INTERNATIONAL RESCUE COMMITTEE

QUALITY

THE IMPACT OF A LEARNING ENVIRONMENT ON GIRLS ENROLMENT AND RETENTION IN SCHOOLS IN BALOCHISTAN

WHITEPAPER SERIES (WP-05)
PAK ALLIANCE FOR MATHS AND SCIENCE

JAN 2022

CONTENTS

1 Executive summary

2 Premise: what existing data tells us

3 Methodological approach

3.1 Secondary literature source and data sets' review
3.2 Primary data collection
3.3 Frame of analysis

4 Challenges impacting quality

4.1 Monograde syllabus, multigrade classrooms
4.2 Insufficient teacher training on management of multigrade classrooms
4.3 Gaps in progression and integration of content
4.4 Learning retention
4.5 Examination driven learning
4.6 Lack of career pathways for students completing high school

5 Recommendations: what can be done

5.1 Multi-grade curriculum for early years (primary school)
5.2 Continuous teacher training on multi-grade classroom management and teaching
5.3 Addressing gaps in content
5.4 Addressing the gaps in children's learning – foundational skills
5.5 Gradual shift to competency based examinations
5.6 Technical and vocational pathways

6 Annexure

7 Bibliography

1 EXECUTIVE SUMMARY

This is series of white papers dwelling into key challenges faced by girls, particularly of school going age, in education in the province of Balochistan. The intent is to understand the multi-faceted barriers, and to identify possible ways of addressing the barriers in consultation with the local community.

This is a five-part series, which each white paper focusing on one fundamental barrier, understanding its limitation in the local culture, value system, political context, availability/ positioning of resources and identifying its linkages to other barriers. The intent is to be able to delve deeper to capture everyday lives of the communities in the province, and seek their input into ways of addressing the longstanding challenges to girls' education.

This series of white papers will address the following supply and demand side barriers:

I. Access: Non-availability of educational institutes
II. Access: Distance to school matters
III. Retention: an ad hoc approach to school infrastructure
IV. Shortage of female teachers: a recruitment and deployment lens, and
V. Quality: prioritising student learning

This white paper focuses on exploring the challenges faced by children enrolled in schools, especially girls, with respect to learning. The paper is divided in two parts: (a) understanding of quality-related issues in primary and post-primary schools, and (b) chalks out possible pathways which can be adopted by the state and the community to facilitate learning in schools.

2 PREMISE: WHAT EXISTING DATA TELLS US

While important, access (to school) is only the first milestone towards ensuring access of quality education to children. The premise of any education system i.e. constructing schools, developing curriculum and textbooks, training teachers, and ensuring adequate school infrastructure, is to be able to equip the children to 'learn' and 'expand their potential' as human beings. Education International[1] defines quality education as below:

"A quality education is one that focuses on the whole child—the social, emotional, mental, physical, and cognitive development of each student regardless of gender, race, ethnicity, socioeconomic status, or geographic location. It prepares the child for life, not just for testing"

A holistic child-centered approach to education requires that the child learns in a physically and emotionally safe environment, is actively engaged with learning content not only specific to school but also the community, is able to access learning through qualified and caring adults, is challenged academically and prepared for participation in global environment. This requires a minimum of the following three pillars[2] in an education system:

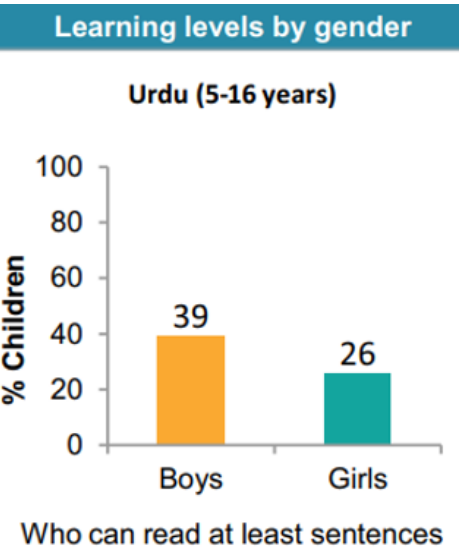
- Students' access to quality teachers;
- Student engagement with quality learning tools; and
- A school environment which supports learning

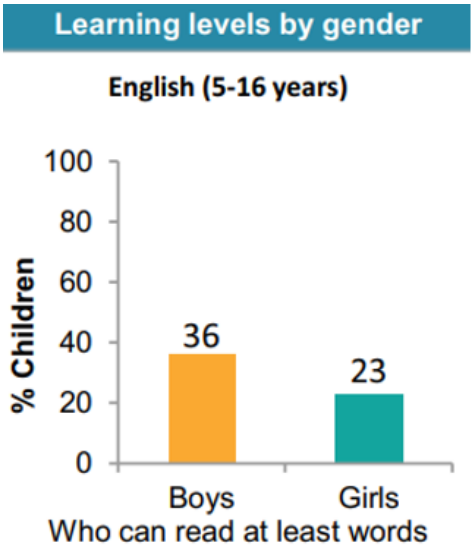
[1] Education International (EI) is the Global Union Federation that brings together organisations of teachers and other education employees from across the world. Through 383 member organisations, EI represents more than 32 million teachers and education support personnel in 178 countries and territories.
[2] People's Action for Learning (PAL) Network
[3] Recruitment Policy (Teaching and non-teaching staff) 2014, Secondary Education Department, Government of Balochistan
[4] Standard Operation Procedures for Curriculum and Textbook Development. 2013. Bureau of Curriculum, Secondary Education Department.
[5] Dawn. 2018. Life skills education to be imparted in Balochistan schools
[6] Chief Minister's School Infrastructure and Improvement Development Program

