

# Barriers to sustainability at Pakistan public universities and the way forward

Barriers to sustainability

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## Abstract

**Purpose** – Sustainability has globally become a mantra to address complex and unprecedented survival, social, political and peace issues. Higher education institutions bear responsibility to address them. This paper aims to explore barriers that Pakistani public universities (PPUs) face in embedding sustainability at their campuses. This paper also offers potential opportunities to take initiatives to minimize barriers and move towards a sustainable future.

**Design/methodology/approach** – This paper is based on case study approach, and data were gathered through interviews and documents. Interviews with 11 academic administrators were conducted to gain deeper understanding on issues of governance and its influence on sustainability. Data were analysed using thematic analysis that created thematic map/model.

**Findings** – Key findings include, firstly, that majority of participants think poor governance is the biggest issue in demoting sustainability. This barrier causes an array of interconnected barriers. Secondly, participants strongly associate unsustainability with lack of institutional change and training. Finally, lack of resources was the most frequently articulated barrier. Findings provided a rationale to propose suggestions to promote sustainability.

**Originality/value** – Developed countries are leaders in promoting sustainability, whereas developing countries are laggards. Pakistan, a developing country, does not have substantial research to reveal the barriers PPU are facing to promote sustainability. This paper is an attempt to address research gap in identifying barriers to sustainability.

**Keywords** Sustainability, Lack of training, Lack of resources, Lack of sustainability, Thematic analysis, Pakistan

**Paper type** Research paper



## 1. Introduction

The world is facing pressing, complex, uncertain and unprecedented challenges of survival, peace and prosperity owing to social, political and environmental issues. The subject of sustainability has become a mantra in addressing these issues and act a catalyst to transform systems for sustainable future (Chiara *et al.*, 2018). Since the convention of

Stockholm Declaration (UNEP, 1972) and greater emphasis on Brundtland's (1987) report to the application of sustainable development goals (SDGs) (Rosati and Faria, 2019), this mantra has permeated in every field of life from business to public policy and international development. Thus, the concept of sustainability has not only been extended to goods and services but also to ways of living. The way organizations adapt themselves to embed sustainability in their functions matters a lot in proposing and finding solutions for sustainable future and development (Husted and Sousa-Filho, 2017; Ramisio *et al.*, 2019).

Higher education institutions (HEIs) are particularly relevant and can play key roles for implementing sustainability by virtue of their responsibility to train and develop future leaders and policymakers (Fadeeva and Mochizuki, 2010; Scott, 2018). Thus, HEIs have been engaged in an array of sustainability efforts such as signing declaration, devising policies, implementing action plans, focusing on teaching and learning, conducting assessment and reporting, governing institutions strategically, managing operations sustainably, engaging with communities and restructuring of curricula. However, HEIs in different countries weighed sustainability differently. For instance, HEIs of six countries from Central Europe (Dlouhá *et al.*, 2017), 60% of HEIs from the entire of Europe, while 40% of HEIs from North America and Australia made efforts for sustainability (Kapitulčinová *et al.*, 2018). Lozano *et al.* (2015) found about 80% of HEIs from Europe, 16% of HEIs from America and 2% of HEIs from Africa and Asia focused on education for sustainable development. These statistics show that the status of HEIs in Asia in implementing and promoting sustainability is under-analysed despite serious need of creating and improving knowledge-based societies and economies (Scott, 2018).

Pakistan being the second most highly populated country with 203 million population in South Asia desperately needs sustainability at HEIs to take the nation out of the economic, political and social hardships. This calls for an identification of impeding factors for sustainability at Pakistan public universities (PPUs), as universities' contribution towards sustainable education, innovation and development is dawdling to be visible (Shiel *et al.*, 2015). Thus, it is questionable whether HEIs are prepared to welcome sustainability and if HEIs are hampered by any constraints, what type of these constraints are. Academic administrators being in decision-making position bear a supervisory and leadership role to set goals and make efforts to permeate sustainability from top to various organizational levels (Loorbach, 2007; Ramisio *et al.*, 2019; Shattock, 2013). However, the area of academic administrators' efforts for sustainability is less investigated at PPU that exhibit a knowledge gap. This study fills that knowledge gap by exploring barriers that PPU face in embedding sustainability at their campuses.

## 2. Literature review

Integration of sustainability at HEIs depends on factors, elements, reasons and opportunities that encourage its promotion. Most of the literature on promotion of sustainability categorizes these factors as drivers and barriers (Blanco-Portela *et al.*, 2017; Larrán Jorge *et al.*, 2015; Verhulst and Lambrechts, 2015; Wright and Wilton, 2012). Sustainability in Pakistan is under-analysed and least investigated. Thus, this study specifically is about the factors that hamper HEIs from engaging in sustainable initiatives. The following sub-headings present relevant literature on hindering factors of sustainability in clustered form.

### 2.1 Governance, sustainability and higher education institutions

Traditionally, HEIs have been governed and administered where governance is a process of social coordination under which different actors adhere to collective decisions of

organization (Enders, 2015). This process determines objectives, sets standards, monitors planning implementation and negotiates with organizational actors to achieve objectives (El-Khawass, 2010). Thus, governance makes efforts for devising policies and implementing them to decrease the risk to change and plan for emergent situations (Enders, 2015).

Governance and sustainability at HEIs are mutually related to each other (Krizek *et al.*, 2012; Soini *et al.*, 2018). It is governance that fosters stakeholders to take initiatives for sustainability. Thus, sustainability can only be integrated in HEIs' functions if governance process is strong and effective enough to transform institution (Lupova-Henry and Dotti, 2019). According to Disterheft *et al.* (2015), integration of sustainability in HEIs requires a participatory and multi-level stakeholders' approach. Kemp *et al.* (2005) stated that sustainability being "a socially instituted process of adaptive change" requires four key elements of governance: sustainability policy is integrated; objectives, criteria, rules and indicators for sustainability are set; information flows periodically and achievements for sustainability are incentivized; and sustainability is considered as an innovation to permeate in the system. That is how sustainability being a paradigm shift demands a transitional process (Loorbach, 2010), to be implemented in addressing complex issues of sustainable development (Brinkhurst *et al.*, 2011; de Lange, 2013). This review reveals that if sustainability and sustainable development are to be met, then governance of HEIs should be improved. It also demands that an enabling environment should be provided to the key stakeholders. Despite the critical role of governance for sustainability, there is a lack of initiatives in governing HEIs for sustainable development. Thus, there is a need to investigate the role of governance to better understand how challenges in adopting sustainability are left unattended.

The governance of PPUs is done by the Higher Education Commission (HEC) of Pakistan (Pakistan, 2001). This commission is meant to promote sustainability with the aid of its devised structural units that look into various areas of higher education at PPUs. The commission does not only produce and provide the policies, regulations and guidelines but also allocates resources, enhances institutional development and ensures quality at PPUs (Pakistan, 2002b). Despite the efforts of HEC, PPUs lag behind in promoting sustainability at their campuses. This lagging role in sustainability is perhaps because of governance of PPUs that raises the question of how governance promotes sustainability. Thus, conceptually, governance leads the journey towards sustainability that is illustrated in the conceptual framework.

### *2.2 Institutional change and sustainability*

Integration of sustainability into HEI's functions relies on institutional preparedness. Literature on institutional change proposes initiatives, strategies and policies to combat with the issues of lack of interdisciplinarity, academic freedom and resources (Blanco-Portela *et al.*, 2017; Christensen, 2009; Ferrer-Balas *et al.*, 2008). These issues have been unaddressed owing to ineffective management of HEIs (Cotton *et al.*, 2009; Moore, 2005). Change is inevitable, but creating supportive environment for change has faced challenges. Researchers found that institutional change is a critical factor, particularly in aspects of HEIs' governance, culture and structure (Baker-Shelley *et al.*, 2017).

Researchers have developed models and frameworks to promote sustainability with the aid of institutional change. For instance, Velazquez *et al.* (2006) proposed a model to develop sustainable university focusing on education, research, outreach and partnership and campus sustainability. Similarly, Ferrer-Balas *et al.* (2009) developed the "framework-level-actor" approach to assess the potential of HEIs' strategies for sustainability. Loorbach (2010) used transition management theory to deal with complex societal transitions to create

sustainable societies. [Stephens and Graham \(2010\)](#) also used transition management theory to navigate the path for future empirical work. Despite having taken these approaches, HEIs have failed to produce positive responses in embedding sustainability into their functions. This knowledge gap demands to explore the role of institutional change to promote or demote sustainability at HEIs ([Ferrer-Balas et al., 2009](#); [Lee et al., 2013](#)).

