

Sustainability of education between academic libraries in Saudi Arabia and the UK

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استدامة التعليم بين المكتبات الأكاديمية

في المملكة العربية السعودية والمملكة المتحدة

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الملخص باللغة العربية:

تهدف هذه الدراسة المقارنة بين جامعة الإمام عبد الرحمن بن فيصل في الدمام، المملكة العربية السعودية، وجامعة ستراثكلايد في جلاسكو، المملكة المتحدة، إلى اكتساب فهم أفضل للعلاقة القائمة بين المكتبات الأكاديمية والاستدامة التعليمية في التعليم العالي. تسعى الدراسة إلى فهم السياسات المعمول بها في مكتبات المدارس في هذين البلدين بسبب هذا العمل. الغرض الأساسي من هذا البحث هو تطوير مقارنة بين مستويات الاستدامة في التعليم العالي في المملكة العربية السعودية وبريطانيا. ينقسم هدف هذه الدراسة إلى هدفين محددين على النحو التالي:

- تقييم الدور الذي تلعبه والجهود التي تبذلها المكتبات الأكاديمية في تطوير وتنفيذ الاستدامة التعليمية في التعليم العالي في البلدين..
- دراسة الدور الذي تلعبه المكتبات الأكاديمية في جامعة ستراثكلايد في جلاسكو، المملكة المتحدة، ضمان مستقبل التعليم المستدام في المملكة المتحدة.
- دراسة تأثير المكتبة الأكاديمية في جامعة الإمام عبد الرحمن بن فيصل بهدف تمكين استدامة التعليم في المملكة العربية السعودية.

أجرت الدراسة مقابلات مع خمسة مشاركين من كل جامعة من مختلف الأقسام المعنية بالمكتبات. تشير نتائج الدراسة بقوة إلى أن الأساتذة سيستخدمون في البداية نهجًا من أعلى إلى أسفل، يليه نهج من أسفل إلى أعلى. العملية المذكورة أعلاه بالغة الأهمية لأن معظم البرامج ستتبع نهجًا من أسفل إلى أعلى وستكون قادرة على دمج تعليم الاستدامة من خلال الكفاءات الأساسية بغض النظر عن توفر الدعم من المؤسسات المعنية (كوزمينا وآخرون، 2021). يهدف هذا البحث إلى تزويد الطلاب بمعرفة محددة حول الاستدامة لأنها تنمي أيضًا قدراتهم الاجتماعية والعملية التي ستفيد المجتمع. أخيرًا، بدأت العديد من الجامعات نموذج الاستدامة من أعلى إلى أسفل، حيث قاد كبار المديرين تطوير المؤسسات المستدامة من خلال التدريس والبحث والمشاركة في الأنشطة داخل الحرم الجامعي. من الممكن إجراء المزيد من البحث من خلال توسيع حجم العينة لتشمل كليات أخرى في البلدين. بالإضافة إلى ذلك، يمكن للباحث إجراء استدلال إحصائي أكثر تفصيلاً على حجم عينة أكبر للتأكد من أهمية نمو الاستدامة

كان هناك وعي متزايد واتفاق في العقود الثلاثة الماضية على أن مؤسسات التعليم العالي ملتزمة بالمساهمة في تطوير مستقبل مستدام (Agbedahin)، 2019. (مؤسسات التعليم العالي في وضع جيد لتولي هذا الدور لأنها يمكن أن تزود الطلاب بالفهم ومجموعة المهارات والتكنولوجيا اللازمة لإنشاء مجتمع مستدام. من خلال مشاريع تحضير الحرم الجامعي وتطوير المناهج والالتزامات الدولية والتقدم السياسي، كانت مؤسسات التعليم العالي تدرب وتطور الاستدامة في التعليم العالي لتمكين الخريجين من اكتساب مجموعة المهارات اللازمة للسماح بمجتمع مستدام. يتم تعريف الاستدامة في هذا البحث على أنها نموذج متعدد المستويات حيث يتم ترسيخ القضايا الاجتماعية والاقتصادية داخل القدرات البيئية. يتم تعريف الاستدامة على أنها "الاهتمام بالبيئة الطبيعية على الأقل (Banister)"، 2019. (بعبارة أخرى، يجب موازنة القضايا البيئية جنبًا إلى جنب مع القضايا الاجتماعية والثقافية والاقتصادية عند النظر في الاستدامة..

