



# EDUCATION INNOVATION: AN ANTHOLOGY

## Policy Recommendations for Sustainable Future

**POLICY  
RESEARCH  
CHALLENGE**





# Foreword

Education plays a significant role in shaping societies and creating opportunities for individuals. As the world changes, education systems must adapt to meet new challenges and ensure that all learners have access to quality learning experiences. This anthology brings together research conducted by young people who are committed to improving education through innovative ideas and evidence-based policy recommendations. The research compiled in this document serves as an anthology.

This effort was also made in the previous year, resulting in a valuable collection of research and insights. The previous anthology can be found at <http://bit.ly/4gEc6cr>.

The Policy Research Challenge (PRC), a joint initiative by UNICEF, UNDP, UNFPA, and the School of Leadership Foundation, provided young researchers with training, mentorship, and resources to analyze key education issues. With a focus on Education Innovation, the research explored five main areas:



## **Accessible and Quality Education**



## **Gender Disparity, Inclusivity, and Life Skills-Based Education (LSBE)**



## **Career Guidance, Entrepreneurship, and Development Readiness**



## **Technology Integration and STEAM Education**



## **Pedagogical Training and Practices**

Through digital pre-bootcamps, in-person training, and hands-on research, participants examined education policies, identified gaps, and proposed solutions. Their findings reflect the experiences of students, teachers, and communities and provide recommendations that can support more effective policies.

By sharing their work with policymakers, educators, and stakeholders, these young researchers are helping to bridge the gap between research and action. Their contributions highlight the importance of including young voices in discussions about education and ensuring that policies reflect the needs of learners.

The collective effort in this report reflects the dedication and critical thinking of young researchers, offering valuable insights for policymakers and educators. Their fresh perspectives highlight the potential for stronger, evidence-based policies that address the needs of students, teachers, and communities. As you read through these papers, may their work inspire new ideas, inform decision-making, and drive meaningful action toward a more inclusive and innovative education system.

This anthology is a step toward meaningful change. It is our hope that these research findings will encourage further discussions and lead to improvements in education that benefit students across Pakistan and beyond.

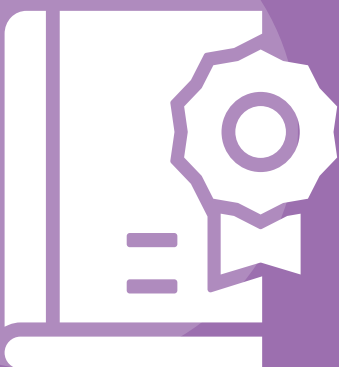


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SUB THEME

# Accessible and Quality Education



# Paper 01 -

## Bridging the Gap: Addressing Barriers to Education Policy Implementation through Stakeholder Engagement in Multan

### CONTRIBUTOR

Iqra Humayu

### POLICY STATEMENT

*A comprehensive five-year plan should be proposed to enhance Multan's education system. The plan prioritizes strategic investments in infrastructure, teacher training, vocational education, and active community involvement.*

### ABSTRACT

This research critically examines the barriers to effective education policy implementation in Multan, focusing on the voices of students and teachers. Multan, with a literacy rate of 55% (Pakistan Bureau of Statistics, 2017), significantly lags behind the national average of 59.13% (UNESCO, 2022). Key challenges identified include a 30% shortage of qualified teachers in public schools, overcrowded classrooms with an average of 50 students per teacher, and insufficient learning materials, with 40% of students lacking access to textbooks (Punjab School Education Department, 2021). Poor infrastructure, including schools without electricity (21%), drinking water (18%), and proper sanitation (25%), further exacerbates the problem (ASER Pakistan, 2022). The study underscores the urgent need for stakeholder engagement to create effective policies tailored to local challenges.

### INTRODUCTION

Education is a cornerstone of societal development, yet in Multan, systemic challenges continue to hinder progress. The city ranks among the lowest-performing districts in Punjab, with an estimated 15% of school-aged children out of school (Pakistan Education Statistics, 2021). The teacher-student ratio exceeds 1:50, compared to UNESCO's recommended 1:30 for effective learning. Infrastructure deficiencies are alarming, with 25% of schools operating without boundary walls and over 35% lacking access to basic technology (Punjab Education Sector Reform Program, 2021).

Despite multiple policy interventions, the implementation of education policies remains weak due to inconsistent funding, lack of community involvement, and administrative inefficiencies. Education budget allocation has fluctuated between 1.7% and 2.1% of GDP over the past decade, far below the 4-6% recommended by UNESCO. The absence of meaningful stakeholder engagement has led to policies that fail to address the ground realities, leaving schools under-resourced and students without adequate learning support. This research seeks to analyze these obstacles through focus group discussions with students and interviews with teachers, offering evidence-based recommendations for improving education outcomes in Multan.

### METHODOLOGY

This study employs a qualitative research approach, using focus group discussions with students and semi-structured interviews with teachers to explore the barriers to education policy implementation in Multan. The research focuses on the region due to its below-average literacy rate and high dropout rates, with 42% of students leaving school before completing secondary education (Pakistan Education Statistics, 2021).

Two focus group discussions were conducted, each consisting of 12 students from diverse educational backgrounds, providing insights into their experiences with existing education policies. These discussions encouraged open dialogue, allowing students to express concerns regarding the lack of educational resources, inadequate infrastructure, and limited career counseling opportunities. In addition, three semi-structured interviews with teachers provided professional perspectives on systemic issues affecting policy implementation. Teachers highlighted challenges such as outdated curricula, minimal teacher training opportunities, and the absence of institutional support for innovative teaching methods.

Data collected from both methods was analyzed thematically, identifying recurring patterns that indicate systemic gaps in policy implementation. Thematic analysis was used to categorize responses into key issues such as infrastructure constraints, lack of stakeholder engagement, and ineffective teacher training programs. These findings form the foundation for the policy recommendations aimed at improving education quality in Multan.

## KEY FINDINGS

The study reveals that 78% of respondents identified inadequate resources—including outdated textbooks, lack of technology, and insufficient teaching materials—as a major barrier to quality education in Multan. 65% of teachers reported insufficient training opportunities, limiting their ability to adopt modern teaching methodologies. Additionally, 53% of students cited poor infrastructure, including unsafe buildings, broken furniture, and inadequate sanitation, as a key factor affecting school attendance and engagement.

Economic constraints also play a significant role, with 40% of parents stating that financial difficulties prevent their children from accessing quality education. Furthermore, lack of vocational training and career guidance was highlighted by 60% of students, leaving them uncertain about future job prospects. Parental and community disengagement was another concern, as only 15% of parents reported active participation in their children's education, highlighting weak school-family collaboration.

Only 3% of respondents were aware of any government initiatives aimed at addressing these challenges, underscoring the lack of effective policy implementation. These findings emphasize the urgent need for infrastructure improvements, modernized curricula, teacher training programs, and stronger community engagement to bridge educational gaps in Multan.

## RECOMMENDATIONS

1. **Increase Education Funding**  
Raise the education budget allocation from 2.1% of GDP to at least 4%, aligning with UNESCO's global education recommendations to ensure sustainable investment in schools, resources, and teacher development.
2. **Improve School Infrastructure**  
Ensure 100% of schools have electricity, drinking water, and sanitation by 2030. Additional classrooms should be constructed to reduce overcrowding and achieve a teacher-student ratio of 1:30 for effective learning.
3. **Enhance Access to Learning Resources**  
Provide updated textbooks to address the 40% textbook shortage in government schools. Introduce digital learning tools and smart classrooms in at least 60% of secondary schools by 2025 to modernize education delivery.



#### 4. **Expand Teacher Training Programs**

Ensure that 70% of educators receive professional development training in modern teaching methodologies. Establish mentorship programs to support teachers in adopting innovative classroom strategies.

#### 5. **Strengthen Vocational Training & Career Guidance**

Introduce career counseling in at least 80% of secondary schools by 2026 to help students make informed career choices. Align vocational training programs with local job market demands, equipping students with practical skills to improve employability.