[Blanco-Portela et al. \(2017\)](#) reported that weak management and organization hinders change process. It has three critical implications. Firstly, lack of institutional change strengthens stagnation of thought where innovative ideas cannot take place. Secondly, internal organizational structures cannot be revised and existing structures become unable to create space for sustainability. Many scholars ([Holmberg and Samuelsson, 2006](#); [Martin and Chen, 2016](#); [Moore, 2005](#)) are of the view that managing change effectively, revising and operationalizing organizational structure needs to be conducted to secure funds and create cooperative environment between academic administrators, faculty, staff and students. The review shows that there is lack of such ways/methods which can enable HEIs to transform their functions. Finally, if change is not institutionalized, then sustainability cannot be rationalized in teaching, learning and research.

Institutional change for sustainability can ensure professional development of faculty and staff ([Tilbury, 2011](#)). However, studies ([Bukhari et al., 2021](#); [Hoover and Harder, 2015](#); [Lee et al., 2013](#); [Ralph and Stubbs, 2014](#)) have shown that HEIs have been rigid in tandem with the need of change. This promotes disconnectivity between different networks and partnerships to promote sustainability ([Blanco-Portela et al., 2017](#)). Moreover, when connections of academic administrators, faculty, staff and students are weak, organizational learning is undermined ([Cebrián et al., 2013](#)). [Thompson and Green \(2005\)](#) found lack of institutional change as discouraging force for sustainability. Literature presents it as a constraint for sustainability where HEIs not only faced disharmony for sustainability agenda but also showed lack of commitment. In Pakistan, sustainability is under-documented and under-researched. Consequently, sustainability issues are not addressed as it needs attention. This requires exploring how PPU's respond to the question of institutional transformation for sustainability.

### *2.3 Capacity building and sustainability*

Capacity building refers to the process of training that is arranged to professionally develop relevant stakeholders such as academic administrators, faculty and staff. These trainings enable them to achieve, update and retain the knowledge, skills and attitudes about their day-to-day job responsibilities and activities ([Naeem et al., 2019](#)). Unfortunately, this is the least bothered and the most needed factor in promoting sustainability. [Blanco-Portela et al. \(2017\)](#) found that about 70% issues in integrating of sustainability in HEIs' functions are only because of lack of training for sustainability. It indicates needs, intensity and seriousness of training.

Trainings under human resource management are carried out to spread awareness and equip individuals with required skills and competence. According to [Brinkhurst et al. \(2011\)](#), academic administrators plan, maintain and coordinate initiatives to promote sustainability. [Fernández-Manzanal et al. \(2015\)](#) reported that academic administrators' capacity building is vital to train the students. [Verhulst and Lambrechts \(2015\)](#) found that capacity building depends upon the intention of academic administrators as it enables them to have profound value and understanding of sustainability. Thus, it is established that lack of training hampers them to comprehend the underlying reasons for barriers to sustainability and their relationship.

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The above reviewed literature is from the developed countries, whereas the literature on the subject from developing countries such as Pakistan is scarce. [Kates et al. \(2001\)](#) emphasized the urgency of addressing sustainability issues in developing countries in these words:

Generating adequate scientific capacity and institutional support in developing countries is particularly urgent as they are most vulnerable to the multiple stresses that arise from rapid, simultaneous changes in social and environmental systems (p. 642).

This argument implies two points. Firstly, it rationalizes that sustainability is equally needed for developed and developing countries. Secondly, if developing countries prepare themselves, then the main issue of finance can easily be tackled. [Sibble \(2009\)](#) found that HEIs can only promote sustainability if appropriate capacity building programmes are arranged. The development and initiation of SDGs is a bead of this chain that can only be ensured if trainings for sustainability are carried out continuously ([Gusmão Caiado et al., 2018](#)). The review establishes that sustainability can only be promoted if academic administrators understand its worth and have skills to engage every stakeholder to take sustainable initiatives. It also presents that its lack discourages sustainability and prevents it to thrive at HEIs.

#### *2.4 Financial resources for sustainability*

Financial resources refer to the resources that support sustainability at HEIs. [Blanco-Portela et al. \(2017\)](#) point out resources as the second critical barrier in comparison of capacity building. Its importance can be understood by Hooft's (2009) argument which states that universities should play their role "in a world beset with environmental problems, political conflicts and the 'clash of civilizations' by preparing students for leadership roles that would be sensitive to the needs of others and to the demands of cultural tolerance" (p. 86). The contemporary university is operated on a general slogan that university is not funded for sustainability. [Shephard \(2010\)](#) reports, "universities can only do what they are funded to do" (p. 17). [Wright and Wilton \(2012\)](#) found that safeguarding the built environment of campuses was prevented from taking sustainable initiatives owing to lack of finance. This shows that universities face financial constraints to set priorities and directions in addressing sustainability issues. The literature ([Abad-Segura and González-Zamar, 2021](#); [Filho et al., 2019](#); [Ramisio et al., 2019](#); [Walwyn, 2020](#)) on finance for sustainability show that sustainable efforts pay off in the long run. Generally, this is possible in the developed countries, as the developing countries consider this as an excuse to promote economic development ([Cobbinah et al., 2015](#)). Perhaps the developing countries expect short-term returns from sustainability as viable owing to pressing economic conditions. Thus, budget constraints hamper sustainability promotion. [Davis et al. \(2016\)](#) argued that governance, capacity building and institutional structure cause budget cuts at HEIs owing to new public management. Another reason for budget cuts is linked with rapidly increasing trends of marketization and privatization, as states devise stringent policies to allocate funds and provide resources to HEIs ([Bouillard, 2016](#); [MacFarlane, 2019](#)). Thus, it raises a question to know more about financial resources for sustainability.

Apart from the states' reduced allocated budget, there is a lack of external funding, especially to promote sustainability at HEIs ([Blanco-Portela et al., 2017](#)). Lack of external funding is linked with capacity building of academic administrators ([Baum and Bartkowski, 2020](#)). HEIs having well-trained academic administrators can secure maximum external funds to promote sustainability by winning research grants and collaborating with industries with the aim of long-term success and sustainable development ([Ashton et al.,](#)

2017; Gebreiter, 2021). Moreover, HEIs having lack of such well-trained academic administrators cannot realize their potential to meet their financial needs. The complex relationship of capacity building and financial support is a key factor for sustainability. Such scenarios widen the gap between leaders' motivation and their role to promote sustainability (Ramos *et al.*, 2015). This is why financial support is critically important in promoting sustainability. These complex circumstances place a demand for exploring the role of financial resources in promoting sustainability at HEIs, especially in a developing country, Pakistan.

2.5 Other barriers to sustainability

The above reviewed literature shows that governance is one of the biggest and most critical factors for sustainability. If barriers to sustainability are considered, it becomes evident that there are minor and major barriers. These cannot be completely covered here so an attempt to categorize them as minor barriers apart from the ones discussed earlier was done. Under minor barriers, there are lack of personal values in comparison to organizational values, individual understanding on sustainability and lack of interest and motivation (Holmberg and Samuelsson, 2006; Martin, 2015; Moore, 2005). These barriers are a mixture of internal and external motives (Blanco-Portela *et al.*, 2017). It is assumed that the barriers at system level are of great importance, and if these barriers are minimized, then the minor barriers can be removed accordingly, as transformation comes from top.

Barriers to sustainability are interrelated to make change difficult (Thomas, 2004; Velazquez *et al.*, 2006). Moreover, these barriers vary from region to region or from country to country depending on circumstances, internal and external pressures and governance system (Lozano *et al.*, 2015). Thus, variability in setting priorities determines the efforts to deal with these barriers (Clarke and Kouri, 2009). These barriers prevent HEIs' academic and operational activities (Arnon *et al.*, 2015).

2.6 Conceptual framework of barriers to sustainability

Based on the review, a conceptual framework (Figure 1) that exhibits the qualitative nexus between the governance and barriers to sustainability was proposed. It also shows that barriers mar sustainability. It can be conceptualized that governance is assumed to promote sustainability. The literature shows that poor governance causes lack of institutional change that further causes lack of capacity building and lack of finance. These barriers collectively affect sustainability. The proposed framework works as a ground to explore barriers to sustainability. As the literature (Higgins *et al.*, 2020; Journeault *et al.*, 2021) shows that HEIs

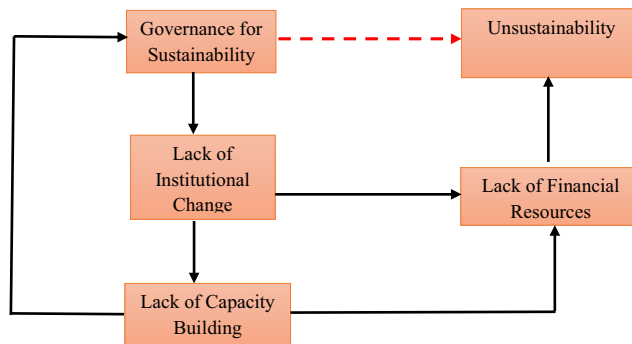


Figure 1. Conceptual framework of barriers to sustainability

which started their journey at the right time are now measuring sustainability outcomes in quantitative forms. On the other hand, HEIs that have not yet completely started to value sustainability and sustainable development are still struggling with the qualitative methods. The present study is such an example. The arrows show the directional criticality of these barriers to sustainability. This framework will be beneficial in analysing the data. The red broken line needs transformation of governance to promote sustainability.

