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Conceptual Understanding of Sustainability Among Academic Administrators of Pakistan Public Universities

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Abstract

The transition of higher education institutions (HEIs) from a traditional role to a modern one has focused on the advancement of the innovative idea of sustainability in their functions. HEIs played their traditional role in promoting the disciplinary nature of teaching and research. The modern role of HEIs makes demands for not only knowledge to be promoted but also for the gap between academia and society to be bridged. This modern role is a fundamental principle of sustainability. Lack of understanding of the concept of sustainability causes hurdles in taking sustainable initiatives. The status of sustainability in Pakistan is in its infancy phase and poorly documented. It is due to the lack of conceptualizing sustainability that is underestimated and unexplored. This study explored how Pakistan Public Universities' (PPUs) academic administrators conceptualize sustainability, universities' role in promoting sustainability, and factors supporting or hindering sustainability. A qualitative approach was employed to conduct this study. Data were generated using semi-structured interviews and document analysis. A conceptual framework, comprising the role of universities, barriers and favourable factors to sustainability was used to analyse the data. Interviewees' responses and documents were meticulously transcribed, read, re-read and coded and findings were presented in thematic form based on the conceptual framework. The study found that academic administrators were aware of the subject of sustainability but faced more constraints than incentives to promote sustainability. The study also found that PPUs are transforming partially into modern role. The findings indicated lack of interest and commitment from top leadership in engaging stakeholders and creating supportive environment to understand sustainability. The findings point out a serious need for concerted efforts from relevant stakeholders to comprehend and embed sustainability in HEIs functions.

Keywords

Sustainability, Barriers to Sustainability, Conceptual Framework, Thematic Analysis, Academic Administrators, Sustainability Conceptualization

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Conceptual Understanding of Sustainability Among Academic Administrators of Pakistan Public Universities

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The transition of higher education institutions (HEIs) from a traditional role to a modern one has focused on the advancement of the innovative idea of sustainability in their functions. HEIs played their traditional role in promoting the disciplinary nature of teaching and research. The modern role of HEIs makes demands for not only knowledge to be promoted but also for the gap between academia and society to be bridged. This modern role is a fundamental principle of sustainability. Lack of understanding of the concept of sustainability causes hurdles in taking sustainable initiatives. The status of sustainability in Pakistan is in its infancy phase and poorly documented. It is due to the lack of conceptualizing sustainability that is underestimated and unexplored. This study explored how Pakistan Public Universities' (PPUs) academic administrators conceptualize sustainability, universities' role in promoting sustainability, and factors supporting or hindering sustainability. A qualitative approach was employed to conduct this study. Data were generated using semi-structured interviews and document analysis. A conceptual framework, comprising the role of universities, barriers and favourable factors to sustainability was used to analyse the data. Interviewees' responses and documents were meticulously transcribed, read, re-read and coded and findings were presented in thematic form based on the conceptual framework. The study found that academic administrators were aware of the subject of sustainability but faced more constraints than incentives to promote sustainability. The study also found that PPUs are transforming partially into modern role. The findings indicated lack of interest and commitment from top leadership in engaging stakeholders and creating supportive environment to understand sustainability. The findings point out a serious need for concerted efforts from relevant stakeholders to comprehend and embed sustainability in HEIs functions. Keywords: Sustainability, Barriers to Sustainability, Conceptual Framework, Thematic Analysis, Academic Administrators, Sustainability Conceptualization

Introduction

The excessive use of natural resources to sustain development has weakened the relationship between environment and human beings. Sustaining development at the expense of environment has called all the users of natural resources to revisit their understanding and behaviour about these three elements of sustainability (Triple Bottom Line Theory): development with respect to economy, well-being with respect to society, and environment with respect to natural resources (Filho, Shiel, & do Paco, 2015; Jordan & Kristjánsson, 2017;

Lozano, Lukman, Lozano, Huisingsh, & Lambrechts, 2013). Consequently, all organizations for instance business and industries, in general, and the higher education institutions (HEIs), in particular, have been suggested to readdress and acclimatize their behaviour for sustainability (Ralph & Stubbs, 2014). Academic institutions, including all forms of education and learning, bear a profound responsibility; as stated “education has the potential to play a major role in the future realization of vision of sustainability that links economic well-being with respect for cultural diversity, the Earth and its resources” (UNESCO, 2007, p. 6). HEIs being a departure point for students moving into various workplaces are more responsible and have more potential than other institutions to preserve the environment and create sustainable future (Arroyo, 2017; Bullock & Wilder, 2016; Gough & Scott, 2007; Stephen, Hernandez, Roman, Graham, & Scholz, 2008) by providing students with education in the form of knowledge, skills and attitude required to cope with the 21st century challenges (OECD, 2015). Thus, HEIs create human capital (graduates) by enabling them to play their role at the workplaces. In this process, the impact of human capital reveals HEIs’ transformation in curriculum, research, services and operations towards the well-being of societal systems.

The transition of HEIs from the traditional role to the modern role has focused on the advancement of the idea of sustainability. Though HEIs have acknowledged the importance of sustainability (Ceulemans, Molderez, & Van Liedekerke, 2015; Chalkley & Sterling, 2011; García, Kevany, & Huisingsh, 2006), there is lack of understanding on the concept of sustainability. Various efforts have been made to address this issue. For instance, Wright and Wilton (2012) conducted a study to explore the understanding of sustainability of Canadian facilities management directors in higher education. In relation to the issue of sustainability conceptualization, the title of our study partially echoes with that of Wright and Wilton’s study. As this study was conducted in Pakistan, our concerns and arguments are with respect to Pakistan’s context and perspectives. Linked to this issue, the journey towards sustainability has been facilitated and barred by a number of factors. Lack of understanding presents that sustainability is a behavioural and social issue that needs to be addressed in an interdisciplinary way at the governance level (Dyer & Dyer, 2017; Mader, Scott, & Abdul Razak, 2013). On the other hand, taking initiatives for sustainability raises a great question of how it can be beneficial to HEIs (Larrán Jorge, Herrera Madueño, & Javier Andrades Peña, 2015; Scott, 2015). The literature on sustainability (e.g., Lozano et al., 2013; Quental, Lourenço, & da Silva, 2011; Spangenberg, 2004) reveals that there is not only the rationale of economic growth and environmental sustainability, but it is also needed to maintain integration and balance in economy, ecology and society to meet the needs of present and future generations. However, the fundamental step in this transformation is the education for sustainable development which itself is the best driver for sustainability at HEIs (Barth, Michelsen, & Sanusi, 2011; Glasser, 2007; Shephard, 2010).

As sustainability is a combination of three pillars (economy, ecology and society), efforts to promote its every pillar with equal focus divides countries into two broader extremes: the developed and developing countries. In the developed countries, the idea of sustainability is not only fully conceptualized but efforts are made to weigh every pillar equally. In the developing countries, there is an imbalance in making efforts towards its pillars due to lack of understanding, awareness and importance of sustainability. The need of sustainability for developing countries is rationalized if it is well-conceptualized at governance level. Additionally, the common point between the developed and developing countries demands that economy should be strong enough to bring about prosperity, ecology should be preserved to meet the needs of present and future generations and society should be well-aware of the consequences of harmful effects towards ecology. Thus, the idea of sustainability is still in developing phase, especially in developing countries, with respect to its maturity in the functions of HEIs in a comprehensive way (Sterling, 2010; World Bank, 2011), this study aims

to explore how academic administrators conceptualize sustainability at the governance level to incorporate it in the functions of HEIs. This study was conducted in Pakistan, a developing country where sustainability is in its embryonic phase, requiring advancement in an exploratory way at the system (governance) level. Linking with this major issue of conceptualization, the role of universities and the barriers or drivers towards sustainability have also been explored.

The paper is framed in a way that the next section presents sustainability and the roles of HEIs with the aim of sustainability. Transitioning for sustainability is facilitated and faced with the supportive and non-supportive factors respectively which are reviewed after the role of HEIs. We argue that the concept of sustainability has been challenged and conceptualized in a variety of ways. Our definition of sustainability is based on the argument by Rittel and Webber (1973) where we assume sustainability as a “wicked” problem. After this the conceptual framework of the study is presented. The framework leads to the context of the study. Upon this the method section states the rationale to select the setting and participants. To gain deeper understanding of the participants on sustainability, multi-methods for data collection were employed; while the data were analysed based on thematic analysis framework (Braun & Clarke, 2006). Thus, the findings section is presented in thematic forms which were triangulated based on the use of multi-methods.

Sustainability and the Role of HEIs

The process of HEIs’ transformation in tandem with the need for sustainability has transitioned from the traditional role to the modern role that is explored with reference to the Mode 1 and the Mode 2 knowledge production (Gibbon et al., 1994). Historically, Mode 1 knowledge production promoted the disciplinary nature of teaching and research where HEIs were autonomous in terms of maintaining the quality and determining the academic context. As Olssen and Peters (2005, p. 330) point out, “Mode 1 knowledge is that which has been traditionally produced in the academy separately from its use.” It demonstrates that under traditional role universities were autonomous in producing knowledge of their interested and desired areas. Thus, HEIs were considered as elite institutions free from external pressures (Maassen, 2003). The state provided funding to HEIs but is not involved in the regulation processes as in the current era where it oversees, steers, regulates and governs them. That is how traditionally HEIs were not only elite and autonomous institutions but also separated and disengaged from the society and held strongly to the ivory tower conception in terms of evading the social issues (Gough & Scott, 2007; Hoyt & Hollister, 2014). Thus, the traditional role could not cope with the innovative concept of sustainability.