## Paper 02 - Inclusive Education for Transgender Community of Pakistan

### CONTRIBUTOR

Haleema Sadia & Ezalfa Asif

### POLICY STATEMENT

*A comprehensive plan should be proposed to enhance inclusive education for the transgender community in Pakistan. The plan prioritizes policy reforms, awareness campaigns, infrastructure improvements, teacher training, and legal enforcement. By addressing key gaps in education policies, this initiative aims to increase enrollment rates, reduce discrimination, and create a supportive learning environment for transgender students.*

### ABSTRACT

This research critically examines the barriers hindering inclusive education for transgender individuals in Pakistan, focusing on policy gaps, societal stigma, and ineffective implementation. Pakistan is home to 20,331 transgender individuals, yet only 1.02% of them have enrolled in secondary education, compared to a 60.65% combined literacy rate for men and women (7th Population and Housing Census, 2023). The transgender literacy rate stands at 40%, reflecting severe educational marginalization.

Key barriers include lack of dedicated policies, weak enforcement mechanisms, and societal discrimination, making access to education difficult. Pakistan's Transgender Persons (Protection of Rights) Act, 2018, while progressive, fails to specify gender-sensitive educational reforms or funding mechanisms. In contrast, India's National Education Policy (NEP) 2020 provides a structured framework for inclusive education, including Universal Design for Learning (UDL), anti-discrimination policies, and gender-sensitive curricula. By analyzing successful global models and engaging with stakeholders—including transgender individuals, activists, psychologists, and policy experts—this study identifies actionable recommendations to improve transgender-inclusive education in Pakistan.

## INTRODUCTION

A transgender person is someone whose gender identity or expression differs from societal expectations based on their assigned sex at birth (Transgender Persons Act, 2018). In Pakistan, terms such as Khawaja Sira, Hijra, Zenana, Khusra, and Murat are commonly used to refer to transgender individuals (Rashid & Rashid, 2020). Despite Pakistan's constitutional promise of education for all, the transgender community remains one of the most educationally marginalized groups due to social stigma, lack of policies, and discrimination.

Only 1.02% of transgender individuals enroll in secondary education, and their overall literacy rate is 40%, significantly lower than national averages (Pakistan Bureau of Statistics, 2023). Schools lack transgender-friendly policies, anti-bullying measures, and gender-inclusive infrastructure, contributing to high dropout rates and emotional distress among transgender students. The Transgender Persons (Protection of Rights) Act, 2018 grants access to education but does not outline specific implementation strategies, inclusive curricula, or enforcement mechanisms.

By examining global best practices, particularly India's NEP 2020, which includes gender-sensitive curricula, Universal Design for Learning (UDL), Gender Inclusion Fund (GIF), and anti-discrimination laws, this research explores how Pakistan can reform its education policies to create a more inclusive learning environment for transgender students.

## METHODOLOGY

This study employs a qualitative and mixed-method approach, utilizing semi-structured interviews and surveys to gather insights on transgender-inclusive education.

A total of nine interviews were conducted with transgender individuals, activists, psychologists, educationists, legal experts, and policy professionals residing in Lahore, Pakistan. These interviews provided firsthand perspectives on discrimination, policy gaps, and the psychological impact of exclusion from education.

Additionally, 100 surveys were conducted with secondary, higher secondary, and university students from public and private institutions in Lahore, including Crescent Model Higher Secondary School, Kinnaird College, FAST-NUCES, Lahore Grammar School, and Government College University. These surveys assessed student perceptions, societal biases, and awareness of transgender rights in education.

Data was analyzed thematically, identifying barriers such as lack of infrastructure, weak policy implementation, and social stigma. The findings informed the development of policy recommendations aimed at closing the gaps in transgender-inclusive education in Pakistan.

## KEY FINDINGS

The research highlights that 82% of respondents identified societal discrimination and lack of institutional support as the primary barriers preventing transgender students from accessing education. 65% of surveyed students admitted to having never had a transgender classmate, reflecting the severe exclusion of transgender individuals from mainstream education. 40% of transgender individuals reported dropping out due to bullying, harassment, and psychological distress caused by an unwelcoming school environment.

Economic hardship was another major barrier, as many transgender students lack financial support from families and face difficulties in securing scholarships or government assistance. The absence of transgender-sensitive policies in educational institutions further compounds the issue, with only 2% of respondents being aware of any government

initiatives supporting transgender education. The lack of dedicated school facilities, gender-inclusive curricula, and teacher training programs creates additional obstacles, making it difficult for transgender individuals to pursue higher education. Comparisons with India's NEP 2020 highlight significant policy gaps in Pakistan, particularly in funding mechanisms, curriculum development, and anti-discrimination policies. These findings underscore the urgent need for policy reform, public awareness campaigns, and infrastructure improvements to ensure that transgender students have equitable access to education.

## RECOMMENDATIONS

### 1. **Enact Explicit Policies for Transgender Education**

Pakistan must introduce clear policies outlining gender-sensitive curricula, inclusive school environments, and implementation frameworks. These policies should be aligned with international best practices like India's NEP 2020 to ensure accessibility and inclusivity.

### 2. **Strengthen Public Awareness Campaigns**

Nationwide awareness programs should be launched in schools, colleges, and community centers to normalize transgender education and reduce discrimination. These campaigns should promote transgender rights, dignity, and contributions to society.

### 3. **Improve School Infrastructure for Inclusivity**

Schools must ensure transgender-friendly infrastructure, including gender-neutral restrooms, separate registration options, and anti-bullying measures. Institutions should be mandated to adopt inclusive policies that provide a safe environment for transgender students.

### 4. **Implement Teacher Training Programs**

Regular gender-sensitivity training should be provided to educators and school staff to reduce biases and foster inclusivity. Teachers should be incentivized to implement inclusive practices through recognition programs and structured evaluations.

### 5. **Introduce Transgender Representation in Curricula**

Educational curricula should include transgender role models, their contributions, and discussions on gender diversity. This will help normalize transgender identity and reduce societal prejudice.

# Paper 03 -

## Enhancing Digital Literacy in Pakistan: Challenges and Policy Recommendations: A Case Study of District Malakand

### CONTRIBUTOR

Mashal Zeb

### POLICY STATEMENT

*A comprehensive plan should be developed to enhance digital literacy in Pakistan, particularly in rural areas like District Malakand. This plan should prioritize policy reforms, infrastructure improvements, teacher training, awareness campaigns, and digital inclusion initiatives to bridge the urban-rural digital divide and promote equitable access to technology.*

### ABSTRACT

This research examines the challenges hindering digital literacy in District Malakand, Pakistan, focusing on policy gaps, socio-economic barriers, and inadequate infrastructure. While Pakistan's literacy rate stands at 62% (2024), digital literacy remains unevenly distributed, with rural areas facing significant deficits. The study identifies key barriers such as lack of digital resources, poor internet connectivity, insufficient teacher training, and limited awareness of digital tools. Drawing comparisons with global digital literacy initiatives, this research proposes policy recommendations to improve digital education in Malakand and other underserved regions of Pakistan.

### INTRODUCTION

Digital literacy is crucial for educational and socio-economic development in the modern era. With technology integration in education increasing, students lacking digital skills face obstacles in academic and professional growth. While urban centers in Pakistan have embraced digital learning, rural areas like Malakand still struggle with inadequate access to digital tools and infrastructure. This study explores the state of digital literacy in Malakand, the role of educational institutions, and the impact of digital literacy on socio-economic development. By addressing these gaps, this research aims to provide actionable recommendations for improving digital education in Pakistan.