### 3. Research methodology

This study aimed to explore barriers to sustainability in one of the South Asian countries, Pakistan. Sustainability at PPUs is desperately needed owing to excessive devastating condition of environment, social and ethical values and economic status (Batool *et al.*, 2013). Thus, the study aims to clarify governance barriers to sustainability in Pakistan.

#### 3.1 Research design

Sustainability at PPUs is poorly documented, under-analysed and under-researched. The dimensions and patterns of sustainability are not yet developed, and it is at an infancy phase (Ryan *et al.*, 2010). Thus, this study was conducted qualitatively using case study design to explore the viewpoints of academic administrators. Yin (2009) described a case study as “an empirical enquiry that investigates a contemporary phenomenon within its real-life context; especially when the boundaries between phenomenon and context are not clearly evident” (p. 18). As sustainability is least investigated, the implementation of case study contextually supported authors to understand the nuances and unheard voices about its issues. It also enabled the authors to interpret its real status at PPUs, identify its barriers and build up a model of how it is marred. Contextually defining case for the present study, PPUs were considered as a case based on their homogenous characteristics such as the way of their governance and regulation of academic functions and activities. Additionally, the Government of Pakistan issues charter to every university. Thus, culturally and organizationally, all PPUs share similar, uniform and common characteristics to regulate their functions. The research questions under case study were on what, why, how and where the phenomenon took place in natural way, and authors explored the issue in-depth, without controlling the situation, to better understand sustainability status at PPUs.

#### 3.2 Selection of setting and universities

Data for this study were collected from two different cities of Pakistan using semi-structured interviews and documents. The authors chose two metropolitan cities of Pakistan: X and Y. The rationale to select these cities is based on: Firstly, the greater number of universities and state-of-the-art laboratories and libraries exist there. Secondly, these cities have the capacity to accommodate students and faculty greater than other cities. Thirdly, the availability of and access to modern transport enable students, staff and faculty members to commute on daily basis. Fourthly, these cities are considered as a hub for education and employment. Finally, law and order situation in these cities is relatively more favourable for sustainability than others. Thus, these cities were selected for this study.

PPUs from X and Y cities were selected based on three criteria. Firstly, the sheer percentage of enrolment (86%) at PPUs, whereas the Pakistan private universities enrol only 14% of the same cohort (Statistics, 2015). Secondly, PPUs present diversity with regard to students and programmes. Finally, PPUs have developed state-of-the-art infrastructure that may support sustainability. Thus, these factors substantiated to conduct this study at PPUs.

*3.2.1 Sampling technique and sample size.* The initiatives for sustainable development at PPUs are carried out by decision-making bodies such as board of studies, board of faculties

and academic council. These bodies regulate academic activities, as their heads are either head of the departments, dean of the faculty and director of the institute or the principal of the college within the premises of PPUs. They play a decisional and leadership role in teaching, learning, research and managing administrative activities. Thus, the term “academic administrator” is used for them in this study. Despite their pivotal role, sustainability integration in teaching, learning, research, outreach programmes and operations is under-developed and poorly documented (Nadeem and Hameed, 2006). Thus, these academic administrators were selected based on purposive sampling technique (Creswell, 2007). Following characteristics (Table 1) further qualify their selection.

Table 1 shows that the participants had relevant characteristics and duties to enlighten the authors on sustainability. The total population of PPUs administrators in cities X and Y was 37. This study being qualitative and initial in Pakistan aimed to better understand the status of sustainability at PPUs. Thus, the sample size was kept small. Out of the total population, 20 participants were contacted from nine PPUs, but 11 showed their interest to participate in the study. These participants belonged to a homogenous group of PPUs being a case based with regard to their governance and regulation of academic functions and activities. Though Table 1 shows different positions as the department head, dean of faculty, institute director or college principal following their institutional nomenclature but their responsibilities were similar for governance and sustainability.

*3.2.2 Research instrument.* Qualitative case study dictated the authors to use open-ended semi-structured one-on-one interview and documents to draw contextual understanding of the participants on the issue, as Bailey (2007) said that such interviews work as conversation with a purpose. The rationale of using open-ended questions made the authors confident to open up the discussion (Esterberg, 2002). These open-ended questions facilitated the participants to share their views to dig the issue of sustainability. According to Kitzinger (1994), interview method can be used when the understanding of complex issues is unexplored. The issue of sustainability integration at PPUs was explored with respect to its impeding factors. Moreover, exploring the status of sustainability was not only complex as an initial study in Pakistan context but also difficult to conduct in a quantitative way. Thus, this study is situated with neither positivist nor post-positivist approach; rather it aligns with exploratory approach. The interview to collect data was rationalized with the participants’ positions and their characteristics for selection in this study (Table 1).

Another method, document analysis, was used to collect data. According to Bogdan and Biklen (1998), documents provide the information on how an organization communicates with its stakeholders to regulate its functions. Use of documents with interview made it convenient to reach findings. The participants provided the authors documents during interview sessions. Thus, these documents were organized to align with the interview data used in the analysis.

No.	Characteristics	Illustration (relevant duties/roles)
1.	Qualification	PhD or post doctorate in the field of sustainability
2.	Academic position	Minimum Assistant Professor – teaching learning and research
3.	Academic administrative position	HoD, dean, director or principal – playing a bridging/mediating role between top management and faculty
4.	Experience in academic and administrative positions	Minimum three years and maximum 15 years – have a thorough understanding of PPUs’ working culture/system
5.	Leadership role in decision making bodies	Giving input in Board of Studies, Faculties and Academic Council to regulate and improve departments and faculties

**Table 1.**  
Characteristics of the participants



*3.2.3 Procedure of data collection.* Firstly, the authors browsed the worldwide web of regulating authority, HEC of Pakistan (Pakistan, 2002a) to identify the participants. Then the authors approached them via cell-phone and email to update them that their ideas and experiences on governance, sustainability and its barriers would be sought. A total of 11 participants showed their interest to take part in this study. The authors developed, shared and followed the protocol to conduct interviews. Each interview lasted for 25–30 min to record the information in audio form on the following questions. The authors used the argument that unjustifiable treatment of human beings towards the natural environment/resources for the first time in history seriously needed to be revisited. Educational institutions, especially HEIs' governance, have the capacity to play transformational role for sustainability. Based on this argument, the authors developed the following research questions:

*RQ1.* What is the status of governance for sustainability at PPU's?

*RQ2.* How has governance influenced sustainability at PPU's?

During interviews, the participants provided the authors documents to explore further about sustainability in Pakistan. These documents supported the authors to reach how barriers affect sustainability. The documents were triangulated with interviews in the analysis process.

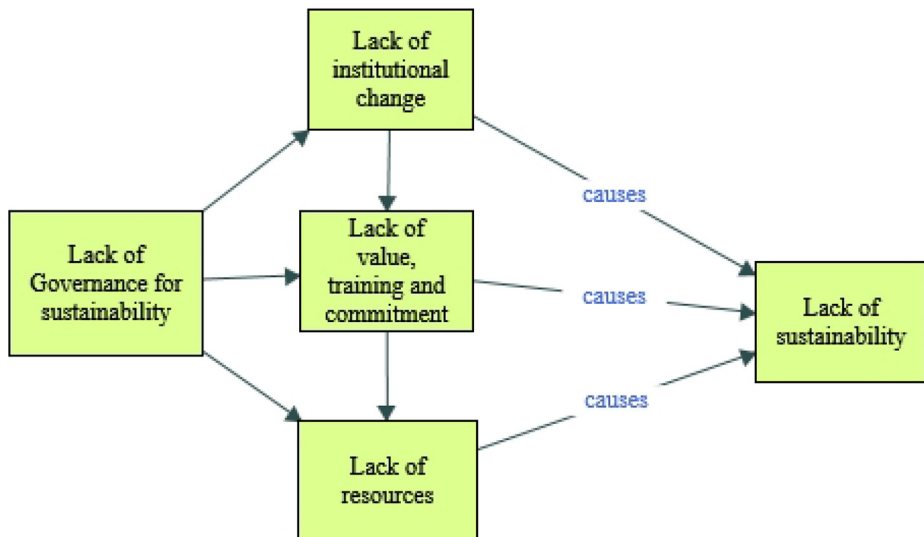
### *3.3 Data analysis*

Thematic analysis approach, developed by Braun and Clarke (2006), was used to analyse the data. It is a well-accepted approach in analysing complex and various types of qualitative data in the fields of education, medicine, business and other sub-disciplines of social sciences and humanities. Considering the approaches to design this study regarding data collection and data analysis, it is vital to differentiate them. This study is situated with neither positivist nor post-positivist approach, as these approaches are best aligned with the studies that test, confirm or disconfirm a theory. Moreover, the present study does not aim to test a theory but an effort to explore the viewpoints of academic administrators. Therefore, it aligns with exploratory approach to gather/collect data. It can be said that viewpoints were constructed to explore governance barriers for sustainability at PPU's. Thus, it works as a constructionist paradigm – constructing the reality. Considering the analysis of the data, thematic analysis was used that does not need any theory. Though it is flexible, yet no one can claim to use it without acknowledging its six-step framework: familiarizing with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes and producing the report (Braun and Clarke, 2006). In this study, the authors listened to each audio-recorded interview, transcribed and typed them in Microsoft Word programme. After that, the authors coded each interview transcript and organized similar codes together. Documents were also read, re-read and coded along with the interview transcripts to form a theme. Then, themes were reviewed to maintain contextual understanding of the data. Finally, a thematic map emerged consisting of four themes given below.