ABSTRACT

This comparative study between Imam Abdulrahman bin Faisal University in Dammam, Saudi Arabia, and Strathclyde University in Glasgow, United Kingdom, aims to gain a better understanding of the relationship that exists between academic libraries and educational sustainability in higher learning. The study seeks to understand the policies in place in these two countries' school

libraries due to this work. The primary purpose of this research is to develop a comparison between levels of sustainability in higher education in Saudi Arabia and Britain. The aim of this study is broken down into two specific objectives as follows:

- To assess the role played and efforts that have been taken by academic libraries in the development and enactment of education sustainability in higher education in the two countries.
- To examine the role played by academic libraries in the University Of Strathclyde In Glasgow, UK, in ensuring the future of sustainable education in the United Kingdom.
- To examine the effect of the academic library in Imam Abdulrahman Bin Faisal University to enable the sustainability of education in Saudi Arabia.
- The study will conduct interviews with five participants from various departments of the university concerned with libraries.

The study results strongly suggest that professors will initially use a top-down approach, followed by a bottom-up approach. The above process is critical because most programs will take a bottom-up approach and will be able to incorporate sustainability education through key competencies regardless of the availability of support from the respective institutions (Kuzmina et al., 2021). This course aims to provide students with specific knowledge about sustainability as it also develops their social and practical abilities that will benefit society. Finally, many universities have started a top-down sustainability model, where top managers spearheaded the development of sustainable institutions by instructing, researching, and participating in on-campus activities. Further research is possible by expanding the sample size to include other colleges in the two countries. Additionally, the researcher can perform a more detailed statistical inference on a larger sample size to ascertain the significance of sustainability growth.

1.1 INTRODUCTION

There has been a growing awareness and agreement in the last three decades that higher learning institutions (HEIs) contribute to developing a sustainable future (Agbedahin, 2019). HEIs are well-positioned to take on this role because they can equip students with an understanding, skillset, and necessary technology for establishing a sustainable community. Through campus greening projects, curriculum development, international commitments, and policy advancements, HEIs have been training and developing sustainability in higher education (SHE) to enable graduates to gain the necessary skill set for a sustainable society. Sustainability is defined in this research as a tiered paradigm in which social and economic issues are anchored within environmental capacities. Sustainability is defined as "concern for the natural environment at a minimum" (Banister, 2019). In other words, environmental issues must be weighed alongside social, cultural, and economic ones when considering sustainability.

While some SHE studies specifically address students' involvement, the majority refer to and examine students only for their participation rather than contributing to sustainable higher education policy development or as change agents in SHE initiatives (Agbedahin, 2019). This is problematic because students have been identified as change agents on campuses, particularly within the campus sustainability movements, suggesting that students contribute more to SHE than they do as simple participants in the initiatives of other stakeholders (Harley & Clark, 2020). While it is essential to understand the role of students as participants concerning other people's initiatives (e.g., curricula and sustainability programming in universities),

examining how and to what extent students lead sustainability action on campuses is also critical for furthering our understanding of SHE integration (Caradonna, 2014). Indeed, student leadership in SHE has been acknowledged as essential to the institutionalisation of sustainability, with students considered critical stakeholders for leading change across campuses. This Study compares Saudi Arabia's Abdulrahman bin Faisal University in Dammam with Glasgow's University of Strathclyde to understand the connection between academic libraries and academic sustainability. This research targets a comparison between the educational library policies and systems designs in the two higher learning institutions. This chapter discusses the study's research problems and study objectives in detail.

1.1.1 Education Sustainability

Education enables generations to pass on their culture, discoveries, accomplishments, and inaccuracies in various ways and contexts. Education is also critical for generating, criticising, and distributing ideas, knowledge, skills, and values in or amongst communities, countries, and regions for people of all ages (Agbedahin, 2019). Education is recognised as a critical component of sustainable solutions in various contexts and levels. It is committed to teaching environmentally conscious individuals, claiming that education is necessary for developing awareness of ecology and ethics, values, attitudes, skills, and behaviours consistent with sustainability (Agbedahin, 2019). Education was recently reemphasised as a critical component of the SDGs and the Global Action Program on Education for Sustainable Development. On the flip side, education provides a mechanism for businesses to cement and retain, or preserve, ways of