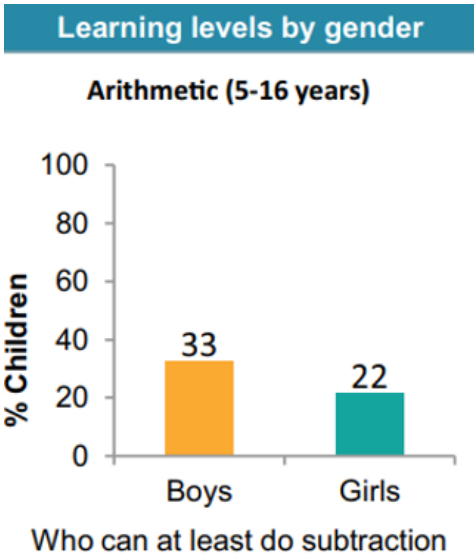
Over the last two decades, Secondary Education Department, Government of Balochistan has taken steps to improve and invest in each of the three pillars, for example, merit-based recruitment of teachers[3] to improve the quality of teachers being inducted into the system; a shift towards non-conventional learning approach with revisions in textbook,[4] inclusion of life-skills based education;[5] and investment in improving school infrastructure.[6]

However, the system continues to grapple with multiple supply-side challenges, some of which are discussed in the earlier papers of this series (unavailability of education institutes, distance to school, shortage of qualified female teachers, continued lack of school infrastructure, and gender insensitive school budgeting). All of these have an adverse effect on the ultimate goal i.e. student learning.

According to the Annual Status of Education Report,[7] of the children enrolled in Grade 5 in a rural government school, 51% are unable to read a story in Urdu, 58% are unable to read sentences in English, and an alarming 64% cannot do two-digit division. All of these milestones are mapped to learning competencies of Grade 2-3 as per the National Curriculum. Furthermore, girls enrolled in rural schools continue to lag behind boys in literacy and numeracy skills.







Source: Annual Status of Education Report (Rural), 2019

[7] Annual State of Education Report. 2019. Idara-e-Taleem-o-Aagahi

The Trends in International Mathematics and Science Study (TIMSS) reiterates the plight of learning of Pakistani children. Pakistan participated in the international assessment for the first time in 2019,[8] and was ranked 57 out of 58 countries in mathematics and science scores. Based on Pakistani school principals and teachers that participated in the survey, Pakistani students get on average 139 hours per year of science instruction, which is the third highest number of science instruction hours among the 58 participating countries.

The findings of the TIMSS and ASER reports indicate at system-level issues which become a hurdle in the 'learning' process of children enrolled in schools. These include content gaps, mismatch in policy and school delivery, examination-drive assessments among many others. This white paper will solely look at the challenges which impact the 'quality' of education imparted to children fortunate enough to be enrolled in schools.

[8] From Pakistan, a total of 139 schools, teachers, and 3,980 students enrolled in grade 4 participated in the survey.

3 METHODOLOGICAL APPROACH

The conceptual underpinning of this white paper is based on insights from an extensive review of literature comprising of existing frameworks addressing girls' challenges to education, policy and practice from across the globe. It also includes an in-depth analysis of the existing data plus research available in context of Balochistan.

The white paper builds on existing publicly available datasets informing the existence of in-school and outside-the-school barriers to girls' education in Balochistan. Findings from these datasets and research studies are used as inputs to design the framework of primary data collection from selected districts in Balochistan. Primary data was collected with the objective of understanding local populations' thought-process regarding challenges identified in the desk review.

3.1 Secondary literature source and data sets' review

This section comprises of two types of analysis: theoretical underpinning and exploring existing datasets.

Through the literature review, barriers which exist at the individual, household, community, school or policy levels were identified. These were drawn from the work of UNICEF, UNESCO, the Global Partnership for Education and the United Nations Girls' Education Initiative and the Malala Funds' barriers to girls' education reports and frameworks to collate a longlist of barriers that exist (UNICEF, 2002[10]; Albright, 2016[11]; Antoninis et al., 2018[12]; UNESCO 2018[13]; Malala Fund, 2020[14]).

