

A Comparative Analysis of Educational Barriers Between Pakistan and Malaysia [†]

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Abstract

This paper explores a comparative study of higher education barriers between Pakistani and Malaysian students using Bronfenbrenner's Ecological Systems Theory and Human Capital Theory. A cross-sectional, mixed-methods survey of 102 undergraduate and graduate students is analyzed via descriptive statistics and thematic coding. At the mesosystem level, the cost of education and mental health pressures are shared barriers. Divergences emerged at other levels; at the microsystem level, barriers between school facilities, teaching methods, and technological inclusion were highlighted. Pakistani students cited rote memorization and rigid, exam-based structures, while Malaysian students reported a lack of personalization and curriculum industry misalignment. Both groups favoured project-based learning, with Malaysian students also preferring hybrid work–study models.

Keywords: higher education; rote learning; rigid structures; assessment methods; hybrid work–study; practical industry-ready

1. Introduction

With the evolving landscape of global higher education, it is imperative to analyze and understand specific friction points for systemic improvement. This paper provides a comparative analysis of the primary educational barriers faced by higher education students in Pakistan and Malaysia, individually or collectively. Pakistan and Malaysia gained independence just a decade apart: Pakistan in 1947 and Malaysia in 1957. However, the two systems have shown persistent divergence in policy execution. Pakistan's educational policies, ever since 1970, have fallen short of proper execution and achieving desired targets due to weak governance, budget constraints, and implementation gaps, with funding remaining well below UNESCO's recommended benchmark [1]. In contrast, Malaysia has pursued a sustained execution of its higher education plans, intending to establish itself as the region's education hub [1]. The educational landscape and progress differ vastly between the two countries, as it is reflected in the SDG report [2], where Malaysia ranks 76 globally with an SDG score of 70.4, citing significant challenges in SDG 4 quality education, and Pakistan ranks 131 out of 169 ranked countries with a score of 59.3, citing major challenges in SDG 4 quality education. This paper provides insight into shared and distinct challenges in the present education system prevailing in both countries, pointing towards the performance of the Education Ministry in the two countries and aiding them in developing relevant policies of change that students in the



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present time deem necessary. This paper explores a comparison of education and the expectations of the students living and studying in these two countries for future education in this evolving time of technological advancements. Affordable and quality education is a fundamental right of all children. Hence, their needs and expectations should be at the core of all ministries when devising education policies for their students. This paper highlights a comparative view of the students in Pakistan and Malaysia and highlights their expectations for future education. Human Capital Theory (HCT), originally advanced by Schultz [3] and later formalized by Becker [4], conceptualizes education as an investment in individuals' knowledge and skills that yield employability, productivity, and economic returns. This framework is particularly important here as students' expectations of future education in Pakistan and Malaysia are influenced largely by the labour market and income returns. Students' growing dissatisfaction in education is due to their comparison of the economic returns a degree will yield for them in comparison to the money and resources spent on it. Bronfenbrenner's Ecological Systems Theory [5] categorizes barriers across microsystem, mesosystem, exosystem, macrosystem, and chronosystem levels to capture structural influences at each level. This theory helps in understanding the individual's development in relation to their immediate surroundings, impacting the growth and behaviour of individuals due to the environmental influences at various levels. This framework is applied here because the barriers reported by students are embedded in family, institutional, and national policy contexts, which are better captured by a systems-level approach rather than an individual-level approach. These two frameworks combined allow for the analysis of educational barriers that are either shared or divergent between the two countries.

2. Methodology

This study employed a cross-sectional, mixed-methods survey design, selected for enabling synchronic comparison across two national contexts. Participants were recruited through purposive and snowball sampling, distributed via WhatsApp student groups, targeting undergraduate and graduate students in Pakistan and Malaysia. A total of 102 valid responses were collected. This study addresses the following research questions: (RQ1) What educational barriers do students in both Malaysia and Pakistan identify at micro-, macro-, meso-, exo-, and chronosystem levels? (RQ2) How do these barriers align with or diverge from the assumptions of Human Capital Theory when they are assessed against economic returns from education? (RQ3) What similarities and differences emerge between the two countries in the context of their expectation for future education? The dataset was filtered to exclusively include respondents whose country of origin or current study destination is either Pakistan or Malaysia. Likert-scale items were analyzed using frequency distributions and descriptive statistics, while open-ended responses underwent inductive thematic analysis through open-coding and theme clustering. Bronfenbrenner's levels structured barrier categorisation and HCT-informed interpretation of student motivations. Table 1 shows basic information about the respondents.