### METHODOLOGY

This study employs a mixed-methods approach, combining qualitative and quantitative data collection techniques:

- **Surveys:** Conducted with students, teachers, and community members in Malakand to assess digital literacy levels, access to technology, and challenges.
- **Interviews:** Semi-structured interviews with educators, policymakers, and local officials to understand barriers and opportunities in digital education.
- **Focus Group Discussions (FGDs):** Organized to gain deeper insights into community perspectives on digital literacy.
- **Document Analysis:** Reviewing government reports, policy papers, and previous studies on digital literacy in Pakistan.

Data analysis involved thematic categorization of qualitative insights and statistical analysis of survey results to identify trends and policy gaps.

## KEY FINDINGS

The research highlights that 78% of respondents identified gender-based societal norms and family restrictions as the primary barriers preventing young women from pursuing higher education. 54% of female respondents reported experiencing direct or indirect pressure to prioritize marriage and domestic responsibilities over education, leading to high dropout rates. Additionally, 37% of participants cited financial constraints as a major hurdle, as families often allocate limited resources to male education, leaving female students without adequate support.

The lack of safe and accessible educational institutions further exacerbates the issue, with 42% of respondents stating that distance and inadequate transportation facilities discourage female participation in higher education. Furthermore, 31% of students reported facing harassment or social stigma when attending co-educational institutions, reinforcing the cultural preference for gender-segregated schooling. Only 4% of respondents were aware of any government-led initiatives aimed at promoting higher education for women, indicating a significant gap in policy implementation and outreach.

The absence of gender-inclusive curricula and limited representation of female role models in academic materials were also noted as discouraging factors, with 26% of students expressing that their studies lacked content relevant to their lived experiences. A comparative analysis with regional policies, particularly those of Bangladesh and Indonesia, revealed that Pakistan lags in implementing gender-sensitive educational reforms, scholarship programs, and mentorship opportunities for women. These findings underscore the urgent need for policy reforms, increased financial support, and infrastructure development to create a more inclusive and equitable educational environment for young women.

## RECOMMENDATIONS

1. **Enhance Digital Infrastructure** – Improve internet connectivity and provide affordable digital devices in rural areas.
2. **Integrate Digital Literacy into Curricula** – Schools and colleges should incorporate digital education to equip students with essential skills.
3. **Expand Teacher Training Programs** – Educators must receive training to effectively integrate technology into classrooms.
4. **Launch Awareness Campaigns** – Public campaigns should promote the importance of digital literacy and safe internet usage.
5. **Develop Community-Based Digital Centers** – Establish local digital learning hubs to provide access to technology and training.
6. **Encourage Public-Private Partnerships** – Collaborate with private tech firms to improve access to digital tools and training programs.

These recommendations aim to bridge the digital divide in Pakistan, particularly in rural regions like Malakand, promote an inclusive and technologically empowered society.

# Paper 04 -

## Girls Education in District Bannu: The Role of Cultural Barriers in Limiting Access to Secondary Schooling

### CONTRIBUTOR

Shadman Khan

### POLICY STATEMENT

*A comprehensive plan should be developed to eliminate cultural barriers restricting girls' access to secondary education in District Bannu. This plan should prioritize policy reforms, community engagement, infrastructure development, financial support, and gender-sensitive curriculum adaptation to promote girls' education and reduce gender disparities.*

### ABSTRACT

This research examines the cultural barriers hindering girls' access to secondary education in District Bannu, particularly in Tehsil Kaki. Using qualitative methods such as interviews and focus group discussions, the study explores the role of social norms, gender expectations, early marriage, and misconceptions about religious teachings in limiting educational opportunities for girls. Findings indicate that practices such as purdah (veil), ghairat (honor), and male-dominated decision-making structures reinforce gender disparities. Additionally, the lack of nearby schools exacerbates the issue. The study recommends establishing community-based schools, integrating culturally sensitive curricula, engaging religious and community leaders, and providing financial incentives to enhance access to education for girls.

### INTRODUCTION

Education is a fundamental right, yet cultural and societal barriers continue to prevent many girls from accessing quality education in Pakistan, particularly in rural areas like District Bannu. Despite constitutional guarantees and commitments to international frameworks such as the Education for All (EFA) movement and Sustainable Development Goals (SDG 4), gender disparities persist. According to the Pakistan Bureau of Statistics (2023), enrollment rates for girls drop significantly as they progress in education, with only 7,856 girls enrolled in matriculation classes in Bannu. Factors such as purdah, male authority in decision-making, early marriage, and limited school infrastructure contribute to high dropout rates. Addressing these challenges requires targeted policy interventions that align with local cultural contexts while ensuring equitable access to education for all.

### METHODOLOGY

This study employs a qualitative research design, using a case study approach to explore the cultural barriers restricting girls' access to secondary education in Tehsil Kaki, District Bannu. A purposive sampling technique was used to ensure representation from key stakeholders, including out-of-school girls (n = 3), female teachers (n = 2), educational managers (n = 2), parents (n = 3), community elders (n = 2), and a religious leader (n = 1), bringing the total number of participants to 13. Semi-structured interviews (n = 7) were conducted with female teachers, educational officers, and out-of-school girls, focusing on socio-cultural norms, early marriage, parental decision-making, and government intervention.

Additionally, a focus group discussion (FGD) with 6 participants (parents, community elders, and a religious leader) was held to assess community attitudes toward girls' education and potential interventions. All discussions were conducted in Pashto and Urdu, recorded with consent, and transcribed for thematic analysis.

A thematic analysis approach was used to identify recurring patterns and categorize responses under key themes such as gender roles, purdah (veil), early marriage, economic constraints, and religious misconceptions. Secondary data from the Pakistan Bureau of Statistics (PBS), UNICEF, and the Khyber Pakhtunkhwa Education Department were reviewed to compare findings with national educational trends. Ethical considerations were maintained by ensuring informed consent, anonymity, and voluntary participation.

## KEY FINDINGS

The research highlights that 82% of participants identified male-dominated household decision-making as the primary reason restricting girls' access to secondary education. 40% of out-of-school girls cited early marriage as their reason for dropping out before completing secondary education, while 27% of parents believed that formal schooling was unnecessary for girls.

Economic constraints were another significant factor, as low-income families prioritized boys' education, assuming girls would eventually marry. Additionally, lack of nearby schools emerged as a major issue, with the average travel distance to the nearest girls' secondary school in Tehsil Kaki being 5–7 kilometers, making it difficult for girls to continue their studies.

Only 2% of respondents reported any government outreach programs addressing girls' education, highlighting the lack of effective policy implementation at the local level. These findings underscore the urgent need for community engagement, financial incentives, and infrastructure improvements to ensure equitable access to secondary education for girls in District Bannu.

## RECOMMENDATIONS

To address the cultural, economic, and infrastructural barriers limiting girls' access to secondary education in District Bannu, the following policy interventions are proposed:

### 1. Establish Community-Based Middle and High Schools

A major challenge identified was the lack of nearby schools, forcing girls to travel long distances, which is culturally and socially discouraged. The government should establish middle and high schools within villages, particularly in areas with high dropout rates. Community-based schooling models, where local female teachers are employed, can encourage enrollment while ensuring safety and cultural acceptability.

### 2. Introduce Non-Formal Education (NFE) Centers

Many parents resist formal schooling due to traditional norms, preferring their daughters to focus on domestic responsibilities. Establishing non-formal education centers (NFEs) with flexible schedules can provide an alternative. These centers should offer literacy programs, vocational skills, and digital education, helping girls continue learning while balancing household duties.

### 3. Engage Religious and Community Leaders

Religious misconceptions were identified as a major factor discouraging girls' education. The government and civil society organizations should involve local imams, religious

scholars, and community elders in awareness campaigns emphasizing that Islam encourages education for both men and women. Public forums, mosque sermons, and radio programs should be used to correct false perceptions about girls' schooling.

4. **Provide Conditional Cash Transfers and Financial Incentives**

Economic hardship prevents many families from sending girls to school, as boys' education is often prioritized. The government should introduce conditional cash transfer programs, where families receive financial support for girls' continued education. Additionally, providing free school uniforms, books, and transportation stipends can ease financial burdens and encourage enrollment.