[10]Barriers to Girls' Education: Strategies and Interventions. (2002). Teachers Talking about Learning
[11]Albright, A. (2016). Five Barriers That Keep Girls Out of School – Women Deliver
[12]Antoninis, at el. (2018). Meeting our commitments to gender equality in education
[13]UNESCO (2018). Meeting commitments to gender equality in education, Global Education Monitoring Report
[14]Malala Fund. (2020). Building back equal: girls back to school guide

In addition to the theoretical literature review, three datasets have been extensively explored to identify indicators and contributors to major barriers outlined in the first section. Below is a snapshot of the datasets explored:

- Pakistan Social and Living Standards Measurement Survey (PSLM) is conducted once every two years by the Pakistan Bureau of Statistics, with analysis at the provincial and at the district levels in each alternate iteration
- Balochistan Education Management Information System (BEMIS) manages the monitoring and real time data collection for government schools and colleges in Balochistan. It also conducts private school census
- Population & Housing Census 2017 provides us with the exact number of children in each age cohort at the tehsil level

3.2 Primary data collection

Pak Alliance for Maths and Science collected primary data from five districts: Pishin, Killa Abdullah, Chaghai, Kharan and Nushki. The framework and design of the data collection tools[15] was structured to understand the reason(s) behind commonly reported symptoms of barriers, and recording community's input on how to address them.

The team deployed a mix-methods approach to collect qualitative and quantitative information from each district.

[15] Note on primary data collection and tools is provided separately

Below is a snapshot of the stakeholders' engagement matrix.

District level stakeholders

Stakeholders	Data collection instrument	
	Focus group discussion	Key informant interview
Out of school adolescent girls	✓	
Parents/ community members	✓	
Head Teacher of government girls school		✓
Teacher of girls' community school		✓
Local leader / Head of Jirgah		✓
Local activist / social mobiliser		✓
District Education Officer or Deputy		✓

Provincial level stakeholders

Stakeholders	Data collection instrument	
	Focus group discussion	Key informant interview
Secondary Education Department, Government of Balochistan		✓
Social Welfare Department, Government of Balochistan		✓
Donors and civil society players: • JICA • UNICEF • SCSPEB		✓

The table below gives summary states of the field outreach in five districts:

Primary data collection – Focus group discussions

Stakeholders	Participants
Adolescent out of school girls (age 10-20 years)	72
Parents/community members	115

Primary data collection – Key informant interviews

Stakeholders	Participants
District	36
Province	11

3.3 Frame of analysis

Balochistan's data collection regime in education has significantly improved in the last 7 years. However, it continues to largely focus on collecting quantitative information in a consistent manner. While it is utmost important to be collecting consistent data, it is equally crucial to deconstruct what is being reported.

This series of white papers intend to take a deep dive at the key barriers reported and attempts to understand the local area-specific challenges and thought-process of the communities, which is currently missing from the statistical year on year reporting.

This series of white papers follow the below mentioned method to analyse the existing and primary data collected from the field:

01

Desk review
Utilising existing knowledge/data to narrow down *fundamental* barriers to girls education in Balochistan

02

Primary data collection Developing tools for direct engagement with key stakeholders in specific districts (of Balochistan), to understand the reasons behind already-known barriers

03

Triangulating the response
Develop a nexus of understanding the local needs, correlating evidence and best practices, and preparing a menu/combination of recommended pathways to address specific *fundamental* barriers in each of the white paper

Once the data from the field and the desk review is triangulated, common themes are identified. These themes are cross analyzed to answer some of the gaps identified in the desk review.

The preliminary findings of the triangulated barriers are than used to prepare for specific key informant interviews seeking ways to address the challenge at hand.

4 CHALLENGES IMPACTING 'QUALITY EDUCATION'

For better understanding of the reader, this section will contain barriers to quality at two tiers: primary schools and post-primary schools. Some of the challenges are unique only to how primary education is configured (4.1 and 4.2), while other challenges discussed in this section are applicable to all tiers (primary, middle, high and higher secondary).

4.1 Monograde syllabus, multi-grade classrooms (primary schools)

According to the Balochistan Education Statistics Report 2016-2017,[16] there are 5,257 single teacher primary schools across the province. This accounts for 47% of the total government primary schools.[17]

District Barkhan has the highest proportion of single-teacher primary schools (73%), followed by Kohlu (68%) and Musakhel (66%). Table 1 in the annexure contains district-wise number and proportion of single-teacher primary schools in the province.

A single teacher primary school implies that only one teacher is available to teach all students enrolled in grade 1 to 5. The curriculum being followed for primary grades in Balochistan continues to be monograde in nature. For mainstream government primary school, the appointed teacher has to teach the following subjects to each grade:

Grade	Subjects to be taught as per notified curriculum
Kacchi	English, Urdu/Pashto and Mathematics
Grade 1	English, Urdu/Pashto, Mathematics, and General knowledge
Grade 2	English, Urdu/Pashto, Mathematics, and General knowledge
Grade 3	English, Urdu/Pashto, Mathematics, General Knowledge, and Islamiat
Grade 4	English, Urdu, Mathematics, General Science, Social Studies, and Islamiat
Grade 5	English, Urdu, Mathematics, General Science, Social Studies, and Islamiat

This is a total of 8 different subjects to be taught to students enrolled in five different grades, expected to be covered by a single teacher, each day, under the monograde curriculum. This extensive requirement from a single teacher in primary school leads to each teacher developing their own strategy to cope up with the issue of multi-grade teaching. Some teach the same subject and content to all students enrolled in the school, some adhere to group-based teaching and assigning different tasks for students belonging to different grades, and some assign brighter students from higher early grades to assist the teacher in managing students, serving the purpose of student-assistant teachers.

