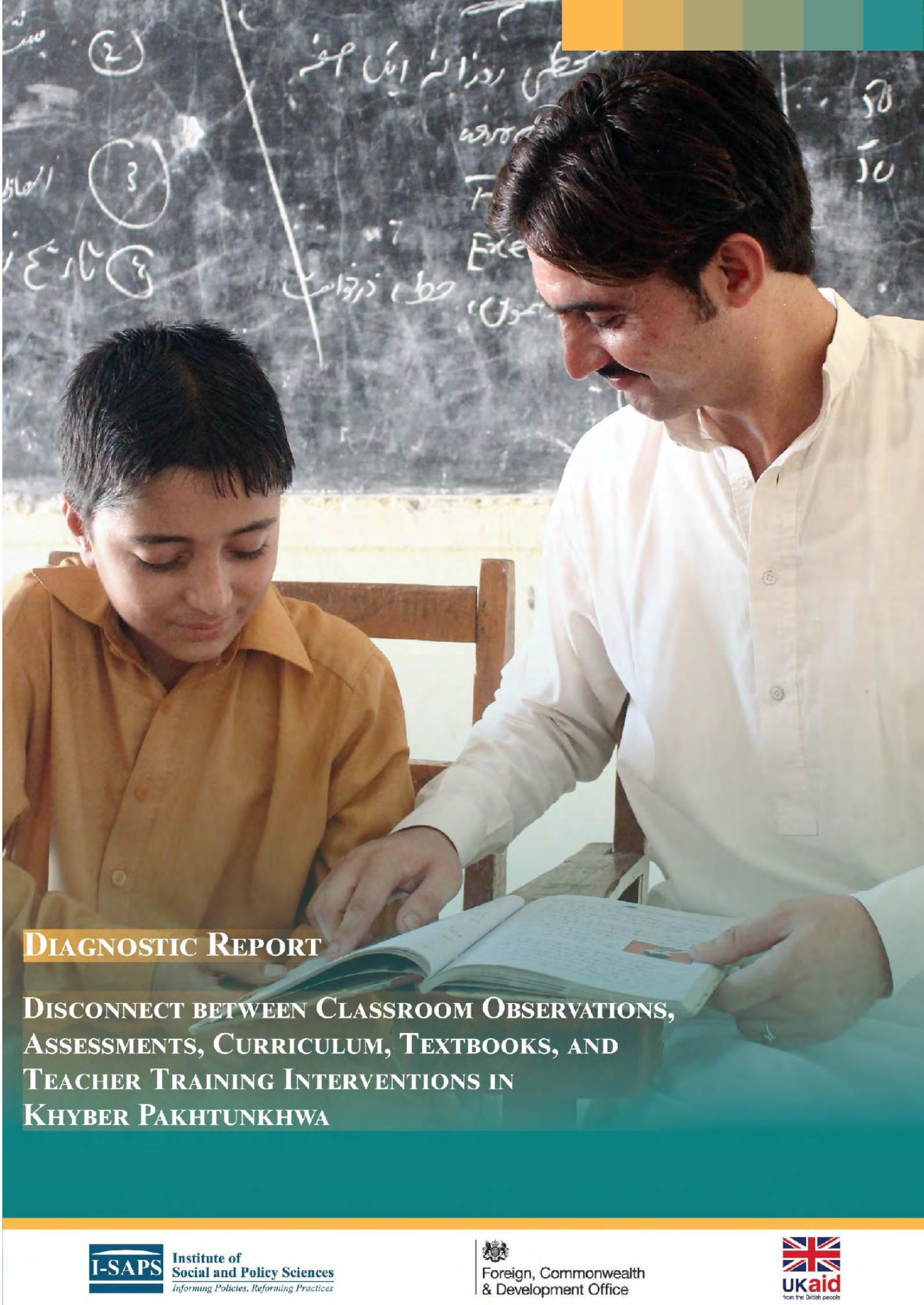




DIAGNOSTIC REPORT

DISCONNECT BETWEEN CLASSROOM OBSERVATIONS, ASSESSMENTS, CURRICULUM, TEXTBOOKS, AND TEACHER TRAINING INTERVENTIONS IN KHYBER PAKHTUNKHWA