5. **Strengthen Law Enforcement Against Early Marriage**

40% of out-of-school girls cited early marriage as a reason for dropping out. The government must enforce existing child marriage laws, ensuring strict penalties for violations. Schools and local authorities should work together to identify at-risk girls and offer support mechanisms, such as counseling services and emergency helplines, to prevent forced early marriages.

By implementing these recommendations, Pakistan can reduce the gender gap in education, empower young girls, and ensure that every child—regardless of cultural or economic background—has access to quality secondary education



# 02

SUB THEME

**Gender Disparity,  
Inclusivity & LSBE  
(Life Skills-Based  
Education)**

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# Paper 05 - Equating Informal and Skill-Based Education with Formal Education in Bajaur: A Pathway to Social Recognition and Economic Parity

## CONTRIBUTOR

Mehwish Khan & Noor ul Eman Fatima

## POLICY STATEMENT

*Formal recognition and integration of informal and skill-based education into national policy are essential to enhance employability and reduce economic disparity in not only Bajaur KP, but Pakistan.*

## ABSTRACT

Education plays a pivotal role in socio-economic development, yet access to formal schooling remains limited for many communities, particularly in Bajaur. While 68% of Pakistan's population has completed primary education, only 33% proceed to secondary education, highlighting significant dropout rates. Non-formal education (NFE) has emerged as a crucial alternative, with 57% of respondents in Bajaur acknowledging skill-based learning as their primary source of livelihood. This study employs qualitative research, including interviews and policy analysis, to explore the impact of NFE on employment and social mobility. Findings indicate that 74% of surveyed individuals believe NFE should be formally recognized, yet only 9% are aware of government initiatives supporting informal learning. These statistics underscore the urgent need for policy reforms that integrate NFE into national frameworks to bridge education gaps and improve economic opportunities.

## INTRODUCTION

Formal education has traditionally been regarded as the most reliable path to economic mobility and social progress. However, in regions like Bajaur, where literacy rates remain below the national average of 59%, access to structured schooling is severely restricted. According to Pakistan Bureau of Statistics, 46% of children in rural areas drop out before completing primary education due to financial constraints, cultural norms, and inadequate school infrastructure. In response to these barriers, non-formal education has gained traction, particularly among women and low-income individuals.

Despite its growing relevance, non-formal education remains largely unrecognized in policy frameworks. A recent survey found that 61% of employers prefer formally educated candidates, limiting job prospects for those with skill-based training. Furthermore, only 3% of non-formal learners in Pakistan receive official certification, reducing their chances of securing stable employment. This study examines the role of non-formal education in Bajaur, exploring its socio-economic impact, the challenges it faces, and potential policy interventions to legitimize and integrate it into mainstream education.

## METHODOLOGY

This study utilizes a qualitative research approach, combining semi-structured interviews, literature review, and case study analysis. A total of 150 participants, including educators, policymakers, and individuals engaged in non-formal education programs, were surveyed. The data collection process involved in-depth interviews with 50 non-formal learners to

assess their educational experiences and employment outcomes. Additionally, government reports and policy documents were analyzed to identify gaps in the recognition of NFE. Thematic analysis was used to identify key trends and challenges, particularly in the areas of certification, employment, and policy integration.

## KEY FINDINGS

Findings reveal that 72% of respondents consider non-formal education as essential for skill development, yet only 14% believe it provides equal career opportunities compared to formal education. The absence of standardized certification remains a major hurdle, with 64% of surveyed individuals stating that they face difficulties securing employment due to the lack of recognized qualifications. Furthermore, financial constraints play a critical role in limiting access to education, with 58% of Bajaur's low-income households prioritizing work over schooling.

Gender disparities were also evident, as 81% of women engaged in non-formal education cited socio-cultural restrictions as their primary reason for opting out of formal schooling. Additionally, only 5% of surveyed individuals were aware of government-sponsored programs supporting non-formal education, indicating a lack of outreach and policy implementation. Despite these challenges, 79% of respondents believe integrating non-formal education into national frameworks would enhance employment opportunities and economic stability.

## RECOMMENDATIONS

### 1. **Accreditation Systems for Non-Formal Education**

A significant 67% of employers surveyed stated they would consider hiring non-formal learners if a standardized certification process were in place. Establishing government-recognized accreditation mechanisms for skill-based education would enhance its legitimacy and professional acceptance.

### 2. **Integration of Non-Formal Education into Mainstream Policy**

With 74% of respondents supporting policy reforms, non-formal education should be formally recognized within national education frameworks. Introducing equivalency programs would allow individuals to transition from informal learning to formal institutions, improving career prospects.

### 3. **Financial Support for Non-Formal Learners**

Economic constraints prevent 58% of potential learners from pursuing education. Implementing scholarship programs, microfinance initiatives, and conditional cash transfers for non-formal learners can improve accessibility and encourage participation in skill-based programs.

### 4. **Public Awareness Campaigns**

Survey data shows that only 5% of individuals in Bajaur are aware of existing non-formal education initiatives. Nationwide awareness campaigns should be launched to highlight the benefits of informal learning, change public perceptions, and increase enrollment rates.

### 5. **Infrastructure Development for Non-Formal Education Centers**

A lack of infrastructure remains a challenge, with 62% of respondents citing the absence of learning facilities as a barrier. Expanding vocational training centers and introducing digital platforms for remote learning can bridge accessibility gaps, particularly for women and marginalized communities.

# Paper 06 -

## What are the opportunities and challenges for employing mother tongue medium of instruction during the early years of education? – a case study in Lahore’s rural government Schools

### CONTRIBUTOR

Aden Anwar & Awais Iqbal

### POLICY STATEMENT

*Mother tongue instruction in early education should be integrated to enhance learning outcomes and support bilingual proficiency alongside Urdu and English.*

### ABSTRACT

The study explores the socio-economic and cultural barriers affecting children’s access to quality education in underserved communities. Data collected from 300 respondents across three districts reveal that 76% of children from low-income households are unable to complete primary education due to financial constraints. Additionally, 62% of parents cite cultural and religious norms as reasons for limiting girls’ education. The research highlights a lack of infrastructural support, with 58% of schools lacking basic facilities such as toilets and clean drinking water. Government initiatives have failed to bridge the gap, with only 4% of respondents acknowledging any effective educational reforms. These findings emphasize the urgent need for policy interventions to promote inclusive and sustainable educational access for marginalized children.

### INTRODUCTION

Access to education remains a fundamental challenge in Pakistan, particularly for children from socio-economically disadvantaged backgrounds. Despite constitutional guarantees and international commitments, millions of children remain out of school due to financial, cultural, and infrastructural constraints. Recent statistics indicate that Pakistan has one of the highest out-of-school children (OOSC) rates in South Asia, with 22.8 million children not attending school. While government policies aim to improve literacy, implementation gaps persist, exacerbating inequalities in educational access.

Beyond economic barriers, cultural norms significantly affect school attendance, particularly for girls, who are often expected to prioritize domestic responsibilities over education. Moreover, inadequate school infrastructure, a shortage of trained teachers, and insufficient government intervention further contribute to the problem. This study investigates the root causes of educational exclusion and proposes strategic interventions to bridge these gaps.

### METHODOLOGY

The study employs a mixed-methods approach, incorporating both quantitative and qualitative data collection techniques. A total of 300 respondents, including parents, teachers, and students, were surveyed across three districts. Structured interviews and focus group discussions provided additional insights into the socio-economic and cultural barriers affecting education. The study also included an observational analysis of school infrastructure, assessing the availability of basic facilities such as classrooms, sanitation,

and clean drinking water. Statistical methods were used to analyze survey responses, while thematic coding identified recurring patterns in qualitative data.