While administratively viable, each of these styles of multi-grade teaching leads to significant loss of learning for students, especially compared to students enrolled in schools with lower student-teacher ratio and grade-relevant learning. Primary school lays the foundation of core-concepts of each subject including reading and writing. Single teacher primary schools and monograde curriculum put the children enrolled in single teacher primary schools at an early disadvantage, by design.

4.2 Insufficient teacher training on management of multi-grade classrooms in early years

The Provincial Institute for Teacher Training (PITE) of Secondary Education Department is the institute responsible for identifying the training needs of teachers, designing and executing the trainings of all government school teachers.

From 2019 – 2021, PITE reported training 6,511 primary school teachers in total (3,252 males and 3,259 females)[18]. These primary school teacher trainings were on eight thematic areas, two out of which were on multi-grade teaching. There is not enough micro data publicly available to drill down the number of teachers who were trained on the two multi-grade teaching modules from the pool of 6,511 trained.

Given the magnitude of primary government schools, approximately half of which are single-teacher schools, once-in-a-lifetime training of 12-days on multi-grade teaching is not enough. These teachers handling students from five grades need to be trained on syllabus integration (in the absence of an integrated curriculum), classroom management, assessment development, and pedagogy. These trainings need to be frequent and should be addressing the challenges identified by teachers in the classrooms.

[16] Balochistan Education Statistics 2016-2017 is the latest published report by the Secondary Education Department, Government of Balochistan. It has not yet been released after 2017.
[17] Balochistan Education Statistics Report 2016-2017
[18] Progress Report 2019-2021, Provincial Institute of Teacher Education, Government of Balochistan

4.3 Gaps in progression and integration in topics (all levels)

Based on input from government school teachers regarding gaps in content progression across grades, a rigorous mapping exercise was carried out for Mathematics and Science. The mapping exercise took into account the topics and student learning outcomes (SLOs) in the Single National Curriculum[19] for grade I-V and the National Curriculum 2006[20] for grades VI-X.

The mapping exercise validated two claims made by the teachers:[21]

- Progression in concepts and topics across grades is weak, especially when transitioning from primary to post-primary level
- Integration within subjects is largely missing

Gaps in progression of foundational concepts in primary curriculum hamper a child's mastery in skills which are required to cover the content for higher grades. Teachers at each grade level find it challenging to cover previous grades' content prior to starting current grade's content.

4.4 Learning retention

In addition to the gap in the curriculum progression and the absence of an integrated teaching and learning approach, the retention of learning content among students is a serious challenge. This challenge is amplified especially when the foundation skills of students are weak. The Annual Status of Education Report has been consistently providing data on learning outcomes of students enrolled in different types of schools (government, private, and madrassah). While we can see marginal improvement in the learning status of children compared to the previous years, the learning outcomes have consistently remained low, and more so for girls.

ASER measures basic reading and numeracy skills among children between the age of 5 and 16. With students enrolled in Grade 5 in rural government schools unable to read sentences in English and/or Urdu, and the annual promotion based on school assessment leads to students being promoted to higher grades without much literacy and conceptual understanding. This results in low learning achievement and 'teaching-to-the-test' approach.

[19] In 2021, Ministry of Federal Education and Professional Training rolled out the Single National Curriculum for Grades 1 – 5 to be implemented across all provinces. The consultative process and resultant final curriculum for each subject and grade can be found here: https://snc.gov.pk/

[20] National Curriculum for General Science, Grades IV-VIII, 2006; National Curriculum for Mathematics, Grades I-XII, 2006

[21] Progression Framework for Mathematics and Science, PAMS, 2021

4.5 Examination-driven learning

In Balochistan, in fact across Pakistan, parents, teachers, and students view the results of summative exams (more specifically Board exams held in Grade 5, 8 and 10) as a reflection of a student's potential in life.[22]

For 10 years, the entire education system (teachers, school leaders, lesson plans, textbooks, formative assessments, school-based exams) focuses on the child clearing matriculation exams. Invariably, the system is bent to maximize the score of students in the matriculation, with teaching-to-the-test approach being rewarded and appreciated over conceptual-based learning. The exam patterns set by the Boards are replicated for school-based lower grade assessments, since the agenda is to eventually prepare the students to clear the matriculation exam. The inefficiency of the Balochistan Board of Intermediate and Secondary Education (BBISE) has been criticized several times.