The survey comprised 18 items, spanning across three response formats: nine Likert-scale questions, two multi-select questions, and two open-ended questions, alongside items on student demographics. Items were mapped a priori to theoretical frameworks and, where applicable, to the necessary ecological system levels. Satisfaction with school facilities, teaching methods, and technological tools was mapped to the microsystem; relevance of learning to the real world was mapped to the mesosystem; and items on alternative future learning models and economic returns were mapped to the chronosystem and Human Capital Theory, respectively. A priori mapping structured both the quantitative analysis and thematic coding of open-ended responses. Open-ended questions: "If you could

change one thing from the core goal of future education, what would it be?” and “What is your biggest hope for the future of education?” aided in mapping the responses across Bronfenbrenner’s ecological system levels, HCT, and further deepened understanding of students’ outlook towards education.

Table 1. Basic information of the respondents.

Survey Analysis	Malaysia	Pakistan
School studying in		
Private	0	23
Public	47	27
Current mode of education		
Face-to-face	33	48
Hybrid	12	4
Online	2	3
Current Education Level		
Graduate	12	7
Undergraduate	35	48
Age group		
17–20	0	17
21–24	30	30
25 and above	17	8
Income Group		
Low-income	19	11
Mid-income	26	41
High-income	2	3

3. Results

Of the 102 selected respondents, 54% (n = 55) are from Pakistan, and 46% (n = 47) are from Malaysia. The primary cohort is concentrated in the 21–24 age bracket, comprising 58.8% (n = 60) of total respondents, with 24.5% (n = 25) of respondents aged 25 years and above. A dominant majority of the students are currently enrolled in undergraduate programs at 81.3% (n = 83), followed by graduate students at 18.6% (n = 19). A total of 72.55% (n = 74) of respondents attend public institutions, while 22.54% (n = 23) are enrolled in private institutions. The sample is composed of the mid-income group at 65.7% (n = 67), with the low-income group at 29.4% (n = 30) and the highest-income group at 4.9% (n = 5). The mode of learning for most students remains standard face-to-face learning at 79.4% (n = 81).

3.1. Microsystem + HCT (Student and Classroom)

The microsystem focuses on structural barriers between students and the classroom dynamics. Figure 1 does not show complete satisfaction of the respondents with school facilities. This indicates that the available facilities need improvement, with resources for better infrastructural development.

Figure 2 reflects students’ satisfaction with teaching methods. 29.8% of students in Malaysia showed complete satisfaction, as did 14.5% in Pakistan. The remaining students did not show complete satisfaction with the teaching methods, as they cited them as being more teacher-centred and making them more passive learners of information. Qualitative

analysis of responses from Pakistan showed reservations with the current teaching methods in the country, as they deem them to be teacher-centered, theoretical, boring, and not aligned with global teaching methods. Students from Malaysia also pointed out the necessity to increase personalization in learning, making teaching and learning more practical, student-centred and less theoretical and teacher-centred. The results conclude that students' increased need for education to become systematically deeper, which then converts into skills and progresses towards real-life applications. Therefore, resulting in a more sustainable and tangible outcome.

