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Curriculum, Skills, and Employability: Reimagining Higher Education for Pakistan's Workforce

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Abstract

The current interpretive qualitative study explored the relevance of higher education programs to job market demands. This study aimed to get opinions of participants on the relevance of higher education programs with labour market needs, and potential strategies to enhance alignment of academic competencies with employability outcomes. A semi-structured interview protocol was used to collect data. Fifteen participants (faculty members, HoDs/senior administrators, representatives of Quality Assurance Cell) at public and private sector universities of Punjab province were selected through purposive sampling. The collected data were analyzed through thematic analysis. The findings revealed that non-alignment of curriculum with market needs, traditional and outdated teaching methodologies and limited soft skills development caused un-employability and dissatisfaction on the part of the industry. In addition, poor industry-academia collaboration and limited professional guidelines hindered graduate employability. These findings highlighted a pressing need for policy-level reforms, innovative teaching practices, and systematic changes that prioritize practical, future-ready, and entrepreneurial competencies.

Keywords: Curriculum Alignment, Labour market Demands, Graduate employability, Entrepreneurial competencies

Introduction

In today's rapidly changing world, the relationship between the ability of graduates to find employment and the level of education they have received is a major concern for everyone. This is because economies are increasingly demanding a professionally competent, skilled and adaptable workforce, so the relevance of higher education programs to market needs plays an important role in preparing graduates for successful transitions into the workforce. In recent years, the mismatch between labour market demands and higher education outputs has become a major issue, particularly in emerging nations such as Pakistan. Unfortunately, there is a gap between what the stakeholders or employers demand and what higher education institutions are producing (Al Hinai et al., 2020).

Throughout the world, higher education is facing remarkable challenges. Over the years, there has been a huge transition in Higher education, from a predominantly knowledge-based approach to a more holistic focus on developing practical skills, critical thinking abilities, and problem-solving competencies. This shift in emphasis reflects the recognition that employers seek graduates who possess not only theoretical knowledge but also the capacity to apply that knowledge effectively in real-world contexts. Numerous recently released scientific studies (Manaf, 2021; Zimmer & Keiper, 2021) have emphasized the critical and timely challenge of curriculum alignment to close the gap between university-acquired skills and the relevant skills that are essential in the labour market. Aljohani et al. (2022) suggested that academics and curriculum developers must keep an eye on the job market to incorporate the required and most demanded skills in their curriculum. Students are increasingly looking for programs that offer rigorous coursework (Nagy, 2006).

Universities are expected to place more focus on meeting the expectations of students and evaluating the demands of the job market, and make necessary reforms in their offerings to meet those expectations (Aljohani et al., 2022). At the time of graduation, students must have learnt to become successful professionals ready to meet the demands of their jobs (Nilsson, 2020).

Problem Statement

Pakistan is a developing nation that works hard to uphold its diplomatic, economic, and cultural influence throughout the world. It is also facing the problem of a youth bulge, as Faisal et al. (2019) reported the status of youth from the National Human Development Report 2017, as 64% of the whole population is under 30 years in Pakistan. If youth here are not efficiently and proficiently engaged and their dependency ratio on their elders remains high, they will become a threat to the progress of the nation. Pakistan LFS survey (2021) reports that the youth fall in between the category of 25 to 34 years of age, comprising 75.9% of the unemployed working age population.

Despite increasing university enrolments, many graduates struggle to find jobs due to a mismatch between education and industry demands. Out of the whole population, 4.5 million people in Pakistan are currently unemployed as per the Pakistan Labour Force Survey 2021 (Pakistan LFS, 2021). Therefore, there is a dire need to find a solution to unemployability by reducing the skill gap for university students with respect to market requirements.

Research Objectives

The following are the objectives of the study:

1. To assess the alignment of higher education curricula with labour market needs.
2. To evaluate teaching methodologies for their relevance to employability.
3. To explore strategies for enhancing industry-academia collaboration.
4. To recommend systemic reforms for graduate employability.

Research Questions

The study answered the following questions:

1. Are the teaching methodologies used in universities in Pakistan relevant to job market demands?
2. What are the specific gaps between academic curricula and market needs?

3. What are the specific gaps between academia and industry?
4. What are the possible strategies to align higher education with industrial needs?

Review of Literature

Higher education institutions are under pressure to develop skilled and competitive human resources in the modern global knowledge-based economy. Significant macro-environmental shifts, such as globalization and technological advancements, have heightened the demand for professional education (Bhagra & Sharma, 2018). Industries are now in search of leaders with a global perspective who can navigate and address environmental uncertainties (Nusrat & Sultana, 2019). To enhance employability skills, universities must play a crucial role in a country's economic development and should be viewed as catalysts for broader change (Suleman, 2018). Additionally, universities need to equip graduates with practical and relevant skills that are aligned with the needs of employers (Mason et al., 2009).

Alignment of Higher Education with Job Market Demands

Higher education is crucial to the modern, post-industrial economy because it provides the trained labour necessary to ensure future prosperity. In order to improve the employability of the graduates, the universities should therefore increase the opportunities for internships and industrial tours, and host seminars on the hiring process before students graduate. (Aboagye & Puoza, 2021).

Tomlinson (2017) presented a graduate capital model suggesting that higher education institutions prepare students for employability using a more comprehensive way. He emphasized the importance of not only developing technical skills but also identity, resilience, and social networks to better prepare students for a wide range of employment opportunities.

Manoharan & Arockiam (2017) suggest that institutions should sign MOUs with nearby industries to improve their students' practical technical skills. Taylor recommends that universities get industrialists on board in their educational programs and statutory board meetings. Establishing industrial advisory boards in educational programs will be more beneficial for institutions for the successful running of their programs (Taylor and Calitz, 2020).