gaining knowledge, existing, and behaving that benefit the economy, diverse culture, and community but are not viable in other forms (McKanan, 2019). As a result, one of the section's primary objectives is to assist academic communities in distinguishing between education systems that wish to retain the "unsustainable" and those that desire something different, whatever that may be. According to (Banister, 2019), librarians can identify a sustainable Higher Education (HE) system as a local, national, and global network of HE institutions and their supporting systems. The institutional framework of EH's social, economic, and environmental objectives and constraints include training and understanding, research and reaching out. Sustainable HE contributes not just to the operations of HE but also to the goals of sustainable development by expanding people's know-how and capacities to deliver societal and economic demands and promoting environmental stewardship (Agbedahin, 2019). Without confronting the established status quo, this region would struggle to accommodate or encourage high-quality education.

1.1.2 Research Rationale

My Indigenous beliefs are similar to social constructivism and interpretivism. They view reality as an idea that society coins and varies according to the individual's or community's surroundings, culture, and experiences. Social constructivism strikes a particular chord with me because it "insists on the relevance of cultural and contextual issues in the comprehension of what happens in society and developing a knowledge-based understanding of this comprehension." This serves as a foundation for my research, with the idea that each individual and higher education institution would

look at sustainability differently. Additionally, the interpretive paradigm is concerned with comprehending the world through humans' subjective experiences, thereby acknowledging the social construction of reality and truth. According to Creswell (2007), the interpretive approach is particularly beneficial for comprehending "conditions that put some individuals at a disadvantage and exclude others." It thus is advantageous in the SHE context when attempting to comprehend how student communities are or are not involved in the development of SHE. In conclusion, I recognise that learners are frequently disadvantaged in their efforts to elicit reforms in institutions for SHE as a result of their low hierarchy in Higher Education Institutions. To this purpose, I take on critical theories that permit the critique of society with the ultimate objective of educating persons and communities to go past the imposed limits and forms of oppression. My ontological and epistemological perspectives direct my study and analysis, as I consider reality a subjective and socially created idea heavily impacted by power systems. This research is informed by critical education policy and social movement theory literature. I draw investigation to what libraries do to support sustainable education development through the services provided in the library, such as student reading books service, reference service, online search, and actions taken in the library such as collection development, buildings, and student services.

1.1.3 Research Questions

This research looks to answer the following research questions:

- What efforts has the academic library made to promote sustainable education in a higher learning institution?

- What measures have been adopted in Imam Abdulrahman Bin Faisal University library to promote sustainable education development?
- What measures have been adopted in the University Of Strathclyde In Glasgow library to promote sustainable education development?

1.1.4 Research Objectives

The main aim of this study is to compare the forms of educational sustainability employed in two academic libraries – one in Saudi Arabia and the other in Britain. The researcher will seek the following specific objectives throughout the study:

- To assess the role played and efforts that have been taken by academic libraries in the development and enactment of education sustainability in higher education in the two countries.
- To examine the role played by academic libraries in the University Of Strathclyde In Glasgow, UK, in ensuring the future of sustainable education in the United Kingdom.
- To examine the effect of the academic library in Imam Abdulrahman Bin Faisal University to enable the sustainability of education in Saudi Arabia.

1.1.5 Research Learning Outcomes

- At the end of the study, this research expects to find the following outcomes:
 - Getting to understand the impact of academic libraries and their role in achieving

- educational sustainability.
- Gaining an understanding of the role of academic libraries in the future of higher education.
- Studying academic libraries in their futuristic ideas and understanding the role they will play in attaining educational sustainability. Understand that the researcher can focus on the academic libraries from these two countries to develop educational sustainability.

1.1.6 Research Approach

This research provides two academic libraries and their impact on education sustainability. The study uses the interview method of data collection. Since we intended to find out the efforts and strategies that the universities have, the interviews were the most appropriate since they could collect information. The interviewees had an option of expressing their opinions, unlike the closed-end questionnaires, where the respondents only responded to what they had been asked. The study collected first-hand data from the librarian and academic directors from both universities. The researcher got other information about sustainable education from journals and peer-reviewed articles.

Five respondents from each university included the librarian, the ICT department, the library management, the academics director, and a student. These respondents helped us shed light on what efforts and systems that the universities have set up to promote sustainable education. The interviews allowed the collection of crucial data that

indicates the relationship between academic libraries and education sustainability.