The modern role can be explored in line with Mode 2 that was enhanced based on Mode 1 knowledge production aspects such as the context of knowledge, transdisciplinary and social accountability to transmit knowledge to society in a visible way and bridge the gap between academia and society (Hessels & van Lente, 2008). As Holland (2009, p. 552) states, “Mode 2 is seen as typically requiring transdisciplinary organization and its products are accordingly judged in terms of diversified quality criteria that reflect multiple disciplinary interests as well as other social, economic, or political ones.” Holland’s quote provides a valuable distinction between Mode 1 and Mode 2 under HEIs role transformation with regards to social, economic and political issues. The modern role determines that the relevant stakeholders (the academics and academic administrators) should coordinate and collaborate to conceptualize the innovative idea of sustainability and devise ways in order to incorporate this concept (sustainability) in curriculum, teaching and learning and research processes.

The modern role of HEIs holds the conception of a real world view that facilitates societies in dealing with the unprecedented issues and challenges such as the issue of sustainability, as Watson, Hollister, Stroud, and Babcock (2011, p. XX) highlight, “brick by

brick, in all parts of the globe, the engaged university is replacing the ivory tower.” The transition from the disengaged university to the engaged one needs changes at governance level. In this regard, Watson et al. (2011) imply that HEIs need to shift their ideological and philosophical governance foundations from the traditional model to neo-liberalism and new public management in order to be an engaged university (Degn & Sørensen, 2015; Seeber et al., 2015). Critically observing, the governance changes required HEIs to practise decentralized management where authority and responsibility determine the achievement of objectives and quasi-market to bring efficiency and effectiveness in the system (Jongbloed, 2004). Thus, the modern role of HEIs aimed to revisit the culture of HEIs focusing on tangible and measurable outputs, strategic planning, performance indicators and quality standards (Olssen & Peters, 2005).

It is well-documented that HEIs have been required to revisit and redefine their role to qualify for sustainability (Dentoni & Bitzer, 2015; Larrán, Herrera, & Andrades, 2016; Niu, Jiang, & Li, 2010; Scott, 2018; Sharp, 2009; Shephard, 2008). This revision and redefinition has been witnessed with the change in the core strategies of governance to meet the expectations of their stakeholders (Brinkhurst, Rose, Maurice, & Ackerman, 2011; Müller-Christ et al., 2014; Sharp, 2009; Sipos, Battisti, & Grimm, 2008). Thus, the modern role of HEIs emphasizes sustainability at the governance level. First, the modern role has been concerned with the structural changes in decision making to integrate sustainability in universities’ internal functions such as curriculum, research, operations and maintenance of the campus (Beringer & Adomßent, 2008; Conceição, Ehrenfeld, Heitor, & Vieira, 2006; DuPuis & Ball, 2013; Krizek, Newport, White, & Townsend, 2012; Müller-Christ et al., 2014; White, 2003). Secondly, governance has been concerned with the conception that universities need to interact with the societies as HEIs cannot sustain alone and this is in line with the social sustainability (Sabine, 2013; Wells, Bristow, Nieuwenhuis, & Christensen, 2009; Zilahy & Huisingh, 2009; Zilahy, Huisingh, Melanen, Phillips, & Sheffy, 2009). Finally, the modern role is an endeavour to maintain the eco-system of the campus and surroundings that is in line with the environmental sustainability (Atherton & Giurco, 2011; White, 2014).

The HEIs are operated with the implications of internationalization and globalisation with respect to global, empirical, policy and inevitable agendas (Teichler, 1996). This nature of operationalization has made sustainability an inevitable global issue for HEIs. Even more it rationalizes the scenario for both the developed and developing countries in response to integrating and implementing sustainability at HEIs. In fact, there are various ways of addressing the issue of sustainability based on its conceptualization in the developed and developing countries. In addition, the developing countries were and are in more need of sustainability than the developed ones due to lack of education and more specifically, the lack of environmental education, such as in Pakistan where there is a lack of awareness on such issues (Ahmad, Bazmi, Bhutto, Shahzadi, & Bukhari, 2016; Arif, 2009; Bukhari & Said, 2013). The discussion supports the argument that integration of sustainability in HEI’s can only be fulfilled when universities strategically conceptualize, consider and weigh sustainability at the governance level. Thus, this paper reinvestigates the role of universities in achieving sustainability.

Factors That Contribute to Sustainability

The integration of sustainability at HEIs relies heavily on the factors that provide rationales to respond to sustainability. This integration is also dependent on the factors that do not support the rationales of sustainability. Collectively, these factors consist of positive and negative conditions, contexts and scenarios that help or hinder sustainability. These factors in this study can include the elements, reasons and opportunities that may or may not support the

integration of sustainability. Thus, these factors can be categorized as drivers or barriers of sustainability.

Regarding barriers, sustainability is barred because of a series of barriers such as lack of understanding of the concept of sustainability (Filho, 2000; Wright & Wilton, 2012); disciplinary nature of education (Moore, 2005; Orr, 2004); lack of funding (Figueredo & Tsarenko, 2013; Waas et al., 2012); lack of training relevant to sustainability, competitive environment despite being collaborative, too much focus on individual-based-priority criteria, rigidity of decision making structures; and lack of awareness, commitment and interest (Adams, 2013; Milutinović & Nikolić, 2014; Moore, 2005; Verhulst & Lambrechts, 2015). The literature reveals these barriers affect the core areas of sustainability: curriculum development, research development and capacity building of the top management and staff.

Reviewing the intensity of these barriers, finance is one of the significant elements that influences the organizational structure of HEI's with reference to the realization of sustainability. In a similar vein, Shephard (2010, p. 17), while reviewing the reasons to engage HEIs for sustainability reports, concluded that "universities can only do what they are funded to do." The quote implies that universities have limitations, specifically of finance, in terms of focus on what should be set as goals and directions at the institutional level. Hence, finance being the prime factor influencing sustainability can trigger HEIs to be innovative in devising sustainability curriculum across all the disciplines or resistance to change in following the disciplinary education. Indeed, entrepreneurial universities are excluded from the implication of this point and they are relatively independent in envisaging their direction and generating and allocating finance to promote sustainability. These barriers establish the argument that sustainability is promoted only if HEIs' decision making supports it.

There are many opportunities, interests or elements that support sustainability. A major portion of literature highlights these factors to promote environmental management system (EMS) (e.g., Clarke & Kouri, 2009; Mora & Martin, 1998; Viebahn, 2002; Walton, Alabaster, & Jones, 2000). Clarke and Kouri (2009) divided the drivers into three generations: first, second and third generation to promote EMS. First generation drivers focus on cost and compliance regulations implying that efforts to promote sustainability pay in the long term. Second generation internal drivers emphasize stakeholder and total quality management implying that HEIs mandatorily promote sustainability to be ranked high. Third generation drivers are the external drivers that highlight the partnership of university with community and market implying that external forces such as community and market need sustainability realized by HEIs. It is implied that these drivers work only if the university top management is aware of, interested in, and accept sustainability as their top priority. Considering the drivers to promote sustainability and environmental sustainability, it is vital to understand the difference between these two types of sustainability. Sustainability is meant to maintain a balance between three interconnected elements: economy, ecology/environment (natural resources) and society. The well-being of a society depends upon the economic system. The ecology is affected by the economic system of the society. Sustainability demands for equality in the use of natural resources to bring about prosperity in the society by the economic system. Environmental sustainability is meant to maintain the natural capital by fulfilling two fundamental functions (Ceulemans et al., 2015). First, human economic system should not use the natural resources (e.g., forests, water, flora and fauna, marine life) at excessive rates. Second, the waste emission from the use of natural resources should not pollute the (local) environment. The moderate use of natural resources and lesser disastrous emissions from these resources can ensure the maintenance of natural capital. Most of the literature considers environmental sustainability as the entire concept of sustainability. Thus, it reveals that an EMS is promoted in the name of sustainability focusing only on environmental aspects and ignoring economic and social aspects. The compartmental understanding on sustainability aspects

indicates one of the reasons for sustainability misconceptualization where EMS or environmental sustainability is emphasized more than social and economic aspects.

The promotion of environmental sustainability is necessary to maintain the natural environment of the campus, as based on this motive HEIs try to use less amounts of water, electricity and recycle paper, food, plastic and chemical wastes. This role is played by the fundamental driver of pushing HEIs to take such initiatives to make an environment-friendly campus to regulate campus functions (Finlay & Massey, 2012). Our argument is, environmental sustainability is important, but it is not the entire concept of sustainability nor does it substantiate the movement towards sustainable development. Even more, such initiatives are generally beneficial for daily users of the campuses. Thus, how sustainability contributes to the well-being of the society has not been explored in as much depth as the environmental sustainability has been investigated (Jordan & Kristjánsson, 2016). It indicates the lack of response, interest or drivers to promote sustainability comprehensively at HEIs.