According to an ILO report from 2021, the global economy demands employability skills that are vital for economic strength, and employers seek these key skills in university graduates for their specific roles. Moreover, UNESCO (2020) highlighted that due to the global youth population increase, countries encounter major challenges due to the widening gap between the skills employers require and the qualifications of graduates. This disparity could lead to ongoing unemployment, underemployment, and extended transitions from institution to the workforce (World Bank, 2020).

Current Situation of Unemployment in Pakistan

While this issue is global, Pakistan is also affected. A large portion of its youth population encounters substantial developmental challenges. Each year, nearly 4 million young people in Pakistan reach working age, contributing to the country's position as the ninth largest labour force in the world. Pakistan must implement significant policy changes to increase the employability of its youth, especially university graduates, considering the data and existing circumstances. (Rafiq-uz-Zaman, (2025).

Importance of Professional Competence in the Job Market

A person must constantly develop, adjust, and improve their personal skills and attributes in order to be regarded as significant human capital (Oliver, 2015). Students' successful shifting from higher education to the job market is a complex process (Aljohani et al., 2022). Individuals' motivation to develop career-related skills necessitates a long-term approach, particularly emphasizing professional well-being (Hojda et al., 2022). Van Horn et al. (2004) argued that an employee's professional reputation and occupational well-being are

dependent on their competence.

Oraison, Konjarski, and Howe (2019) reveal that employers prioritize graduates possessing practical competencies and 21st-century skills, including real-world problem-solving skills and communication. Digital transformation represents a phase of change demanding significant adaptability skills (Brezeanu & Lazaro, 2020). The need for innovative approaches, including product-based learning that aligns competencies with relevant industries, has been highlighted in recent literature (Yudiono et al., 2021).

Employers' Expectations

As competition intensifies, the demand from employers for highly skilled professionals has also increased (Malik & Venkatraman, 2017). Furthermore, recent economic growth has intensified the corporate demand for skilled and capable human resources (Paolo & Mañé, 2016). Employers increasingly prioritize both technical and soft skills over theoretical knowledge that lacks practical application, seeking innovative solutions to real-world challenges (Mirza et al., 2014; Succi & Canovi, 2020).

Cheong et al. (2016) highlighted that employers prioritize values and personality traits, openness, willingness to learn, analytical and critical thinking. In another study, Teijeiro et al. (2013) discussed that employers emphasize graduates' problem-solving skills, their motivation to work and ability to learn. Additionally, Moore and Morton (2017) interviewed twenty employers of newly hired graduates, noted that writing skills and communication were particularly important to employers. Teijeiro et al. (2013) and Velasco (2012) suggested that employers prioritize human traits such as commitment, diligence, enthusiasm, awareness and work motivation.

Skill Gap

Industries are facing a shortage of appropriately skilled workers, which hampers their ability to adopt essential technologies and achieve critical objectives (Bokrantz et al., 2020; Stavropoulos et al., 2023; Di Battista et al., 2023). This disconnection between the skills that employers seek and those that employees possess is commonly referred to as a skills gap (McGuinness et al., 2018; Enders et al., 2019; Braun et al., 2022).

A study conducted by Abbasi et al. (2018) aimed to identify the difference between the skills expected by managers and those possessed by business graduates. Alshare and Sewailem (2018) conducted a study to examine the skills gap among business students in the 21st century. Their findings revealed a discrepancy between the skills students believed they had and the skills that were actually needed. Similarly, Abbasi et al. (2018) analyzed the skill gaps of business graduates, concluding that the employability skills of these graduates fell short of the expected level.

Methodology

An interpretive qualitative research design (Creswell and Poth, 2018) was adopted to explore the alignment between higher education outcomes and labour market expectations. According to Wheeler & Holloway (2010), in interpretivism, the researcher creates knowledge by exploring and comprehending the social world of the individual under study. According to Blumberg et al. (2008), the interpretivism approach uses small sample sizes and focuses on in-depth qualitative rich data rather than generalization to gain empirical evidence. It is an inductive approach that involves gathering data and observations before formulating theories and conclusions (Caulfield, 2022).

Instrument

Data was collected through a semi-structured interview protocol, allowing for in-depth insights. The interview protocol was validated by three experts in the field of education. These interviews allowed the researcher to listen and record participants' experiences and perspectives in their own words while providing the researcher with the flexibility to investigate and explain the responses.

Research Participants

A total of fifteen participants were selected from five universities in Punjab Province through purposive sampling. The province of

Punjab was selected on the basis of a greater number of universities as per the division of the Higher Education Commission (HEC). Universities of Punjab province were further classified into three categories, i.e. General Universities, Subject Specialized Universities and Women Universities. One public and one private university were selected from each category. Since there is no private HEC-recognized women's university, therefore, two private universities from the remaining two categories were selected. Thus, a total of five universities were included in the study.

The participants included faculty members, Heads of Departments HoDs/ senior administrators and representatives of the Quality Assurance Cell, from five selected universities. These individuals were chosen for their direct involvement in curriculum design, academic quality assurance, and institutional decision-making. All interviews were audio-recorded with participants' consent and later transcribed for analysis.

Data Analysis

The collected data were analyzed using thematic analysis. This method involved reading and re-reading the transcripts to identify patterns, coding meaningful segments, and grouping them into themes that reflected the participants' views on curriculum relevance, skill gaps, and institutional practices. The data analysis procedure was carried out according to the six-phase structure that Braun and Clarke (2006) suggested, i.e. familiarization with the data, generating initial codes, searching for the themes, reviewing the themes, defining and naming the themes, and then producing the final report.