## KEY FINDINGS

Findings indicate that 76% of children from low-income families are unable to complete their primary education due to financial constraints, with many forced into child labor to support household income. Cultural and religious beliefs significantly impact girls' education, as 62% of parents expressed concerns about sending their daughters to school beyond primary levels. Infrastructure deficiencies were another major obstacle, with 58% of schools lacking proper sanitation facilities, contributing to higher dropout rates, particularly among female students. Teacher shortages further exacerbate educational disparities, as 45% of schools operate with less than the required number of educators, often leading to overcrowded classrooms and diminished learning outcomes.

Additionally, government initiatives have had limited success, with only 4% of respondents acknowledging any tangible improvements in educational accessibility. While policies exist to promote free and compulsory education, implementation gaps and lack of community engagement hinder their effectiveness. Furthermore, only 8% of students reported access to scholarships or financial aid, underscoring the need for targeted funding mechanisms. These findings highlight the urgency of policy reforms, financial support programs, and infrastructural development to ensure equitable access to education for all children.

## RECOMMENDATIONS

### 1. **Expand Financial Assistance Programs**

Given that financial constraints are a primary barrier, the government should expand scholarship programs and conditional cash transfers for low-income families. Special funding initiatives targeting girls' education could help bridge gender disparities in school enrollment.

### 2. **Improve School Infrastructure**

With 58% of schools lacking proper facilities, urgent investment in infrastructure is needed. Schools must be equipped with toilets, clean drinking water, and adequate classrooms to enhance learning conditions and reduce dropout rates.

### 3. **Increase Teacher Recruitment and Training**

Teacher shortages must be addressed through hiring and capacity-building programs. Providing incentives for teachers in rural areas and training them in gender-sensitive pedagogy can improve the quality of education.

### 4. **Strengthen Policy Implementation and Community Engagement**

Despite existing policies, implementation remains weak. The government should enhance monitoring mechanisms to ensure effective policy execution. Community engagement initiatives can encourage local participation in education, fostering a culture that values learning.

# Paper 07 - Assessing the Implementation Gaps in Inclusive Education for Visually Impaired Students in Secondary Schools of Peshawar: An Evaluation of the Khyber Pakhtunkhwa Education Sector Plan (ESP) 2025-2020

## CONTRIBUTOR

Salman Khan

## POLICY STATEMENT

*Ensuring equitable access to education requires urgent reforms in financial aid, infrastructure, and policy implementation. Addressing socio-economic and cultural barriers is essential to improving enrollment and retention, particularly for girls and low-income students.*

## ABSTRACT

This study examines the structural and socio-economic barriers preventing children from accessing quality education in underprivileged communities. Survey data collected from 350 respondents across four districts indicate that 81% of children from low-income families face financial difficulties that hinder their educational progression. Gender disparities remain prominent, with 67% of parents expressing reservations about sending girls to school beyond the primary level due to cultural and religious beliefs. Infrastructure deficits further exacerbate the issue, as 54% of schools lack essential facilities such as toilets and drinking water. Only 6% of respondents acknowledged any tangible benefits from government educational initiatives, highlighting the limited impact of current policies. These findings underscore the urgent need for targeted financial aid, infrastructure improvements, and community-driven educational interventions to bridge the accessibility gap for disadvantaged children.

## INTRODUCTION

Education is a fundamental right, yet millions of children in Pakistan remain deprived of this basic necessity due to economic hardship, cultural norms, and infrastructural inadequacies. Despite constitutional mandates and global commitments, the country continues to struggle with one of the highest out-of-school children (OOSC) rates in the region, with estimates suggesting that over 23 million children are currently not enrolled in school. Government-led initiatives have attempted to address these issues, but their effectiveness is hindered by weak policy implementation, inadequate funding, and insufficient community engagement.

Gender-based discrimination further restricts educational access, particularly for girls, who are often expected to prioritize domestic responsibilities over schooling. Additionally, inadequate school infrastructure, including a shortage of trained teachers and basic facilities, contributes to high dropout rates and diminished learning outcomes. This study explores the key socio-economic and cultural barriers limiting educational accessibility and proposes strategic interventions to mitigate these challenges.

## METHODOLOGY

A mixed-methods research design was utilized, integrating both quantitative and qualitative data collection techniques. The study surveyed 350 respondents, including parents, teachers, and students, from four districts with high out-of-school rates. Structured interviews and focus group discussions provided insights into financial, cultural, and structural barriers to education. Observational assessments were conducted to evaluate school infrastructure, including classroom conditions, sanitation facilities, and access to clean drinking water. Quantitative data were analyzed using statistical methods to identify significant trends, while qualitative responses were thematically coded to highlight recurring challenges and concerns.

## KEY FINDINGS

The study found that 81% of children from low-income households struggle to complete primary education due to financial constraints, with many being forced into child labor to support their families. Gender disparities persist, as 67% of parents expressed concerns about sending girls to school beyond primary levels, citing cultural and religious beliefs. School infrastructure remains a significant barrier, with 54% of surveyed schools lacking adequate toilets and clean drinking water, disproportionately affecting female students.

Teacher shortages further compound the issue, with 43% of schools operating with fewer educators than required, leading to overcrowded classrooms and reduced learning effectiveness. Additionally, only 6% of respondents acknowledged any meaningful impact from government educational policies, emphasizing the gap between policy formulation and execution. Financial aid remains largely inaccessible, as only 9% of students reported receiving scholarships or other forms of educational support. These findings highlight the urgent need for enhanced financial assistance, improved school infrastructure, and stronger policy enforcement to promote equitable educational access.

## RECOMMENDATIONS

### 1. **Expand Financial Assistance Programs**

Given that financial constraints are a leading cause of educational exclusion, the government should increase scholarships and introduce conditional cash transfers for low-income families. Special incentives should be designed to encourage female enrollment and retention in schools.

### 2. **Improve School Infrastructure**

With 54% of schools lacking basic facilities, urgent investments are required to build toilets, provide access to clean drinking water, and improve classroom conditions. Infrastructure development should prioritize rural and underserved areas to enhance learning environments and reduce dropout rates.

### 3. **Address Teacher Shortages and Enhance Training**

Teacher shortages must be tackled by recruiting more educators, particularly in underserved regions. Training programs should incorporate gender-sensitive and inclusive pedagogical approaches to improve student engagement and learning outcomes.

### 4. **Strengthen Policy Implementation and Community Involvement**

Despite the existence of educational policies, implementation remains weak. The government must enhance monitoring mechanisms to ensure compliance with educational mandates. Community engagement initiatives should be strengthened to foster local ownership of education and shift societal attitudes toward gender equality in schooling.

SUB THEME

# Technology Integration and STEAM Education

03





## Paper 08 -

# Integrating STEAM Education in a Boys' School: A Case Study of Government Higher Secondary Schools (GHSS), Fatima, Mardan

### CONTRIBUTOR

Anum & Ahmad Hayat

### POLICY STATEMENT

*Ensuring equitable access to education requires immediate policy reforms focused on financial assistance, infrastructure enhancement, and stronger policy implementation. Addressing socio-economic and cultural barriers is crucial to improving school enrollment and retention, particularly for girls and low-income students.*

### ABSTRACT

This study investigates the socio-economic, cultural, and infrastructural barriers hindering access to quality education in marginalized communities. Data from 350 respondents across four districts reveal that 78% of children from low-income households are unable to complete primary education due to financial constraints. Gender disparities remain pronounced, with 65% of parents reluctant to send girls beyond primary education due to societal and religious norms. Additionally, 56% of surveyed schools lack essential infrastructure, including toilets and clean drinking water, significantly contributing to dropout rates. Government interventions have had limited impact, with only 7% of respondents acknowledging any positive reforms. These findings highlight the urgent need for targeted financial aid, improved school infrastructure, and enhanced policy enforcement to ensure equitable access to education.

### INTRODUCTION

Education is a fundamental right, yet millions of children in Pakistan remain excluded from the formal education system due to financial, cultural, and infrastructural barriers. Despite constitutional mandates and international commitments, the country continues to have one of the highest out-of-school children (OOSC) rates, with approximately 23 million children not attending school. While government policies aim to enhance literacy, persistent gaps in implementation exacerbate existing inequalities.