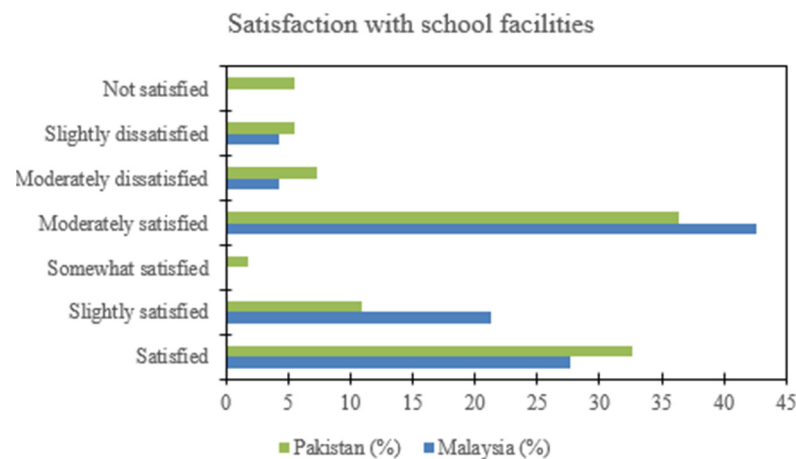


Figure 1. Student satisfaction in school facilities.

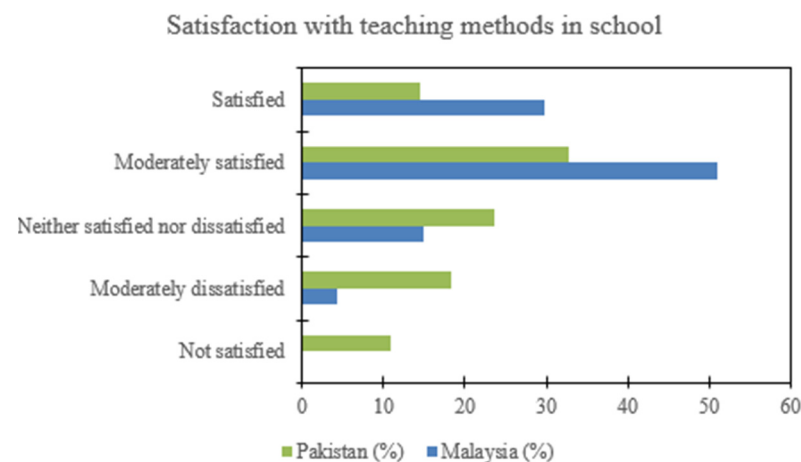


Figure 2. Student satisfaction with teaching methods.

Figure 3 predominantly shows dissatisfaction among students in Pakistan towards the inclusion of technological tools in relation to basic tools such as Word, Excel, PowerPoint, and the incorporation of ethical usage of AI tools (such as ChatGPT, Gemini, etc.). This highlights one of the biggest systemic barriers in Pakistan: a lack of digital literacy in educational institutions, where students do not have knowledge of foundational tools due to poor investment in education.

Growing dissatisfaction among students towards teaching methods and assessment is not just a pedagogical frustration. It reflects the failure and dissatisfaction of students making implicit cost–benefit calculations, failing to build human capital. According to Figure 4, 66% of students in Malaysia and 43.6% of students in Pakistan cited the cost of education as one of the biggest challenges to the attainment of quality education. In addition, rigid structures of rote memorization, old traditional teaching methods, and assessment methods are troubling students that are increasingly troubled in Pakistan.

Mental health pressure is one of the most cited concerns in current education systems. This theme emerged inductively from open-ended responses, with students frequently describing stress related to financial and academic demands. Students are constantly under stress due to evaluating the quality and usability of education in relation to the amount of money spent in completion of a degree program. Respondents highlighted depression, anxiety, and uneasiness with the evolving future dynamic of the workforce as their major concerns with the present quality of education.

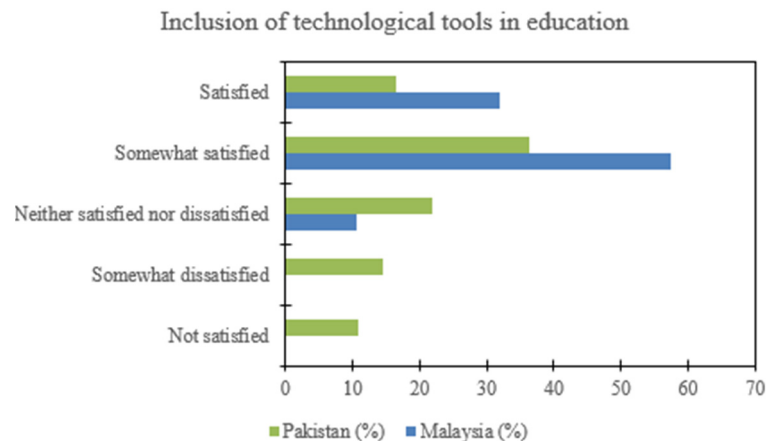


Figure 3. Satisfaction with the inclusion of technological tools in learning.

