



Barriers to Sustainability at Pakistan Public Universities and the Way Forward

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

Originality/value – Developed countries are leaders in promoting sustainability while 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 of barriers to sustainability.

Keywords: Sustainability, lack of training, lack of resources, lack of sustainability, thematic analysis, Pakistan.

Paper type – Research paper

1.0 INTRODUCTION

The world is facing pressing, complex, uncertain, and unprecedented challenges of survival, peace, and prosperity due to social, political, and environmental issues. The subject of sustainability has become a mantra in addressing these issues and as a catalyst to transform systems for sustainable future (Chiara, Alessio, Francesca, Luigi, & Arthur, 2018). Since the convention of Stockholm Declaration (UNEP, 1972) and greater emphasis on Brundtland report (1987) to the application of sustainable development goals (SDGs) (Rosati & 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 & Sousa-Filho, 2017; Ramísio, Pinto, Gouveia, Costa, & Arezes, 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 policy makers (Fadeeva & 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, six countries from Central Europe (Dlouhá, Glavič, & Barton, 2017), 60% of countries from entire Europe, while 40% from North America and Australia made efforts for sustainability (Kapitulčinová, AtKisson, Perdue, & Will, 2018). Lozano et al. (2015a) found about 80% of HEIs from Europe, 16% from America, and 2% from Africa and Asia focused on education for sustainable development. These statistics show that Asia's status in implementing and promoting sustainability is underestimated 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 too slow to be visible (Shiel, Leal Filho, do Paço, & Brandli, 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; Ramísio et al., 2019; Shattock, 2013). However, the area of academic administrators' efforts for sustainability is less investigated that exhibits a knowledge gap. This study fills that knowledge gap by exploring barriers to sustainability in the voice of academic administrators.

2.0 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 (e.g. Blanco-Portela, Benayas, Pertierra, & Lozano, 2017; Larrán Jorge, Herrera Madueño, & Javier Andrades Peña, 2015; Verhulst & Lambrechts, 2015; Wright & Wilton, 2012). Sustainability in Pakistan is underestimated and least investigated. Thus, this study specifically is about the factors that hamper HEIs from engaging in sustainable initiatives. Following sub-headings present relevant literature on hindering factors of sustainability in clustered form.

2.1 Governance, Sustainability and HEIs

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-Khawas, 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, Newport, White, & Townsend, 2012; Soini, Jurgilevich, Pietikäinen, & Korhonen-Kurki, 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. According to Disterheft, Caeiro, Azeiteiro, and Filho (2015), integration of sustainability in HEIs requires a participatory and multi-level stakeholders' approach. Kemp, Parto, and B. Gibson (2005) stated that sustainability being "a socially instituted process of adaptive change" requires four key elements of governance: sustainability policy is integrated;

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3 objectives, criteria, rules, and indicators for sustainability are set; information flows periodically
4 and achievements for sustainability are incentivized; and sustainability is considered as an
5 innovation to permeate in the system. That is how sustainability being a paradigm shift demands
6 a transitional process (Loorbach, 2010), to be implemented to address complex issues of
7 sustainable development (Brinkhurst, Rose, Maurice, & Ackerman, 2011; de Lange, 2013).
8 Despite the critical role of governance for sustainability, there is lack of initiatives in governing
9 HEIs for sustainable development. Thus, there is a need to investigate the role of governance to
10 better understand how challenges in adopting sustainability are left unattended.

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12 The governance of PPU is done by the Higher Education Commission (HEC) of Pakistan
13 (Pakistan, 2001). This commission is meant to promote sustainability with the aid of its devised
14 structural units that look into various areas of higher education at PPU. The commission does not
15 only produce and provide the policies, regulations and guidelines, but also allocates resources,
16 enhances institutional development and ensures quality at PPU (Pakistan, 2002b). Despite the
17 efforts of HEC, PPU lag behind in promoting sustainability at their campuses. This lagging role
18 in sustainability is perhaps due to governance of PPU that raises the question of how governance
19 promotes sustainability. Thus, conceptually, governance leads the journey towards sustainability
20 that is illustrated in the conceptual framework (Figure 1).

2.2 Institutional Change and Sustainability

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

30
31 Researchers have developed models and frameworks to promote sustainability with the aid
32 of institutional change. For instance, Velazquez, Munguia, Platt, and Taddei (2006) proposed a
33 model to develop sustainable university focusing on education, research, outreach and partnership
34 and campus sustainability. Similarly, Ferrer-Balas, Buckland, and de Mingo (2009) developed the
35 "Framework-Level-Actor" approach to assess the potential of HEIs' strategies for sustainability.