Results

This section presents the findings from semi-structured interviews of 15 purposively selected participants from five public and private universities in Punjab to thoroughly investigate the research phenomenon. Faculty and HoDs were selected from a variety of fields, including Electrical Engineering, Pharmacy, Education, Management, and Business Administration. For ethical and confidentiality considerations, all participants were assigned pseudonyms. Faculty members were given pseudonyms as F1, F2, F3, F4, F5; HoDs/senior administrators as H1, H2, H3, H4, H5 and representatives of QEC as Q1, Q2, Q3, Q4, Q5. The professional experience of faculty members ranged from 3-17 years, HoDs/senior administrators 11-29 years and QEC representatives 4-30 years. This diversity of experience of participants enriched the data and increased the depth of thematic interpretation.

Thematic analysis revealed recurring patterns related to curriculum relevance, teaching methodologies, skill development, institutional support, and industry collaboration.

Theme 1: Non-Alignment of Curriculum with Industry Demands

The most dominating theme across all the interviews was non-alignment of the curriculum with Industry demands. Participants highlighted that the curriculum lacks practical components that are relevant to current job market trends, and it is heavily based on theoretical knowledge. As H1 informed, *"the curriculum is largely theoretical and disconnected from practical realities.*" Participant in every discipline complained that their curriculum is outdated and lacks modern techniques and trends.

Participants reported that our current curriculum is not up to the mark, it lacks industry-relevant content, and this is the reason that our graduates are not very much prepared to meet the demands of employers and find their workplace more challenging to cope with. F2 informed that "*practical and market-oriented courses are lacking. For instance, the subjects related to software development, AI, and robotics are missing in many engineering programs*." Q5 also complained that the current curriculum does not cover the skill sets required by the corporate sector.

One of the reasons revealed for the non-alignment of curriculum with market trends was the limited involvement of industry professionals in curriculum design. Most of the participants criticized this practice and

mentioned that industry members are not frequently called in to the universities, and if called occasionally, their feedback is not incorporated on a regular basis. Q4 stressed that "*regular updates with input from industry experts are essential to keep pace with global trends*."

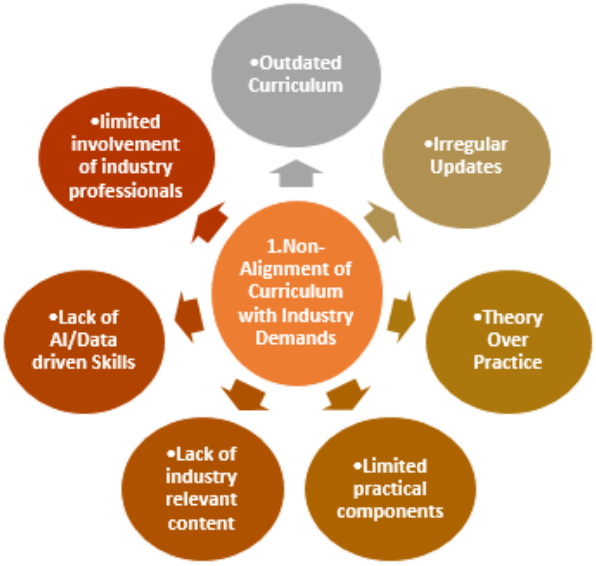

Figure 1. Themes and Sub-Themes Demonstrating Non-Alignment of Curriculum with Industry Demands

Theme 2: Ineffective Teaching and Learning Approaches

Another recurring theme was the use of outdated pedagogical approaches. Most participants were informed that teaching is most of the time lecture-based. Many teachers use traditional teaching methods in classrooms with little focus on adopting modern teaching styles. This way of pedagogy limits critical thinking and the deeper learning of students. *"Teaching is lecture-based and heavily reliant on rote memorization, which limits creativity and problem-solving skills"* H1. F1 also said the same as "*teaching methods are largely theoretical, with limited practical application.*" Q5 also had the same viewpoint that lectures are mostly teacher-centred and *"it's still mostly teacher-centred delivery; students just take notes."* Q5

It is a matter of grave concern because in a teacher-centred approach, students resultantly fail to develop a deep understanding and perform poorly in assessments, indicating the ineffectiveness of current pedagogical practices. Participants stressed that interactive teaching methods are much needed to develop critical thinking in students. For example, F3 suggested that "*group projects, case studies, and hands-on learning activities should be incorporated into regular teaching practices to better prepare students for the workplace.*"

Many participants recommended that frequent teacher training programs must be held regularly, where teachers can get trained on how to engage students in the classroom through interactive teaching strategies.

Another problem raised by one of the Directors of QEC was the traditional assessment method, which is quite inappropriate to measure students' readiness for work workplace. Q1 raised his concern that *"many professional competencies cannot be assessed through traditional assessment methods. Assessment methods do not fully measure job readiness. There is a need to integrate problem-based learning, case studies, and industry-led training programs."*

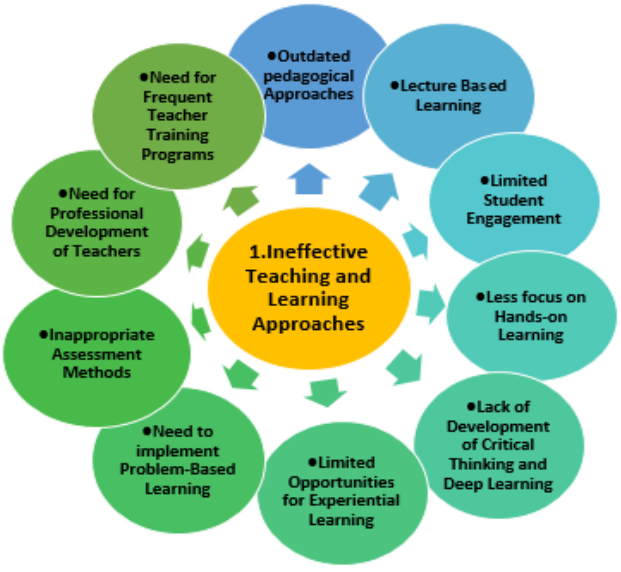

Figure 2. Themes and Sub-Themes Reflecting Ineffective Teaching and Learning Approaches