The seminal work by Clugston and Calder (1999) included all relevant areas of sustainability in which university leadership works as champion in its promotion and advancement. Exploring in more depth, it appears that visionary and transformational leadership works better in comparison with charismatic leadership (Williams, Pillai, Lowe, Jung, & Herst, 2009). Visionary leadership envisages the future of sustainability and transformational leadership determines the change strategies to embed the concept of sustainability at HEIs. Moreover, transformational leadership can engage the relevant stakeholders for the collective purpose of sustainability (Simola, Barling, & Turner, 2010). Putting in the perspectives of this study, the academic administrators play a leadership role. Though the positional title is administrative in nature, but their role is of leadership, as they are the members of decision-making bodies (setting and participants). They are the custodians to translate the policy into practice and thus they not only look into the teaching and learning process, and curriculum development but also oversee the maintenance of the campus in ensuring safety, security and eco-friendly campus. Therefore, academic administrators are referred to as potential change agents for sustainability (Stephen et al., 2008) by their position and role for strategic planning. Based on this discussion, it can be proposed to investigate the role of universities in preventing or promoting sustainability.

The above reviewed barriers and drivers are from the (initiator) developed countries; while the developing countries are behind in this transition. Similarly, there is a lack of literature on the subject (barriers and drivers) to promote sustainability at PPU. We believe that sustainability is found, though partially, at PPU in one form or another but it is in its infancy phase and not as explored, documented and developed as in other Asian neighbouring countries like: India, China and Iran. Based on this argument and the reviewed literature on sustainability, it is assumed that rigidity of decision-making structures; lack of finance; lack of awareness, commitment and interest; and lack of training work as barriers to sustainability. While leadership role and curriculum change work as drivers to sustainability, there is a need to better understand what barriers academic administrators face in taking initiatives and what the most favourable reasons are for them in promoting sustainability at PPU so that sustainability can be strategically integrated across campus functions.

Challenges in Conceptualization of Sustainability

As this study intends to explore HEIs' transformative process to sustainability in general and conceptualization of sustainability at governance level in particular, the above reviewed section presents that academic administrators have a significant role to play in conceptualizing sustainability and integrating it in HEIs' functions. Thus, there is a great pressure on academic administrators on ways they deal with the issues of curriculum

development, research promotion, operations, safety and security of the campuses and maintenance of the campuses. Their role presents variability of drivers and barriers to sustainability depending upon the nature of efforts by HEIs that presumably conceptualized sustainability in a number of ways. Hence, sustainability is confronted by challenges.

To understand these challenges, the advocacy literature on sustainability that began with the initiation of charters, declarations, and frameworks to encourage academic administrators to take initiatives presents a guiding picture (Wright, 2002). This being a paradigm shift caused variability in the level of commitment for sustainability initiation that was the result of conceiving sustainability in a number of ways such as the anthropocentrism versus ecocentrism (Gladwin, Kennelly, & Krause, 1995; Starik & Gordon, 1995); weak versus strong sustainability—ecological economics (Mazmanian & Kraft, 1999); technological versus ecological sustainability (Orr, 1992); cornucopia versus neo-Malthusia (Meadows, Meadows, & Randers, 1993); and economic versus biological sustainability (Costanza, Cumberland, Daly, Goodland, & Norgaard, 1997). Critically observing, these concepts show that sustainability has been conceptualized in different continuum forms or binary forms. In addition, it also reflects the comprehensive nature of sustainability, as all these concepts represent sustainability. Thus, the evolutionary process of sustainability started with a number of ways. To put it simply, sustainability started to be conceived more in a subjective form than an objective one.

Conceptually, these concepts can be categorized in philosophical (anthropocentrism versus ecocentrism, cornucopia versus neo-Malthusia), scientific (weak versus strong sustainability) and practical (technological versus ecological sustainability and economic versus biological sustainability) perspectives. In addition, the philosophical perspective is more significant than others in guiding the scientific and practical form of sustainability. Moreover, emphasizing specifically on philosophical perspectives, anthropocentrism is more important than others as it sustains successful human societies in accordance with the ecocentric sensitivity at all levels and it provides “human commitment to real global stewardship” (Reitan, 2005, p. 77). The reason for its significance provides us with the futuristic view of sustainability. Our viewpoint on conceptualization is different from the ones discussed earlier. We assume that regardless of sustainability conceptualization in philosophical, scientific and practical ways sustainability is a complex social problem/wicked problem that does not follow any structured format. Thus, it may overlap with the characteristics of philosophical, scientific and practical perspectives. It may even include some other characteristics that are contingent upon situations and contexts. Therefore, we define sustainability as an intergenerational and interdisciplinary complex social issue that requires HEIs to adopt case-based, contextual and insightful wisdom to transform society, industry and eco-system.

Undoubtedly, the importance of sustainability cannot be denied but how it should be integrated into HEIs is a complex matter of interpretation due to the lack of sound theoretical underpinnings (Stephens & Graham, 2010; Yarime et al., 2012). Though the Triple Bottom Line Theory (combination of economy, ecology and society; Elkington, 1997) has been employed in literature, it has not been proven sound and supportive at HEIs and opened conceptualization avenues. Consequently, sustainability by definition falls under wicked problems (Rittel & Webber, 1973). Exploring wicked problems in-depth, their four characteristics are applicable on sustainability. These characteristics show that wicked problems such as sustainability have: (1). failure to have definitive formulation; (2). indeterminacy of scope and scale; (3). lack of right or wrong solutions but better or worse solutions (Rittel & Webber, 1973); and (4). failure to fit into formal theoretical models (Andersson, Törnberg, & Törnberg, 2014). Thus, the reasons for sustainability being a wicked problem are its complexity, interconnectedness and multiple perspectives as multi-stakeholders are involved in it (Sardar, 2010). Based on this argument, sustainability is a contradictory,

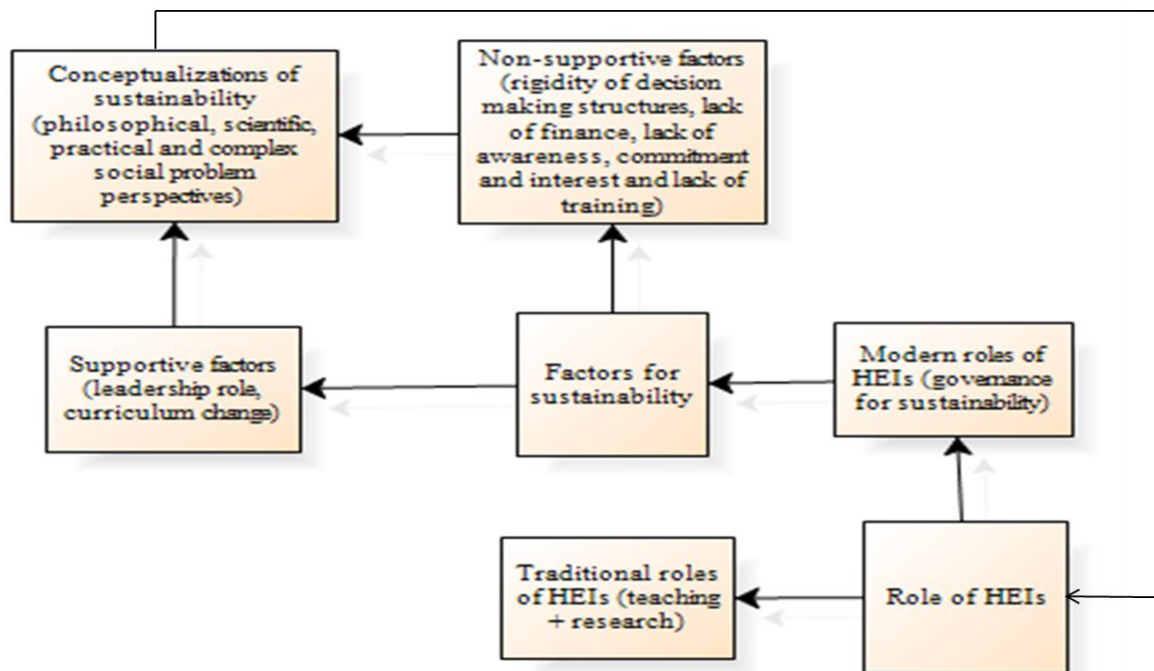
complex, interconnected and uncertain problem which always remains an unexplained gap that requires how it is conceptualized (Burns, 2012; Wright & Wilton, 2012; Ziegler & Ott, 2011).