Federal Directorate of Education (exam results analysis)

Mathematics and Science exam papers (March 2020) for Grade 5 and 8 were mapped against questions/exercises in the respective textbooks

The following was observed in the analysis:

Science: More than 70% of questions in the exam paper were from the textbook
Mathematics: More than 90% of the questions in the exam paper were from the textbook

Source: PAMS (2019)

An in-depth analysis of the challenges BBISE has been facing are documented in a study undertaken by a local civil society organization (SCSPEB, 2015).[23]

4.6 Lack of career pathways for students completing high school

In Balochistan, for every 100 students enrolled in grade 1, there are only 41 students completing grade 5, compared to a 67% survival rate to Grade-5 for the rest of the country.[24] The situation gets much worse as we move along higher grades. Owing to several reasons and hurdles, only a very small proportion of students enrolled in schools make it to matriculation – a standpoint perceived as stepping stone to a better life, especially economically. However, that is not always the case. Scope of employability after completing matriculation remains low. This paired with lack of technical pathways results in more than expected delay in returns to the parent's investment in education.

This delayed returns to investment in education results in adverse immediate effects at the community level. For instance, student(s) having completed high school but unable to find entry level employment or internship signals community to instead opt for local-apprenticeship model of teaching skills to children, instead of formal education. The local-apprenticeship model guarantees quick employability (girls and boys) e.g. electrician, mechanic, sewing and stitching.

[22, 23] Pass/Fail? Matriculation examination results in Balochistan. 2015. SCSPEB & Alif Ailaan
[24] Balochistan Education Statistics, 2016-2017

5 RECOMMENDATIONS - WHAT NEEDS TO BE DONE

Ensuring access of high quality education to all children, especially girls, requires the state to deploy innovative contextualized solutions to local challenges. Understanding local needs requires active engagement with community members as inputs into policies and reforms being devised by the Secondary Education Department.

This section proposes a set of recommendations for two tiers of schools: primary and post-primary schools. Recommendations 5.1 and 5.2 are applicable at the primary school level while others are relevant for all school tiers.

5.1 Multi-grade curriculum for early years (primary school)

Currently, there is no official multi-grade curriculum for single-teacher primary schools. Teachers in these primary schools are struggling to manage administrative and teaching tasks for students enrolled in five grades.

"I have taught in a single-teacher primary school for 8 years, prior to joining the middle school. It was an extremely challenging task to manage the students. I had divided the students in groups and had to plan to do multiple tasks simultaneously. On daily basis, I would ask one group to copy work from board, give a test to another group, and teach to another group – all within the same classroom"

Nargis Kakar, now the head teacher of GGMS Yaqoob Batezai, Pishin

Below are some of the examples of existing evidence for a dedicated multi-grade curriculum in other countries.

	Promising practices from other countries		
	Key features	Successes	Lessons learnt
Australia	Western Australia Aboriginal Pedagogy Project Project addressing the issue of multi-grade classrooms in rural and remote areas Research study – used as input to further polish multi-grade curriculum and policies	Curriculum based on 'minimum learning competencies' Dedicated teacher training program for teachers expected to engage in multi-grade schools - pre-service and continuous in-service training was provided Each teacher was placed in a 'bush school' for a teaching practice placement regarding multi-grade Teachers were given support such as timetable scheduling, school routine, classroom organization, suggested layouts for multi-grade classroom management	Non-local teachers do not take up positions in single-teacher primary schools Model for different set of schools (geographically) differed – natural evolution was encouraged as a lesson learned
Bangladesh	District: Shylhet and Tangail district Sparse population in these districts with different tribes and low literacy	Consistent review of multi-grade curriculum based on lessons from teachers Dedicated textbooks for multi-grade curriculum Special training for teachers from these districts Local language in these districts is different hence content being developed in local language for multi-grade classrooms	Poor school infrastructure Radio programs and video content was needed for improve multi-grade teaching Community engagement was required for provision of basic facilities
India	Project: Operation Blackboard Target: rural primary schools with two or less teachers	Introduced combination classes: grade 1 and 2 have non-graded units Teacher guides (video) and training (in-service) Multi-grade teaching is included in the Education Curriculum Framework	Inadequate learning and teaching resources Non-academic responsibilities for teachers Need to conduct need-assessment study for multi-grade schools

Recommended pathways based on evidence and research

Secondary Education Department needs to devise a multi-grade curriculum for primary school level, which can be implemented in single-teacher primary schools across the province. Learning from the framework of the Non-Formal Basic Education Curriculum (Box 02) and examples from other countries, the department should identify 'minimum learning competency' (MLC) for each grade, set benchmark for each MLC to be achieved in a multi-grade classroom, and train teachers on MLC rather than attempting to cover 100% course of a primary school.

Integrated primary curriculum

The notified curriculum of non-formal basic education in Balochistan covers the content of primary grades in 3 years with an integrated teaching and learning approach.

The integrated approach builds on competency strands, against which Student Learning Outcomes for different subjects are mapped, which are than measured against the benchmark standard for each competency.

Source: Social Welfare Department, Government of Balochistan

5.2 Continuous teacher training on multi-grade classroom management and teaching

Insufficient teacher training

"We need teaching kits and learning material for the students of early grades. The pedagogical training we received last time was two years ago. There aren't any trainings for the teachers" – Head Teacher, GGPS Ulus Khan. Nushki

"We have never [been part of] pedagogy training"

Head Teacher GGMS Babo Muhallah, Kharan

More continuous professional development (CPD) opportunities need to be explored for government school teachers, especially at the primary school level. Non-traditional methods of delivery of CPD support to teachers are much needed. Various evidence-based models of teacher-support have been explored in this white-paper series, 03-shortage of teachers.