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List of Abbreviations

A&E	Assessment and Evaluation
ASDEO	Assistant Sub-Divisional Education Officer
BISE	Board of Intermediate and Secondary Education
B-TAG	Bridging Technical Assistance for Government
CPD	Continuous Professional Development
DCTE	Directorate of Curriculum and Teacher Education
DPD	Directorate of Professional Development
ECE	Early Childhood Education
EMA	Education Monitoring Authority
ESEF	Elementary and Secondary Education Foundation
ESP	Education Sector Plan
ESRU	Education Sector Reform Unit
FCDO	Foreign, Commonwealth & Development Office
IMU	Independent Monitoring Unit
KESP	Khyber Pakhtunkhwa Education Sector Programme
KP	Khyber Pakhtunkhwa
KPI	Key Performance Indicator
LMS	Learning Management System
NFE	Non-Formal Education
NMD	Newly Merged Districts
NOC	No Objection Certificate
OOSC	Out of School Children
R&I	Reforms and Implementation
RPDC	Regional Professional Development Centre
SDEO	Sub Divisional Education Officer
SL	School Leader
TBB	Textbook Board
TCK	Teacher Content Knowledge
TCS	Teacher Competency Survey
TLM	Teaching Learning Material

1. Introduction and Background

School education service delivery in Khyber Pakhtunkhwa (KP) is shared between multiple attached and autonomous departments under the Elementary and Secondary Education Department (E&SED). The Directorate of Professional Development (DPD) is responsible for training teachers, both pre¹- and in-service, developing necessary materials and carrying out research to inform practice. Directorate of Curriculum and Teacher Education (DCTE) is mandated with carrying out student assessment from grades 1-8, develop curriculum, review textbooks, and do research. The Education Monitoring Authority (EMA) is responsible for collecting data on school facilities and infrastructure, enrolment, teachers, retention etc. and develop monitoring indicators. The Elementary and Secondary Education Foundation (ESEF) is the KP Government arm for promoting public-private partnerships to support school education. All these departments are generating a large volume of information and data year-round and utilizing it to inform their respective planning and implementation.

The policy landscape in KP highlights the importance of data utilization for better planning and implementation of school education initiatives, while also acknowledging the challenges faced in data collection, sharing and use in decision making.

The ***KP Education Sector Plan (ESP) 2020/2021 – 2024/2025*** states that various units and institutions maintain their own databases which are not shared with other institutions that might benefit from them. These databases do not come together in any centralised framework or mechanism and are not accessed by the Independent Monitoring Unit² or the Education Management Information System Cell. Centralising data management would ensure that a unified picture of education supply and demand is better understood. Data needs to be systematically analysed to be of value and for this a research function should be established to provide trend reports and allow research to feed into the design and delivery of programmes.

The KP Education Blueprint (2018-2023) identifies a key issue regarding the lack of reliable and accurate data within the province, which makes it hard to accurately baseline the state of education and provision of services. The Blueprint talks about development of a high-level implementation plan which would require effective use of resources, backed by data, and supported by ongoing monitoring and evaluation. Data should be used to support prioritisation of areas which require additional school supply, evidence-based intervention design, allocation of adequate financial resources, the right service delivery mechanism and effective monitoring and evaluation to prove and improve impact. The Blueprint emphasises the use of current sources of data coming from different institutions to monitor each school's performance against the standard and ensure compliance.

The ***EdTech Hub*** report on ***Data Access and Protection Laws in Pakistan (July 2022)*** mentions issues relating to coordination, communication, and data sharing among stakeholders in education.

Student assessment data serves as a cornerstone for gauging academic progress, identifying areas for improvement, and tailoring instructional approaches to address specific needs. When shared with relevant stakeholders, this data enables a comprehensive understanding of student performance trends, allowing for the development of targeted interventions to support struggling students and the implementation of successful pedagogical strategies. The collective utilization of assessment data promotes a collaborative environment where educators can learn from each other's experiences, ultimately enhancing the quality of education across the entire department.

Similarly, the data on school facilities, enrolment, teachers, and other items plays a pivotal role in optimizing resource allocation and ensuring a conducive learning environment. Efficient utilisation of

¹ Currently there is no pre-service training provided by E&SED.

² Now it is Education Monitoring Authority



school level data not only contributes to cost efficiency, better utilization of resources, but also enhances the overall educational experience for students.