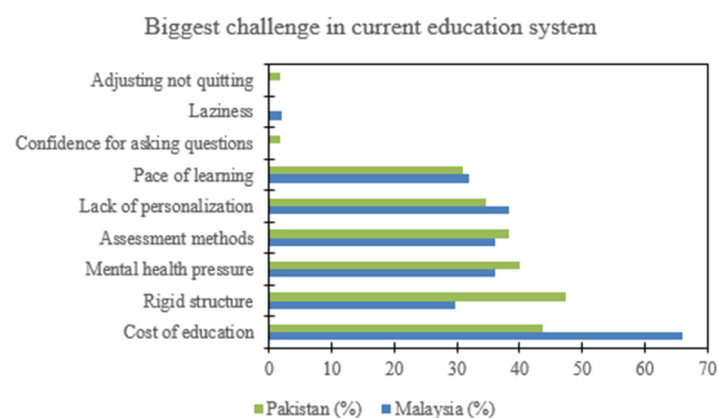


Figure 4. Challenges cited by students in the current education system.

3.2. Mesosystem + HCT (Education and Financial Pressure)

Direct HCT implications are seen in a mesosystem failure, indicating a disconnect between financial pressure and institutional returns. When students compare financial gains stemming from obtaining a degree, they are dissatisfied. According to Figure 5, Malaysian students are seen as more satisfied with the relevance of current education to the real world than Pakistani students. Qualitative responses from Pakistani students unanimously pointed out the outdated grading system in the country. Their complaint about relying solely on examination grades and not assessing the holistic development of a student needs to be taken into consideration. Students from Malaysia suggested the adoption of competency progression for a more structured development of students' skills over time.

Figures 5 and 6 show that they are not sure about the relevance of their education in the real world, but they do believe in a good life resulting from education. Consequently, Pakistani students do not see it practically happening for them, in comparison with the achievement of life objectives among Malaysian students, resulting from relevant, up-to-date learning.

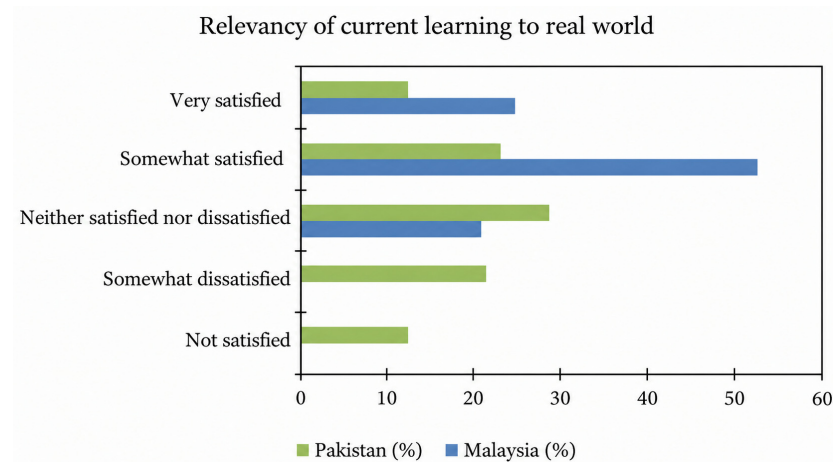


Figure 5. Relevance of current learning to the real world.