Recommended pathways based on evidence and research

The Provincial Institute of Teacher Education (PITE) is recommended to do undertake the following on urgent basis:

- Conduct a need-assessment of the single-teacher schools in each district
- Devise a continuous teacher training plan for teachers appointed in single-teacher schools in the province. This should include virtual training via videos and sharing of resources material

In addition to PITE's agenda of need-identification and training, Secondary Education Department should engage cluster-based school management to support single-teacher primary schools in each cluster.

Teachers in middle and high schools in each cluster should be assigned to support single-teacher primary schools on a rotation basis (Cluster-based Mentoring Support discussed in previous white paper).

5.3 Addressing gaps in content

The Bureau of Curriculum should to undertake a rigorous review of the current curriculum to look for progression gaps among all grades and topics I-X. This review should be driven by subject-specific teachers with the aim of not only identifying the content-related gaps but also build on integrated learning modules.

5.4 Addressing the gaps in children's learning – foundational skills

School closures during COVID-19 initiated a global debate on learning losses and shifted the learning paradigm towards addressing the anticipated learning loss. In case of Pakistan, learning loss was a pressing concern even before the pandemic, especially foundational skills including basic literacy and numeracy. Below is a summary of some of the existing projects which address the foundational skills pertaining to basic literacy and numeracy in Pakistan.

Evidence on foundational skills among school going children

	Key features	Enabling factors	Lessons learnt
Pakistan Reading Project, USAID	Objective: improve reading skills among children enrolled in Grade 1 & 2 Geographical spread: all provinces and territories in Pakistan 1.3 million student beneficiaries 23,800 teachers trained Project components: • Teacher training on reading skills • Community-support model for investing in reading skills • Advocacy for policy reform	Scheme of studies developed for reading Dedicated lesson plans, work books, vowel buddy charts and other reading material devised for teachers Supplementary reading material developed in 4 languages including Balochi, Brahvi, Pashto and Sindh Scholarship program for deserving undergraduate students (enrolled in B.Ed programs) Mobile libraries were initiated Early Grade Reading Assessment Framework Success: Oral Reading Fluency (ORF) of treatment group increased by 2% (whereas control group dropped by 6%)	For project sustainability, private and corporate partnerships had to be explored

Pak Alliance for Maths and Science, in collaboration with World Bank and respective provincial education departments, developed a 'Learning Recovery Diagnostics Framework'. The framework and its supporting documents provide insights into why remediation of foundational skills is necessary for Pakistani children, strategies deployed across the globe, and a set of recommendations for provincial governments to begin addressing the issue.

Option	Direct assessment of all students	Direct assessment of sampled students	Teachers survey	Students / parents survey
Baseline availability	The system/school has a good understanding of the baseline and able to test all students effectively	Baseline available and can test a sample of students	Some baseline available and can assess all students indirectly	No baseline and can assess sample of students indirectly
Approach	Diagnostic assessment / test	Diagnostic assessment / test	Survey teachers after first week of school re-opening	Sample survey of parents and students via phone prior to school re-opening
Prerequisites to success	Baseline data available for every student Robust remote learning	Baseline data available for select student groups Robust remote learning	Strong teacher capabilities to assess students in first week of re-opening (through conversations, quizzes, etc.)	Access to parents and students
Pros	Personalised understanding of each students needs Accurate remediation strategies	Personalised understanding of select students needs Focus on students at risk or transitional grades	Teacher understanding of their students' needs to adapt remediation strategies Incorporates socio-emotional needs	Access to an estimated understanding of learning loss prior to school start Incorporates socio-emotional needs
Cons	Lack of preparedness & induced stress of assessments Does not provide understanding of the socio-emotional needs	Lack of preparedness & induced stress of assessments Does not provide understanding of the socio-emotional needs	Inaccuracies in teachers' approach	Inaccuracies in data gathered due to sample size

Source: PAMS, 2022, Learning Recovery and COVID-19 in Pakistan

Recommended pathways based on evidence and research

Secondary Education Department and its attached departments should develop a remediation framework for each grade. This framework would chalk out a strategy to address the issue of weak foundational skills (literacy and numeracy) among children enrolled in government schools.

5.5 Gradual shift to competency based examinations

An examination system which rewards rote-memorization and promotes textbook based learning fails to give the children the holistic experience they need to become skillful individuals. Children should be learning skills which empower them to become thinkers and problem solvers. Balochistan Board of Intermediate and Secondary Education (BBISE) is responsible for executing high-stakes external examinations while Balochistan Assessment and Examination Commission is responsible for internal summative exams at grades 5 and 8. The evidence grid below summaries competency based assessments being undertaken globally.