2.1 Literature Review

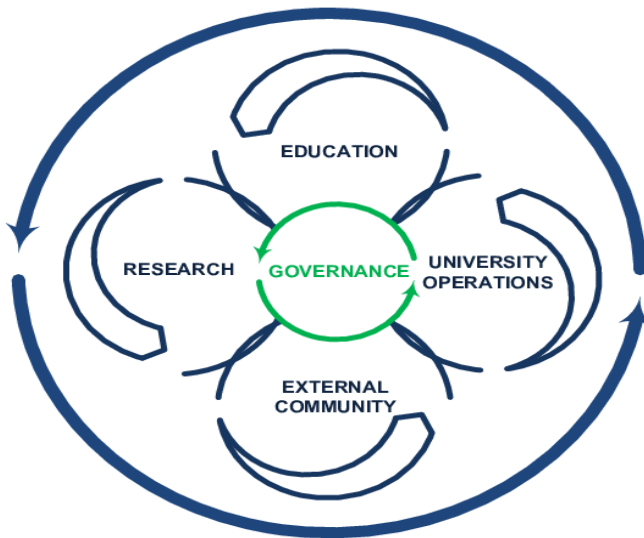
A library and higher education institution serve as the study's organisational setting; the problem is environmental sustainability, and the solution is to build a sustainability education program. Much theoretical work has been done regarding sustainability, higher education management, organisational change, and corporate social and ecological responsibility. The junction of sustainable leadership and management in higher education does not have much research in any case. As a result, one of the critical objectives of this chapter is to integrate knowledge from other fields to produce research questions and beginning proposals, thereby building a model of organisational elements influencing SHE. In Chapter II, literature from past scholars is critically assessed in each component to develop this framework. The first part of the study examines sustainability theory to lay the groundwork for evaluating SHE and the role of libraries in this process. The following part compares and contrasts various higher education management theories to develop a framework for assessing organisational transformation. It also examines a limited but growing body of literature on SHE, emphasising defining and measuring the process of becoming a sustainable college or school.

2.1.1 The importance of higher education for sustainability

Due to education being one of the most important means of communication and the foundation for developing the "sustainable mindset," it is the driving force behind achieving sustainability. There is an approach to knowing beyond the technical knowledge and even

understanding a healthy ecosystem. Flourishing society as the basics" in this notion "is an excellent example of this. The sustainable mindset pushes us to break away from past management discipline silos by emphasising ethics in management, entrepreneurship, ecological studies, systems thinking, and self-understanding (Kassel et al., 2016). As an example, systemic thinking is frequently cited as a critical ability required to grasp sustainability's significance fully. This is because environmental, social, and economic sustainability are all intertwined. Based on data from UNESCAP (2015), "It

is people and the nature of society as a whole that shape the economies that provide them with a living and improve their overall well-being. In the application of education for sustainability, higher education institutions have a crucial role:



1. Sustainability may be improved by teaching and research centres incorporating sustainability ideas into all of their projects.

2. Different educators' practices can affect public opinion through outreach activities, which in turn can influence policy.
3. It promotes university personnel's local and more extensive community understanding when there is an institutional culture of sustainability.
4. Higher education institutions will shape Next-generation professionals in many professional contexts and social activities, which will significantly impact them.
5. By putting in place environmentally friendly school policies and procedures (e.g., limiting greenhouse emissions, promoting diversity in flora and fauna, energy efficiency, and reducing ecological footprint).
6. Verities can impact students by setting examples (Littledyke et al., 2013). Investing in higher education is critical for creating a sustainable culture, as organisations with the highest concentrations of higher education personnel have more advanced academic backgrounds and a greater desire to adopt and investigate new technologies, including those closely allied to SDGs (Rosati and Faria, 2019). It has a significant influence on the real world, namely the ecological side, the economic side, the societal side, and stakeholder sustainability awareness, to develop on-campus a sustainability culture through various activities that include institutional framework and assessment, research, educational experiences, and operations; and reaching out. Several studies and revisions have been conducted on the effects and presence of sustainability concepts in degrees, course topics, and teaching approaches in higher education institutions.

Teaching sustainability issues is more effective when integrated into core courses (required disciplines), not side ones, according to Figueiró and Raufflet's systematic study (2015). In light of this,

7. university programs must place a high priority on sustainability projects. There have been several methodological frameworks proposed for the transfer of sustainability-related knowledge.