The availability of teacher training, mentoring and classroom observation data supports ongoing professional development initiatives, enabling educators to stay abreast of the latest pedagogical trends, teaching methodologies, and technological advancements. This collaborative approach ensures that educators are well-equipped to provide high-quality instruction, fostering a culture of continuous improvement within the education department.

It is important that information and data is cross shared within a system to contribute to overall efficiency, collaboration, and decision-making. Access to shared data by the policy makers enables them to base their decisions on accurate and up-to-date information, leading to more informed and data-driven choices, better strategic planning, and decision making.

For developing insights on school education data collection and dissemination in KP meetings were held with different departments under the E&SED including DPD, DCTE, ESEF, EMA and Textbook Board (TBB). The information shared by representatives from these departments, and from other sources such as websites and social media pages, and documents such as the school census, and DCTE reports has been used to prepare findings for this report.

2. Stakeholders and Data Landscape

The significance of disseminating educational data, which includes crucial details like student evaluations, records of teacher training, enrollment figures, retention rates, and information about school facilities, cannot be emphasised enough. Encouraging cooperation among educational entities sets the stage for an educational environment that relies on well-informed decision-making, policies grounded in evidence, and focused interventions to cater to the varied needs of students, educators, and educational establishments.

Following is a brief description of the functions of attached and autonomous departments under the E&SED, providing school education and generating data that should be shared among all stakeholders routinely for better planning and delivery of education services:

The Directorate of Professional Development is an attached department of the E&SED, and is responsible for training teachers, headteachers and education managers. DPD develops necessary Teaching and Learning Material (TLM) and is also mandated to carry out research to inform practice.

There are 25 Regional Professional Development Centers (RPDC, 13 males, 12 female) working in 17 districts (including newly merged districts (NMD) under the DPD to support various teacher development initiatives.

DPD offers a Continuous Professional Development (CPD) programme for primary school teachers covering all the districts across KP and has recently started planning to upgrade CPD to elementary level. The CPD programme is offered one day every month during the academic session (9 months) and the teachers receive face-to-face training at the cluster level. DPD supports teachers, headteachers and Assistant District Education Officers (ASDEOs) to carry out other professional development activities such as self-reflection, classroom observation and mentoring, teacher group meetings, and monitoring meetings.

DPD also offers a nine-month blended Induction Programme for newly recruited teachers (primary to secondary level) when they are placed in schools.

The activities implemented by the DPD generate significant information and data on professional development of teachers, headteachers, ASDEOs, and School Leaders, which if readily available to concerned units and departments is an important source for planning and decision making.

The Directorate of Curriculum and Teacher Education is the Competent Authority in pursuance of *Khyber Pakhtunkhwa Supervision of Curricula, Textbooks and Maintenance of Standard of Education Act 2011*. The mandate of DCTE is to:

- Develop, revise, and approve Curriculum and scheme of studies for pre-I-XII grades.
- Review and approve textbooks from pre-I-XII grades.
- Review and approve supplementary reading materials, training manuals and teaching learning material.
- Maintenance of standards for education.
- Conduct assessments and research to inform assessments.

The Assessment and Evaluation (A&E) Wing of DCTE is mandated to conduct both the teacher and student assessments, designing, administering, marking, and reporting on the following assessments:

- Annual Grade 2 sample-based assessment.
- Annual Grade 5 sample-based assessment.
- Annual Grade 8 sample-based assessment.
- Annual Teacher Content Knowledge (TCK) Test

- Annual Teacher Competency Survey - TCS (replaced by School Leader (SL) led teacher observations – DCTE develops the tool)
- Teacher Induction Program (DCTE develops external assessment for certification and tools for Learning Management System (LMS) that DPD uses for internal assessment)

In addition to the above, DCTE is also awaiting E&SED approval to notify Non-Formal Education (NFE) assessments and certification for the Elementary and Secondary Education Foundation schools, following which DCTE will design the assessment protocols.

The assessment data generated by DCTE is an important source of information for the DPD, Textbook Board and E&SED to inform their planning and interventions.

The Education Monitoring Authority was set up as an Independent Monitoring Unit (IMU) in 2013 under the KP Education Sector Programme (KESP) before its regularization in 2019. The EMA is heavily invested in technology and was the first organization in Pakistan where technology-based school data collection was adopted.

Currently EMA collects data on several initiatives of E&SED such as regular Government Schools, second shift schools, Girls Community Schools, Annual School Census, and is the main data generator of educational statistics for KP.