Theme 3: Skill Deficiencies among Graduates

The skills gap between graduates and market requirements emerged as a major concern. Interviewees reported that employers usually highlight students' weaknesses in soft skills such as communication, flexibility, teamwork, and critical thinking. F1 informed that "*employers mention a lack of practical*

experience and exposure to real-world challenges, which are critical for employability." H1 reported that "*employers appreciate graduates' technical knowledge but consistently highlight weaknesses in communication, teamwork, and problem-solving skills."*

There was also consensus that critical thinking and decision-making skills should be developed through classroom discussions, role-plays, and live case studies. H5 recommended that "m*ore emphasis on hands-on trainings, internships, and workplace simulations would help bridge these gaps,*" which leads to another sub-theme that is students' lack of practical exposure that hampers them from applying their technical knowledge in real-world job roles and in practical life.

Similarly, extracurricular activities were cited as crucial for developing leadership, teamwork, and interpersonal skills. As H1 said that *"extracurricular activities help students develop leadership, teamwork, and interpersonal skills."* H5 suggested that "*participation in student societies, industry visits, and competitions helps students develop confidence and practical insights. These activities should be integrated into the academic structure to maximize their benefits."* F4 informed that "*many students prioritize grades over such activities*."

To make students more employable and for their practical exposures, participants suggested that universities make strong collaborations with industries and grab more opportunities for students' industrial trainings and internships, as H2 informed that '*employers are consulted primarily for internship placements, but their feedback is not fully integrated into academic policies*." Such responses of the interview participants raised a very important concern that if universities want their students to be sent to industries for internships and practical exposure, the universities should make their relationship with industries strong through appreciating ideas and feedback from industry representatives and integrating those ideas for curriculum reforms.

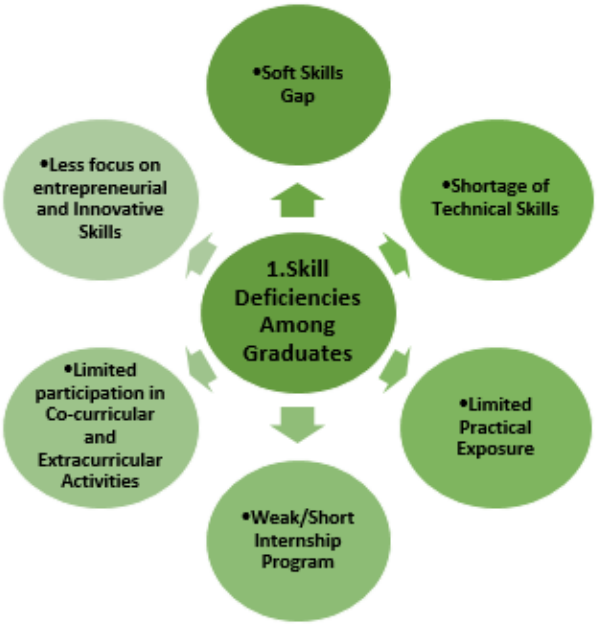

Figure 3. Themes and Sub-Themes Depicting Skills Deficiencies among Graduates

Theme 4: Weak Industry-Academia Collaborations

Participants described existing university-industry linkages as inconsistent. While job fairs, guest lectures, and alumni events are occasionally organized, there is no structured or continuous feedback loop between employers and universities. Participants perceive this kind of inconsistent and non-structured collaboration between academia and industry as a barrier to aligning educational outcomes with the requirements of the industry.

Participants stressed on establishment of Industrial advisory boards with representatives from academia, industry, and government to oversee curriculum relevance and promote long-term collaboration.

Participants also emphasized the crucial role of the government in bridging this gap between academia and industry. Participants considered that a systematic change is required at all levels rather than placing the sole responsibility on universities to initiate collaboration. H1 suggested that "*policymakers can incentivize industries to participate in internships and training programs, while funding joint research projects can strengthen ties*" F4. Q4 said that "*higher education institutions, policymakers, and industry stakeholders should establish a*

uniform policy and engage the government for funding to improve graduate employability."

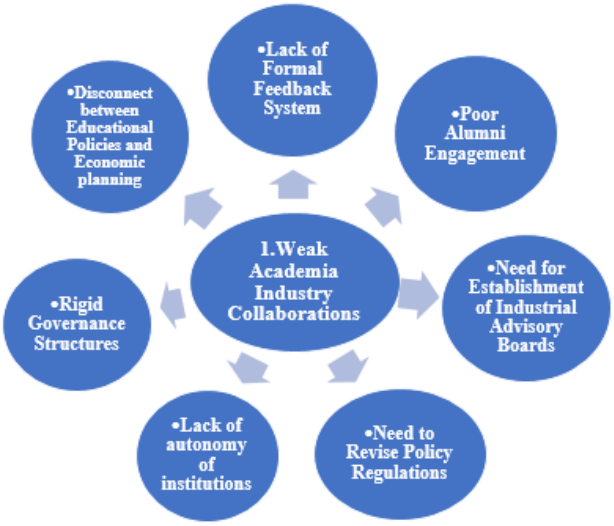

Figure 4. Themes and Sub-Themes Representing Weak Academia Industry Collaborations