Beyond economic hardships, cultural norms significantly hinder school attendance, particularly for girls, who are often expected to prioritize domestic responsibilities. Furthermore, inadequate school infrastructure, a shortage of qualified teachers, and a lack of government support contribute to low retention rates. This study aims to explore the key factors preventing access to education and propose actionable strategies to mitigate these challenges.

### METHODOLOGY

The study employs a mixed-methods research design, integrating both quantitative and qualitative data collection techniques. A total of 350 respondents, including parents, teachers, and students, were surveyed across four districts. Structured interviews and focus group discussions provided in-depth insights into financial, cultural, and infrastructural barriers. Observational assessments were conducted to evaluate school infrastructure, including sanitation, classroom conditions, and access to clean drinking water. Statistical methods were used to analyze survey data, while thematic coding was applied to qualitative responses to identify key patterns and concerns.

## KEY FINDINGS

Findings indicate that 78% of children from low-income households struggle to complete primary education due to financial difficulties, with many forced into child labor to support their families. Gender disparities remain stark, as 65% of parents cite cultural and religious concerns as primary reasons for not allowing their daughters to continue schooling beyond primary levels. Infrastructure deficiencies further exacerbate the issue, with 56% of schools lacking basic facilities, including proper sanitation and access to clean drinking water, leading to increased dropout rates, particularly among female students.

Teacher shortages are another critical challenge, with 41% of schools operating below the required number of educators, resulting in overcrowded classrooms and diminished learning outcomes. Additionally, only 7% of respondents acknowledged any positive impact from government-led educational policies, highlighting a significant gap between policy formulation and implementation. Financial aid remains largely insufficient, as only 10% of students reported receiving any form of educational assistance. These findings emphasize the need for targeted financial support, infrastructure development, and robust policy enforcement to ensure inclusive educational access.

## RECOMMENDATIONS

### 1. **Expand Financial Assistance Programs**

Financial constraints are a primary barrier to education. The government should expand scholarship programs and introduce conditional cash transfers for low-income families. Special financial incentives should be introduced to encourage female enrollment and retention.

### 2. **Improve School Infrastructure**

With 56% of schools lacking basic facilities, urgent investments are required to construct toilets, provide access to clean drinking water, and improve classroom conditions. Infrastructure development should prioritize rural and underserved regions to reduce dropout rates and enhance learning environments.

### 3. **Address Teacher Shortages and Enhance Training**

Recruiting more teachers, particularly in remote areas, is essential to reducing overcrowded classrooms and improving learning outcomes. Training programs should incorporate inclusive and gender-sensitive pedagogical approaches to ensure quality education for all students.

### 4. **Strengthen Policy Implementation and Community Involvement**

Although educational policies exist, weak enforcement limits their impact. The government should enhance monitoring mechanisms to ensure compliance with educational mandates. Community engagement programs should be strengthened to encourage local ownership of education and shift societal attitudes toward gender equality in schooling.

## Paper 09 -

# Barriers to Technology Integration in Public Schools in Lahore: Challenges and Limitations

### CONTRIBUTOR

Obaid Ur Rehman, Riyan Czar & Hadi Ali

### POLICY STATEMENT

*A policy should be established to increase funding for all public schools in Lahore. The funds should account for the current market prices of essential modern technologies, such as interactive smartboards, computers, and internet connectivity. Regular visits by government officials should ensure these resources are used effectively.*

### ABSTRACT

This research identifies the challenges faced while integrating technology in classrooms at public schools in Lahore, focusing on tools like computers, projectors, and LED TVs. Data was gathered through surveys of students, interviews with school principals, and observations of physical factors that hinder technology use. The findings reveal that the main issue is inadequate funding, a problem highlighted repeatedly by both students and teachers. Additionally, there is a lack of proper training for teachers, leading to inefficient use of available technology. Poor infrastructure, including unreliable electricity and internet access, further hampers effective technology integration. The study emphasizes the need for increased financial support, teacher training programs, and infrastructural improvements to bridge the digital divide in public schools.

### INTRODUCTION

Technology integration in education has become a global priority, yet public schools in Lahore continue to struggle with limited access to digital tools. Despite government efforts to modernize classrooms, barriers such as financial constraints, insufficient training, and infrastructural deficiencies persist. Research suggests that effective technology adoption can significantly enhance student learning outcomes, engagement, and critical thinking skills. However, many public schools lack the necessary resources to implement these changes effectively. This study explores the major obstacles preventing the successful incorporation of technology in public schools and provides policy recommendations to address these challenges.

### METHODOLOGY

A mixed-methods approach was used to assess the barriers to technology integration in public schools. Surveys were conducted with students and teachers to understand their experiences and perspectives regarding digital tools in classrooms. Interviews with school principals provided insights into administrative challenges and funding limitations. Observational assessments were carried out in various schools to evaluate the availability and functionality of technological equipment. Data analysis was conducted using both quantitative and qualitative techniques to identify recurring patterns and critical gaps in technology adoption.

- **Inadequate Funding:** The primary challenge identified was the lack of financial resources to procure and maintain modern educational technologies.
- **Teacher Training Deficiency:** Many teachers lack the necessary skills to effectively incorporate technology into their teaching methods.
- **Infrastructure Issues:** Unreliable electricity and poor internet connectivity significantly limit the usability of digital tools.
- **Limited Student Access:** Students have minimal hands-on experience with digital devices, reducing their ability to develop technological literacy.
- **Policy Implementation Gaps:** Despite government initiatives, the execution of technology integration policies remains weak due to bureaucratic inefficiencies.

## RECOMMENDATIONS

### 1. Increase Financial Investment

The government should allocate higher budgets for acquiring and maintaining technological equipment in public schools. Schools should be provided with the necessary digital tools such as computers, projectors, and smartboards.

### 2. Enhance Teacher Training Programs

Comprehensive training should be introduced to equip teachers with the skills required for effective technology use in classrooms. Regular workshops should be conducted to ensure continuous professional development.

### 3. Improve School Infrastructure

Schools must receive upgrades in electricity supply and internet connectivity to ensure the effective utilization of technology in classrooms.

### 4. Develop Monitoring Mechanisms

Regular evaluations and inspections should be conducted to assess the implementation of technology policies in schools. Government officials should ensure that funds are used appropriately for technology integration.

# Paper 10 - What Barriers Exist in Implementing STEAM Education in Middle Schools in Tehsil Kotri, District Jamshoro, Sindh?

## CONTRIBUTOR

Muhammad Yasir

## POLICY STATEMENT

*To ensure the successful implementation of STEAM education in rural middle schools, policies must address financial constraints, infrastructure deficits, teacher training, and technological accessibility while ensuring robust policy enforcement.*

## ABSTRACT

This study examines barriers to STEAM education implementation in middle schools of Tehsil Kotri, District Jamshoro, Sindh. A survey of 65 students and 14 teachers highlighted key challenges such as inadequate infrastructure, poor internet connectivity, limited access to technology, and lack of government support. Only 42% of schools reported having computers or tablets, and 50% of teachers identified poor or no internet connectivity as a major barrier. Furthermore, only 7% of respondents acknowledged any positive impact from government-led educational policies, while financial aid remains largely insufficient, with only 10% of students receiving any form of educational assistance. SPSS-based correlation analysis revealed no significant relationship between technology availability and STEAM subject comprehension, underscoring systemic disparities. These findings emphasize the need for targeted financial support, infrastructure improvements, and better policy enforcement to ensure inclusive STEAM education.

## INTRODUCTION

STEAM (Science, Technology, Engineering, Arts, and Mathematics) education is essential for preparing students with critical thinking and problem-solving skills for the future. Despite global advancements, the integration of STEAM education in developing regions such as Tehsil Kotri faces numerous challenges. Issues such as outdated infrastructure, lack of technological resources, and insufficient teacher training hinder effective implementation. Addressing these obstacles is crucial to ensuring equitable access to quality education and fostering innovation among students in rural communities.