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3 Loorbach (2010) used transition management theory to deal with complex societal transitions to
4 create sustainable societies. Stephens and Graham (2010) also used transition management theory
5 to navigate the path for future empirical work. Despite having taken these approaches, HEIs have
6 failed to produce positive responses in embedding sustainability into their functions. This
7 knowledge gap demands to explore the role of institutional change to promote or demote
8 sustainability at HEIs (Ferrer-Balas et al., 2009; Lee, Barker, & Mouasher, 2013).
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13 Blanco-Portela et al. (2017) reported that weak management and organization hinders
14 change process. It has three critical implications. Firstly, lack of institutional change strengthens
15 stagnation of thought where innovative ideas cannot take place. Secondly, internal organizational
16 structures cannot be revised, and existing structures become unable to create space for
17 sustainability. Many scholars (e.g. Holmberg, E. Samuelsson, & Unesco, 2006; A. R. Martin &
18 Chen, 2016; Moore, 2005) are of the view that managing change effectively, organizational
19 structure needs to be revised and operationalized to secure funds and create cooperative
20 environment between academic administrators, faculty, staff and students. Finally, if change is not
21 institutionalized then sustainability cannot be rationalized in teaching, learning, and research.
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30 Institutional change for sustainability can ensure professional development of faculty and
31 staff (Tilbury, 2011). However, studies (e.g. Hoover & Harder, 2015; Lee et al., 2013; Ralph &
32 Stubbs, 2014) have shown that HEIs have been rigid in tandem with the need of change. This
33 promotes disconnectivity between different networks and partnerships to promote sustainability
34 (Blanco-Portela et al., 2017). Moreover, when connections of academic administrators, faculty,
35 staff and students are weak, organizational learning is undermined (Cebrián, Grace, & Humphris,
36 2013). Thompson and Green (2013) found lack of institutional change as discouraging force for
37 sustainability. Literature presents it as a constraint for sustainability where HEIs not only faced
38 disharmony for sustainability agenda but also showed lack of commitment. In Pakistan,
39 sustainability is under documented and under researched. Consequently, sustainability issues are
40 not addressed as it needs attention. This requires to explore how PPU's respond to the question of
41 institutional transformation for sustainability.
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50 51 **2.3 Capacity Building and Sustainability**

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53 Capacity building refers to the process of training that is arranged to professionally develop
54 relevant stakeholders such as academic administrators, faculty and staff. These trainings enable
55 them to achieve, update and retain the knowledge, skills, and attitudes about their day-to-day job
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responsibilities and activities (Naeem, Mirza, Ayyub, & Lodhi, 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 sustainability in HEIs' functions are only due to lack of training. It indicates needs, intensity, and seriousness of training.

Trainings under human resource management are carried out to spread awareness, equip individuals with required skills and competence, and transform HEIs. 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.

The above reviewed literature is from the developed countries; while the literature on the subject from developing countries such as Pakistan is scarce. Kates et al. (2001, p. 642) 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, Leal Filho, Quelhas, Luiz de Mattos Nascimento, & Ávila, 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) positions resources as the second critical barrier in comparison of capacity

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3 building. Its importance can be understood by Hooft's (2009) argument which states that
4 universities should play their role "in a world beset with environmental problems, political
5 conflicts, and the 'clash of civilizations' by preparing "students for leadership roles that would be
6 sensitive to the needs of others and to the demands of cultural tolerance" (p. 86). The contemporary
7 university is operated on a general slogan that university is not funded for sustainability. Shephard
8 (2010, p. 17) reports, "universities can only do what they are funded to do" (p. 17). Wright and
9 Wilton (2012) found that safeguarding the built environment of campuses was prevented from
10 taking sustainable initiatives due to lack of finance. This shows that universities face financial
11 constraints to set priorities and directions in addressing sustainability issues. The literature on
12 finance for sustainability rarely shows that sustainable efforts will pay off in the long run.
13 Generally, this is possible in the developed countries, as the developing countries consider this as
14 an excuse to promote economic development.
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24 Budget constraints hamper sustainability promotion. Davis, Jansen van Rensburg, and Venter
25 (2016) argued that governance, capacity building and institutional structure cause budget-cuts at
26 HEIs due to new public management. Another reason for budget cuts is linked with rapidly
27 increasing trends of marketization and privatization, as states devise stringent policies to allocate
28 funds and provide resources to HEIs (Bouillard, 2016; MacFarlane, 2019). Apart from the states'
29 reduced allocated budget, there is lack of external funding, especially to promote sustainability at
30 HEIs (Blanco-Portela et al., 2017). This widens the gap between the leaders' motivation and their
31 role to promote sustainability (Ramos et al., 2015). This is why financial support is critically
32 important in promoting sustainability. These complex circumstances place a demand for exploring
33 the role of financial resources in promoting sustainability at HEIs, especially in a developing
34 country, Pakistan.
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43 **2.5 Other Barriers to Sustainability**