## **4. Results**

The data produced four themes as displayed in Figure 2. Based on their characteristics, these themes have legitimate qualitative relationships with each other.

Figure 2 presents four themes that conceptually and qualitatively affect sustainability at PPU's. These themes respond to the research questions on the status of governance and its



**Figure 2.**  
Thematic map of  
barriers to  
sustainability

process that affects sustainability at PUs and the conceptual framework (Figure 1). Thus, the map shows model of these barriers that systematically caused unsustainability at PUs. Each theme is a unified construct as it reflects participants' viewpoints on barriers to sustainability. The given quotes are exemplary from interviews and documents. Thus, these quotes supported the authors to present them under a theme. Subsequently, firstly, a theme is introduced; secondly, its link with the data is discussed; thirdly, examples of excerpts are given; and finally, the analysis on excerpts is presented.

#### 4.1 Lack of governance for sustainability

Participants showed lack of satisfaction about governance in promoting sustainability. Their views on the subject can be categorized in three examples/reasons. Firstly, they expressed the prevalent system of governance is poor and does not present the inclusivity of stakeholders. The P given at the end of every quote stands for participant. As stated:

When we talk about good governance, it involves the involvement of all those stakeholders who are directly or indirectly affected by the university decisions and participation of all stakeholders can make the process more effective [ . . . ] I feel it that few very important stakeholders of any academic institution like students, like employers and parents have no role at present in the decision-making process of the university (P-9).

I think that there are lot of issues which should be resolved. Suppose, when we make decisions normally we do not consider our students for participations (P-2).

This example shows the characteristic and mechanism of university governance. The participants expressed democratic way of governance where internal stakeholders can give their opinions, views and thoughts to promote sustainability. However, the stakeholders (students, parents and employers) are not invited to participate in the decision-making. They do not have any role to play in promoting sustainability. Thus, inclusivity to promote sustainability in taking diverse views from students, employers and parents is missed from

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university governance. It shows inappropriate form of governance being exercised at PPU that discourages sustainability.

Another aspect of the existing governance of PPU indicates confusing governance that is a mixture of democratic and authoritarian styles. It is so-called democratic for internal stakeholders who can have direct influence on governance. However, participants' reluctance to further enlighten on "how" their direct influence raises questions on the democratic style. Besides, it is authoritarian for external stakeholders where they do not even have an indirect influence on governance as they are not included in the decision making process. Thus, owing to exclusion, these stakeholders are deprived of the sense of ownership. As they are not included in the decision-making, they are neither facilitated nor motivated to participate in governance. Participants' silence on internal stakeholders' role indicates their level of satisfaction and commitment that seems to begin to decline. Resultantly, nothing can be expected from them and the system starts to lose its worth. The second example on lack of governance underlines a number of issues. As stated:

The decision-making processes in my campus is not yet fully developed. And so that decision making is poor in administration [...] And then because of this and some other factors sustainability is also weak [...]. They do not comply the orders and the rules and that's why the system is not developed yet and it is weak and decision making process is none (P-7).

The present governance [management structure] seems all set to decline the system (Documents).

The governance and management weaknesses at the university level have been widely recognized as major impediments to urgently needed policy transformation (Documents).

The excerpts describe two different but similar elements of governance: management and decision-making. The latter is carried out under the management of an institution, the governance is an umbrella term that comprises both the management and decision-making. The excerpts indicate that both are weak owing to weak management and administration. The phrase "not yet fully developed" points out the legitimacy of institutions where rules are not complied with. Perhaps decision-makers are not capable enough to make decisions appropriately and timely. Consequently, weak decision-making process hampers PPU from achieving institutional targets and objectives. Additionally, the quotes highlight that lack of policy to improve governance has caused problems to bring about sustainability. Thus, process is not yet matured enough to support the system and sustainability is affected. The third example highlights recruitment process for governance. As stated:

So, recruitment of the best faculty and selection of best faculty is one of the top-most requirements for the purpose of being aware about the developments that are taking place internationally and nationally (Documents).

I think the major issue in this country is actually the wrong people in the right job (P-10).

Process should be institutionalized, requiring open advertisement, for the selection of all academic and administrative posts (Documents).

The excerpts highlight that the assumption of putting right people for the right job can ensure the success of organization. The quotes expressed ineffective recruitment criteria which has caused a number of issues. Firstly, ineffective and inappropriate criteria cannot promote professionalism and the system starts to decline. Secondly, competency starts to dwindle. Thirdly, continuous professional development is not promoted. Fourthly, needed time management and planning cannot take place in the system. Finally, it creates hurdles

in maintaining a balance between academic, administrative, financial and operational sustainability. Thus, ineffective recruitment criteria are revealed as the biggest barrier to sustainability that adversely affects universities' vision. The following themes are offshoots of this barrier.

#### *4.2 Lack of institutional change*

This theme is a combination of lack of institutional change and lack of planning. Comparing planning and change, former is a critical and indispensable element for institutional survival. The theme highlighted two major shortcomings of institutional change: lack of visionary leadership and planning. As stated:

First of all, I will say that the leadership. They should have a vision. A visionary leadership means that one can see what is going to happen after twenty years. Keeping that in mind they can set the vision and set goals, then to achieve that goals they set how much finance is required, how much forces, how much other persons are involved. So, only then that goal can be achieved (P-3).

There are so many factors which are the barriers to sustain. Number one is we are not dutiful. Number two is punctuality. Number three is vision and mission is not clear. Overall vision and mission, it is not clear to the students and not to the faculty (P-7).

Exemplary quotes show that visionary change determines the path for institutional success. Lack of such visionary change causes a chain of failures that cannot be compensated. Firstly, it cannot ensure how management functions such as planning, organizing and coordinating of personnel and resources are observed and exercised. Secondly, institutional failure cannot navigate the destination. It shows that PPU are led by *laissez-faire* leadership. Thus, tasks are done in a disentangled way. This pattern of performance declines the efficiency of system. It also causes negative trickle-down effect that destabilizes the system. The following excerpts present the second shortcoming. As stated:

People are not focusing on the issues and what should be the situation of the department for the next five years or after next ten years (P-9).

There is lack of planning for sustainability at present (Documents).

The excerpts present planning status of institutions. Further, it shows lack of planning for departmental success, for managing human resource and for future directions. Data shows that planning for departments and curriculum is unsatisfactory. Additionally, planning of human resource development for future academic success is also underestimated. This status exhibits lack of innovative programmes, research groups and future-needed changes. Thus, sustainability is marred owing to lack of visionary change and planning. Perhaps small changes and short-term planning are in place, but transformational change and long-term planning are missing showing that poor governance declines the performance of faculty and department. Thus, poor governance creates hurdles to transform PPU by inhibiting change.

#### *4.3 Lack of training*

This theme shows that sustainability is neither valued nor its trainings are arranged. The fundamental cause of this barrier was identified as lack of awareness. It was disclosed as:

There are no bio-safety rules up till now implemented even in the campus. That is one of the bigger barriers [...] people are working on other things in molecular biology. They have well established biotechnologies laboratories there but no bio-safety and other rules are practised (P-4).

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Obviously, awareness is a big problem. For me the important solutions for the environment is the massive awareness programs which indeed is lacking (P-9).