2.1.2 Sustainability Education Research

Research on sustainability has an approach that takes a look at different disciplines and perspectives from different levels that focuses on the production of knowledge on the environments used for learning, approaches in teaching, and the attitudes and ideologies in teachers and students and education on sustainability, with their outcomes. The current world is undergoing significant changes in the rapid and significant environmental issues. The observed changes are causing changes in the lives of individuals born at this time and those of coming generations, and it is difficult to predict what the future will be like. Scholars emphasise the importance of improving practices to reduce the effects that might be seen in the unforeseen future. Sustainable development is a comprehensive concept that looks at the sociopolitical, economic, and ecological issues surrounding different groups of people and how they are interrelated. Their solutions are also in the areas that should be explored widely using different disciplines to grasp the whole idea (Reunamo and Pipere, 2012). This means that children and adolescents should look at the issue of sustainability from a holistic perspective and not from perspectives that focus on a particular approach or discipline. This will bring about a better understanding of sustainability.

2.1.3 Libraries and Sustainability

Many studies have tried to look at academic libraries from a futuristic perspective. Some of them only report on the trends that have been observed in academic libraries. An example is the Ithaca S&R reports, which look at perspectives of different parts that require change. There are other studies on periodicals, for instance, the Marshall Breeding Library Systems, which are annual.

Reports that report on one academic library work. Additionally, some research is updated after specified periods, and the many publications, including reports, journal articles, and books, target to summarise the subtle positions of academic libraries (Long and Schonfeld, 2012).

More complex and comprehensive developments in higher education are also the main focus of other publications. The hype cycle is sometimes referenced as the model of how the progression is essential, especially after periods that brought enthusiastic and disillusioned states. Organisations such as the World Economic Forum publish futuristic reports such as those that discuss emerging technology. Most notable is the IFLA Trend Study (1991), and all the updates that have followed take a look at the ecosystem from a global perspective. The fundamental trends usually analyse the pros and cons of significant changes in how information is acquired and utilised worldwide. A considerable amount of the publications on academic libraries are assumed to connect to the future through ways that look at one area. This could be a study of the deployment of new technological and innovative ways to solve unique issues.

Another study by Lidman (2008) researches how decisions are made in Academic Libraries and the tactics that they use to do so. Finding that a decent concept where studies on academic libraries can help understand future expectations by going through other literature. This paper does not aim to look at these patterns comprehensively. Still, it focuses on the gap that it assumes will exist between the interactions between libraries and librarians in the future. Much literature discusses the trends in the libraries or their environment from a broader perspective and the different libraries and how they can lead to the development of a strategy. However, there is very little information concerning the future of libraries. The future position should discuss how the people will react to changes, the agreement on the essential nature of change, and how the libraries can adapt to this. Research can use a vast number of scholarly works to create a universal understanding of the need for change. There is little focus on how libraries are prepared for this situation. The intention to promote a long-term education system has made different libraries bring about e-resources for students.

2.1.4 Learning and teaching in academic libraries

Academic libraries are always created for educational purposes, but this mission constantly adapts to pedagogical, technological, economic, societal, and institutional policies. Because of financial constraints, marketisation and differentiation in higher education everywhere, and changes in pedagogy, a comprehensive approach to education and student experiences is now standard practice, as is allowed that this will include institutions partnering and collaborating. According to Elkington (2019, p. 3), "Learning happens anywhere" in

HE. Even while librarians' involvement in supporting students' learning is widely acknowledged, the function of librarians as teachers remains controversial. This study is interested in increasing evidence for the critical role that library practitioners play in ensuring there is learning and teaching in higher education. The developments that have been seen in digital humanities, curing data, and open science have increased opportunities for librarians to expand their role in research, which has led to many acquisitions of case studies. They have been documented to show support in the research of practices and innovation. Some of these case studies cover modernised library practices that increase information, designing instructions and student-assisted learning, and the resources available to everyone.

2.1.5 Assessment and Accountability in Saudi Higher Education

Accountability for academic organisational performance has numerous pros for politicians and the general public, one of which is that it creates incentives for a domestic stakeholder to pursue perfection. Consequently, while accountability is short-sighted in that it focuses mainly on judging prior performance, it also looks at the idea that it tends to frame futuristic behaviour favourably. This would assist in showing that domestic investments in HE are worthy and increase trust in the HE system. Problems of evaluation and accountability might develop. Despite the many advantages of assessment and academic responsibility, these approaches have several disadvantages and limitations. These downsides are especially true when assessment and liability are unilaterally imposed with few, whether any,

distinctions that account for significant disparities in the availability of resources, the complexity of tasks, or both.