44 The above reviewed literature shows that governance is one of the biggest and most critical
45 factors for sustainability. If we consider barriers to sustainability, it becomes evident that there are
46 minor and major barriers. These cannot be completely covered here. We have attempted to
47 categorize them as minor barriers apart from the ones discussed earlier. Under minor barriers, there
48 are lack of personal values in comparison to organizational values, individual understanding on
49 sustainability, and lack of interest and motivation (Holmberg et al., 2006; L. Martin, 2015; Moore,
50 2005). These barriers are a mixture of internal and external motives (Blanco-Portela et al., 2017).
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We assume 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 (e.g. 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., 2015b). Thus, variability in setting priorities determines the efforts to deal with these barriers (Clarke & Kouri, 2009). These barriers prevent HEIs' academic and operational activities (Arnon, Orion, & Carmi, 2015).

2.6 Conceptual Framework of Barriers to Sustainability

Based on the review, we propose conceptual framework (Figure 1) that exhibits the qualitative nexus between the governance and barriers to sustainability. It also shows that barriers mar sustainability. We conceptualize 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 arrows show the directional criticality of these barriers to sustainability. This framework will be beneficial in analysing the data. The red dotted line needs transformation of governance to promote sustainability.

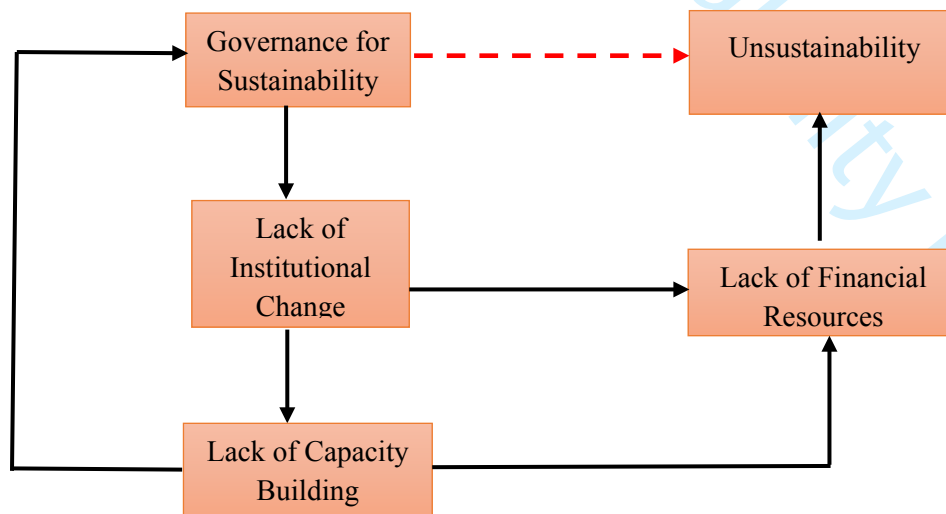


Figure 1. Conceptual framework of barriers to sustainability

3.0 RESEARCH METHODOLOGY

This study aimed to explore barriers to sustainability in one of the South Asian countries, Pakistan. Sustainability at PPU is desperately needed due to excessive devastating condition of environment, social and ethical values, and economic status (Batool, Rashid, & Riaz, 2013).

3.1 Research Design

Sustainability at PPU is poorly documented, underestimated, and under-researched. The dimensions and patterns of sustainability are not yet developed and it is at an infancy phase (Ryan, Tilbury, Corcoran, Abe, & Nomura, 2010). Thus, this study was conducted qualitatively employing 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, use of case study contextually supported us to understand the nuances and unheard voices about its issues. It also enabled us to interpret its real status at PPU, identify its barriers, and build up a model of how it is marred. Contextually defining case for the present study, PPU 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 PPU share similar, uniform, and common characteristics to regulate their functions. The research questions under case study were on what, why and how—where the phenomenon took place in natural way and we explored the issue in-depth, without controlling the situation, to better understand sustainability status at PPU.

3.2 Selection of Setting and Universities

Data for this study were collected from two different cities of Pakistan employing semi-structured interviews and documents. We 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; while, 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 & 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: Characteristics of the Participants

No.	Characteristics	Illustration (relevant duties/roles)
1.	Qualification	Ph.D. 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 shows that the participants had relevant characteristics and duties to enlighten us on sustainability. This study being qualitative and initial in Pakistan aimed to better understand the status of sustainability at PPUs. The sample size was small. Twenty participants were contacted from nine PPUs but eleven showed their interest to participate in the study.

3.2.2 Research Instrument

Qualitative case study dictated us 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 us 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 PPU 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 employed 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 us documents during interview sessions. Thus, these documents were organized to align with the interview data that were used in analysis.