Evidence on competency based assessments			
	Key features	Enabling factors	Lessons learnt
Program for International Student Assessment (PISA)	Framework developed to identify relevant competencies and domains -Knowledge -Skills -Attitudes -Technology -Lifelong learning	Regular review of competencies and domains Teachers trained on delivery of competency based teaching Includes the following domains: -Reading literacy -Mathematical literacy -Scientific literacy Prepares students for 21st century skills	Requires dedicated resources to shit to competency-based learning systems
Network on Education Quality Monitoring in the Asia-Pacific (NEQMAP)	Countries: Indonesia, Thailand, Hong Kong Curriculum and Assessment Systems for 21st Century Skills	Hong Kong: Shift in examination system from individual grade-based assessment to competency-based assessments Multiple iterations were run for the competency-based assessments before a framework as finalized Teacher training on finalized components	Paradigm shift – gradual process A core technical team is required to develop competency-based assessment and curriculum

Recommended pathways based on evidence and research
Balochistan Board of Intermediate and Secondary Education (BBISE) and Balochistan Assessment and Examination Commission (BAEC) should:

- Develop a framework of competency-based-assessments' in collaboration with relevant stakeholders
- Roll-out competency based assessments in selected schools for a pilot; and revise the framework based on inputs from pilot testing
- Devise a plan to gradually shift towards competency based assessments in a staggered manner
- Define yearly targets to evaluate progress against the competency based learning and assessments

Balochistan Education Sector Plan 2020-2025 commits to improving 'quality of BBISE examinations to ensure alignment with curriculum that includes testing of critical and analytical ability of students'

5.6 Technical and vocational pathways

For a holistic quality education agenda, it is equally important to ensure decent job opportunities are made available to students completing matriculation, especially for females. For girls enrolled in schools in remote and rural areas, employability is a pull factor for parents to send girls to schools. Therefore, the linkage between schools and career opportunities, especially for girls needs to be strengthened.

The table below gives a snapshot of skills' centered education:

	Evidence on skills-based-education		
	Key features	Enabling factors	Lessons learnt
National Vocational and Technical Training Commission, Pakistan	Matric-Tech launched in 2020[25] Pilot: 15 schools in Islamabad Capital Territory, Azad Jamu Kashmir, and Gilgit Baltistan IBCC approved – 4 qualifications	A parallel stream of matriculation in science and arts Integrates technical and vocational education with formal education Increases chances of employability of students gaining technical and vocational skills alongside formal education[26]	The evaluation of the pilot is not yet available
National Dropout Prevention Center, NY, USA	Career and technical education[27] Formal education and vocational skills integrated	School-to-Work Act, 1994 Improve student learning and also integrate work based learning into the curriculum Aimed at curbing drop out from formal schooling to earn a living Decrease in dropout rate of at-risk students	

Recommended pathways based on evidence and research

Secondary Education Department is recommended to work closely with the Balochistan Technical Education & Vocational Training Authority, local Chambers of Commerce and other workforce related directorates to enhance employment opportunities, especially for girls. The collaboration should offer alternate streams to students in high and higher secondary schools which allow them to gain formal education alongside technical or vocational skills, thereby increasing their chance of immediate employability or earning.

Balochistan Education Sector Plan 2020-2025 talks about collaboration with the 'Balochistan Technical Education Vocational Training Authority (BTEVTA) to introduce technical and vocational skill courses' and 'Engage with higher education institutions, public service commission and other employers for identifying needs for secondary school competencies at exit on grade 12.'

[25] Punjab Skills Development Authority, Government of Punjab
[26] The News. 2020. NAVTTC to introduce matric tech in schools
[27] National Dropout Prevention Center, USA

6 ANNEXURE

District	Primary Schools	Single Teacher Schools	
		Number	%
Awaran	214	95	44.4%
Barkhan	541	392	72.5%
Chaghai	213	101	47.4%
Dera Bugti	284	86	30.3%
Duki	-	-	-
Gwadar	219	133	60.7%
Harnai	139	65	46.8%
Jaffarabad	491	274	55.8%
Jhal Magsi	242	116	47.9%
Kachhi	391	158	40.4%
Kalat	480	171	35.6%
Kech	512	205	40.0%
Kharan	182	106	58.2%
Khuzdar	623	297	47.7%
Killa Abdullah	469	183	39.0%
Killa Saifullah	540	239	44.3%
Kohlu	399	270	67.7%
Lasbela	508	228	44.9%
Loralai	655	338	51.6%
Mastung	303	142	46.9%
Musakhel	267	175	65.5%
Naseerabad	442	213	48.2%
Nushki	169	65	38.5%
Panjgur	319	78	24.5%
Pishin	826	376	45.5%
Quetta	439	64	14.6%
Shaheed Sikandarabad	-	-	-
Sherani	170	109	64.1%
Sibi	210	62	29.5%
Sohbatpur	358	202	56.4%
Washuk	154	69	44.8%
Zhob	298	148	49.7%
Ziarat	215	97	45.1%
Total	**11,272**	**5,257**	**46.6%**

Source: Balochistan Education Statistics, 2016-2017

7 BIBLIOGRAPHY

Annual Status of Education Report -ASER Pakistan. (n.d.). Retrieved February 15, 2022, from http://aserpakistan.org/Learning-Losses-2021

Annual Status of Education Report ASER-PAKISTAN 2019. (n.d.). Retrieved February 15, 2022, from http://aserpakistan.org/document/aser/2019/reports/national/ASER_National_2019.pdf

Akhtar, T. (2021). Understanding learning loss Learning recovery: core principles.