The complexity of sustainability conceptualization has an interrelationship with HEIs' academic administration (Martin, 2015). Since HEIs train human capital, they have a critical role to play in maintaining a balance between Triple Bottom Line Theory of sustainability (environment, economy and society). This nexus between HEIs and sustainability draws an international attention to practically translate sustainability into HEIs' functions. The translation process is possible only when HEIs' academic administrators have a clear conceptualization of sustainability (Verhulst & Lambrechts, 2015). The achievements of developed countries in this regard are based on adequate conceptualization of sustainability. Efforts from developing countries to promote sustainability are generally weak and lesser in numbers and more likely to cause unsustainability (Amaral, Martins, & Gouveia, 2015). Therefore, developing countries are behind in this transition. Pakistan in this movement is at an embryonic phase, as there is a lack of literature on the subject to better understand it (sustainability) and take practical and tangible initiatives in promoting global efforts for sustainability. Any new idea or innovation can permeate an organization if its administration and management welcome it, understand it well and work as change agents. PPU's academic administrators in this regard are a ray of hope to take initiatives to promote sustainability but firstly needed to be ready to conceptualize it. Upon this their contributions in this (sustainability) global issue will be visible.

The relevancy of academic administrators for sustainability lies in the fact that decision making processes at PPU's are carried out by well-integrated bodies: board of studies, board of faculties and academic council. Academic administrators are the heads and members of these bodies. Being heads they bear the profound responsibilities of leading and managing these bodies. Being members, they teach, learn and research and monitor these activities. In this capacity, they can contribute by diffusing sustainable activities in teaching, learning and research processes. The empirical study conducted by Mughal, Qaisrani, Solangi, and Faiz (2011) shows that diffusion of sustainability in the institutional functions such as teaching, learning, research, services, and operations is weak. This shows that sustainability is at an embryonic phase and poorly documented and underestimated at the governance level. Moreover, the contribution of PPU's in service to the society seems insignificant or nil; it indicates that greater responsibility depends upon the functional presence of appropriate personnel who lead, govern and administer PPU's and not other stakeholders because the conceptualization of sustainability at governance level determines how these administrators incorporate it in HEIs functions. This study is an effort to fill this gap in Pakistan.

Conceptual Framework of the Study

Based on the reviewed sections of literature, we developed a conceptual framework. Figure 1 presents this framework which shows the role of HEIs for sustainability that provides the ground for other significant concepts reviewed in the literature. The role of universities is divided into two types. Firstly, the traditional role and secondly the modern role that lays the foundation to incorporate sustainability in HEIs' functions. We assume that when sustainability as an innovative idea is taken at governance and decision-making level there are factors that help or hinder the promotion of sustainability. This explains why there are two separate blocks that emerge from the factors for sustainability. It is these blocks that terminate the framework at the conceptualization of sustainability.



The modern role of HEIs is to bring about transformative changes in the institutions to accept sustainability. However, sustainability is not always or usually welcomed and thus decision makers ponder upon the reasons that can propel them to take initiatives. Among these reasons the most favourable is the leadership role. It implies how the leadership role envisages the promotion of sustainability. The leadership role raises the question of “what other aspects are there that possibly provide the rationales to understand sustainability to incorporate it in HEIs” functions. Possibly, these aspects can be the awareness and preservation of natural environment. The other supportive and favourable reason is the change in curriculum. The core function of HEIs is to prepare the human capital that meet the needs of the society and market. The revision of curriculum is considered the primary and fundamental step with the changing needs of society and the market. Moreover, the change of curriculum is meant to integrate sustainable curriculum that enables the graduates to be good at their specialized areas, civic citizenship and life-long learning. In this way, not only will HEIs graduates consider their role in daily life but they will also be able to create an environment that encourages other people at their workplaces to mind their acts for sustainability purpose.

The non-supportive factors for sustainability are greater in number and impact than the supportive ones. The first non-supportive factor is rigidity in decision making structure that underestimates sustainability. Since the modern role of HEIs considers sustainability in governance in the developed countries, the same role in developing countries such as in Pakistan is not up to the standard. In this regard, other non-supportive factors: lack of finance, awareness, commitment and training hinder the promotion of sustainability. The parallel supportive factor of leadership role can cope with these barriers if HEIs’ leadership plays its visionary role in synergistic form. Thus, the conceptual relationship of these factors based on literature sets the stage to evaluate which factors are more dominant than others and how they work as they exist at HEIs. The final section of the conceptual framework sheds light on different perspectives of sustainability conception. Based on the literature and our understanding of it, sustainability is conceptualized in four different ways in this study: philosophical, scientific, practical and complex social problems perspectives. We assume sustainability conception to be procedurally and systematically linked with the role of HEIs.

However, to what extent it is found at PPU is explored in this study. Thus, four main areas of conceptual framework provide us platform to analyse the data and understand sustainability status at PPU.

Context of the Study

Higher education in Pakistan was not a priority since the day the country came into existence on 14th August, 1947. During that time, there was only one university that existed in Pakistan. Until the end of the 20th century, higher education was not promoted despite the need to give it priority to solve the economic problem of the country and to increase university going population in the nation (Hoodbhoy, 2009). The main thrust of higher education since the 20th century was teaching and unfortunately the knowledge production idea of Mode 2 as stated above was not taken seriously. The dawn of the 21st century was a fortunate beginning for higher education, as the steering committee on higher education initiated to bring about structural changes at national level. Resultantly, the regulating authority, the University Grants Commission (UGC), was replaced with the new centralized regulating commission, Higher Education Commission (HEC) (Pakistan, 2002).

The first initiative taken by HEC was to create the conditions to set standards for Pakistani higher education with reference to higher education in the developed countries. For instance, regarding structural measures, all PPUs were brought under the auspices of HEC policy. Every policy from HEC was directly communicated to the chief executive officer (VC) of university. Moreover, VCs of universities were periodically and as per the need of institutional transformation invited to give their suggestions and proposals at HEC forum. In line with these initiatives, the institutional autonomy was ensured. Furthermore, based on this autonomy, academic administrators were consulted to improve PPUs governance. The significance of understanding sustainability and its integration in PPUs functions, specifically with reference to the constitutive parts of the conceptual framework, were based on these transformations. Thus, these conditions proved to encourage the academic administrators to set a dynamic and challenging context at PPUs.

I became interested in the concept of sustainability when I was reading and searching for a topic for my study. After my Master's degree I wanted to choose the topic of "higher education" for my Ph.D. research. When I was reading the literature on higher education, I found that apart from training human capital, higher education can create a sustainable future. I became curious as to how higher education can contribute towards sustainability. With the passage of time, I realized that sustainability can only be translated into actions if it is embedded in the governance and management of higher education institutions. My interest at this point increased further because I came to know that sustainability is an interdisciplinary concept that can be used in many ways as it contributes to sustainable future. I believe that sustainability is the first step that can bring about sustainable development and a sustainable future. My Ph.D. work deals with the decision making for campus sustainability at Pakistan Public Universities. That was how I started out in the field of sustainability. The current study is not sponsored by any governmental or non-governmental agency. It is solely based on my curiosity and compounded with the interest and passion of two Malaysian collaborators who have been holding administrative positions in higher learning institutions in Malaysia and are advocates of campus sustainability.

We intended to explore how academic administrators conceptualize sustainability at Pakistan Public Universities. Thus, we bear the responsibility that the analysis of the data and its interpretation is our own. Our hope with regard to sustainability is that Pakistani Higher Education Institutions can successfully integrate sustainability in teaching, learning and research and move forward in these aspects.

Methods

This study employed the inductive approach to explore the viewpoints of academic administrators on sustainability conceptualization. This is an initial study in Pakistan perspectives and more specifically at PPUs. The following section describes the setting and presents how the participants were selected and how the data was gathered.

Setting and Participants

This study was conducted at two public universities in two metropolitan cities of Pakistan; pseudonyms given as X and Y. In this paper, pseudonyms were also given to the respondents to protect their anonymity. Both cities have salient features in that they both have a high number of universities and state-of-the-art laboratories and libraries. What was even more astounding is that, the availability of and access to modern transport in both cities facilitate both staff and students to travel daily for the purpose of serving and seeking education respectively. The universities from these cities were chosen based on three criteria. Firstly, PPUs share a great burden of admitting a large number of university-going students. According to the National Education Management Information System, PPUs enrol 86% of the university-going students; while, the Pakistan Private Universities enrol only 14% of the same cohort (Statistics, 2015). The sheer percentage of enrolment in the public sector substantiated to investigate sustainability at PPUs. Secondly, PPUs present a richer mix of diverse programmes and population than the private institutions. Thus, these universities were expected to present a lucid analysis on sustainability. Thirdly, these universities are more appropriate in terms of safety and security and consequently supportive to conduct research in a peaceful way.

The initiatives for sustainable development in Pakistan universities started with the decision-making processes carried out by well-integrated bodies: board of studies, board of faculties and academic council. These bodies play their roles and perform responsibilities within their autonomy and resources. The heads of these bodies bear the profound responsibilities as they teach, learn and research, and lead and manage these bodies. However, the diffusion of sustainability in the institutional functions such as teaching, learning, research, services, and operations is weak (Mughal et al., 2011). Thus, sustainability is at an embryonic phase and poorly documented and understood at the governance level. Moreover, the contribution of PPUs in service to the society seems insignificant or nil; it indicates that greater responsibility depends upon the functional presence of appropriate personnel who lead, govern and administer PPUs and not the other stakeholders because the conceptualization of sustainability at governance level determines how these administrators incorporate it in HEIs functions. The emphasis on the selection of academic administrators—either they are the head of the departments, dean of the faculty, and director of the institute or the principal of the college within the premises of PPUs—for this study is based on the following three reasons.