3.2.3 Procedure of Data Collection

Firstly, we browsed the worldwide web of regulating authority, Higher Education Commission (HEC) of Pakistan (Pakistan, 2002a) to identify the participants. Then we approached them via cell-phone and email to update them that their ideas and experiences on governance, sustainability, and its barriers would be sought. Eleven participants showed their interest to take part in this study. We developed, shared, and followed the protocol to conduct interviews. We 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, we developed following research questions:

1. What is the status of governance for sustainability at PPU?
2. How has governance influenced sustainability at PPU?

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3 During interviews, the participants provided us documents to explore further about
4 sustainability in Pakistan. These documents supported us to reach how barriers affect
5 sustainability. The documents were triangulated with interviews in the analysis process.
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8 **3.3 Data Analysis**

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10 Thematic analysis approach, developed by Braun and Clarke (2006), was employed to
11 analyse the data. It is a well-accepted approach in analysing complex and various types of
12 qualitative data in the fields of education, medicine, business, and other sub-disciplines of social
13 sciences and humanities. This method can be used without a theory. Thus, it works as a
14 constructionist paradigm. Though it is flexible yet no one can claim to use it without
15 acknowledging its six-step framework: familiarizing with the data, generating initial codes,
16 searching for themes, reviewing themes, defining and naming themes, and producing the report
17 (Braun & Clarke, 2006). In this study, we listened each audio-recorded interview, transcribed, and
18 typed them in Microsoft Word programme. After that we coded each interview transcript, and
19 organized similar codes together. Documents were also read, re-read and coded along with
20 interview transcripts to form a theme. Then, themes were reviewed to maintain contextual
21 understanding of the data. Finally, a thematic map emerged consisting of four themes given below.
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31 **4.0 RESULTS**

32 Data produced four themes displayed in Figure 2. Based on their characteristics these
33 themes have legitimate qualitative relationships with each other.
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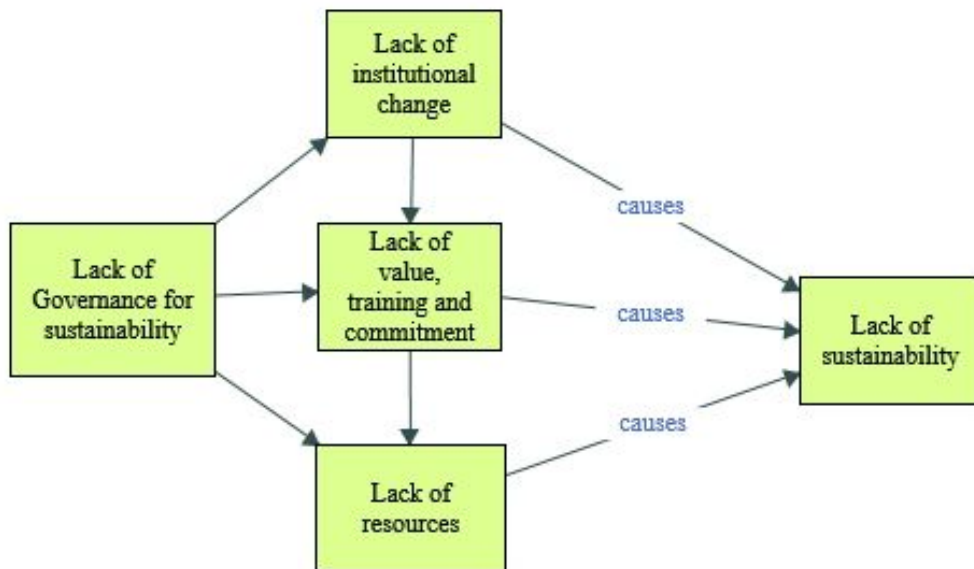


Figure 2. Thematic Map of Barriers to Sustainability

Figure 2 presents four themes that conceptually and qualitatively affect sustainability at PUs. These themes respond to the research questions on the status of governance and its 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 us to present them under a theme. Following, 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. 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