The EMA maintains a dashboard where school level information and data on all key indicators is available once the concerned school code is provided. EMA data is used by E&SED for planning initiatives related to schools, basic facilities, recruitment etc.

KP Textbook Board is mandated to ensure production and publication of textbooks from Classes I to XII, supplementary reading material relating to textbooks, production of reference and research material, and conduct of research in the field of curricula, textbooks, and other reading material. After the adoption and introduction of the new KP Textbooks and Learning Materials (KPTLM) Policy 2017, the role of Textbook Board has become more important as a regulatory authority.

The prime objective of the TBB is timely availability of quality textbooks to all the students of Khyber Pakhtunkhwa (Class I to XII) at minimum cost. The TBB coordinates with DCTE for approval or textbook drafts before they can be finalized.

TBB utilises data from EMA for planning on production and distribution of textbooks every year. The mandate for making revisions in textbooks rests with DCTE.

Elementary and Secondary Education Foundation is an autonomous body established under KP Elementary & Secondary Education Foundation Ordinance 2002.

The main objective of the Foundation is to take all necessary measures for the promotion, improvement, and financing of school education in the KP province through strengthening of elementary & secondary education in the private sector in line with the education policy of the Government.

ESEF is supporting out-of-school children (OOSC) through four separate initiatives by engaging the private sector partnerships. Almost 250,000 boys and girls are enrolled in 3,800 schools and are taught by almost 5,500 teachers.

ESEF is in coordination with DCTE for designing assessment protocols for its schools.



Reforms and Implementation (R&I) Unit, formerly Education Sector Reform Unit (ESRU) is tasked with managing and implementing school education reforms to enhance the quality and accessibility of education. The R&I unit is led by an Additional Secretary who is supported by a Deputy Secretary and two Section Officers. As per the KP ESP, The R&I Unit is conceived to monitor progress against the KPIs in school education and ensures that the activities the KP ESP are on-track and report the same to the senior E&SED management. R&I also provides support for undertaking any third-party or evaluation studies, as part of the monitoring mechanism. R&I is expected to coordinate with international projects to make sure that their interventions are in alignment with the KP ESP. In practice however, this coordination is not smooth, and for the most part international projects directly coordinate with E&SED and its departments.

E&SE Directorate plays a pivotal role in overseeing the educational landscape in the districts. The Directorate is responsible for the administration, management, and implementation of educational policies at the elementary and secondary levels, and strives to improve educational outcomes, promote literacy, and contribute to the overall development of school education in the province. E&SED's service delivery is through the Directorate which has an elaborate structure at the district level including a District Education Officer (DEO) the head of the district – there are two DEO positions in each district, male and female DEOs, responsible for the management of boys' and girls' schools respectively. Each DEO is supported by a Deputy DEO, a Sub-Divisional Education Officer (SDEO) and ASDEO. The Directorate also oversees provincial and district education planning and coordinates with the district education offices for keeping track of policies, plans and targets. As such, the availability of educational data from multiple sources is of vital importance for the Directorate to help in its planning and implementation of education interventions.

Boards of Intermediate and Secondary Education (BISE) responsible for conducting examinations at the secondary and higher secondary level. The examination data generated at the 8 BISEs operational in KP is of paramount importance to the E&SED institutions, particularly DPD, DCTE, and TBB. Likewise, data and information from DCTE and TBB is important for BISEs when designing exam papers.

3. Data Sharing - Opportunities and Challenges

The vast education data generated by different departments in KP has the potential to support evidence-based decision making, planning and implementation. Some of this data is already being disseminated and utilized for planning and decision making, but there are data sets and information which are not sufficiently analysed and disseminated. The exchange of education data within E&SED can lead to several specific goals, outcomes, and insights. Here are some key objectives that can be achieved through effective data sharing:

Informed Decision Making will enable decision-makers (E&SED at the provincial level, attached and autonomous departments at their respective levels) to make well-informed and evidence-based decisions.

- Outcome: Improved decision-making processes, leading to better strategies, operational efficiencies, and resource utilisation resulting in improved learning outcomes for students.

Cross-Departmental Collaboration will facilitate collaboration and information sharing among different departments or teams.

- Outcome: Enhanced communication, synergy, and innovation across the organisation leading to reduction in duplication, optimised workflows, and saving of resources.