Trow (1996) points to some good ideas; however, a well-designed college rating scheme should incorporate point collection after graduation. Learning is very confined, mainly throughout my college years. Future assessment attempts can also go beyond assessing knowledge to include unexpected results, such as hope, curiosity, and entrepreneurship. To appreciate the increasing emphasis on EH evaluation worldwide, especially in Saudi Arabia, it is vital to understand the distinction between internal and external assessments. Internal evaluation refers to the collection of data on the institution's performance and any subsequent examination of such data for internal reasons. This sort of evaluation is most often linked to the achievement of university students and faculty personnel. It can also fit, though, into the grading of the entire institution. External assessment involves one or more external parties that evaluate institutional data and draw opinions on their performance.

Trow (1996) contrasts clearly between these two forms of assessment. External accountability resembles an audit in ensuring that universities and colleges fulfil their duties towards critical stakeholders and society. Internal accountability ensures, among other things, that several institutional components meet and even overtake their respective tasks to achieve and even exceed performance objectives. Academic organisational efficiency in different settings, such as business, is connected to organisational efficiency. Variables affecting the implementation process of HE institution–efficacy indicators are the same as those affecting continued growth in business and industrial

situations and the participation of stakeholders. Indeed, corporate and industrial performance enhancement programs, strategies, and methods have numerous opportunities to explore and, transfer and adapt programs, procedures, and techniques to higher learning environments.

3.1 Methodology

The paper seeks to undertake a comparison of the educational sustainability between the Imam Abdulrahman Bin Faisal University library and the University of Strathclyde library. The objectives of the study are 1) To assess the role played and efforts that have been taken by academic libraries in the development and enactment of education sustainability in higher education in the two countries, 2) To examine the role played by academic libraries in the University Of Strathclyde In Glasgow, the U.K. on ensuring the future of sustainable education in the United Kingdom, and 3) To examine the efforts of the academic library in Imam Abdulrahman Bin Faisal University with intentions of enabling sustainability of education in Saudi Arabia.

The data that will be collected for this research will be the different efforts and strategies that the two universities put into ensuring they attain educational sustainability. The study looks at different measures through the qualitative research method. To gain the information, the research uses interviews as the main form of collecting qualitative data. These interviews will collect primary data from the library and academic directors in the different schools. For secondary data, the study will be collected from peer-reviewed articles and online journals. Secondary data that will be collected will be used to supplement the information from the interviews. From both sets of

data, the researcher will then come up with the results and conclusions and give recommendations on how each library can improve. The study will also recommend future research ideas.

3.1.1 Data Collection

The study collected both primary data and secondary data. For primary data collection, the study conducted interviews with different stakeholders at the library to gain firsthand information. The questions targeted the understanding of different strategies and efforts that have been put in place in the two libraries. The interviews were conducted on the following set of people from each university: 1) the librarian, 2) one individual from the ICT department, 3) one individual from the library management department, 4) the academic director department, and 5) one student. A request was sent to the departments through an email with the request of a member from the department who was willing to participate in the interviews. The one who agreed had to sign a consent form to acknowledge their participation. The form also contained the conditions and the guidelines for participation. The form was attached to the requested email.

Secondary data resources used for this research are journals and peer-reviewed articles. Both were mainly retrieved from the internet. The main focus of the secondary data is to supplement the information we got from the interviews (Reddy & Agrawal, 2012). The study also establishes some important aspects of the different strategies and efforts that are being put in place from these secondary sources by studying the advantages and disadvantages of each strategy they apply. Furthermore, the study also acquires important recommendations for

university libraries through research on how other libraries are implementing educational sustainability into their programs. These are the main ways in which data for the research was collected.