Firstly, being heads of different decision-making bodies they govern and administer PPUs' functions based on their expertise and experience. With respect to their academic and administrative positions, they hold the positions of institutional head for instance, directors, deans, head of department or principal as per the nomenclature is used. With respect to their academic experience, the minimum experience they had was five years and maximum was fifteen years. Thus, they also have a strong connection with students and faculty by discharging their responsibilities and playing their roles. By their roles, academic administrators give their suggestions to decision making bodies, while they themselves are the members of these bodies as well as the heads that decide on the curriculum development and teaching and learning processes. In this way, though they are above the faculty they have a strong connection with the faculty and students, as the faculty have to interact, by their roles and responsibilities with

the students to impart knowledge and with the academic administrators (having a direct positional interaction to the faculty) to update them about accomplishing teaching and learning processes and taking their guidelines from time to time to regulate the academic activities.

Secondly, the selection of academic administrators is vital with respect to the transformation for learning processes that depend upon their comprehension of sustainability concept so that they can play their roles aligned with their managerial position of decision-making. Thirdly, academic administrators' conceptualization would set targets for students, faculty and supporting staff with respect to their participation and practice for sustainability in revising curriculum, devising research projects and initiating sustainable practices at the campuses such as recycling or reusing of used papers or initiating electronic form of submission of assignments and other similar practices.

Procedures---Data Collection

We gathered the data employing multi-methods: one-on-one semi-structured interviews and documents, as Denzin (1978) is of the view that the use of multiple methods aids in enhancing validity of research findings. We provided the participants with a consent form that described: (a) participants would participate voluntarily, (b) they would choose the convenient/suitable time for interview, (c) they would select the place for interview, (d) they would agree to record the interview on audio-gadgets, (e) participants' name and their institutional identity would be encoded, and (f) upon the transcription of the interviews, the transcript copy would be sent to the participants in order to finally approve it. We followed these steps in this study. Participants were selected purposefully (Harsh, 2011) to understand their deeper understating on sustainability concept, its incorporation in academic activities, role that universities can play for sustainability, favourable reasons and barriers to sustainability. The participants were identified by the updated worldwide web of regulating authority HEC (Pakistan, 2002) and contacted by email. Eleven participants were contacted by cell-phone and email to brief that their ideas and experiences on sustainability, like its promotion, barriers, drivers and conceptualization would be included. Participants were assured of research ethics such as the confidentiality and anonymity of their identities and their institutions. Furthermore, permission was granted to audio record the interview on a voluntary basis. Upon having granted the permission, one-to-one open ended semi-structured interviews lasting from thirty to forty minutes were conducted in English.

The current study aimed to explore PPU's transformative process for sustainability with the main and overarching research question being how sustainability is conceptualized among academic administrators. Thus, the main research question consisted of four relevant sub-topics based on the literature reviewed. The purpose of the interview was to gain deeper understanding of academic administrators on four areas of sustainability mapped out in the four questions below:

1. What role, if any, do you feel universities in general should play in achieving sustainability?
2. What, if any, are the barriers that you see preventing you from taking initiatives for sustainability at this campus?
3. What are the most favourable reasons supporting you to take initiatives for sustainability at this campus?
4. What is your conception of sustainability?

The second source of data was documents. During the interview, the participants provided the documents to explore further the transformative role of sustainability in Pakistan. The

documentary data supported us to explore the status of sustainability implementation, university role for sustainability and the factors that influence sustainability. The documents were triangulated with the interview data in the analysis process.

Data Analysis

We used the generated data from interviews and documents to understand the areas of conceptual framework. We asked open-ended interview questions so that the participants can give their vast and informed information. We used thematic analysis (Braun & Clarke, 2006), to analyse the collected data in three steps. Firstly, we listened each audio-recorded interview and typed in Microsoft Word Application program. Listening the interviews and typing them enabled us to get familiarity of the audio data. Subsequently, we matched each interview transcript with its audio form by listening to it to ensure the correctness of the speech. Through this process we get a general sense of interview data. Secondly, we coded each interview transcript. We also rechecked codes to ensure that codes were interpreted in the appropriate contexts. Finally, we arranged similar codes under constituent areas of conceptual framework. To analyse the data in the form of documents, we used thematic analysis following two steps. Firstly, we read and re-read all the documents to get familiarity. Secondly, we arranged the relevant data, and separated, organized and coded the data according to themes. Upon the completion of this stage, we organized the similar codes and compared/matched with the interview data, as the themes drawn from interviews and documents were in line with conceptual framework areas that lead to findings.

Findings

When we had coded all the data from interviews and documents, we arranged the codes that constituted different themes. We organized these codes based on their semantic relationship to each other that enabled us to draw theme from the data. Thus, we named each theme following the steps of thematic analysis framework. Simply, a theme contained, for instance, six to ten codes and these codes accordingly contained ten or more than ten quotations. That's how we named the themes as findings of this study. Since our purpose of data was to understand the interrelated areas of sustainability conceptualization, themes are presented based on four identified areas of conceptual framework: role of universities for sustainability, barriers to sustainability, favourable reasons for sustainability, and conception of sustainability. To better understand each area/theme, we presented sub-themes representing relevant patterns of a theme in a comprehensive and diverse way. The way of describing themes is that firstly the main theme is given then its sub-themes are presented with excerpts of empirical data and their analysis.

Role of Universities for Sustainability

This theme presents findings on the first part of the conceptual framework that shows universities have shifted from the traditional to a modern role that is in line with the promotion of sustainability. The study found that PPU's play their modern role under the auspices of two sub-areas: leadership role in improving relationship and revising and improving curriculum.

Leadership Role in Bridging the Gap Between University and Society

In exploring the university role for sustainability purpose, the participants focused on the leadership role of university. They were aware of the importance of leadership and its role to promote sustainability with specific reference to the relationship of university and society:

The only thing that is if the leadership is there. We can take the example of many countries. It's all with the leadership. You may take the example of Korea.... All the innovative processes they start, they have established the system... how this research can be shifted to the common persons. ...So, these are the things which we have to take the initiatives.... And we are lucky, we have all the manpower. We have to provide the skills to them and then we can also be somewhere in next years, (P-3).

In the above example, the participant highlighted the significant role of leadership that envisages the vision of university. The participant described the critical role that leadership plays in bringing about systemic changes in the institution. These changes further transform the institution in realizing the value of university mission. In addition, the participant pointed out that leadership can visualize the impact of knowledge transfer in the form of research. To put it simply, how the university research can improve the quality of life of a common man in a country was attributed to university leadership. Moreover, the excerpt above also highlights the responsibility of the leadership to capitalize on the human resource management of the university. The excerpt also draws our attention to the idea of leadership to train academics to improve their performance that consequently helps the leadership to bridge the gap between the university and community. Another example of leadership role in creating awareness among the societies on the importance of natural environment protection was illustrated as:

Universities, I think universities should come up with the ideas to go to the community to support them and we should work together hands in hands and that will be the solution. So, I think the prime responsibility lies upon universities. We have to teach the community. And we have to bring them to the level that they should be thinking about to protect the environment, to protect our eco-system, (P-11).

The above excerpt draws attention towards the relationship of community and university indicating that PPU are the elite institutions and there is lack of relationship between universities and the community, as the participant stated, "universities should come up with the ideas." It further indicates the prevalent status of PPU that is not aligned with the global vision of sustainability. In this example, there is a specific focus on the protection of natural environment. The participant emphasized the university leadership to devise a mechanism that can help universities to train the society. The excerpt reflects the participant's awareness on the importance of sustainability and understanding of sustainability, i.e., the protection of natural environment. Thus, it is implied that the participant conceptualized sustainability specifically in protecting natural environment rather than its comprehensive form. These findings revealed that the leadership role for the promotion of sustainability can be highlighted in two areas: to set the vision at institution level and to train the society to make it sustainable and to make the community aware of the significance of natural environment. Though the findings point out that PPU have started their journey from the traditional to modern role, but this is not at the level that can create awareness among the university stakeholders and society.

This shows that PPU's are in a transition process. The findings also highlight the lack of comprehensive understanding of sustainability.

Revision and Integration of Sustainable Curriculum in Various Programmes

The second sub-area under the leadership role was identified in revising and integrating the curriculum to train the graduates for sustainable development. The revision and integration of sustainable curriculum was in line with the mainstream activities of PPU's:

Three ways. Number one curriculum revision should be a continuous process. And yes, we are doing that. Second thing is that the subject of environmental sciences should be introduced at school level. And third thing...is the short training programmes, refresher courses for youth, after when they graduate from here.... So, we have to introduce these kinds of refresher courses and diplomas at subsidized rate for our youth, (P-9).