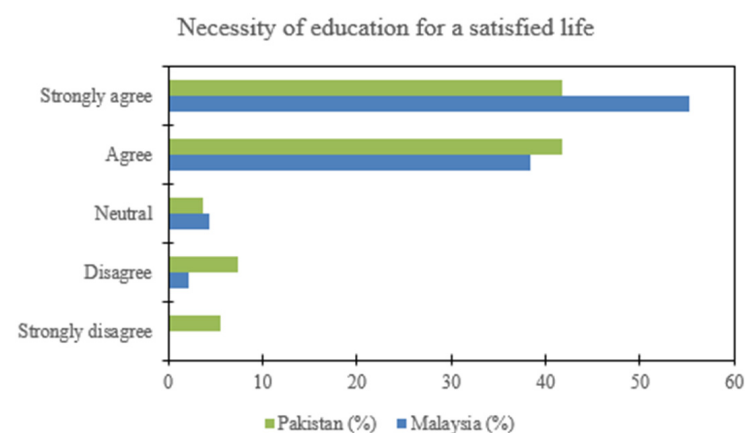


Figure 6. Necessity of education for a satisfied life.

Unanimously at the mesosystem level, both cohorts identified the cost of education and mental health pressure as dominant shared barriers, consistent with HCT's premise that financial strain undermines educational investment returns. Monetary benefits from education feel uncertain to students, as this undermines the foundational HCT assumption that education reliably increases earning potential. This situation, as depicted, is felt more by students in Pakistan. This reflects two situations in the country. First, growing inflation and poor allocation of budgetary funds in education. Second, a disconnect with current world education due to the failure in the adoption of modern/current teaching methods and tools in education.

3.3. Exosystem + HCT (Curriculum and Practical Policy Design)

Curriculum bodies and examination boards are shaping human capital formation through policy decisions in which students have no voice, or whose opinions are not taken into consideration. Results from the qualitative analysis showed that students find current curricula to be theory-heavy and lacking practical applications, which is an exosystem misalignment. This reveals students' frustration with the system as they strongly believe that the current system is producing the wrong type of human capital compared to what the actual labour market demands are.

This frustration can be viewed in the responses seen in Figure 4. Respondents from both groups identified lack of personalisation and curriculum–industry misalignment as primary exosystem-level barriers. Therefore, informed decisions made by policymakers and the relevant design of the curriculum at the exosystem level will produce positive outcomes and student-desired outcomes.

3.4. Macrosystem + HCT (Educational Investment and Financial Return)

Pakistan and Malaysia represent different macrosystems with different historically established relationships between educational investment and economic returns. According to the responses collected with the open-ended questions, Malaysian students reported higher student satisfaction, which reflects a macrosystem in the country where HCT, investment in education, and resulting employment rewards feel more credible. On the other hand, responses from Pakistan showed complete dissatisfaction, which reflects a macrosystem where the bargain has completely broken down or was never firmly established.

The macrosystem reflects broadly on the prevailing economic conditions and educational policies in the country the respondents belonged to and the country they were pursuing their education in. Pakistan suffers from an outdated education system, a lack of uniformity across the country, poor quality of education, an outdated curriculum, inadequate budget allocation, a shortage of qualified teachers, high dropout rates, rural–urban disparities, and weak governance, which makes it almost impossible to execute its educational policies and objectives successfully [6]. On the other hand, Malaysia has a centralized education system throughout the entire country, high enrolment of students, proper funding for education, and better integration of sustainability and technology with newer frameworks [7].

3.5. Chronosystem + HCT (Today's Education and Future Labour Market)

With the evolving and actively engaging use of AI, the fundamental concerns of students stemming from AI are disruptions and forward-looking HCT-related anxiety. Students are now questioning whether the human capital being built today will retain its value in tomorrow's automated labour market.

As per Figure 7, 75% of the students from both countries preferred project-based learning, which highlights the importance of learning practical skills for students, as they believe that skills have higher labour-market value than memorized theory.