Theme 5: Inadequate Institutional Facilities and Resources

Participants reported limited internship programs, poor alumni engagement, and minimal career guidance services that are outdated or ineffective. They said that career counselling services and other facilities for supporting students' future careers are very limited. H1 criticized that *"facilities like career counselling centres and labs exist but are poorly equipped and rarely used. There is no proper guidance or promotion to encourage students to utilize these resources. Upgrading these facilities and actively engaging students would improve their effectiveness."*

Participants also highlighted that university labs lack modern equipment and proper monitoring. F4 added that while the university offers facilities such as career counselling offices and professional development programs, *"their utilization is low. Students often hesitate to approach these facilities, and many are unaware of their benefits. Additionally, the infrastructure to provide advanced skills training and career support is limited, which reduces the overall effectiveness of these initiatives."*

Alumni were also identified as a crucial stakeholder group that can provide valuable feedback and recommendations to improve the education system. However, participants reported that universities rarely focus on engaging alumni or involving them in platforms where their input is much needed. F4 recommended that *"a feedback loop involving students, alumni, and employers should also be implemented to ensure alignment between education and job market requirements."* F2 further suggested that *"it is essential to strengthen alumni networks as a bridge between the university and the industry. Regular mentorship programs and alumni engagement initiatives can help students understand the job market better."*

Participants concluded that alumni, with their workplace experiences, can give better insights into workforce requirements.

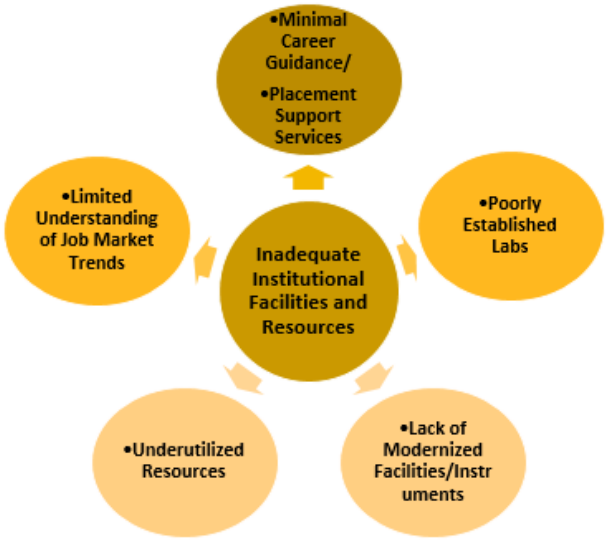

Figure 5. Themes and Sub-Themes Reflecting Inadequate Institutional Facilities and Resources

Theme 6: Entrepreneurship and Future-Readiness

Participants emphasized that higher education should go beyond preparing students for traditional employment and focus on fostering an entrepreneurial mindset. There is a need for higher education institutions to prepare students for both employment and self-employment while promoting innovation in a rapidly evolving economic landscape. H5 suggested that *"universities should establish incubation centres, provide startup funding opportunities, and offer courses on entrepreneurship to encourage self-employment*

and innovation."

Several participants also highlighted the importance of promoting entrepreneurship and self-employment, noting that in a changing global economy, job creation skills are as essential as job readiness.

Theme 7: Policy and Governance Challenges

The discussion leads to another important theme of challenges and constraints faced by higher education's regarding policy challenges and restrictions imposed by higher authorities. Universities have limited authority to make changes to the curriculum that is prepared and implemented at the national level, and universities are expected to align their programs accordingly. Although Universities can propose minor changes, such as course titles, teaching methods, or electives, as long as the core content meets HEC's framework, they cannot make major changes. H2 commented that "*even after revising the curriculum, we still feel like we are 10 years behind other universities. HEC has decentralized the system to some extent, but universities lack autonomy to tailor the curriculum to regional and industry-specific needs. Courses like Islamic studies and redundant mathematics are often repeated unnecessarily, leaving less room for relevant technical content.*"

Participants also commented that the accreditation system focuses more on rules and paperwork than on making education useful and relevant. Furthermore, participants also discussed that there is not a need assessment at the national level of subjects and field requirements.

Discussion

The interviews revealed a significant misalignment between university curricula and current job market demands. Participants repeatedly stated that curricula are outdated, stagnant, and rarely revised. They attributed this gap to the lack of involvement of industry professionals in curriculum design and review, resulting in academic programs that remain disconnected from market realities and fail to develop professional competencies. Waryam et al. (2021) similarly reported that Pakistani curricula are rarely informed by industry feedback.

Another recurring concern was the dominance of theoretical content over practical application. Participants emphasized that this imbalance limits students' preparedness for real-world challenges. Bruno et al. (2024) echoed this, highlighting that Pakistani course content and research are largely outdated and theoretical.

Participants also criticized outdated teaching methods, particularly lecture-based approaches that hinder creativity, critical thinking, and active participation. Q1 noted that instruction is largely content-driven and exam-oriented, with little emphasis on experiential or project-based learning. Bhutto et al. (2018) confirmed that rote-based teaching is common in Sindh schools, while Hoodbhoy (2009) identified low student engagement, poor teaching quality, and limited research productivity as systemic problems in higher education. These findings align with Tymon (2013), who argued that participatory teaching strategies foster deeper learning and skill development.

Problem-based learning (PBL) was repeatedly recommended as a solution. Al-Shehab et al. (2021) and Sultana & Zaki (2015) also found PBL to be highly effective in improving motivation and learning outcomes, making it a viable alternative to traditional methods.

Participants further observed that universities provide minimal professional development opportunities for faculty. Teachers are often reluctant to adopt innovative approaches due to insufficient training (Ahsan et al., 2025). Hafizullah & Wajid (2015) also identified the lack of structured training as a major barrier to quality improvement. This study confirms that teacher-centred practices persist because institutions have not prioritized pedagogical innovation or established teaching development units. Participants recommended integrating internships, simulations, and industry projects to bridge the gap between

theory and practice.