Based on the above excerpt, this study found that different measures were taken to revise the curriculum and to integrate it in the existing curriculum. Sustainability being the paradigm shift leads to a need to upgrade the curriculum of every discipline. This second excerpt also highlights the way to introduce sustainable education at school levels to equip students with necessary knowledge on sustainability that makes them aware of its significance. Thus, there were suggestions to introduce and integrate sustainable education at every level. In addition, it was also found that curriculum should be devised for short refresher courses to keep graduates updated on sustainable education. Introducing such courses indicate the realization of university leadership in promoting the significance of sustainability. Similarly, the study also found the prime objective of higher education in Pakistan as:

You see, very simple why we are sitting.... Don't you think that environment is one of the most important issues that should be taken into account so that I can make optimal improvements for my country? It would not be possible without having a relevant knowledge for that, (P-8).

The excerpt exemplifies clearly the national objective for global sustainable development. According to the respondent, the purpose of PPU's is to ensure environmental issues are taken seriously to sustain development. Resultantly, it contributes in minimising the global issues of sustainability such as lack of sustainable curriculum. The respondent also felt that sustainable development was not possible without the existence of relevant and accurate knowledge. Contextually, the phrase "relevant knowledge for that" implies the revision and integration of curriculum on sustainable education. Moreover, the relevancy of knowledge shows the measures to revise the curriculum and train students on sustainability. Thus, understanding on sustainability with respect to revising the curriculum and imparting this to university students was expressed under the pivotal role of PPU's. These findings were in response to the first research question and the first part of conceptual framework that perceives PPU's as transitioning from traditional to modern role or the elite universities to the engaged universities, though partially. The findings showed PPU's have initiated to consider sustainability at governance level. Furthermore, PPU's are playing their role in two areas: bridging the gap between university and community and revising and integrating curriculum. Therefore, university leadership is playing its role in making efforts to produce the desired human capital that will not only consider natural environment but also sustain development. The findings also showed that leadership is unable to completely realize its potential for sustainable development.

Barriers to Sustainability

This theme based on the conceptual framework found three barriers (lack of finance, training and awareness) that participants face in taking sustainable initiatives. These barriers occurred in different contexts and situations that constrained the participants from comprehending the concept of sustainability and enhancing sustainable practices at PPU.

Lack of Finance

The first and most hindering factor to sustainability was lack of finance. Since finance is the fundamental drive to take initiatives and translate policy into practice, its significance is undeniable. It was found that the need to upgrade the infrastructure or to finance a new teaching program were both critical and major issues as stated:

Barrier to sustainability is mainly funding. Mainly the finance is the most important barrier I think the finance should be allocated to the universities to come up with good research in environmental sciences. Whatever we make, whatever you say energy or industry or anything that we have, we must make sure that it is environment-friendly. That's very important. But that can come through if there is a proper research which is done at universities, (P-6).

Based on excerpt 3, lack of finance caused further barriers to sustainability, as it was expressed that when appropriate finance is not allocated to PPU the maintenance of buildings and core functions such as teaching and research cannot develop as much as it is needed. Consequently, PPU start to stray away from their main purpose of existence. In addition, whatever amount of finance is allocated is not sufficient to produce environment-friendly research. The expression on the production of environment-friendly products by conducting beneficial research indicates participants' understanding of sustainability. Moreover, it also shows the importance of conducting research in environmental sciences. However, the extract does not highlight participants' contribution in generating finance other than the allocated finance. Apart from the underestimated core functions of teaching, research and maintenance, lack of electricity was highlighted as the major barrier that was attributed to the lack of finance. That is how hierarchically lack of finance affected every functioning area of PPU, as stated:

We do not have enough funds...of course, we have currently the problem of power [electricity] in our country, and air conditions and the environment in which we are sitting...machines are not functioning due to lack of electricity, (P-11).

Excerpt 4 presents energy crises in the country that affects badly not only the temperament of the stakeholders especially in the summer season but also blocks the movement of academic activities. It is important to state here that Pakistan has four seasons: spring, summer, autumn and winter. The summer and winter seasons are intensive in nature. Based on this intensity, the need of electricity is more critical in the summer and winter seasons than in the spring and autumn. More specifically, comparing the summer and winter seasons' longevity the summer is becoming longer and longer and winter is becoming shorter and shorter. This is happening phenomenologically, perhaps due to rapidly changing dynamics of environment and global warming. Thus, academic activities are more affected in summer than in winter. This is how lack of energy was a consequence of lack of funding that was affecting PPU. This theme showed and proved qualitatively that the lack of finance was the most critical issue for PPU

that has subsequent negative impacts on their performance. The most dangerous consequence was lack of electricity that abrogates PPU's activities. Critically observing, this barrier indicated lagging part of policy at national level, as less allocated budget has influenced the decision makers to take or not to take sustainable initiatives. Consequently, lack of finance has adverse effects on the performance of PPUs and quality of education.

Lack of Training

The second barrier found was lack of training that is conceptually a fundamental and more critical issue than lack of finance. Since the context of training and finance influence is important, the need for both is mutually significant. Only provision of sufficient finance cannot justify the lack of training and vice versa. This barrier affected sustainability badly.

Unfortunately, I mean, the capacity building is very poor. I mean, sometimes I think that there are many people, I mean, once when they are skip and they go to some other university, we don't have any alternative for them. So, what you need to do is just to prepare people, I mean, through your internal professional development programmes, (P-7).

The excerpt indicates that the lack of capacity building hinders the development and sustainability of human capital. The capacity building implies the training that can be referred to as the process intended to enhance learning of academic administrators, specifically learning directed towards bringing efficiency in job skills. To put it simply, the ways of professional improvement in these needed areas: proposal of formulation process, teaching and learning process or contribution in knowledge production by producing research articles. The data evidently presents the lack of such process. Moreover, when fewer existing experts move from the institution, a gap of skilled persons is created that can be filled only if there is a process of continuous professional development. In higher education context, professional development is inevitable based on rapid changes in technology and efficiency in performance. The status of training at PPUs presents the lack of a system or mechanism that can develop, train and retain professionals.

Lack of training is logically linked with lack of finance, as the former indicates that participants are not trained enough to generate resources of finance. Furthermore, this link indicates that participants are not experts in financial management. The deficiency of financial management is proved if a lack of finance is critically observed in the excerpt, "finance should be allocated to the universities" that implies that a lack of training partially causes a lack of finance, as the participants in academic administration are responsible to secure adequate grants to execute PPU's functions. Another common belief is that training implies the lack of sustainable education.

Lack of training in the concerned departments, in the concerned jobs. Of management, like registrar, like the finance head, like the examination. They are not trained in their respective area, (P-4).

Based on the excerpt 4, the participants were not trained for their assigned responsibilities. The excerpt indicates a lack of mentoring among teachers, students, and the academic administrators that is necessary from time to time. As training is foundation and mentoring strengthens based on training, mentoring can only take place if the mentor is trained and expert enough to be able to mentor the mentee. Excerpt 4 suggests inadequate ways of enhancing and upgrading the skills and training (in video/conferences, seminars and workshops) for academic

administrators, teachers and scholars. To conclude this, we can say that sustainability was hampered due to the participants' lack of training that caused inefficiency in sustainability integration in HEIs' functions and constrained the participants from generating sufficient funds to run these functions. Thus, the participants were found to have a dire need for training to become an expert to promote sustainability in HEIs' functions, operations and practices. In short, the lack of training contributed to the lack of sustainability at PPU's by preventing the participants to promote sustainability.

Lack of Awareness

The third barrier found was lack of awareness to engage the campus community to take sustainable initiatives. The lack of awareness among the population of PPU's and the country has affected the efforts to advance sustainability, as stated:

Awareness is a big problem, obviously. For me, the important solution for the environment is the massive awareness programmes which indeed is lacking.... Still massive awareness is to be spread, (P-9).

Based on excerpt 5, the lack of awareness is the most enormous hurdle that inhibits sustainability progress, as its significance is evident by the participant's remark because awareness has been proposed as an important solution to environmental problems. Lack of awareness on sustainability indicates lack of understanding of the significance of sustainability. Consequently, it implies lack of initiatives at national level. Data from documents on this subject reveal that a public sector federal department known as Pakistan Environmental Protection Agency (Pak-EPA) particularly works for spreading awareness and ensuring sustainable development, as it says Pak-EPA is responsible to: "recommend environmental courses, topics, literature and books for incorporation in the curricula and syllabi of educational institutions and promote public education and awareness of environmental issues" (documents).

The above example states explicitly that Pak-EAP is meant to spread awareness not only at educational institutions but also among the public of Pakistan by using mass media, seminars, workshops, and conferences. Thus, Pak-EPA is the main authority at national level to devise, spread and monitor the process of enabling every Pakistani to understand the importance of sustainability. More specifically, educational institutions are tied with Pak-EPA mandatorily with respect to spread awareness on environmental safety, sustainable initiatives and development, as these institutions are the mainstream institutions having profound impact on society. Thus, Pak-EPA needs to build and develop a strong connection with relevant ministries (HEC and Ministry of Education) to devise syllabus to permeate awareness on sustainability at PPU's. When we examined the performance of Pak-EPA with regard to awareness, the following are some of the responses obtained.