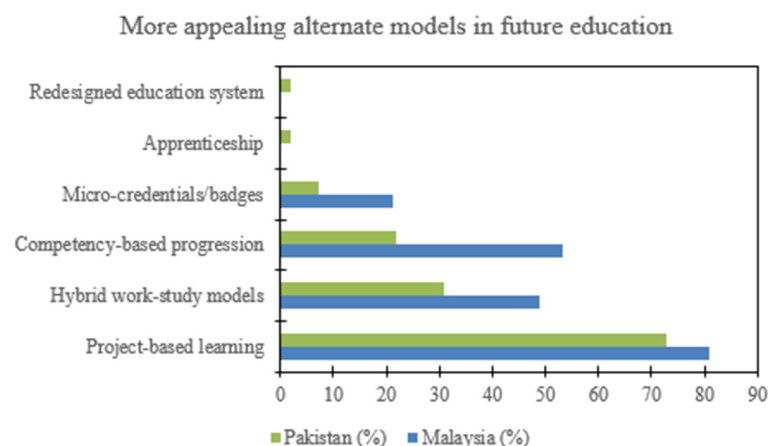


Figure 7. Student-chosen alternate models in future learning.

Figure 8 shows that the expected outcomes of students from education are inclined towards getting a high salary and least towards self-fulfilment. Student's expectations for the outcomes of their future education are perfectly balanced between achieving a high salary, contributing to society, and securing stable employment. This highlights that students view education as an asset both for individual security and societal contribution.

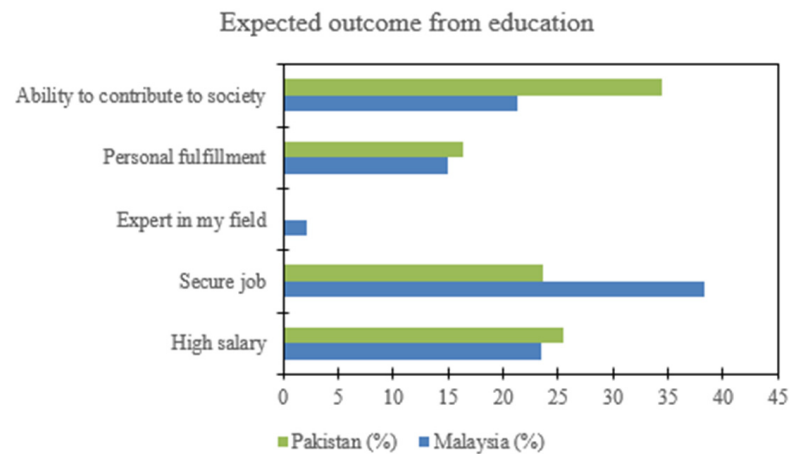


Figure 8. Expected outcomes from education.

3.6. Human Capital Theory (HCT)

Figure 9 displays the primary purpose of education. Collective responses highlight that the purpose is gaining knowledge and critical thinking skills. A breakdown of the data between the two countries highlights that the dominant response from Malaysian students is to gain knowledge and critical thinking skills—57.4% of responses. However, Pakistani respondents' interest leaned more towards preparing for a specific career—30.9% of responses. This highlights a major difference between an economically stable country and an economically struggling country. Malaysian students can be seen progressing towards Maslow's self-actualization needs, and Pakistani students are still attempting to fulfil their safety needs.

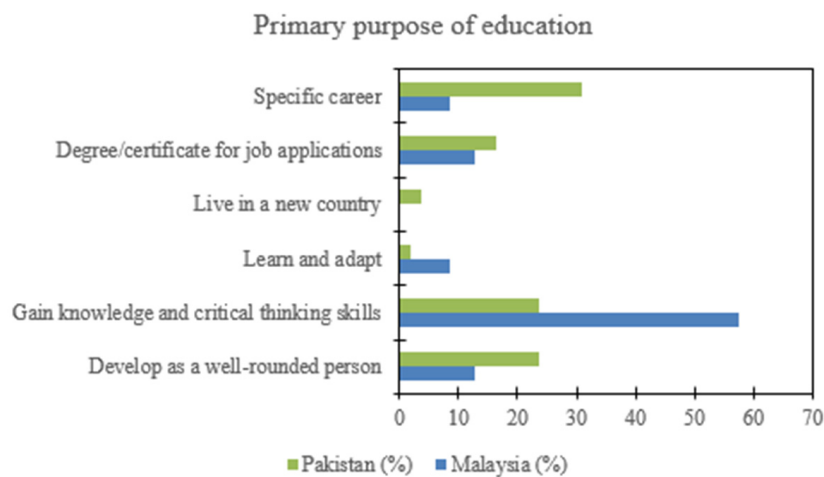


Figure 9. Primary purpose of education.