The excerpts highlight lack of awareness that prevents the promotion of sustainability. Data depicts institutional negligence to address awareness issue. It also shows that chemical laboratories cause environmental pollution. As universities exist in societies and for the service of societies, it is their prime obligation to conduct outreach programmes. Lack of exercising biosafety rules and safety measures at universities indicate that campuses are not safe and sustainable. Moreover, it causes lack of understanding on sustainability importance. Conceptually, lack of training emerges owing to lack of awareness of valuing sustainability. The data evidence its absence. As stated:

The vice chancellor has to look across the boundaries of knowledge and see what new developments are taking place in sciences and social sciences. This kind of imbalance is found due to the lack of appropriate training and the capacity building in the needed area (P- 8).

They should encourage, support and facilitate training programs, workshops and symposia (Documents).

The excerpts highlight lack of training at strategic management level. It caused a knowledge gap between sciences and social sciences. As training of top management gives meaning to organization sustenance, its deficiency cannot be compensated. Data shows that lack of interdisciplinary knowledge caused a decline in the thought process whereby maintenance of civil society is not in place. It demands from university top management to cross over to other disciplines to understand new trends and set futuristic direction.

Lack of training hinders them to have an in-depth knowledge of leadership techniques, strategic planning, management and decision-making for effective academic administration which may cause the missing of development. Thus, the quality of education starts to decline and sustainability is barred. This theme has shown that lack of training emerged owing to lack of awareness and value for sustainability that cause absence of new ideas and ineffective strategy to run the institutions. These results fail to create a connection between civil society and university to promote sustainability.

#### *4.4 Lack of resources*

This theme showed that resources are recognized mainly as finance or the things that meet financial needs to accomplish teaching, learning and research. As stated:

The biggest barrier is the lack of finance [...] lack of facilities [...] we are behind than other nations where the facilities are required (P-1).

Provided funds to execute the decision making are insufficient (Documents).

If we have some proposals to enrich the programmes or we want to make any expansion we have to face lot of constraints regarding to the budget allocation by the HEC (P-7).

The excerpts highlight lack of resources to enrich the programmes and meet quality standards. By addressing sustainability needs, it does not seem to be a priority of PUs. Data shows that financial regulatory authority HEC imposes constraints to allocate funds to universities. Perhaps universities fail in securing sufficient funds owing to ineffective budget planning. Critically analysing, lack of resources takes place because of lack of training. It seems that training fails in securing, monitoring and auditing financial activities that affect infrastructure and development of universities. It is also linked with the

governance of sustainability. If governance is strong, then it creates opportunities for capacity building in areas of financial development. It indicates that governance and training hinder financial development. Participants also expressed constraints to finance, as reported:

Ah, finances, I say that they are the requirement, but the other thing is that which I feel we have also to devise some system whatsoever the finances we have are they being properly used or not? [...] Surely, we have not much finances but whatsoever we are having are they being used properly or not (P-3).

Where we feel that things are not going on well is our finance department [...] a part and parcel of our decision-making hierarchy (P-6).

Numbers of constraints are there for funding resources. That's why I believe in that the entrepreneurial university is the best policy nowadays (P-7).

The quotes present a critical issue of inefficiency in using allocated funds. Phrases such as “we have also to devise some system” and “not going on well is our finance department” highlight the need of a system to monitor, evaluate and audit financial performance. This indicates lack of training, especially for financial management. Perhaps, this is why the participants felt that there has to be a proper mechanism in place. The excerpts also indicate a new direction of governance – the concept of entrepreneurial university where knowledge seekers are educated in a self-managing system. However, presently, it is not applicable as Pakistan is a welfare state and education is considered as a public good. Moreover, the gross domestic product of Pakistan is not sufficient to impose high charges on education. Thus, PPUs cannot be governed as entrepreneurial universities. This theme contextually and hierarchically relates to lack of governance and training.

Emerged themes show that PPUs are facing four barriers in response to the questions of governance (i.e. exclusive and authoritative) and the process of its influence on sustainability (Figure 2). These barriers take place hierarchically and procedurally affect one another. Poor governance has emerged as one of the biggest barriers that affect others. Similarly, lack of training is the second biggest and overlapping barrier that causes lack of institutional change. Inefficiency of the system to govern universities is caused owing to lack of institutional change and training. These barriers imply lack of priorities for sustainability.

## 5. Discussion

Findings show that governance status is very poor and has adversely affected campus environment causing other barriers to sustainability (Figure 2). Data evidence that ineffective governance is because of authoritarian leadership and lack of democratic decision-making. Data also shows that good governance, if it is there, is a key success factor to promote sustainability. These findings confirm the argument of Enders (2015) that coordination of different actors and stakeholders is vital for governance. In practice, lack of coordination between stakeholders at PPUs results in poor governance. These findings are also consistent with that of the study of Disterheft *et al.* (2015) and Soini *et al.* (2018) reporting that sustainability cannot thrive at HEIs until governance is effective enough to engage every stakeholder in transformation process. This study further guides that strategically, institutional change is of utmost need with regard to sustainability.

This study investigated barriers to sustainability regarding governance. The study also found the underlying reason of ineffective governance, that is, lack of human resource

management practices such as ineffective recruitment criteria for strategic managers, “the wrong people in the right job,” shows poor governance that causes other barriers. Prevalent practice proves that only effective recruitment criteria can place the right people for the right job. It shows that general approach can never be prioritized to the specialized and expert approach. Sustainable success and development is strongly associated with the expertise and relevant area of specialization that brings about lasting impact on governance. Data from interviews and documents converge at the point of surprise that PPU do not have effective recruitment criteria. It indicates that lack of such criteria keeps a veil on the performance of wrong people at the right place. These findings are opposed to the study of [Mader \*et al.\* \(2013\)](#) and [de Lange \(2013\)](#) who reported efficiency of governance for sustainability in developing countries. Poor governance highlights inefficiency of system where capable, efficient and right personnel are discouraged to be recruited.

The finding suggests that lack of institutional change has trickle-down negative effect on sustainability. This finding contradicts that of [Mader \*et al.\*'s \(2013\)](#) study which found institutional change in developed countries can push sustainability from peripheries to mainstream functions of HEIs. The finding is consistent with that of [Velazquez \*et al.\* \(2006\)](#) and [Baker-Shelley \*et al.\* \(2017\)](#) regarding serious need of change for sustainability. Moreover, it is directly related to the studies of [Lee \*et al.\* \(2013\)](#), [Ralph and Stubbs \(2014\)](#); [Hoover and Harder \(2015\)](#); and [Martin and Chen \(2016\)](#) who reported that HEIs have been rigid to change organizational structure and culture to promote sustainability. This study extends one step ahead and implies that PPUs are run on *ad hoc* basis where long-term success and efficiency is missing.

Lack of training has a complex nexus with resources and awareness. Considering resources, finance is a major barrier. It is deduced though less funds is a big issue, but inefficiency to manage funds is bigger than former. Considering awareness, it hampers them to value training for sustainability. Thus, these are the most devastating barriers that prevent academic administrators from valuing it and being committed to enhance their capacity building. This finding is supported by the studies of [Verhulst and Lambrechts \(2015\)](#) and [Blanco-Portela \*et al.\* \(2017\)](#) who argued that sustainability issues are because of lack of training. This finding is also consistent with that of [Stephen \*et al.\* \(2008\)](#) who found that academic administrators can work as change agents if they are capable and trained to transform HEIs. This is also consistent with [Sibble's \(2009\)](#) study in terms of supportive and collaborative environment for training of academic administrators.

Data from interviews and documents converge at the point to prove that poor governance causes ineffective system of training and development. Conceptually, governance works as a custodian of quality if it exists. Its ineffectiveness creates stagnation of thought and the institutions start to lose their value. [Figure 2](#) indicates that if governance issues are addressed, then other issues can be minimized. For instance, training can enable academic administrators to design effective financial proposals to maintain quality standards in teaching, learning, research and infrastructure. Thus, these barriers have qualitative relationship with each other. Findings imply that financially weak and poor governance system needs corrective measures and critical initiatives.

## 6. Conclusions

This study contributes to the body of knowledge presenting the relationship of barriers' intensity with reference to governance ([Figure 2](#)) by addressing complex and unprecedented issues of sustainability. The model implies that adhocism needs a paradigm shift to transform the governance and culture of universities. The nexus of model's parts implies that system efficiency can only be maintained if institutional change, training and

monitoring are prioritized in close connection with governance. Following case study research, this study attempted to explore sustainability issues in Pakistan. Thus, findings cannot be generalized but are transferable in understanding sustainability status at other public universities. Another limitation was to take ample time from academic administrators, as they hold management positions and have greater responsibilities. Finally, being qualitative study, this study cannot claim that findings and their interpretations are free from subjectivity. Thus, future research can be conducted quantitatively to generalize findings.