The study supports Iqbal (2020), who called for assessment reforms to align evaluation methods with learning objectives. Chan et al. (2017) similarly emphasized that curriculum, teaching, and evaluation practices must evolve together to improve graduate outcomes.

Participants also highlighted widespread skill gaps. Graduates often lack essential soft skills such as communication, teamwork, and emotional intelligence, alongside practical expertise in their fields. This finding aligns with Andrews & Higson (2017), who reported that employers increasingly value soft skills over technical proficiency. Finch et al. (2013) similarly argued that universities must embed communication and problem-solving into curricula. Respondents observed that graduates struggle with confidence, workplace communication, and applying academic knowledge (Jackson & Bridgstock, 2021). These concerns reflect Jackson's (2016) model of skill transfer, which emphasizes the ability to apply learned skills, and Cappelli's (2015) argument that rigid curricula lead to mismatched competencies. Pervez et al. (2024) proposed addressing these deficiencies through curriculum reform, skills-based programs, internships, and strong industry partnerships.

Participants expressed concern about inactive alumni networks, noting that alumni are rarely involved beyond ceremonial events. Alumni were recognized as a vital link between academia and industry, offering opportunities for mentorship, feedback, and networking. Nisar et al. (2023) similarly criticized Pakistani universities for lacking formal alumni engagement programs.

Infrastructure deficiencies were another major barrier. Respondents reported outdated laboratories, limited equipment, and ineffective career support services.

Participants also observed that low participation in co-curricular activities restricts students' leadership and organizational skill development. A lack of entrepreneurial training and encouragement was also reported. Participants argued that higher education institutions do not promote creativity, initiative, or self-directed projects, which undermines graduates' ability to thrive in competitive markets. Sumra et al. (2011) similarly found that public universities rarely offer formal entrepreneurial programs.

Taken together, these findings present a comprehensive picture of systemic barriers preventing alignment between higher education and job market requirements as per (Ming et al., 2022). Addressing these challenges holistically is essential to equip graduates with the competencies needed in a rapidly evolving global labour market.

Conclusion

The thematic analysis highlights deep-rooted gaps between higher education outputs and labour market expectations in Pakistan, including outdated curricula, ineffective teaching practices, limited skills development, weak university-industry linkages, and inadequate support services. Major reforms are required in curriculum design, teaching methods, assessment practices, and institutional support systems. Educators, policymakers, and industry stakeholders must collaborate to create sustainable, long-term strategies that enhance graduate employability and align education with workforce needs.

Recommendations

Based on the insights gathered, coordinated reforms in higher education are required to better align with labour market needs. This includes updating curricula to focus on practical, future-relevant and entrepreneurial skills; improving teaching methods to foster critical thinking and real-world problem solving; and encouraging and incentivizing industry-academia collaboration through funded projects and implementation of other effective policies by the Government. Enhanced student support services, including career counselling and structured internship placements, should also be prioritized to improve graduate employability.

References

Abbasi, F. K., Ali, A., & Bibi, N. (2018). Analysis of skill

gap for business graduates: Managerial perspective from the banking industry. *Education + Training, 60*(4), 354–367. https://doi.org/10.1108/ET-08-2017-0120

Aboagye, B., & Puoza, J. C. (2021). Employability of mechanical engineering graduates from Sunyani Technical University of Ghana. *Journal of Teaching and Learning for Graduate Employability, 12*(2), 185–205.

Ahsan, S., Qureshi, N., & Rashid, A. (2025). Examining Employability Skills Development in Universities: Perspectives, Challenges, and Responsibilities. *Qlantic Journal of Social Sciences*, *6*(1), 10-21.

Al Hinai, M. R., Bhuiyan, A. B., & Husin, N. A. (2020). An empirical review of the graduate attributes and readiness for employability among the engineering graduates in higher education institutions (HEIs). *Indian Journal of Finance and Banking, 4*(3), 8–25.

Aljohani, N., Aslam, M., Khadidos, A., & Hassan, S.-U. (2022). Bridging the skill gap between the acquired university curriculum and the requirements of the job market: A data-driven analysis of scientific literature. *Journal of Innovation and Knowledge, 7*, Article 100190. https://doi.org/10.1016/j.jik.2022.100190

Alshare, K., & Sewailem, M. F. (2018). A gap analysis of business students' skills in the 21st century: A case study of Qatar. *Academy of Educational Leadership Journal, 22*(1), 1–22.

Al-Shehab, N., Al-Hashimi, M., Madbouly, A., Reyad, S., & Hamdan, A. (2021). Do employability skills for business graduates meet the employers' expectations? The case of retail Islamic banks of Bahrain. *Higher Education, Skills and Work-Based Learning*, *11*(2), 349-366.

Andrews, J., & Higson, H. (2008). Graduate employability, 'soft skills' versus 'hard' business knowledge. *Higher Education in Europe, 33(4)*, 411–422.

Bhagra, A., & Sharma, D. K. (2018). Changing competency requirements of management graduates in the 21st-century business environment. *International Journal of Management Studies, 5*(2/4), 92–102.

Bhatti, M. A., Mat Saat, S. A., Aleidan, M. M., Al Murshidi, G. H. M., Alyahya, M., & Juhari, A. S. (2022). Are business graduates' employability skills and learning/teaching techniques universal? Exploring the role of culture: A comparative study among Australia, China, Pakistan, and Saudi Arabia. *Sustainability*, *14*(5), 3069.