Departmental Productivity will empower departments and staff through access to relevant data and information necessary to perform their roles effectively.

- Outcome: Increased productivity, as employees can make more informed decisions and perform their tasks more efficiently

Accountability and Performance Measurement will help establish Key Performance Indicators (KPI) and measure organisational performance.

- Outcome: Clear insights into how well the departments and concerned staff members are meeting their objectives, ensuring compliance, facilitating continuous improvement, and contributing to the larger goals and objectives.

Information/Data-Driven Culture will help foster a culture where information and data is valued, and decisions are based on evidence provided by data.

- Outcome: Increased data literacy, better understanding of the importance of data, and a culture of continuous learning.

Innovation and Research will support innovation and research efforts by providing access to relevant data.

- Outcome: Accelerated research and development, leading to the refinement of existing and creation of new products, services, or processes to improve practice.

The following table illustrates various data sources, who their consumers are (or should be) and utilisation (as it currently is, and the potential for further use).

Data Source	Data Type	Consumer	Data Use
DCTE	Student and Teacher Assessments	DPD	Teacher Training
		TBB/DCTE	Textbook Development
		DCTE	Curriculum Revision
			Resource Planning and Allocation,

		E&SED Planning Wing R&I Wing	Quality Assurance
DPD	Teacher Training Record	E&SED Planning Wing	Resource Allocation, Quality Assurance
EMA and SLs	School Census, Attendance Records	E&SED Planning Wing and Directorate	Resource Allocation and Planning
	Classroom Observations	DPD	Teacher Training
ESEF	Enrolment Data	E&SED Planning Wing	Resource Allocation
	Teacher Training Record	DPD	Teacher Training
	Assessment Data	DCTE	Quality Assurance
	Enrolment Data	EMA and EMIS	Monitoring and Census
BISEs	Secondary and Higher Secondary Examinations	DPD	Teacher Training
		DCTE	Textbooks and Curriculum
		E&SED Planning Wing	Resource Allocation
		E&SE Directorate	District Planning

Until 2022, the student and teacher assessments conducted by DCTE were shared with DPD to help them prepare CPD content for teachers based on assessment results. DPD utilised TCK, TCS and student assessment results effectively to train teachers. A Trends Analysis Report under KESP provides evidence to indicate that needs targeted CPD has a direct correlation with improved student learning. Since 2022, no assessments have been carried out due to lack of budget, and no training of teachers has been done in the current fiscal year for the same reason.

During 2023 the E&SED has recruited almost 3,000 SLs to provide academic supervisory support to all the primary level teachers in the province. The SLs will administer fortnightly formative assessments for selected grade 2 students and will also carry out teacher observations (replacing TCS) against approved teacher competencies. DCTE will develop the test items and tools for both the grade 2 fortnightly assessments and teacher observations. The SL led activities will be carried out using a tablet and will be used to mentor teachers to help improve their classroom teaching.

The classroom observation and mentoring data available through SLs will be an important source of information for planning teacher CPD programmes and informing curriculum and textbook planning.

The TBB coordinates with the DCTE and E&SED for preparation, review, and approval of textbooks in the province. Once the publishers are invited to share their draft textbooks (subject and grade wise), TBB reviews the drafts and then sends them to DCTE for their review and No Objection Certificate (NOC). DCTE reviews, provides feedback, and issues NOC. TBB then sends the drafts to Special Secretary E&SED who makes the final decision as to which draft is to be selected for government schools. DCTE also shares revised curriculum with the TBB every time new books are to be published, and TBB shares the curriculum with the publishers. For gathering feedback from the field on textbook relevance and difficulty, a proforma is appended at the end of each textbook for teachers



and school heads to provide feedback. However, hardly any feedback is received by the TBB. If there is any feedback received, it is shared with DCTE since they have the mandate to revise the textbook content.

BISEs produce exam results for secondary and higher secondary level which are published for consumption of students, schools, and colleges. However, no detailed data on exams is made available by BISEs, such as item level analysis, or learning outcome level information, which if available and shared can be very useful for DPD and DCTE to accordingly design their training programmes and carry out curriculum and textbook revisions.