### **7. Recommendations**

Based on the findings, this paper proposes the following suggestions to minimize barriers and move towards sustainable future:

- To improve the governance system of PPUs for sustainability, the charter of the universities can be amended to incorporate the policy, goals and programs on sustainability.
- To overcome lack of planning, charter of PPUs can be revised to add medium-to-long-term plans. Thus, it will not only have the policy and programs on sustainability but also the planning for sustainability.
- The charter of PPUs can also be revised to add medium-term human resource development programs to improve the governance for sustainability.
- Criteria to govern the recruitment and promotion of faculty and staff can be revised to give opportunities to the competent persons for the efficiency of the system.
- To promote sustainability, vision and mission of every university should be spelled out clearly and aligned with the amendments of the charter. Thus, vision and mission of the university can seamlessly be aligned with the charter at national level to promote sustainability.
- Budgetary support to promote sustainability can be enhanced and fixed in the charter.
- To make governance system more efficient, human resource management practices such as the recruitment process can be improved, implemented in true letter and spirit and monitored continuously to promote sustainability.
- To overcome the issue of poor governance, the excluded stakeholders such as students, parents and employers can be invited and engaged in decision-making to make it more democratic and rational.
- To enhance the level of PPUs with respect to have competent faculty, culture of training academic administrators and faculty focusing on financial management and cutting-edge ideas of sustainability be promoted at PPUs. This will improve the governance system where stakeholders will be able to spend, monitor and evaluate finance following standard operating procedures. This will also enable them to identify futuristic areas that can be useful for sustainability.
- To overcome the issue of lack of institutional change, above point nine is important. Institutional transformation cannot be possible without having well-trained faculty. Only trained faculty/personnel can visualize the vision and navigate its path through appropriate planning, implementation, monitoring and evaluation process.



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**References**

- Abad-Segura, E. and González-Zamar, M.-D. (2021), "Sustainable economic development in higher education institutions: a global analysis within the SDGs framework", *Journal of Cleaner Production*, Vol. 294, p. 126133, doi: [10.1016/j.jclepro.2021.126133](https://doi.org/10.1016/j.jclepro.2021.126133).
- Arnon, S., Orion, N. and Carmi, N. (2015), "Environmental literacy components and their promotion by institutions of higher education: an Israeli case study", *Environmental Education Research*, Vol. 21 No. 7, pp. 1029-1055, doi: [10.1080/13504622.2014.966656](https://doi.org/10.1080/13504622.2014.966656).
- Ashton, W.S., Hurtado-Martin, M., Anid, N.M., Khalili, N.R., Panero, M.A. and McPherson, S. (2017), "Pathways to cleaner production in the Americas I: bridging industry-academia gaps in the transition to sustainability", *Journal of Cleaner Production*, Vol. 142, pp. 432-444, doi: [10.1016/j.jclepro.2016.03.116](https://doi.org/10.1016/j.jclepro.2016.03.116).
- Bailey, C.A. (2007), *A Guide to Qualitative Field Research*, Sage Publications, London.
- Baker-Shelley, A., van Zeijl-Rozema, A. and Martens, P. (2017), "A conceptual synthesis of organisational transformation: how to diagnose and navigate, pathways for sustainability at universities?", *Journal of Cleaner Production*, Vol. 145, pp. 262-276, doi: [10.1016/j.jclepro.2017.01.026](https://doi.org/10.1016/j.jclepro.2017.01.026).
- Batool, Z., Rashid, M.D. and Riaz, N. (2013), "Quality assurance reflections on higher education in Pakistan", *Journal of Educational Research*, Vol. 16 No. 2, pp. 45-53.
- Baum, C.M. and Bartkowski, B. (2020), "It's not all about funding: fostering interdisciplinary collaborations in sustainability research from a European perspective", *Energy Research and Social Science*, Vol. 70, p. 101723, doi: [10.1016/j.erss.2020.101723](https://doi.org/10.1016/j.erss.2020.101723).
- Blanco-Portela, N., Benayas, J., Pertierra, L.R. and Lozano, R. (2017), "Towards the integration of sustainability in higher education institutions: a review of drivers of and barriers to organisational change and their comparison against those found of companies", *Journal of Cleaner Production*, Vol. 166, pp. 563-578, doi: [10.1016/j.jclepro.2017.07.252](https://doi.org/10.1016/j.jclepro.2017.07.252).
- Bogdan, R.C. and Biklen, S.K. (1998), "Qualitative research in education", *An Introduction to Theory and Methods*, 3rd ed., Allyn and Bacon, Boston, MA.
- Bouillard, P. (2016), "A multi-objective method to align human resource allocation with university strategy", *Perspectives: Policy and Practice in Higher Education*, Vol. 20 No. 1, pp. 17-23, doi: [10.1080/13603108.2015.1081303](https://doi.org/10.1080/13603108.2015.1081303).
- Braun, V. and Clarke, V. (2006), "Using thematic analysis in psychology", *Qualitative Research in Psychology*, Vol. 3 No. 2, pp. 77-101, doi: [10.1191/1478088706qp063oa](https://doi.org/10.1191/1478088706qp063oa).
- Brinkhurst, M., Rose, P., Maurice, G. and Ackerman, J.D. (2011), "Achieving campus sustainability: top-down, bottom-up, or neither?", *International Journal of Sustainability in Higher Education*, Vol. 12 No. 4, pp. 338-354, doi: [10.1108/14676371111168269](https://doi.org/10.1108/14676371111168269).
- Brundtland, G.H. (1987), "Our common future: the world commission on environment and development", available at: [www.un-documents.net/our-common-future.pdf](http://www.un-documents.net/our-common-future.pdf).
- Bukhari, S.K.U.S., Gul, R., Bashir, T., Zakir, S. and Javed, T. (2021), "Exploring managerial skills of Pakistan Public Universities (PPUs) middle managers for campus sustainability", *Journal of Sustainable Finance and Investment*, pp. 1-19, doi: [10.1080/20430795.2021.1883985](https://doi.org/10.1080/20430795.2021.1883985).
- Cebrián, G., Grace, M. and Humphris, D. (2013), "Organisational learning towards sustainability in higher education", *Sustainability Accounting, Management and Policy Journal*, Vol. 4 No. 3, pp. 285-306, doi: [10.1108/SAMPJ-12-2012-0043](https://doi.org/10.1108/SAMPJ-12-2012-0043).
- Chiara, R., Alessio, C., Francesca, S., Luigi, L. and Arthur, R. (2018), "Universities and smart specialisation strategy: from third mission to sustainable development co-creation", *International Journal of Sustainability in Higher Education*, Vol. 19 No. 1, pp. 67-84, doi: [10.1108/IJSHE-04-2016-0070](https://doi.org/10.1108/IJSHE-04-2016-0070).
- Christensen, P. (2009), "Sustainable development", *International Journal of Sustainability in Higher Education*, Vol. 10 No. 1, pp. 4-20, doi: [10.1108/14676370910925217](https://doi.org/10.1108/14676370910925217).