Figures 10 and 11 show higher responses towards pursuing a degree and achieving a desired life by students in both Pakistan and Malaysia. This indicates that students in both countries believe in education and are increasingly inclined to pursue higher education. It should be noted that Figure 10 measures the intent of currently enrolled students in undergraduate and graduate programs to pursue further education beyond their current level of study. A higher likelihood of pursuing further education reflects students' continued belief that education is a pathway to their desired life, motivating them to invest in additional years of study and achieve higher-level qualifications.

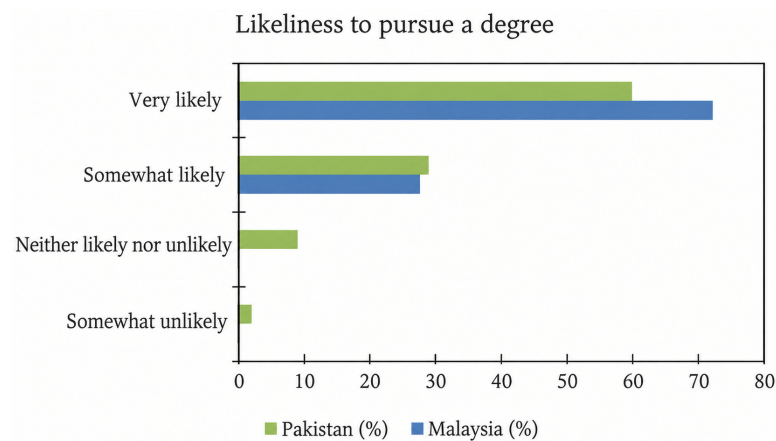


Figure 10. Likelihood to pursue a degree.

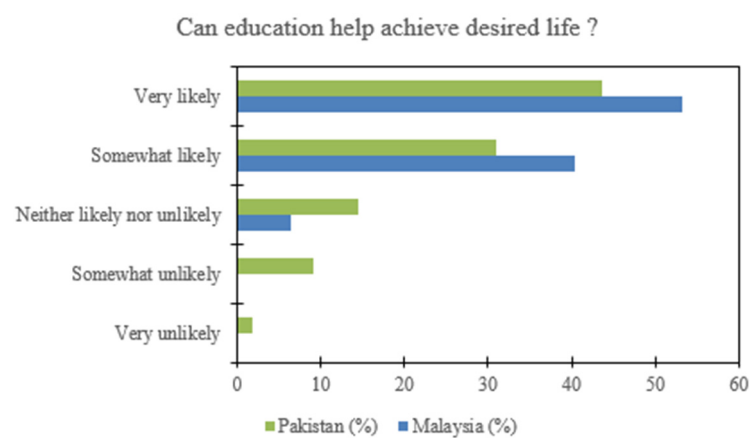


Figure 11. Achieving a desired life with education.

4. Discussion

Figure 12 shows participants' responses about their future career with the current quality of education. Only 45% of responses in favour of the question show confusion and distrust in the prevailing education system. This indicates a profound systemic anxiety amongst the students who are currently following a strict path but lack the conviction that it will lead them to success in the modern, automated world. In the present age, and era of automation, there is a probable increase in mistrust among students in relation to education. The purpose of this question was to highlight the importance of education among the students in these two countries, and it is a clear indication that education methods in classrooms—in order to maintain students' retention in education—need to evolve with respect to technological advancements and students' needs. Understanding students' needs by adding their feedback to educational reforms helps to achieve collective success for the future of education. This will not only build students' confidence but will also build trust in education.

Students in both Pakistan and Malaysia struggle with the high cost of education and severe mental health pressures. Heavy workload, fear of failure, and lack of institutional support, both emotionally and financially, are causing an excessive burden in both countries. Institutions need to pay more attention to students, develop counselling facilities, and implement peer counselling and mentoring programs [8]. Despite the challenges, students still believe in the education system and are inclined towards receiving higher education to achieve their desired life. This achievement is reflected in both monetary gains and self-fulfilment gains. Therefore, with proper curriculum design, considering the changing learning needs of students over time can pave the way for their brighter future.