Bhutto, M. I., Qazi, W., & Rawat, K. J. (2018). Effect of existing teaching of chemistry on ninth graders' achievement in Sindh, Pakistan. *Bulletin of Education and Research, 40*(3), 1–30.

Blumberg, B., Cooper, D., & Schindler, P. (2008). *Business research methods* (2nd European ed.). McGraw-Hill Higher Education.

Bokrantz, J., Skoogh, A., Berlin, C., Wuest, T., & Stahre, J. (2020). Smart maintenance: An empirically grounded conceptualization. *International Journal of Production Economics, 223*, Article 107534. https://doi.org/10.1016/j.ijpe.2019.107534

Braun, G., Järvinen, M., Stahre, J., & Hämäläinen, R. (2022). Motivational challenges of engineers participating in an online upskilling program. In P. Fotaris & A. Blake (Eds.), *ECEL 2022: Proceedings of the 21st European Conference on e-Learning* (Vol. 21, pp. 25–31). Academic Conferences International. https://doi.org/10.34190/ecel.21.1.594

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101.

Brezeanu, T. M., & Lazarou, E. (2020). Alignment between engineering curriculum and skills development for Industry 4.0. *eLearning & Software for Education, 2.*

Bruno, A. I., Shafiq, M., & Jalil, F. (2024). Universities' contribution to the creation and diffusion of innovation in Punjab, Pakistan: Exploring the industries' perspective. *Qlantic Journal of Social Sciences, 5*(4), 84–99.

Cappelli, P. H. (2015). Skill gaps, skill shortages, and skill mismatches: Evidence and arguments for the United States. *ILR Review, 68*(2), 251–290.

Caulfield, J. (2022, December 10). How to do thematic analysis: Step-by-step guide & examples. *Scribbr.* https://www.scribbr.com/methodology/thematic-analysis/

Chan, C. K., Fong, E. T., Luk, L. Y., & Ho, R. (2017). A review of literature on challenges in the development and implementation of generic competencies in higher education curricula. *International Journal of Educational Development*, *57*, 1-10.

Cheong, K. C., Hill, C., Fernandez-Chung, R., & Leong, Y. C. (2016). Employing the 'unemployable':

Employer perceptions of Malaysian graduates. *Studies in Higher Education, 41*(12), 2253–2270.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Thousand Oaks, CA: SAGE.)

Di Battista, A., Grayling, S., & Hasselaar, E. (2023). *Future of Jobs Report 2023.* World Economic Forum. http://hdl.voced.edu.au/10707/648248

Paolo, A.D., & Mañé, F. (2016). Misusing our talent? Overeducation, overskilling and skill underutilization among Spanish PhD graduates. *The Economic and Labour Relations Review, 27*(4), 432–452.

Edwards, S., & Hammer, M. (2006). Laura's story: Using problem-based learning in early childhood and primary teacher education. *Teaching and teacher education*, *22*(4), 465-477.

Enders, T., Hediger, V., Hieronimus, S., Kirchherr, J. W., Klier, J., Schubert, J., & Winde, M. (2019). *Future skills: Six approaches to close the skill gap.* World Government Summit.

Faisal, T., Hyder, M., & Zaidi, S. S. Z. (2019). Behavioural aspects of youth in Pakistan: Un-employment and entrepreneurship. *Academic Research International, 10.*

Finch, D., Hamilton, L., Baldwin, R., & Zehner, M. (2013). An exploratory study of factors affecting undergraduate employability. *Education + Training, 55(7)*, 681–704.

Hafizullah, M., & Wajid, G. (2015). Vision to promote health professions education in Pakistan. *Advances in Health Professions Education, 1*(1).

Hojda, P., Roszkowska, S., & Trojak, M. (2022). What drives labour market success? Empirical analysis of university graduates in Poland. *Education + Training, 64*(5), 619–641.

Hoodbhoy, P. (2009). Pakistan's higher education system—What went wrong and how to fix it. *The Pakistan Development Review, 48*(4), 581–594.

Iqbal, Z. (2020). Evidence-based teaching practices: A road less travelled in Pakistan? *Health Professions Educator Journal, 3*(2), 7–8.

Jackson, D., & Bridgstock, R. (2021). What actually works to enhance graduate employability? The relative value of curricular, co-curricular, and extra-curricular learning and paid work. *Higher Education*, *81*(4), 723-739.

Jackson, D. (2016). Modelling graduate skill transfer from university to the workplace. *Journal of Education and Work, 29(2)*, 199–231.

Malik, G., & Venkatraman, A. (2017). "The great divide": Skill gap between the employer's expectations and skills possessed by employees. *Industrial and Commercial Training, 49*(4), 175–182.

Manaf, P. A. (2021). Inter-organizational alliance in improving the quality of learning through academic and industry alignment. *Cometra Education, 1*(1).

Manoharan, S., & Arockiam, K. (2017). A study on the influence of the domicile of engineering colleges and the competency profile of industrial aspirants. *International Journal of Engineering and Management Research (IJEMR), 7*(3), 238–241.

Mason, G., Williams, G., & Cranmer, S. (2009). Employability skills initiatives in higher education: What effects do they have on graduate labour market outcomes? *Education Economics, 17*(1), 1–30.

McGuinness, S., Pouliakas, K., & Redmond, P. (2018). Skills mismatch: Concepts, measurement and policy approaches. *Journal of Economic Surveys, 32*(4), 985–1015. https://doi.org/10.1111/joes.12254

Ming Cheng, Olalekan Adekola, JoClarisse Albia, Sanfa Cai (2022). Employability in higher education: a review of key stakeholders' perspectives. *Higher Education Evaluation and Development* 16 (1): 16–31. https://doi.org/10.1108/HEED-03-2021-0025

Mirza, F. M., Jaffri, A. A., & Hashmi, M. S. (2014). An assessment of industrial employment skill gaps among university graduates: In the Gujrat-Sialkot-Gujranwala industrial cluster, Pakistan (Vol. 17). International Food Policy Research Institute.