Balochistan Education Sector Plan 2020-25. (n.d.). Retrieved February 15, 2022, from http://emis.gob.pk/Uploads/BESP2020-25.pdf

Balochistan Education Statistics 2016-17. (n.d.). Retrieved February 15, 2022, from http://emis.gob.pk/Uploads/BalochistanEducationStatistics/Balochistan_Education_Statistics_2016-17.pdf

Balochistan NFBE Curriculum Aug-2016. (n.d.). Retrieved February 15, 2022, from https://www.swd.balochistan.gov.pk/publications/1-32%20Curriculum%202016.pdf

Barriers to Girls' Education, Strategies and Interventions Household/Community-Level Barriers Areas for analysis Possible findings/causes Broad Strategies Possible interventions. (n.d.).

Five Barriers That Keep Girls Out of School – Women Deliver. (n.d.). Retrieved February 14, 2022, from https://womendeliver.org/2016/five-barriers-keep-girls-schoolsince-2000-millennium-development-goals-mdgs-adopted-worldwide-gender-disparity-primary-education-narrowed-dramatically/

Diagnostics Assessment Framework Learning Recovery (COVID-19). (2021).

Education International. (n.d.). Retrieved February 15, 2022, from https://www.ei-ie.org/en
Government of Balochistan Recruitment Policy - 2014 . (n.d.). Retrieved February 15, 2022, from http://emis.gob.pk/Uploads/recuritment%20policy%202014.pdf

Joubert, Dr. J. (n.d.). Multi-grade teaching in South Africa.
Ministry of Federal Education and Professional Training. (n.d.). Retrieved February 15, 2022, from https://snc.gov.pk/

Moe. (2006). National Curriculum for Mathematics (Grades I -XII) 2006.
Multigrade teaching in single teacher primary schools. (1989).

National Curriculum for General Science (Grades IV - VIII) 2006. (n.d.). Retrieved February 15, 2022, from https://bisep.edu.pk/downloads/curriculum/Grades-IV-VIII/pk_prsc_sc_2006_eng.pdf

Meeting our commitments to gender equality in education; Global education monitoring report 2018, gender review; 2018. (n.d.).

Meeting our commitments to gender equality in education | Global Education Monitoring Report. (n.d.). Retrieved February 14, 2022, from https://en.unesco.org/gem-report/2018_gender_review

Launch of “Building Back Equal — Girls Back to School Guide.” (n.d.). Retrieved February 14, 2022, from https://en.unesco.org/news/launch-building-back-equal-girls-back-school-guide

Murtaza, Z. (2021). Diagnostics for Remediation.

National Dropout Prevention Center. (n.d.). Retrieved February 15, 2022, from https://dropoutprevention.org/effective-strategies/career-and-technology-education-cte/

NAVTTC to introduce Matric-Tech in schools. (n.d.). Retrieved February 15, 2022, from https://www.thenews.com.pk/print/601883-navttc-to-introduce-matric-tech-in-schools

PITE Balochistan Progress Report (April 2019 to April 2021). (n.d.). Retrieved February 15, 2022, from http://pitebalochistan.com/wp-content/uploads/2021/08/PITE-Progress-Report-Final.pdf

Progression Framework – Pak Alliance for Maths and Science. (n.d.). Retrieved February 15, 2022, from https://mathsandscience.pk/publications/progression-framework/

Sami, A., Irfan, K., Awan, A., Anwar, M., Khan, M. A., Shoaib, S., Zaidi, A., Javed, S., & Zakria, T. (n.d.). Pass/Fail: Matriculation Examination Results in Balochistan. School Infrastructure and Improvement Development Program – Government of Balochistan. (n.d.). Retrieved February 15, 2022, from https://balochistan.gov.pk/chief-minister/cm-initiatives/school-infrastructure-and-improvement-development-program/

Shahzad Ashfaq, M., Imran Yousuf, M., & Arshad Dahar, M. (n.d.). EFFECTS OF MULTI-GRADE TEACHING AND LEARNING AT PRIMARY LEVEL SCHOOLS. Int. J. Adv. Res, 6(6), 357–371. https://doi.org/10.21474/IJAR01/7220

USAID-funded Pakistan Reading Project-Quarterly Progress Report. (2018).
What Do We Mean by a Quality Education? – PAL Network. (n.d.). Retrieved February 15, 2022, from https://palnetwork.org/what-do-we-mean-by-a-quality-education/

The Definition and Selection of Key Competencies. (n.d.).

INTERNATIONAL RESCUE COMMITTEE

QUALITY

THE IMPACT OF A LEARNING ENVIRONMENT ON GIRLS ENROLMENT AND RETENTION IN SCHOOLS IN BALOCHISTAN