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3 stakeholders can make the process more effective... I feel it that few very important
4 stakeholders of any academic institution like students, like employers and parents have no
5 role at present in the decision-making process of the university, (P-9).
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9 This example shows the characteristic and mechanism of university governance. The
10 participants highlighted democratic way of governance where every stakeholder has freedom to
11 give their opinions, views, and thoughts to promote sustainability. The data fails to show
12 inclusivity as students, employers, and parents are left out of university governance. It shows
13 inappropriate form of governance being exercised at PPU. This situation discourages
14 sustainability.
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19 The existing governance of PPU can be considered as an authoritative governance. Due
20 to exclusion, stakeholders are deprived of the sense of ownership. Since they are not included in
21 the decision making, they are neither facilitated nor motivated for effective performance. Thus,
22 their level of satisfaction and commitment begin to decline. Resultantly, nothing can be expected
23 from them and the system starts to lose its worth. The second example on lack of governance
24 underlines a number of issues. As stated,
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30 The decision-making processes in my campus is not yet fully developed. And so that
31 decision making is poor in administration..... And then because of this and some other
32 factors sustainability is also weak.....They do not comply the orders and the rules and that's
33 why the system is not developed yet and it is weak and decision making process is none, (P-
34 7).
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39 The present governance [management structure] seems all set to decline the system,
40 (documents).
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43 The excerpts describe two different but similar elements of governance: management and
44 decision making. The latter is carried out under the management of an institution, the governance
45 is an umbrella term that comprises both the management and decision making. The excerpts
46 indicate that both are weak due to weak management and administration. The phrase "not yet fully
47 developed" points out the legitimacy of institutions where rules are not complied with. Perhaps
48 decision makers are not capable enough to make decisions appropriately and timely. Consequently,
49 weak decision-making process hampers PPU from achieving institutional targets and objectives.
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3 Thus, process is not yet matured enough to support the system and sustainability is affected. The
4 third example highlights recruitment process for governance. As stated:
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7 So, recruitment of the best faculty and selection of best faculty is one of the top-most
8 requirements for the purpose of being aware about the developments that are taking place
9 internationally and nationally, (documents).
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13 I think the major issue in this country is actually the wrong people in the right job, (P-10).
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15 The excerpts highlight ineffective recruitment criteria which has caused a number of issues.
16 Firstly, ineffective and inappropriate criteria cannot promote professionalism and the system starts
17 to decline. Secondly, competency starts to dwindle. Thirdly, continuous professional development
18 is not promoted. Finally, it creates hurdles in maintaining a balance between academic,
19 administrative, financial and operational sustainability. Thus, ineffective recruitment criteria is
20 revealed as the biggest barrier to sustainability that adversely affects universities' vision. The
21 following themes are offshoots of this barrier.
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28 **4.2 Lack of Institutional Change**

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30 This theme is a combination of lack of institutional change and lack of planning.
31 Comparing planning and change, former is a critical and indispensable element for institutional
32 survival. The theme highlighted two major shortcomings of institutional change: lack of visionary
33 leadership and planning. As stated,
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37 First of all, I will say that the leadership. They should have a vision. A visionary leadership
38 means that one can see what is going to happen after twenty years. Keeping that in mind
39 they can set the vision and set goals, then to achieve that goals they set how much finance
40 is required, how much forces, how much other persons are involved. So, only then that goal
41 can be achieved, (P-3).
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47 There are so many factors which are the barriers to sustain. Number one is we are not
48 dutiful. Number two is punctuality. Number three is vision and mission is not clear. Overall
49 vision and mission, it is not clear to the students and not to the faculty, (P-7).
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53 Exemplary quotes show that visionary change determines the path for institutional success.
54 Lack of such visionary change causes a chain of failures that cannot be compensated. Firstly, it
55 cannot ensure how management functions such as planning, organizing, and coordinating of
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3 personnel and resources are observed and exercised. Secondly, institutional failure cannot navigate
4 the destination. It shows that PPU's are led by laissez-faire leadership. Thus, tasks are done in a
5 disentangled way. This pattern of performance declines the efficiency of system. It also causes
6 negative trickle-down effect that destabilizes the system. The following excerpts present the
7 second shortcoming. As stated,
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13 People are not focusing on the issues and what should be the situation of the department for
14 the next five years or after next ten years, (P-9).
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16
17 There is lack of planning for sustainability at present, (documents).
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19 The excerpts present planning status of institutions. Further, it shows lack of planning for
20 departmental success, for managing human resource, and for future directions. Data shows that
21 planning for departments and curriculum is unsatisfactory. Additionally, planning of human
22 resource development for future academic success is also underestimated. This status exhibits lack
23 of innovative programmes, research groups, and future-needed changes. Thus, sustainability is
24 marred due to lack of visionary change and planning. Perhaps small changes and short-term
25 planning are in place but transformational change and long-term planning are missing showing
26 that poor governance declines the performance of faculty and department.
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32 **4.3 Lack of Training**