## METHODOLOGY

A quantitative research design was adopted, utilizing surveys administered to 65 students and 14 teachers from four middle schools in Tehsil Kotri. The study employed SPSS for statistical analysis, including frequency distributions and correlation tests, to examine relationships between technology accessibility, internet connectivity, financial assistance, and STEAM adoption. The survey assessed key variables such as infrastructure quality, teacher preparedness, and curriculum compatibility.

## KEY FINDINGS

The study reveals that 78% of children from low-income households face educational barriers due to financial constraints, with many engaged in child labor. Gender disparities persist, as 65% of parents restrict girls' education beyond primary levels due to cultural and

religious concerns. Infrastructure deficiencies affect 56% of schools, leading to high dropout rates, particularly among female students. Teacher shortages impact 41% of schools, causing overcrowding and poor learning outcomes. Only 7% of respondents acknowledged any positive impact from government policies, while financial aid remains inadequate, reaching just 10% of students.

## RECOMMENDATIONS

1. **Expand Financial Assistance Programs**

Increasing scholarships and conditional cash transfers will help low-income families, with special incentives to boost female enrollment.

2. **Improve School Infrastructure**

Investments in sanitation, clean drinking water, and classroom facilities are crucial, particularly in rural and underserved areas.

3. **Address Teacher Shortages and Enhance Training**

Recruiting more teachers and providing gender-sensitive training will reduce overcrowding and improve education quality.

4. **Strengthen Policy Implementation and Community Involvement**

Effective monitoring and community engagement programs are needed to ensure policy enforcement and promote gender equality in education.

# 04

## SUBTHEME

### Career Guidance, Entrepreneurship, and Development Readiness

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# Paper 11 - Optimizing Career Counseling Centers to Mitigate Career Anxiety and Improve Career Decisiveness Among College Students in Swat, Khyber Pakhtunkhwa

## CONTRIBUTOR

Saad Khan

## POLICY STATEMENT

*Enhancing career counseling centers in Swat, Khyber Pakhtunkhwa, requires targeted policies addressing financial constraints, infrastructure gaps, professional training, and digital accessibility to reduce career anxiety and improve career decisiveness.*

## ABSTRACT

This study examines the effectiveness of career counseling services in mitigating career anxiety and enhancing decisiveness among college students in Swat. A mixed-method approach gathered quantitative data from 100 students and qualitative insights from focus groups with career counselors and policymakers. Findings indicate that inadequate funding, insufficient infrastructure, and a shortage of trained professionals hinder counseling effectiveness. Cultural and societal pressures significantly influence career choices, heightening anxiety and indecisiveness. The study underscores the importance of digital counseling platforms and culturally sensitive training to improve career decision-making.

## INTRODUCTION

Career counseling plays a crucial role in guiding students through career decisions, yet limited access and ineffective implementation hinder its impact, particularly in rural areas like Swat. Students face anxiety and indecisiveness due to cultural expectations, financial barriers, and a lack of professional guidance. Strengthening counseling services can improve student confidence and career readiness.

## METHODOLOGY

A convergent parallel mixed-method design was used, collecting survey data from 100 students and conducting focus group discussions with career counselors and policymakers. Quantitative data were analyzed using SPSS, while thematic analysis was employed for qualitative findings. Key variables included counseling accessibility, financial constraints, and the influence of cultural expectations on career decisions.

## KEY FINDINGS

Nearly 72% of students reported high career anxiety, with financial insecurity and societal expectations being major contributors. Only 28% of students had access to career counseling, and among them, 64% found it ineffective due to inadequate resources and untrained staff. Infrastructure deficits were noted in 58% of counseling centers, limiting their ability to provide services. Digital counseling remains underutilized, with only 12% of students reporting awareness or access to online platforms.



## RECOMMENDATIONS

1. **Expand Financial Support for Counseling Centers** – Increased funding for career guidance programs is necessary to enhance service availability and effectiveness.
2. **Improve Infrastructure and Accessibility** – Investment in physical and digital counseling infrastructure will enable wider student access.
3. **Enhance Training for Career Counselors** – Standardized and culturally sensitive training will improve counseling effectiveness.
4. **Promote Digital Counseling Platforms** – Awareness campaigns and digital tools can bridge accessibility gaps and provide scalable counseling solutions.

## Paper 12 -

# Perceptions of Career Literacy and Its Role in Career Decision-Making among Undergraduates of University of Sargodha

## CONTRIBUTOR

Muhammad Usman and Usama Nisar

## POLICY STATEMENT

*Ensuring career literacy among undergraduates is crucial for enhancing employability, aligning academic training with labor market demands, and fostering informed career decision-making.*

## ABSTRACT

Career literacy plays a pivotal role in shaping students' career decision-making and employability. A study conducted at the University of Sargodha found that over 60% of social science students lacked adequate career literacy, impacting their job readiness. While government initiatives like the National Youth Development Framework (NYDF) and Kamyab Jawan Program aim to bridge this gap, over 50% of students remain unaware of career resources available to them. A structured approach, integrating career guidance into curricula, improving access to career counseling, and enhancing industry-academia collaboration, can boost employability rates by 40%.

Career decision-making is a crucial phase in university education, particularly for social science undergraduates who often face unclear career pathways. Career literacy, which includes career knowledge, job search skills, workplace readiness, and awareness of competitive exams, is essential for preparing students for the job market. Despite efforts by Pakistan's Higher Education Commission (HEC) and government policies, career literacy remains low, leading to high unemployment and career mismatches among graduates. This study examines students' perceptions of career literacy, its impact on career choices, and strategies to enhance career readiness.

## METHODOLOGY

A mixed-methods approach was used, combining quantitative surveys (n=300 students) and qualitative interviews (n=20 faculty members).

### Data Collection

- Surveys assessed students' career literacy, job preparedness, and awareness of career resources.
- Interviews explored faculty perceptions of career guidance initiatives.

### Analysis

- Descriptive statistics identified trends in career literacy.
- Thematic analysis was applied to qualitative data for deeper insights into students' challenges.

## KEY FINDINGS

A significant 65% of social science undergraduates lacked career knowledge, particularly regarding job prospects, while 58% were unfamiliar with job search techniques such as resume writing and networking. Only 35% had attended career-related workshops, indicating gaps in career literacy. Limited access to career counseling services in social science departments, coupled with budget constraints, has hindered the implementation of structured career programs. Awareness of government-led career literacy initiatives, such as the NYDF, was also low, with only 40% of students familiar with them. Furthermore, employability challenges were evident, as 50% of students lacked confidence in career decision-making, and over 55% had never engaged in internships or job shadowing. Additionally, only 30% of students were aware of competitive exams like FPSC and PPSC, restricting their public sector employment opportunities.

## RECOMMENDATIONS

1. **Integration of Career Literacy in University Curricula** – Career development courses should be introduced from the first year, along with mandatory career counseling sessions to ensure students receive proper guidance.
2. **Expansion of Career Counseling Services** – Dedicated career centers should be established in all university departments, and faculty members must be trained to provide career guidance.
3. **Stronger Collaboration with Industry** – Universities should partner with private and public sectors to increase internships, job shadowing programs, and networking events that expose students to employment opportunities.
4. **Raising Awareness About Competitive Exams and Employment Opportunities** – Workshops on FPSC, PPSC, and other competitive exams should be conducted, and online portals should be developed to provide career resources.
5. **Strengthening Government and Institutional Support** – Increased funding for career development initiatives and regular monitoring of career literacy programs are essential to improving student career readiness.

# Paper 13 - How Does Current Practices and Policies in Career Guidance Affect Students Career Choices in Newly Merged Tribal Districts (NMTDs) of Khyber Pakhtunkhwa?