Moore, T., & Morton, J. (2017). The myth of job readiness? Written communication, employability, and the 'skills gap' in higher education. *Studies in Higher Education, 42*(3), 591–609.

Nagy, J. (2006). Adapting to market conditions: Plagiarism, cheating, and strategies for the cohort. *Studies in Learning, Evaluation, Innovation and Development, 3*(2), 37–47.

Nilsson, S. (2010). Enhancing individual employability: The perspective of engineering graduates. *Education + Training, 52*(6/7), 540–551.

Nisar, N., Nasruddin, E., & Goh, Y. N. (2023).

Strategizing alumni to encounter financial sustainability issues: Insights from public higher education institutions of Pakistan. *Journal of Applied Research in Higher Education, 15*(2), 509–520.

Nusrat, M., & Sultana, N. (2019). Soft skills for sustainable employment of business graduates of Bangladesh. *Higher Education, Skills and Work-Based Learning, 9*(3), 264–278.

Oliver, B. (2015). Redefining graduate employability and work-integrated learning: Proposals for effective higher education in disrupted economies. *Journal of Teaching and Learning for Graduate Employability, 6*(1), 56–65.

Oraison, H., Konjarski, L., & Howe, S. (2019). Does a university prepare students for employment? Alignment between graduate attributes, accreditation requirements and industry employability criteria. *Journal of Teaching and Learning for Graduate Employability, 10*(1), 173–194.

Pakistan LFS survey (2021). *Pakistan Bureau of Statistics. (2021). Labour Force Survey 2020–21. Government of Pakistan*

Pervez, N., Mahmood, W., Akram, M., & Waqas, M. (2024). Analyzing the alignment between university curriculum and job market requirements in Pakistan: Challenges and opportunities. *Indus Journal of Social Sciences, 2*(2), 397–410.

Rafiq-uz-Zaman, M, (2025). From Chalkboards to Competence: Rethinking Skill-Based Education in Pakistan for a Business-Led Innovation Economy. In Journal of Academic Research for Humanities, 5(3), 01–13.

Stavropoulos, P., Foteinopoulos, P., Stavridis, J., & Bikas, H. (2023). Increasing the industrial uptake of additive manufacturing processes: A training framework. *Advanced Industrial and Manufacturing Engineering, 6*, 100110.

Succi, C., & Canovi, M. (2020). Soft skills to enhance graduate employability: Comparing students' and employers' perceptions. *Studies in Higher Education, 45*(9), 1834–1847.

Suleman, F. (2018). The employability skills of higher education graduates: Insights into conceptual frameworks and methodological options. *Higher Education, 76*, 263–278.

Sultana, M., & Zaki, S. (2015). Proposing project-based learning as an alternative to traditional ELT pedagogy at public colleges in Pakistan. *International Journal for Lesson and Learning Studies, 4*(2), 155–173.

Sumra, S. H., Safarish, H., Suhail, S., & Ahmad, S. T. (2011). Factors responsible for low inclination towards entrepreneurship in the public sector institutions of Pakistan. *Journal of Public Administration and Governance, 1*(1), 75–105.

Taylor, E., & Calitz, A. P. (2020). The use of industry advisory boards at higher education institutions in Southern Africa. In *ICT Education: 48th Annual Conference of the Southern African Computer Lecturers' Association, SACLA 2019, Northern Drakensberg, South Africa, July 15–17, 2019, Revised Selected Papers, 48* (pp. 244–259). Springer International Publishing.

Teijeiro, M., Rungo, P., & Freire, M. J. (2013). Graduate competencies and employability: The impact of matching firms' needs and personal attainments. *Economics of Education Review, 34*, 286–295.

Tomlinson, M. (2017). Forms of graduate capital and their relationship to graduate employability. *Education + Training, 59(4)*, 338–352.

Tymon, A. (2013). The student perspective on employability. Studies in Higher Education, 38(6), 841-856.

UNESCO. (2020). *Global Education Monitoring Report: Inclusion and Education, All Means.* UNESCO.

Van Horn, J. E., Taris, T. W., Schaufeli, W. B., & Schreurs, P. J. (2004). The structure of occupational well-being: A study among Dutch teachers. *Journal of Occupational and Organizational Psychology, 77*(3), 365–375.

Velasco, M. S. (2012). More than just good grades: Candidates' perceptions about the skills and attributes employers seek in new graduates. *Journal of Business Economics and Management, 13*(3), 499–517.

Waryam, T., Mirza, B., & Waheed, A. (2021). Role of university-industry linkages and its impact on innovation: Evidence from Pakistan. *Global Regional Review, VI*(6), 126–144.

Wheelers, S., & Holloway, I. (2010). *Qualitative research in nursing and healthcare.* Wiley-Blackwell.

World Bank Group. (2020). *World Development Indicators.* https://databank.worldbank.org/reports.aspx?source=WorldDevelopment-Indicators

World Bank Group. (2021). *Skills development.* Retrieved from https://www.worldbank.org/en/topic/skillsdevelopment

Yudiono, H., Maulana, S., Wijaya, M. B. R., Aprianto, R., & Karsan, K. (2021). Product-based learning model through the alignment of mechanical engineering competencies with industry. *Jurnal Pendidikan Teknologi dan Kejuruan, 27*(1), 74–80.

Zimmer, W. K., & Keiper, P. (2021). Redesigning curriculum at the higher education level: Challenges and successes within a sport management program. *Educational Action Research, 29*(2), 276–291.