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34 This theme shows that sustainability is neither valued nor its trainings are arranged. The
35 fundamental cause of this barrier was identified as lack of awareness. It was disclosed as,
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39 There are no bio-safety rules up till now implemented even in the campus. That is one of
40 the bigger barriers...people are working on other things in molecular biology. They have
41 well established biotechnologies laboratories there but no bio-safety and other rules are
42 practised, (P-4).
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46 Obviously, awareness is a big problem. For me the important solutions for the environment
47 is the massive awareness programs which indeed is lacking, (P-9).
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50 The excerpts highlight lack of awareness that prevents the promotion of sustainability. Data
51 depicts institutional negligence to address awareness issue. It also shows that chemical laboratories
52 cause environmental pollution. Since universities exist in societies and for the service of societies,
53 it is their prime obligation to conduct outreach programmes. Lack of exercising biosafety rules and
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3 safety measures at universities indicate that campuses are not safe and sustainable. Moreover, it
4 causes lack of understanding on sustainability importance. Conceptually, lack of training emerges
5 due to lack of awareness of valuing sustainability. The data evidence its absence. As stated,
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9 The vice chancellor has to look across the boundaries of knowledge and see what new
10 developments are taking place in sciences and social sciences. This kind of imbalance is
11 found due to the lack of appropriate training and the capacity building in the needed area,
12 (P- 8).
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16 They should encourage, support and facilitate training programs, workshops and symposia,
17 (documents).
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21 The excerpts highlight lack of training at strategic management level. It caused a
22 knowledge gap between sciences and social sciences. Since training of top management gives
23 meaning to organization sustenance, its deficiency cannot be compensated. Data shows that lack
24 of interdisciplinary knowledge caused a decline in the thought process whereby maintenance of
25 civil society is not in place. It demands from university top management to cross over to other
26 disciplines to understand new trends and set futuristic direction.
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31 Lack of training hinders them to have an in-depth knowledge of leadership techniques,
32 strategic planning, management, and decision making for effective academic administration.
33 Probably the development is missing. Thus, the quality of education starts to decline and
34 sustainability is barred. This theme has shown that lack of training emerged due to lack of
35 awareness and value for sustainability that causes absence of new ideas and ineffective strategy to
36 run the institutions. These results fail to create a connection between civil society and university
37 to promote sustainability.
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42 43 **4.4 Lack of Resources**

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45 This theme showed that resources are recognized mainly as finance or the things that meet
46 financial needs to accomplish teaching, learning and research. As stated,
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49 The biggest barrier is the lack of finance...lack of facilities....we are behind than other
50 nations where the facilities are required, (P-1).
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53 Provided funds to execute the decision making are insufficient, (documents).
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3 If we have some proposals to enrich the programmes or we want to make any expansion
4 we have to face lot of constraints regarding to the budget allocation by the HEC, (P-7).
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7 The excerpts highlight lack of resources to enrich the programmes and meet quality
8 standards. Addressing sustainability needs, it does not seem to be a priority of PPU. Data shows
9 that financial regulatory authority HEC impose constraints to allocate funds to universities.
10 Perhaps universities fail in securing sufficient funds due to ineffective budget planning. Critically
11 analysing, lack of resources takes place due to lack of training. It seems that training fails in
12 securing, monitoring and auditing financial activities that affect infrastructure and development of
13 universities. It is also linked with the governance of sustainability. If governance is strong then it
14 creates opportunities for capacity building in areas of financial development. It indicates that
15 governance and training hinder financial development. Participants also expressed constraints to
16 finance, as reported,
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24 Ah, finances, I say that they are the requirement, but the other thing is that which I feel we
25 have also to devise some system whatsoever the finances we have are they being properly
26 used or not?... Surely, we have not much finances but whatsoever we are having are they
27 being used properly or not, (P-3).
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31 Where we feel that things are not going on well is our finance department... a part and
32 parcel of our decision-making hierarchy, (P-6).
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35 Numbers of constraints are there for funding resources. That's why I believe in that the
36 entrepreneurial university is the best policy nowadays, (P-7).
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40 The quotes present a critical issue of inefficiency in utilizing allocated funds. Phrases, “we
41 have also to devise some system”, and “not going on well is our finance department”, highlight
42 the need of a system to monitor, evaluate, and audit financial performance. This indicates lack of
43 training especially for financial management. Perhaps, this is why the participants felt that there
44 has to be a proper mechanism in place. It is deduced though less funds are a big issue but
45 inefficiency to manage funds is bigger than former. The excerpts also indicate a new direction of
46 governance—the concept of entrepreneurial university where knowledge seekers are educated in
47 a self-managing system. However, presently it is not applicable as Pakistan is a welfare state and
48 education is considered as a public good. Moreover, the GDP of Pakistan is not sufficient to impose
49 high charges on education. Thus, PPU cannot be governed as entrepreneurial universities. This
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3 theme contextually and hierarchically relates to lack of governance and training based on the
4 relationships that poor governance causes ineffective system of training and development.