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, (P-5). They are not very efficient, I must say. They have not given anything yet. They have not approached to us. ...they have not done anything by themselves, no curriculum has been revised by them, (P-4).

Participants' responses on the performance of Pak-EPA showed lack of efforts (especially in revising curriculum) that is perhaps due to the lack of interest or commitment. The respondents were of the opinion that Pak-EPA should take serious initiatives to maintain the relationship

with PPU to promote sustainability. When participants' responses are triangulated with data from the documents, it becomes apparent that both converge at one point: lack of awareness. Critically observing, awareness is the first and most crucial step in promoting any new or innovative idea such as sustainability. When there is awareness, the respondents will start to think about it and weigh the idea which eventually may be affirmed in their minds. Lack of awareness has undermined its significance before its conceptualization. Thus, it implies that the conceptualization of sustainability can encourage transformative change at PPUs if the barriers, especially, lack of awareness is removed.

The above findings are in response to the second research question and part of conceptual framework factors/barriers to sustainability. We proposed four non-supportive factors on the frontier of literature: rigidity of decision-making structure, lack of finance, lack of training and lack of awareness, commitment and interest. The analysis of data showed three barriers: lack of finance, training and awareness. It was found that the lack of training among academic and non-academic administrators was hampering the progress towards sustainability. The negative effect of lack of training was that decision-making process was delayed or not carried out in the desired way, as the participants by position are decision makers (setting and participants). Thus, future development of PPUs is not mapped out in the decision-making process. Additionally, lack of training causes lack of finance, as the participants did not show any interest to devise the mechanism of generating resources other than regular budget. Lack of awareness was not being addressed seriously by responsible authorities. Hence, this barrier is also linked with the lack of training, as we believe that if the decision makers are trained enough to understand the subject of sustainability then they can devise initiatives to spread awareness. The sum and substance of these findings led to conclude that lack of training caused lack of finance and awareness that consequently created lack of institutional change and priorities in addressing sustainability issues. Thus, barriers to sustainability in PPUs have undermined the understanding of sustainability and consequently have caused constraints in taking sustainable initiatives. It implies that barriers to sustainability in third world countries like Pakistan is a broader issue that needs further exploration.

Favourable Reason for Sustainability

This theme presents favourable reasons to promote sustainability. Unlike the barriers, these reasons are helpful to the participants in taking initiatives for sustainability. The data produced top leadership support as a favourable reason to advance sustainability.

Top Leadership Support

Data revealed top leadership support as one of the reasons to take sustainable initiatives. As the focus was to explore the supportive reasons, this theme presented that the participants conceptualized sustainability to the extent to incorporate it in HEIs' functions. This reason was shared in three different aspects. The first aspect was the cooperation between the participants and the top leadership, as it was considered a fundamental step.

The most favourable thing is the cooperation of the person who is at upper position. If he is with you on clear decisions, then I think you are the lucky one. Otherwise decisions become useless, (P-2).

The quote states that top leaders' support in endorsing participants' decisions creates enabling and favourable environment for sustainability. It also indicates that participants have a visionary approach in making such decisions that are accepted by their seniors. Thus,

cooperation not merely endorses the decisions but also creates a sense of ownership among the participants where optimum efforts are attempted to realize the initiatives into practice. The second aspect was the teamwork. Hierarchically, cooperation was between the top leadership and the participants, while teamwork was between the participants and students.

The most favourable factor is our teamwork. Our main power, students, which will be helpful and which will set the environment to get the objectives. Teamwork and this power will be helpful to achieve maximum of the objectives, (P-1).

Based on excerpt 6, the mainstream function of teaching and learning is carried out with the cooperation of participants and students. It is vital to state here that the participants are academics. Thus, academics and academic administrators are fully applicable here. As the students at HEIs are intellectual learners who set their learning targets with the facilitation of academics, leadership support to encourage academics and students help them excel in their duties. Thus, providing enabling environment to them to achieve desired academic objectives is attributed to top leadership support for sustainability of academic activities.

The final aspect of top leadership support was motivation. The participants expressed the benefits of an influencing leader's motivation. This characteristic inspired the participants to work more and work harder to promote sustainability, as stated:

Motivation from... my administration. Because why? Why? Because I have been asked to deliver a lecture on environmentally sustainable solutions to the high officers of Pakistan. So, this is a kind of motivation. There are people who listen to us. And I have given so many interviews to T.V. X, Y, Z, and on the occasions like Earth Day and Environment Day and all those things. So, it is a kind of encouragement. I mean they are thinking about the environment, (P-9).

In the above example, motivation is stated as top leadership support to make sustainable initiatives, such as highlighting the importance of "environmentally sustainable solutions." Observing critically, this aspect indicates leadership value the efforts of participants. This favourable reason is linked with the role of university (first theme) where leadership, though partially, tries to bridge the gap between the academia and society. Hence, leadership motivation encourages participants to devise material to train the lay people on sustainability.

The above discussion concludes that top leadership support was identified as a favourable reason comprising three aspects: cooperation, teamwork, and motivation. The support can likely be in the form of appraisal and encouragement upon the accomplishment of a project or on the continuity of some good practices. To put it simply, the link of top leadership support can be traced in the strength of trust that is a fundamental step for powerful professional relationship. Hence, top leadership supports the participants to play an influencing role for sustainability. Comparing the barriers and favourable reasons for promoting sustainability, it is evident that barriers are greater in number and magnitude to affect the efforts for sustainability. Consequently, the role of universities is influenced due to the barriers to sustainability.

Conception of Sustainability

Data analysis on the conception of sustainability is in response to the final research question and part of the conceptual framework. Data shows participants conceptualized

sustainability in three ways: sustainability as an inter-generational issue, maintaining environment, and quality of education. These conceptions are given below.

Conception of Sustainability: Sustainability as an Inter-Generational Issue

The participants expressed sustainability as not only a vital and integral part of the current generation but also inevitable for the coming generations, as stated:

I teach environmental sustainable development but for me sustainability, any development that can be sustained over longer hauls. I mean not unplanned technological atmosphere, not unplanned development. The development that can meet the needs of the present generations without compromising the ability of the future generations to meet their own, (P-10).

The excerpt states three things under the auspices of intergenerational conception: planning, intergenerational, and autonomy. Firstly, long-term but implementable effective planning at decision making level that can create enabling environment to achieve sustainability and sustain development, as effective planning signifies sustainability. Secondly, sustainability is an intergenerational issue where present and future generations are equally important and assumed to have equal opportunity with regard to access and use them effectively. This is how intergenerational issue of sustainability needs effective and long-term planning. The phrase, “without compromising the ability of the future generations,” puts a great responsibility on the current generation in general to use natural resources minimally and preserve environment as much as possible and policy makers and decision makers in particular to visualize sustainable policy, make implementable planning and take initiatives to spread awareness engaging every citizen in realizing responsibilities at national level to contribute towards global efforts for sustainability.

Thirdly, the excerpt states the needs of the present and future generations. An important question arises while analysing this point on who will determine the needs and what these needs will be. In response to this, the quote links with the above two points: effective policy and planning and enables every individual to feel their responsibilities. It is also vital to state that these needs vary from country to country, as philosophical foundations of a nation do so. That is how inter-generational issue links with the philosophical perspective as how sustainability should be perceived epistemologically and how needs should be determined are determined philosophically. This sub-theme expressed participants’ views in favour of sustainability and sustainable development. Thus, participants are well-aware of sustainability conception as an intergenerational issue that emphasizes the need to maintain a balance in the use of natural resources and its importance for present and future generations.

Conception of Sustainability: Sustainability as to Maintain the Environment (Eco-System)

The second conception on sustainability was found to be the one related to maintaining the natural environment that can be conceptualized as eco-system. This conception is implicitly linked with long-term objectives, as sustainability is an inter-generational issue that needs to preserve the natural environment and provide equal opportunities to the present and future generations. Thus, the value of environment is signified by revisiting our actions towards nature, as stated:

There should always be a scope for expansion and there should be least disturbance created with respect to environment.... Overall, sustainability means to implement new ideas on a running system without disturbing the environment, (P-6).

Based on the excerpt, participants expressed that the system of managing higher education activities should be transformed enough to accommodate new, innovative and cutting-edge ideas such as sustainability. In addition, there should be least disturbance towards the natural environment because it provides all the resources such as water, gas, variety of nutritional ingredients/grains, raw materials and genetic resources to sustain life on earth. Therefore, any human activity directly or indirectly affects the environment and consequently causes imbalance in economy, ecology and society. In this process, biological diversity and ecological integrity that by definition is assumed to help us does not do so. The possible reason to this gap indicates lack of training, as the extract states, “there should be least disturbance...to environment.” That is how lack of nurture affects the nature.

The quote presents lack of adaptability of higher education management model at PPU. Since adaptability enhances the process of diffusing new ideas in existing ones, its absence is ensured by the quote itself. Thus, it further displays behavioural lack of preparation or lack of interest from the decision makers. It also points out lack of cooperation and collaboration with respect to advancing new ideas. However, participants expressed top leadership support in taking initiatives for sustainability. When triangulating the findings of top leadership support and lack of preparedness, it becomes evident that PPU are adaptable as far as it is concerned with the accomplishment of activities; but there is lack of adaptability as long as the efficiency of management is concerned. It implies that the university system should be updated in terms of preserving the natural environment for sustainable development.