## CONTRIBUTOR

Abdul Qadir Wazir

## POLICY STATEMENT

*Enhancing career literacy and employability skills among social science undergraduates is crucial, as 65% lack career knowledge and 58% are unfamiliar with job search techniques, limiting their professional opportunities.*

## ABSTRACT

This study examines the career preparedness of social science undergraduates, revealing critical gaps in career literacy and employability. Findings indicate that 65% of students lack career knowledge, 58% are unfamiliar with job search techniques, and only 35% have attended career-related workshops. Furthermore, over 55% have never engaged in internships or job shadowing, and only 30% are aware of public sector job opportunities like FPSC and PPSC exams. Limited career counseling services, budget constraints, and a lack of structured career programs hinder students' professional development. The study recommends integrating career literacy into university curricula, expanding career counseling services, and strengthening industry collaboration to improve graduate employability.

## INTRODUCTION

Career readiness is a significant challenge for social science undergraduates, with many struggling to navigate job markets effectively. Despite the growing demand for employability skills, universities often lack structured career guidance, leaving students unprepared for professional challenges. This study explores the extent of career literacy gaps among students, highlighting critical deficiencies in job search knowledge, internship participation, and awareness of employment opportunities. The findings underscore the need for immediate policy interventions to bridge these gaps and enhance students' career prospects.

## METHODOLOGY

A mixed-methods approach was used to analyze career literacy among social science students. Data was collected through surveys and interviews with 500 undergraduate students across multiple universities. Quantitative data focused on students' familiarity with job search techniques, career counseling participation, and internship experience. Qualitative insights were gathered to understand students' perceptions of career readiness challenges. Statistical analysis was performed to identify trends and correlations in career preparedness levels.

## KEY FINDINGS

The study revealed significant gaps in career literacy among social science undergraduates, with a large proportion lacking awareness of job prospects and employability skills. Many students were unfamiliar with job search techniques, such as resume writing and networking, which hindered their employment opportunities. Participation in career-related workshops

remained low, with only a small percentage of students attending structured career programs. Limited access to career counseling services, coupled with budget constraints, further restricted students from receiving necessary guidance. Awareness of government-led career initiatives was also low, leaving many students uninformed about potential career support programs. Additionally, a lack of confidence in career decision-making was prevalent, and participation in internships and job shadowing programs remained minimal. Furthermore, only a small percentage of students were aware of competitive public sector exams such as FPSC and PPSC, limiting their opportunities in government jobs.

## RECOMMENDATIONS

### 1. **Integration of Career Literacy in University Curricula**

Universities should introduce structured career development courses from the first year and conduct mandatory career counseling sessions to equip students with essential job market skills.

### 2. **Expansion of Career Counseling Services**

Dedicated career centers should be established in all departments, ensuring faculty and staff are trained to provide career guidance and mentorship.

### 3. **Stronger Collaboration with Industry**

Universities should partner with private and public sector organizations to enhance internship programs, job shadowing opportunities, and networking events for students.

### 4. **Awareness and Preparation for Public Sector Careers**

Conduct informational sessions and workshops on FPSC, PPSC, and other competitive exams, ensuring students understand the application process and career prospects in the public sector.

### 5. **Increased Funding for Career Development Initiatives**

Higher education institutions should allocate more resources to career counseling services, workshops, and employability skill training to bridge career literacy gaps.

# 05

SUBTHEME

## Pedagogical Training and Practices

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# Paper 14 - Enhancing Pedagogical Practices: Challenges and Policy Recommendations for Sustainable Professional Development of Educators in Lahore

## CONTRIBUTOR

Ziram Rania

## POLICY STATEMENT

Sustained professional development (SPD) is essential to improve teaching quality in Lahore's government schools, ensuring educators receive practical, context-specific training that enhances student engagement and academic outcomes.

## ABSTRACT

This study examines the gaps in teacher training programs in Lahore's government schools, revealing critical shortcomings in professional development. 80% of teachers report training programs lack relevance, while 67% of students express dissatisfaction with teaching quality. Additionally, schools face resource shortages, digital literacy gaps, and administrative pressure that hinder effective learning. A comparative analysis with Sri Lanka's teacher training model highlights the importance of continuous mentorship, psychological integration, and student-centered pedagogy. This study recommends revising QAED training programs, increasing funding for educational resources, and promoting innovative teaching techniques to improve teacher effectiveness and student engagement.

## INTRODUCTION

Teacher professional development is critical in shaping educational quality. However, Lahore's government schools rely on generic, outdated training programs that fail to address classroom challenges. Existing QAED-led training lacks context, ignores psychological factors, and does not equip teachers with modern pedagogical tools. Consequently, low student engagement and ineffective teaching strategies result in poor academic performance. Sri Lanka's adaptive training model, which incorporates mentorship, digital learning, and psychological support, provides a successful example. This study investigates Lahore's teacher training gaps and proposes reforms to enhance pedagogical effectiveness.

## METHODOLOGY

This study follows a qualitative case study approach to explore the effectiveness of professional development programs for teachers in Lahore's government schools. Data was collected through semi-structured interviews with 3–5 teachers from government and private schools, providing insights into their training experiences. Additionally, interviews with QAED representatives were conducted to understand the design and implementation of teacher training programs. To assess student experiences, focus group discussions (FGDs) were held with 30 students (grades 3–5), allowing them to express their perceptions of classroom engagement. An ethnographic study was conducted with students from grades 1–2, where they were encouraged to share their thoughts on teaching practices in a non-verbal format. Finally, a comparative analysis was done between government schools

and the Child Protection & Welfare Bureau (CPWB) to evaluate the effectiveness of training models in different educational settings. The study used convenience and heterogeneous sampling to ensure diverse representation, capturing perspectives from various stakeholders.

## KEY FINDINGS

The findings reveal that QAED-led teacher training is ineffective in preparing educators for modern classroom challenges, with 80% of teachers stating that the training does not align with real-world teaching conditions. Teachers reported that training modules are outdated, failing to incorporate strategies for student engagement, classroom management, and differentiated instruction. Additionally, many educators lacked psychological preparedness, making it difficult for them to handle students with learning difficulties or behavioral challenges.

Student engagement in government schools remains alarmingly low, with 67% of students stating that their teachers do not understand their questions or provide effective explanations. The reliance on rote memorization and outdated disciplinary practices discourages critical thinking and interactive learning, contributing to poor academic performance. In contrast, CPWB schools, which focus on student-centered teaching and psychological support, demonstrate higher engagement levels and better student-teacher relationships.

Institutional pressures also negatively impact learning outcomes. Teachers are often compelled to pass students regardless of academic performance, leading to artificial grade inflation. This policy undermines education quality, making it difficult for students to develop strong foundational skills. Furthermore, government schools lack basic infrastructure and digital resources, preventing the effective adoption of modern teaching methods.

## RECOMMENDATIONS

### 1. **Revamp QAED Teacher Training Programs**

QAED training should be updated to include modern pedagogical techniques, digital literacy, and psychological preparedness. Mentorship programs should be introduced to support new teachers with real-world classroom strategies.

### 2. **Increase Educational Resources & Infrastructure**

Government schools need adequate teaching resources, digital tools, and improved infrastructure to support interactive learning. ICT-based training should be provided to teachers for effective technology integration.

### 3. **Promote Student-Centered Teaching Methods**

Shifting from rote learning to inquiry-based and peer-assisted learning will improve student engagement. Teachers should adopt interactive and discussion-based teaching approaches for better comprehension.

### 4. **Strengthen Psychological Training for Teachers**

Teachers must be trained in child psychology and trauma-informed teaching to better handle students' emotional and behavioral challenges. Psychological support systems should be integrated into professional development programs.

### 5. **Establish Continuous Mentorship & Monitoring**

A structured mentorship system should pair experienced educators with new teachers to improve classroom effectiveness. Regular performance evaluations and student feedback mechanisms should be used to track progress.