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6 This study investigated barriers to sustainability regarding governance. Emerged themes
7 show that PPU's are facing four barriers in response to the questions of governance (i.e. exclusive
8 and authoritative) and the process of its influence on sustainability (Fig. 2). These barriers take
9 place hierarchically and procedurally affect one another. Poor governance has emerged as one of
10 the biggest barriers that causes others. Similarly, lack of training is the second biggest and
11 overlapping barrier that causes lack of institutional change. Inefficiency of the system to govern
12 universities is caused due to lack of institutional change and training. These barriers imply lack of
13 priorities for sustainability.
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20 **5.0 DISCUSSION**

21
22 Findings show that governance status is very poor that has adversely affected campus
23 environment causing other barriers to sustainability (Figure 2). Data evidence that ineffective
24 governance is due to authoritarian leadership and lack of democratic decision making. These
25 findings confirm the argument of Enders (2015) that coordination of different actors and
26 stakeholders is vital for governance. In practice, lack of coordination between stakeholders at PPU's
27 results in poor governance. These findings are also consistent with that of the study of Disterheft
28 et al. (2015) and Soini et al. (2018) reporting that sustainability cannot thrive at HEIs until
29 governance is effective enough to engage every stakeholder in transformation process.
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36 This study also found the underlying reason of ineffective governance that is lack of human
37 resource management practices such as ineffective recruitment criteria for strategic managers, "the
38 wrong people in the right job", shows poor governance that causes other barriers. These findings
39 are opposed to the study of Mader, Scott, and Abdul Razak (2013) who reported efficiency of
40 governance for sustainability in developing countries. Poor governance highlights inefficiency of
41 system where capable, efficient and right personnel are discouraged to be recruited.
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46 The finding lack of institutional change has trickle-down negative effect on sustainability.
47 This finding contradicts that of Mader et al. (2013) study which found institutional change in
48 developed countries can push sustainability from peripheries to mainstream functions of HEIs. The
49 finding is consistent with that of Velazquez et al. (2006) and Baker-Shelley, van Zeijl-Rozema,
50 and Martens (2017) regarding serious need of change for sustainability. Moreover, it is directly
51 related to the studies of Lee et al. (2013), Ralph and Stubbs (2014), Hoover and Harder (2015),
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3 and A. R. Martin and Chen (2016) who reported that HEIs have been rigid to change organizational
4 structure and culture to promote sustainability. This study extends one step ahead and implies that
5 PPU's are run on ad hoc basis where long-term success and efficiency is missing.
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8 Lack of training has a complex nexus with awareness and resources. However, to value
9 them is the major issue. Thus, it is the most devastating barrier that prevents academic
10 administrators from valuing it and being committed to enhance their capacity building. This
11 finding is supported by the studies of Verhulst and Lambrechts (2015), and Blanco-Portela et al.
12 (2017) who argued that sustainability issues are due to lack of training. This finding is also
13 consistent with that of Stephen, Hernandez, Roman, Graham, and Scholz (2008) who found that
14 academic administrators can work as change agents if they are capable and trained to transform
15 HEIs. This is also consistent with Sibble's (2009) study in terms of supportive and collaborative
16 environment for training of academic administrators.
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24 Figure 2 indicates that if governance issues are addressed then other issues can be
25 minimized. For instance, training can enable academic administrators to design effective financial
26 proposals to maintain quality standards in teaching, learning, research, and infrastructure. Thus,
27 these barriers have qualitative relationship with each other. Findings imply that financially weak
28 and poor governance system needs corrective measures and critical initiatives.
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32 **6.0 CONCLUSIONS**

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34 This study contributes to the body of knowledge presenting the relationship of barriers'
35 intensity with reference to governance (Figure 2) by addressing complex and unprecedented issues
36 of sustainability. The model implies that adhocism needs a paradigm shift to transform the
37 governance and culture of universities. The nexus of model's parts imply that system efficiency
38 can only be maintained if awareness, training and monitoring are prioritized in close connection
39 with governance. Following case study research we attempted to explore sustainability issues in
40 Pakistan. Thus, findings cannot be generalized but are transferable in understanding sustainability
41 status at other public universities. Our other limitation was to take ample time from academic
42 administrators, as they hold management positions and have greater responsibilities. Finally, being
43 qualitative study, we cannot claim that findings and their interpretations are free from subjectivity.
44 Thus, future research can be conducted quantitatively to generalize findings.
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7.0 RECOMMENDATIONS

Based on the findings we propose following suggestions to minimize barriers and move towards sustainable future.