3.1.2 Justification of Research Method

This study is a qualitative research method that seeks to obtain comparative data on the methods that are used to achieve educational sustainability in the Imam Abdulrahman Bin Faisal University Library and the University of Strathclyde Library. The study employs a qualitative research method because the kinds of strategies that are used by these two universities are mainly theoretical and cannot be quantified. The research questions for this study are as follows: 1) What efforts have been taken by the academic library to promote sustainable education in higher learning institutions? 2) What measures have been adopted in Imam Abdulrahman Bin Faisal University library to promote sustainable education development? 3) What measures have been adopted in the University Of Strathclyde In Glasgow library to promote sustainable education development? To come up with answers to these research questions, the study must use qualitative data, which will be in the form of interviews conducted with different individuals in the two universities. Images are also used partly to show the concepts that are being discussed in the research paper. The only disadvantage with this method is that some of the interviewees could not come up with the exact terms for some of the strategies. Therefore, important information might have been lost in the explanations.

In selecting the samples for the study, the researcher uses the simple random sampling method. In this method, every individual in

the population of the two universities has an equal chance of being selected. To avoid bias, the researcher selected a student at random from the school's admission list. In the ICT department, academic director, and library management, the researcher also picked individuals at random through the simple random sampling method. The librarians for both universities were also selected at random.

In data analysis, the researcher used coding and categorisation methods to analyse the data collected from the different interviews. This method was seen as the most appropriate to obtain the codes from the interviews conducted. A lot of information from the interviews was out of topic, and therefore, selecting the codes made it much easier to categorise data, determine the results for both universities, compare them, draw conclusions, and give recommendations for both universities. The only disadvantage with this method of data analysis is that there is a chance of an omission error. The researcher might have omitted some of the important information during either the period of selecting the codes or reducing the number of codes by selecting the important ones.

4.1 Findings and Discussion

Analysis of data from interviews performed at two universities and a literature study is discussed here. Higher education's service, collaboration, and teaching and learning all played a role in the selection process. Rather than addressing sustainability in education in their work, librarians and academics focused more on theoretical publications that examined mission alignment and strategy. The higher education literature addressed service less than the LIS study, indicating a disproportionate focus on sustainability in libraries in

higher education. Academic libraries in Saudi Arabia and the United Kingdom were compared in terms of education sustainability, and we focused on collaboration, communication, and instruction, as well as the measures taken by the two institutions to promote sustainable education in their respective countries. A group of people, including library administrators, department heads, and students from both universities, participated in an interview to give their thoughts on the importance of service, collaboration, and communication on the topic of sustainable development.

From the interviews conducted in both universities, Imam Abdurrahman Bin Faisal University In Dammam, Saudi Arabia, And The University Of Strathclyde In Glasgow, four respondents from both universities said academic libraries should be very engaged in campus sustainability teaching and curricular activities. In comparison, five respondents said they should be somewhat involved. Only one person voted that libraries don't play a significant part in the sustainability of higher education. Most comments were made on this issue, with all of the responders explaining. It doesn't matter whether the option is chosen; over a third say, sustainability is just one area to be addressed. Ninety per cent of individuals who responded to the survey said that academic libraries should play an important role in sustainability education and curricular activities. One respondent from Imam Abdurrahman bin Faisal University stated,

"We are perfectly positioned to sit at the table with other faculty and administrators to decide campus-wide sustainability initiatives, programs, and philosophies because libraries are the

centre of campus life and should take the lead in sustainability issues; we are positioned

perfectly to be an integral player to sit at the table with other faculty and administrators to decide campus-wide sustainability initiatives, programs, and philosophies..".

There are a wide variety of environmental education programs supported and enhanced by several university libraries. Given the importance of sustainability in so many different sectors, it's no wonder that these essential library services were highlighted. Libraries and Information Science Programs in Colleges, Universities, and Universities More than a quarter of those polled said their library was involved in sustainability research. In contrast, others said they wanted to educate the public about sustainability. The Library Buildings & Facilities department of Strathclyde University responded to the survey. "Some modest energy and resource-saving measures have been put in place, such as reducing paper use and electricity consumption and using compost bins in the library.

4.1.1 Summary of the Discussion: Academic Libraries and Sustainability

- **Role of Academic Libraries:** Promoting a culture of sustainability through activities such as:
 1. Collaborating on campus sustainability projects.
 2. Re-planting trees.
 3. Teaching sustainability topics in information literacy.
 4. Developing sustainability-focused curricula.

5. Conducting awareness presentations for academic units.
 - **Definition of Sustainable Development:** Meeting present needs without compromising the ability of future generations, encompassing environmental, economic, and social dimensions.
 - **Future Vision:** Expanding libraries' roles in education and advocacy for comprehensive sustainability.