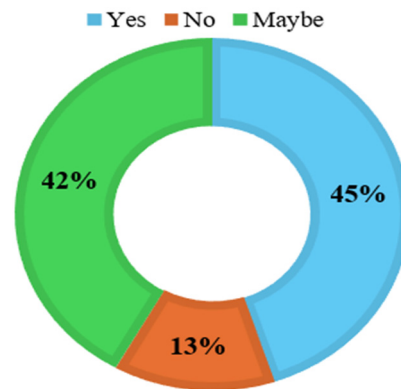


Figure 12. Students' responses on achieving a future career with the current quality of education.

Pakistan's education system's rigid structures and heavy reliance on memorization-based assessments is its biggest hurdle. The education system of Pakistan lacks constant updates to the changing technological needs of students, which is due to insufficient education budgets, a lack of infrastructure facilities, and resources [1]. Students seek to abandon the idea of the marks race system, where failure is treated as a necessary data point, and desire a shift from rote learning to critical thinking skills. At the same time, Malaysia's primary systemic barrier is a lack of personalized pathways and a disconnect between theoretical education and practical industry requirements.

Qualitative analysis presents Pakistani students' desire to change assessment methods and future education to become more accessible and inclusive for all students. Additionally, students from Malaysia hope for a shift towards emotional development, independence in thinking, and ensuring education aligns with practical industry skills more than theoretical knowledge. Respondents also express concern over education being outpaced by AI and the lack of proper systems in place to ensure an AI integration tool for research or professional preparation. Students emphasize the need for policymakers to enable constructive use of AI tools in education, which can make students ethically future-ready.

One of the top requests of students was the incorporation of relevant skills in the curriculum. The inclusion of financial literacy and practical skills, making students capable of managing their taxes, paycheques, and investments, can make them financially sound and support the holistic development of students [9]. Fostering the ability to innovate and build startups, rather than just seeking secure jobs, also adds to this purpose.

5. Conclusions

In conclusion, students' reflection on the current education system helps provide a deep insight into their views of the present education system in both countries and the expected model of education for future learning. This study contributes to the existing literature by applying Human Capital Theory and Bronfenbrenner's Ecological Systems Theory jointly to student-reported data, enabling movement beyond policy-comparison works [1] to show how macrosystem-level policy is experienced by students in micro-, meso-, and exosystem levels.

Shared financial and psychological burdens reflect HCT's consistent expectations of economic returns from education. Malaysian students expressed greater confidence in their education's real-world relevance, and Pakistani students expressed greater dissatisfaction, showing how the same theoretical mechanism produces different results depending on the surrounding macrosystem. This reinforces Bronfenbrenner's premise that individual-level barriers cannot be fully understood by isolating them from the institutional and national systems in which they are embedded.

Reform in Pakistan should prioritize competency-based progression over exam-focused structures, alongside increased investment in infrastructure and digital literacy training to address governance and funding gaps. Malaysia should focus on advancing personalized learning and hybrid work–study integration to align academic outcomes with industry demands. Data from collected responses highlight that meso- and micro-level institutional reforms will fail unless aligned with macro-level demand for active, market-relevant education.

The study has the following limitations: the sample was drawn through purposive and snowball sampling via WhatsApp networks, which may not fully represent the broader student populations of either country, and future studies would benefit from stratified sampling across income groups, institution types, and modes of education. Nonetheless, the results from the conducted research offer a practical blueprint for policymakers in both countries to align educational reforms with students’ lived experiences and expectations.

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Institutional Review Board Statement: The study followed Allama Iqbal Open University’s ethical research guidance and involved anonymous, minimal-risk survey and interview responses. Participants were informed about the purpose and scope of the questionnaire, and their participation was voluntary. No names or direct personal identifiers were collected, ensuring participants’ privacy and confidentiality.

Informed Consent Statement: Informed consent was obtained from all the participants involved in the study.

Data Availability Statement: Dataset available on request from the authors.

Conflicts of Interest: The authors declare no conflicts of interest.

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