- Clarke, A. and Kouri, R. (2009), "Choosing an appropriate university or college environmental management system", *Journal of Cleaner Production*, Vol. 17 No. 11, pp. 971-984.
- Cobbinah, P.B., Erdiaw-Kwasie, M.O. and Amoateng, P. (2015), "Rethinking sustainable development within the framework of poverty and urbanisation in developing countries", *Environmental Development*, Vol. 13, pp. 18-32, doi: [10.1016/j.envdev.2014.11.001](https://doi.org/10.1016/j.envdev.2014.11.001).
- Cotton, D., Bailey, I., Warren, M. and Bissell, S. (2009), "Revolutions and second-best solutions: education for sustainable development in higher education", *Studies in Higher Education*, Vol. 34 No. 7, pp. 719-733, doi: [10.1080/03075070802641552](https://doi.org/10.1080/03075070802641552).
- Creswell, J.W. (2007), *Qualitative Inquiry and Research Design: Choosing among Five Approaches*, Sage Publications, Thousand Oaks, CA.
- Davis, A., Jansen van Rensburg, M. and Venter, P. (2016), "The impact of managerialism on the strategy work of university middle managers", *Studies in Higher Education*, Vol. 41 No. 8, pp. 1480-1494, doi: [10.1080/03075079.2014.981518](https://doi.org/10.1080/03075079.2014.981518).
- de Lange, D.E. (2013), "How do universities make progress? Stakeholder-related mechanisms affecting adoption of sustainability in university curricula", *Journal of Business Ethics*, Vol. 118 No. 1, pp. 103-116.
- Disterheft, A., Caeiro, S., Azeiteiro, U.M. and Filho, W.L. (2015), "Sustainable universities – a study of critical success factors for participatory approaches", *Journal of Cleaner Production*, Vol. 106 No. 1, pp. 11-21, doi: [10.1016/j.jclepro.2014.01.030](https://doi.org/10.1016/j.jclepro.2014.01.030).
- Dlouhá, J., Glavič, P. and Barton, A. (2017), "Higher education in central European countries – critical factors for sustainability transition", *Journal of Cleaner Production*, Vol. 151, pp. 670-684, doi: [10.1016/j.jclepro.2016.08.022](https://doi.org/10.1016/j.jclepro.2016.08.022).
- El-Khawas, E. (2010), "Human resource issues in higher education", in Peterson, P., Baker, E. and McGaw, B. (Eds), *International Encyclopedia of Education*, 3rd ed., Elsevier, Oxford, pp. 527-532.
- Enders, J. (2015), "Higher education management", in Wright, J.D. (Ed.), *International Encyclopedia of the Social and Behavioral Sciences*, 2nd ed., Elsevier, Oxford, pp. 845-849.
- Esterberg, K. (2002), *Qualitative Methods in Social Research*, McGraw-Hill, New York, NY.
- Fadeeva, Z. and Mochizuki, Y. (2010), "Higher education for today and tomorrow: university appraisal for diversity, innovation and change towards sustainable development", *Sustainability Science*, Vol. 5 No. 2, pp. 249-256, doi: [10.1007/s11625-010-0106-0](https://doi.org/10.1007/s11625-010-0106-0).
- Fernández-Manzanal, R., Serra, L.M., Morales, M.J., Carrasquer, J., Rodríguez-Barreiro, L.M., del Valle, J. and Murillo, M.B. (2015), "Environmental behaviours in initial professional development and their relationship with university education", *Journal of Cleaner Production*, Vol. 108, pp. 830-840, doi: [10.1016/j.jclepro.2015.07.153](https://doi.org/10.1016/j.jclepro.2015.07.153).
- Ferrer-Balas, D., Buckland, H. and de Mingo, M. (2009), "Explorations on the university's role in society for sustainable development through a systems transition approach. Case-study of the Technical University of Catalonia (UPC)", *Journal of Cleaner Production*, Vol. 17 No. 12, pp. 1075-1085, doi: [10.1016/j.jclepro.2008.11.006](https://doi.org/10.1016/j.jclepro.2008.11.006).
- Ferrer-Balas, D., Adachi, J., Banas, S., Davidson, C.I., Hoshikoshi, A., Mishra, A. and Ostwald, M. (2008), "An international comparative analysis of sustainability transformation across seven universities", *International Journal of Sustainability in Higher Education*, Vol. 9 No. 3, pp. 295-316, doi: [10.1108/14676370810885907](https://doi.org/10.1108/14676370810885907).
- Filho, W.L., Doni, F., Vargas, V.R., Wall, T., Hindley, A., Rayman-Bacchus, L., Emblen-Perry, K., Boddy, J. and Avila, L.V. (2019), "The integration of social responsibility and sustainability in practice: exploring attitudes and practices in higher education institutions", *Journal of Cleaner Production*, Vol. 220, pp. 152-166, doi: [10.1016/j.jclepro.2019.02.139](https://doi.org/10.1016/j.jclepro.2019.02.139).
- Gebreiter, F. (2021), "A profession in peril? University corporatization, performance measurement and the sustainability of accounting academia", *Critical Perspectives on Accounting*, p. 102292, doi: [10.1016/j.cpa.2021.102292](https://doi.org/10.1016/j.cpa.2021.102292).

- Gusmão Caiado, R.G., Leal Filho, W., Quelhas, O.L.G., Luiz de Mattos Nascimento, D. and Ávila, L.V. (2018), "A literature-based review on potentials and constraints in the implementation of the sustainable development goals", *Journal of Cleaner Production*, Vol. 198, pp. 1276-1288, doi: [10.1016/j.jclepro.2018.07.102](https://doi.org/10.1016/j.jclepro.2018.07.102).
- Higgins, C., Tang, S. and Stubbs, W. (2020), "On managing hypocrisy: the transparency of sustainability reports", *Journal of Business Research*, Vol. 114, pp. 395-407, doi: [10.1016/j.jbusres.2019.08.041](https://doi.org/10.1016/j.jbusres.2019.08.041).
- Holmberg, J.E. and Samuelsson, B.E. (Eds) (2006), "Drivers and barriers for implementing sustainable development in higher education", *Education for Sustainable Development in Action*, UNESCO Education Sector, Paris.
- Hoover, E. and Harder, M.K. (2015), "What lies beneath the surface? The hidden complexities of organizational change for sustainability in higher education", *Journal of Cleaner Production*, Vol. 106, pp. 175-188, doi: [10.1016/j.jclepro.2014.01.081](https://doi.org/10.1016/j.jclepro.2014.01.081).
- Husted, B.W. and Sousa-Filho, J. M. D. (2017), "The impact of sustainability governance, country stakeholder orientation and country risk on environmental, social and governance performance", *Journal of Cleaner Production*, Vol. 155, pp. 93-102, doi: [10.1016/j.jclepro.2016.10.025](https://doi.org/10.1016/j.jclepro.2016.10.025).
- Journeault, M., Levant, Y. and Picard, C.-F. (2021), "Sustainability performance reporting: a technocratic shadowing and silencing", *Critical Perspectives on Accounting*, Vol. 74, p. 102145, doi: [10.1016/j.cpa.2019.102145](https://doi.org/10.1016/j.cpa.2019.102145).
- Kapitulčinová, D., AtKisson, A., Perdue, J. and Will, M. (2018), "Towards integrated sustainability in higher education – mapping the use of the accelerator toolset in all dimensions of university practice", *Journal of Cleaner Production*, Vol. 172, pp. 4367-4382, doi: [10.1016/j.jclepro.2017.05.050](https://doi.org/10.1016/j.jclepro.2017.05.050).
- Kates, R.W., Clark, W.C., Corell, R., Hall, J.M., Jaeger, C.C., Lowe, I. and Dickson, N.M. (2001), "Sustainability science", *Science*, Vol. 292 No. 5517, pp. 641-642.
- Kemp, R., Parto, S. and Gibson, R.B. (2005), "Governance for sustainable development: moving from theory to practice", *International Journal of Sustainable Development*, Vol. 8 Nos 1/2, pp. 12-30, doi: [10.1504/IJSD.2005.007372](https://doi.org/10.1504/IJSD.2005.007372).
- Kitzinger, J. (1994), "The methodology of focus groups: the importance of interactions between research participants", *Sociology of Health and Illness*, Vol. 16 No. 1, pp. 103-121.
- Krizek, K.J., Newport, D., White, J. and Townsend, A.R. (2012), "Higher education's sustainability imperative: how to practically respond?", *International Journal of Sustainability in Higher Education*, Vol. 13 No. 1, pp. 19-33, doi: [10.1108/14676371211190281](https://doi.org/10.1108/14676371211190281).
- Larrán Jorge, M., Herrera Madueño, J. and Javier Andrades Peña, F. (2015), "Factors influencing the presence of sustainability initiatives in the strategic planning of Spanish universities", *Environmental Education Research*, Vol. 21 No. 8, pp. 1155-1187, doi: [10.1080/13504622.2014.977231](https://doi.org/10.1080/13504622.2014.977231).
- Lee, K.H., Barker, M. and Mouasher, A. (2013), "Is it even espoused? An exploratory study of commitment to sustainability as evidenced in vision, mission and graduate attribute statements in Australian universities", *Journal of Cleaner Production*, Vol. 48, pp. 20-28.
- Loorbach, D. (2007), "Governance for sustainability", *Sustainability: Science, Policy and Practice*, Vol. 3 No. 2, pp. 1-4.
- Loorbach, D. (2010), "Transition management for sustainable development: a prescriptive, complexity-based governance framework", *Governance*, Vol. 23 No. 1, pp. 161-183, doi: [10.1111/j.1468-0491.2009.01471.x](https://doi.org/10.1111/j.1468-0491.2009.01471.x).
- Lozano, R., Ceulemans, K., Alonso-Almeida, M., Huisinigh, D., Lozano, F.J., Waas, T. and Hugé, J. (2015), "A review of commitment and implementation of sustainable development in higher education: results from a worldwide survey", *Journal of Cleaner Production*, Vol. 108 No. 1, pp. 1-18, doi: [10.1016/j.jclepro.2014.09.048](https://doi.org/10.1016/j.jclepro.2014.09.048).