Discussion Question: Are these efforts sufficient, or is more innovation needed?

5.1 Conclusion

Recycling, efficient lighting, water conservation devices, toilets for composting, and green building designs have been implemented at several colleges worldwide. A few universities have fully committed to environmentally friendly campus operations, research, and the greening of curricula compared to others. Researchers found that sustainability is not being implemented consistently. To achieve this, the institutions must include sustainability in their goals. Programs should be flexible, and disciplines should be altered to reflect the diversity of the world we live in. Communities should be involved in education. All university connections, including those with stakeholders, governments, and the community, must be reevaluated. To improve education, they encourage critical thinking and the employment of a wide range of instructional methods. It's possible to include student-centred and participatory research procedures into these teaching and learning techniques. The involvement of local

communities as learning resources is one of the most important aspects of participative and inclusive education. Sustaining educational practices include role-playing and simulations as well as stimulating activities such as group debate and reflection. It's important for educators to regularly evaluate the information they offer and consider how changes to its delivery can help students better cope with the subject. The curriculum should also be linked to informal learning by developing curriculum activities that integrate formal and informal learning areas.

Most of the activities and beliefs associated with sustainability focus on reducing negative impacts on natural surroundings and promoting the wise and careful use of natural resources.

Organisational and infrastructural/technological changes, particularly in terms of energy efficiency and the total carbon footprint, are the major sustainability components in university campuses. Making judgments in light of these developments is equally crucial. The importance of social commitment in adopting pro-environmental policies in Saudi Arabia's HE institutions is less significant, yet it is nonetheless included in this research study. The purpose of this PhD is to evaluate how the facility and project management decision-makers in HEIs, Saudi Arabia, are implementing sustainable development planning and action and what obstacles and opportunities exist for continued improvement.

In Saudi Arabia, the success or failure of efforts to promote university campus "status" is influenced by organisational characteristics. Based on the rational choice theory and organisational change theory methodologies and procedures, this investigation was

aided by constructing a theoretical framework. As a key method of gathering information on the viewpoints of representative decision-makers in F&PM departments at chosen Saudi universities, semi-structured interviews are used to conduct face-to-face interviews.

This master's thesis focuses on the organisational and decision-making limitations that currently prohibit Saudi HEIs from progressing towards practical action to ensure sustainability on campus. However, in one of the case study universities, proactive leadership and training for specialised sustainability departments have allowed F&PM decision-makers to follow a strategic program of practical, sustainable development projects across the campus. Using this model, HEI campuses around Saudi Arabia have successfully developed sustainability strategies based on the variables mentioned here and highlighted in the research.

Sustainable development at a Saudi Arabian and a British university is described in this study, which adds to the body of knowledge. The goal of higher education institutions is to pass on knowledge and skills to the next generation while also enhancing students' moral and ethical development. Faculty members at the institution where the poll was conducted have no strong grasp of the concept of sustainable development. Use this research to educate students and the general public about the idea of sustainability. By defining a sustainability purpose for their university or department, they can help to raise awareness of this issue and educate their peers. Using this technique, sustainability will be widely adopted and integrated into the curriculum at many universities. There are many different definitions of sustainable schools, and a purpose can help

bring them all together. It was concluded from the research that the best way to get faculty members on board with the idea of sustainable development was to begin with particular courses. This must be the curriculum's measurement instrument once the course's concept of sustainable development is understood and the thought can be put into practice.

For sustainable development programs and courses, educators need to activate the necessary abilities that are necessary. Academics will first use the top-down approach, followed by the bottom-up approach, according to the data. Because most programs are bottom-up, they can incorporate sustained education through critical skills regardless of the level of institutional support. Key competencies, such as critical thinking, self-awareness, and multidisciplinary groups, assist students in acquiring what they need to study to meet the program's ultimate goals.

Pupils interested in a more sustainable future would benefit from this course, which aims to teach them social and practical skills. Numerous institutions are taking the lead in implementing new methods of teaching, research, and campus life to create a long-term, financially sound business model. Expanding the sample size to include more institutions in Saudi Arabia and the United Kingdom will allow for a future extension. Additionally, a deeper statistical inference on the larger sample size may be made to discover the effect of sustainable development the most effectively.

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