Conception of Sustainability: Sustainability as Quality of Education

This sub-theme was found as the third way of conceptualizing sustainability: the quality of education. Since quality assured the control of the entire system of higher education, it was interpreted in connection with the notion of sustainability. Therefore, it showed that sustainability was found at PPU in the form of quality assurance programmes, as stated:

The thing is that in quality assurance program the things should be under control. When the things are under control you will be able to get the good things. Good things go to the stakeholders, students.... the voice of the students that will be quality assurance that is the sustainability, (P-7).

The quote indicates that the processes of the entire higher education system such as teaching, learning, assessment and administration are accomplished within the purview of quality assurance programmes. The participants expressed their views in support of maintaining good things following recommended procedures. Good things imply learning and training the graduates. As quality assurance programmes monitor and evaluate higher education functions, organizing and controlling of processes are looked after by relevant stakeholders. Resultantly, participants and students coordinate in terms of fulfilling the academic activities (teaching, learning and assessment) and adhering to quality standards of these activities.

This conception of sustainability indicates teamwork of relevant stakeholders: students, academics and academic administrators. In addition, this coordination was considered in maintaining the standards of higher education. This conception also points out that academia understands the needs of the market in terms of employability of graduates and qualified

students, as the quote states, “Good things go to the stakeholders.” A distinguishable point between this conception and the above two is that here the focus is on academic sustainability that is expressed as quality assurance of higher education, while the above two conceptions state planning and decision-making aspects of sustainability. Thus, it is concluded that sustainability is found in practical forms under auspices of quality assurance programmes.

Participants’ responses indicated that they are well-aware of the significance of sustainability for PPU. Based on responses, sustainability can only be realized when the university as a system envisages a long-term vision to provide the future generations with sustainable environment, as the system performs its activities to achieve the aims and objectives of the vision. Comprehending these three conceptions in line with the perspectives on sustainability, it becomes evident that inter-generational issue links with the philosophical perspective as it is determined philosophically that how sustainability should be perceived epistemologically; while eco-system relates to the scientific perspective as the eco-system is badly affected by the scientific revolutions (though scientific inventions are blissful, adverse effects of industries in polluting natural environment have become evident especially by the 20th century) and quality of education is quite relevant to the practical and complex social problems is a normative practice. Collectively, these ways of understanding show the comprehensive view of the participants on sustainability.

Discussion and Implications

The aim of this study was to gain deeper understating of academic administrators on sustainability conceptualization. Similar to previous studies, the findings have shown that sustainability conceptualization takes place at PPU in a systematic way. It is meant that firstly the role universities are playing determines whether the universities work in an elite form or they are engaged with the societies (Holland, 2009; Hoyt & Hollister, 2014). Secondly, the factors present the pace of universities to promote sustainability (Moore, 2005; Orr, 2004). Thirdly, the factors help in understanding sustainability positions/perspectives (Wright & Wilton, 2012). Finally, this understanding transforms the current role of universities with reference to sustainability. Thus, the conceptual framework devised in this study helps to understand sustainability conceptualization in a procedural way.

Based on the findings, PPU are playing partially their modern role to promote sustainability (Gough & Scott, 2007), as the relationship of university and community is at embryonic phase. The prevalent role of PPU requires them to take sustainable initiatives such as to bridge the gap between university and society with the aid of leadership. In addition, revising and integrating curriculum has not reached the level that could train university graduates who can feel ownership and care towards the protection of natural environment. These findings recommend bringing about structural changes in the vision and mission to engage and build a strong relationship with society. With reference to curriculum and its utility in sustainable development the findings imply to focus on community and society-based research projects. To put it simply, PPU are needed to do both the basic and applied research to play their role to create sustainable societies. Thus, the implications of this study focus on academic administrators to comprehend sustainability so that they can perform their duties and play their roles with reference to education for sustainability.

Findings on the barriers to sustainability showed three barriers: lack of finance, training, and awareness. These findings showed negligence towards sustainability efforts that caused lack of sustainable initiatives. These findings are consistent with the study conducted by Walton et al. (2000). Walton et al. (2000) divides the barriers into two categories, macro and micro level barriers, respectively national and institutional level barriers. Since this study was conducted at institutional level; it can be linked with the results of institutional, leadership and

personal barriers. Walton et al. (2000) derived that lack of sustainability at HEIs was mainly due to the lack of commitment and interest of institutional leaders. Removal of these barriers is replaced with opportunities and drivers for sustainability. These findings also link with the argument of Sibble (2009) who stated that these barriers can be minimized if decision makers are well-informed on sustainability. The study conducted by Wright (2010) also showed more or less the same results in the context of barriers to sustainability.

Based on the findings, it can be articulated that issues at macro/national and micro/institutional level were more or less similar. However, in Pakistan context, they are applicable in different scenarios. For instance, lack of fund based on this study is a barrier. But lack of managing funds seems a bigger barrier, which is likely because of leadership barriers and/or personal ones, than the lack of adequate funds. There is a common point between this study and the supportive studies that is the similar nature of the issue has been addressed. Thus, the concept of sustainability gains strength at global level at HEIs. However, at national level, these results may differ to some extent subject to the availability of different kinds of capitals or the ways of translating the policy into practice. More specifically, the results from the study by Wright (2010) are more in line with this paper because of the commonality of population and sample selection than that of Wright and Wilton (2012)'s study. These findings imply that sustainability is not promoted at the national level (i.e., lack of sustainable policy at PPU's). In addition, the findings also imply that there is a need for committed executives at top management level of the universities who can convince the decision makers at national level to remove these barriers.

The findings on favourable reasons to sustainability showed top leadership support that constitutes three aspects: cooperation, teamwork, and motivation. The support can be in the form of appraisal and encouragement upon the accomplishment of a project or continuity of good practices. The link of leadership support can be traced in the strength of trust for professional relationship. These results are in part consistent with the study conducted by Mora and Martin (1998), since the barriers and favourable reasons are controversially related to each other. In short, if barriers are dominant then favourable reasons would not work, and when favourable reasons are dominant then barriers would somehow be minimized. Thus, these reasons take the form of drivers and opportunities depending upon the context. The cross-analysis of barriers and favourable reasons show a greater number of barriers and only one driver. Therefore, barriers remain dominant and sustainability promotion remains underestimated. This implies the need for enhancing leadership support in engaging multi-stakeholders at multiple levels to combat with the persistent barriers to sustainability.

Findings on sustainability conceptualization showed that participants perceived sustainability in three aspects: sustainability as inter-generational issue, sustainability as maintenance of ecosystem, and sustainability as the quality of higher education. These findings are linked partially with the results found by Wright (2010) who conducted a study on the conceptualization of presidents of Canadian universities. The scope of environmental issues in Pakistan may differ from the scope of those in Canada; however, their existence cannot be denied. Based on the findings, it can be said that participants are well-versed with the conception of sustainability. However, they face limitations that could not support them to enhance sustainability. In addition, there is a need to explore further what the efforts are which participants make apart from their job descriptions or institutional requirement, i.e., the efforts on voluntary basis. The findings imply that at academic administration level, sustainability is conceptualized enough to take sustainable initiatives.

With regard to the use of semi-structured interviews, it is evident that conceptual framework was designed to analyse the data. However, themes were not predetermined, as we interviewed the participants in an inductive way. This way helped us to reduce oversight and ensure the uncovering of relevant aspects of sustainability conceptualization. Moreover, the

selection of sample supported us to gain their accounts of their experience with sustainability. These findings can be transferable but cannot be generalized as the nature of this study was purely qualitative. In addition, this is an initial study at PPU that aimed to explore academic administrators' understanding of sustainability, there is a need to extend the sample selection on the subject of sustainability.

We explored PPU's academic administrators' understating of sustainability through semi-structured interviews and documents. Data were analysed based on conceptual framework where participants were found well-versed with sustainability. PPU were found playing their role partially in connection with its promotion. However, there is still a long journey ahead to practically understand and embed sustainability in PPU's functions. Though top leadership support was in favour to promote sustainability, lack of finance, training and awareness prevented the participants to make sustainable efforts. Thus, the movement towards sustainability is at very low pace and barriers seem more perilous when universities fail to bring positive social change into society. The study offers possible solutions to be taken at policy level such as revising the concerned policy and communicating it at PPU, as emergence of barriers in the context of sustainability conceptualization is very much insightful and concerted combined efforts are needed to fix these issues. To better understand how other stakeholders (faculty and students) perceive sustainability to make efforts to promote it is a subject of further investigation. Further studies are also required in other contexts such as understanding of Pakistan Private Universities' top management on sustainability. Last but not least, it is implied that participants' conceptualizations of sustainability can only be translated into effective practice if PPU's leadership is committed and interested enough to convince policy makers to revise the policy at national level and create a favourable environment to take sustainable initiatives—a serious need in Pakistan.

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