1. The recruitment criteria be improved and implemented in true letter and spirit to address governance issues.
2. Opinions and views of faculty and students be incorporated in decision making to make it more democratic and rational.
3. Sustainability be prioritized in universities' policies. Culture of sustainability should also be inculcated at PPU's where academic administrators can work as champions.
4. Culture of training academic administrators and faculty on financial management and cutting edge ideas of sustainability be promoted at PPU's. This will enable them to spend, monitor and evaluate finance following standard operating procedures. Moreover, they can be encouraged and promoted to share their learnings with colleagues. This point will help in promoting sustainability culture (point 3).
5. Awareness campaigns be initiated to spread value and importance of sustainability among all stakeholders at PPU's. This will ultimately be supportive in achieving SDGs.
6. Finally, a committee be devised whose purpose can be to ensure the above recommendations. This body be autonomous in terms of taking new initiatives to promote sustainability.

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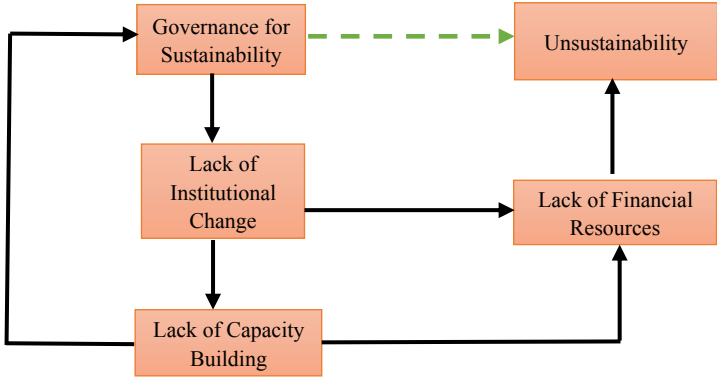


Figure 1. Conceptual framework of barriers to sustainability

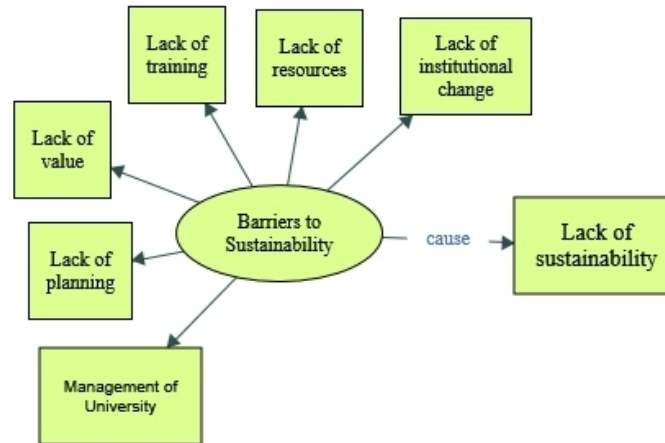


Figure 2. First level thematic map

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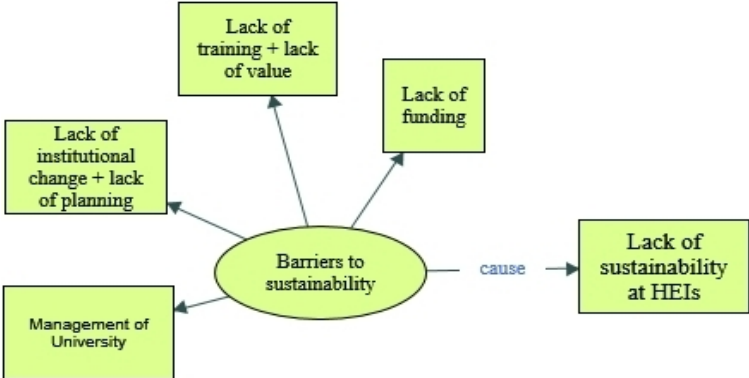


Figure 3. Second level thematic map

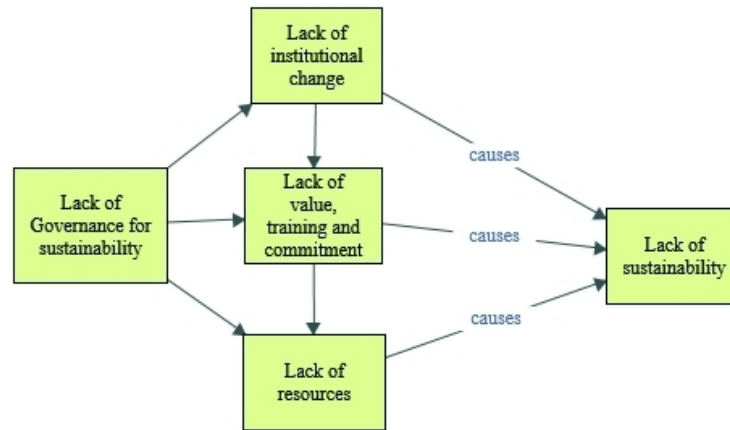


Figure 4. Final level thematic map