- Lupova-Henry, E. and Dotti, N.F. (2019), "Governance of sustainable innovation: moving beyond the hierarchy-market-network trichotomy? A systematic literature review using the 'who-how-what' framework", *Journal of Cleaner Production*, Vol. 210, pp. 738-748, doi: [10.1016/j.jclepro.2018.11.068](https://doi.org/10.1016/j.jclepro.2018.11.068).
- MacFarlane, K. (2019), "How can universities contribute to the common good?", *Perspectives: Policy and Practice in Higher Education*, Vol. 23 No. 4, pp. 1-10, doi: [10.1080/13603108.2019.1567615](https://doi.org/10.1080/13603108.2019.1567615).
- Mader, C., Scott, G. and Abdul Razak, D. (2013), "Effective change management, governance and policy for sustainability transformation in higher education", *Sustainability Accounting, Management and Policy Journal*, Vol. 4 No. 3, pp. 264-284, doi: [10.1108/SAMPJ-09-2013-0037](https://doi.org/10.1108/SAMPJ-09-2013-0037).
- Martin, A.R. and Chen, J.C. (2016), "Barriers to sustainability in mature-age adult learners: working toward identity change", *Environmental Education Research*, Vol. 22 No. 6, pp. 849-867, doi: [10.1080/13504622.2015.1075192](https://doi.org/10.1080/13504622.2015.1075192).
- Martin, L. (2015), "Incorporating values into sustainability decision-making", *Journal of Cleaner Production*, Vol. 105, pp. 146-156, doi: [10.1016/j.jclepro.2015.04.014](https://doi.org/10.1016/j.jclepro.2015.04.014).
- Moore, J. (2005), "Barriers and pathways to creating sustainability education programs: policy, rhetoric and reality", *Environmental Education Research*, Vol. 11 No. 5, pp. 537-555, doi: [10.1080/13504620500169692](https://doi.org/10.1080/13504620500169692).
- Nadeem, O. and Hameed, R. (2006), "A critical review of the adequacy of EIA reports-evidence from Pakistan", *International Journal of Human and Social Sciences*, Vol. 1 No. 1, pp. 54-61.
- Naeem, A., Mirza, N.H., Ayyub, R.M. and Lodhi, R.N. (2019), "HRM practices and faculty's knowledge sharing behavior: mediation of affective commitment and affect-based trust", *Studies in Higher Education*, Vol. 44 No. 3, pp. 499-512, doi: [10.1080/03075079.2017.1378635](https://doi.org/10.1080/03075079.2017.1378635).
- Pakistan (2001), "Higher education commission ordinance", Government of Pakistan.
- Pakistan (2002a), Higher Education Commission, P. C. (9) 1999 C.F.R, available at: [www.hec.gov.pk/english/universities/pages/recognised.aspx](http://www.hec.gov.pk/english/universities/pages/recognised.aspx)
- Pakistan (2002b), "Steering committee on higher education", Summary for the President, Islamabad.
- Ralph, M. and Stubbs, W. (2014), "Integrating environmental sustainability into universities", *Higher Education*, Vol. 67 No. 1, pp. 71-90, doi: [10.1007/s10734-013-9641-9](https://doi.org/10.1007/s10734-013-9641-9).
- Ramísio, P.J., Pinto, L.M.C., Gouveia, N., Costa, H. and Arezes, D. (2019), "Sustainability strategy in higher education institutions: lessons learned from a nine-year case study", *Journal of Cleaner Production*, Vol. 222, pp. 300-309, doi: [10.1016/j.jclepro.2019.02.257](https://doi.org/10.1016/j.jclepro.2019.02.257).
- Ramos, T.B., Caeiro, S., van Hoof, B., Lozano, R., Huisingh, D. and Ceulemans, K. (2015), "Experiences from the implementation of sustainable development in higher education institutions: environmental management for sustainable universities", *Journal of Cleaner Production*, Vol. 106, pp. 3-10, doi: [10.1016/j.jclepro.2015.05.110](https://doi.org/10.1016/j.jclepro.2015.05.110).
- Rosati, F. and Faria, L.G.D. (2019), "Addressing the SDGs in sustainability reports: the relationship with institutional factors", *Journal of Cleaner Production*, Vol. 215, pp. 1312-1326, doi: [10.1016/j.jclepro.2018.12.107](https://doi.org/10.1016/j.jclepro.2018.12.107).
- Ryan, A., Tilbury, D., Corcoran, P.B., Abe, O. and Nomura, K. (2010), "Sustainability in higher education in the Asia-Pacific: developments, challenges and prospects", *International Journal of Sustainability in Higher Education*, Vol. 11 No. 2, pp. 106-119, doi: [10.1108/14676371011031838](https://doi.org/10.1108/14676371011031838).
- Scott, W. (2018), "Higher education for sustainable development", *Environmental Education Research*, Vol. 24 No. 2, pp. 296-301, doi: [10.1080/13504622.2016.1263281](https://doi.org/10.1080/13504622.2016.1263281).
- Shattock, M. (2013), "University governance, leadership and management in a decade of diversification and uncertainty", *Higher Education Quarterly*, Vol. 67 No. 3, pp. 217-233, doi: [10.1111/hequ.12017](https://doi.org/10.1111/hequ.12017).
- Shephard, K. (2010), "Higher education's role in 'education for sustainability'", *Australian Universities' Review*, Vol. 52 No. 1, pp. 13-22.

- Shiel, C., Leal Filho, W., do Paço, A. and Brandli, L. (2015), "Evaluating the engagement of universities in capacity building for sustainable development in local communities", *Evaluation and Program Planning*, Vol. 54, pp. 123-134, doi: [10.1016/j.evalprogplan.2015.07.006](https://doi.org/10.1016/j.evalprogplan.2015.07.006).
- Sibble, A. (2009), "Pathways towards sustainability through higher education", *International Journal of Sustainability in Higher Education*, Vol. 10 No. 1, pp. 68-82.
- Soini, K., Jurgilevich, A., Pietikäinen, J. and Korhonen-Kurki, K. (2018), "Universities responding to the call for sustainability: a typology of sustainability centres", *Journal of Cleaner Production*, Vol. 170, pp. 1423-1432, doi: [10.1016/j.jclepro.2017.08.228](https://doi.org/10.1016/j.jclepro.2017.08.228).
- Statistics, P.E. (2015), "National Educational Management Information System (NEMIS)-Academy of Educational Planning and Management (AEPAM)", Government of Pakistan.
- Stephen, C.J., Hernandez, M.E., Roman, M., Graham, A.C. and Scholz, R.W. (2008), "Higher education as a change agent for sustainability in different cultures and contexts", *International Journal of Sustainability in Higher Education*, Vol. 9 No. 3, pp. 317-338.
- Stephens, J.C. and Graham, A.C. (2010), "Toward an empirical research agenda for sustainability in higher education: exploring the transition management framework", *Journal of Cleaner Production*, Vol. 18 No. 7, pp. 611-618.
- Thomas, I. (2004), "Sustainability in tertiary curricula: what is stopping it happening?", *International Journal of Sustainability in Higher Education*, Vol. 5 No. 1, pp. 33-47, doi: [10.1108/14676370410517387](https://doi.org/10.1108/14676370410517387).
- Thompson, R. and Green, W. (2005), "When sustainability is not a priority: an analysis of trends and strategies", *International Journal of Sustainability in Higher Education*, Vol. 6 No. 1, pp. 7-17, doi: [10.1108/14676370510573104](https://doi.org/10.1108/14676370510573104).
- Tilbury, D. (2011), *Education for Sustainable Development: An Expert Review of Processes and Learning*, UNESCO, Paris.
- UNEP (1972), *Declaration of the United Nations Conference on the Human Environment*, UNEP, Nairobi.
- Velazquez, L., Munguia, N., Platt, A. and Taddei, J. (2006), "Sustainable university: what can be the matter?", *Journal of Cleaner Production*, Vol. 14 Nos 9/11, pp. 810-819, doi: [10.1016/j.jclepro.2005.12.008](https://doi.org/10.1016/j.jclepro.2005.12.008).
- Verhulst, E. and Lambrechts, W. (2015), "Fostering the incorporation of sustainable development in higher education. Lessons learned from a change management perspective", *Journal of Cleaner Production*, Vol. 106 No. 1, pp. 189-204, doi: [10.1016/j.jclepro.2014.09.049](https://doi.org/10.1016/j.jclepro.2014.09.049).
- Walwyn, D.R. (2020), "Turning points for sustainability transitions: institutional destabilization, public finance and the techno-economic dynamics of decarbonization in South Africa", *Energy Research and Social Science*, Vol. 70, p. 101784, doi: [10.1016/j.erss.2020.101784](https://doi.org/10.1016/j.erss.2020.101784).
- Wright, T. and Wilton, H. (2012), "Facilities management directors' conceptualizations of sustainability in higher education", *Journal of Cleaner Production*, Vol. 31 No. 1, pp. 118-125, doi: [10.1016/j.jclepro.2012.02.030](https://doi.org/10.1016/j.jclepro.2012.02.030).
- Yin, R.K. (2009), *Case Study Research: Design and Methods*, Sage Publications, Thousand Oaks, CA.

### Further reading

- Zubair, S.S. (2013), "Total quality management in public sector higher education institutions", *Journal of Business and Economics*, Vol. 5 No. 1, pp. 24-55.

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