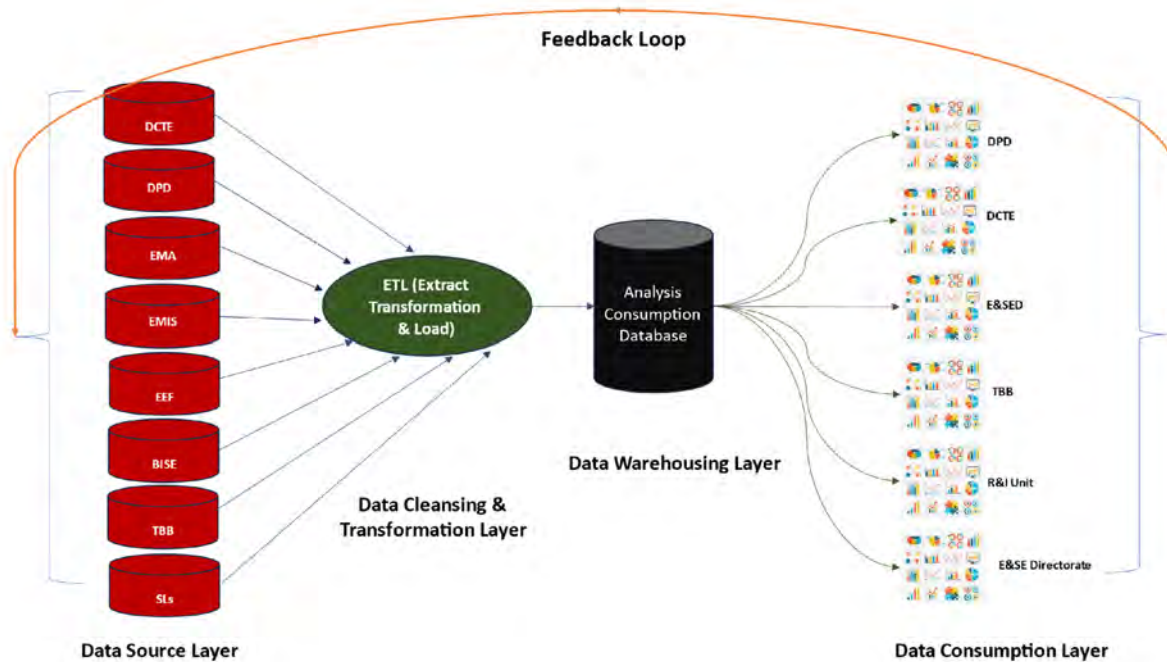
The data from ESEF informs E&SED planning on PPPs, but a closer coordination on information sharing with DPD and DCTE can be very useful for strengthening assessment frameworks, teacher professional development and overall quality assurance for PPP initiatives.

The EMA reports data on school census, student and teacher attendance, student dropout and retention, and other initiatives of E&SED. EMA data is utilized by E&SED for its annual planning relating to school education.

4. Recommendations

i) *A Data Feedback Loop*

The data generation, collection, analysis, and utilisation in KP should take the form of a loop, informing research, practice and decision making. The loop should create a mechanism whereby data is generated by different departments, processed, shared with the consumers, and the feedback is provided to the concerned departments for reviewing their practices. The following diagram illustrates a data feedback loop that can be conceived and created to make sure that the data generated from different sources is shared with concerned stakeholders, processed, and fed back into the system.



Once the raw data is generated by various departments (red cylindrical shapes) and entered in a database, a mechanism or system (ELT in the diagram) is required that extracts data, then transforms it into a suitable shape after cleaning, validation, and aggregation, and then load it in a database or warehouse in a form that will allow analysis and reporting. The analysed data is then shared with the consumers for multiple uses and providing feedback to the data sources for necessary modifications to their activities. This loop should form a continuous system in the E&SED allowing data sharing and feedback.

ii) *Guidelines for the E&SED for establishing educational data sharing practices.*

- ***Establish a Data Governance Framework***
Develop and implement a data governance framework that includes policies, procedures, and standards for data sharing. Clearly define roles and responsibilities and establish data stewardship practices to ensure data quality and consistency.
- ***Define Data Ownership and Access Controls***
Clearly define data ownership to identify responsible individuals or teams for different datasets. Implement access controls to ensure that only authorised personnel can access and modify specific data.
- ***Ensure Data Quality and Consistency***
Prioritise data quality by implementing data validation, cleansing, and enrichment processes. Consistent and accurate data is essential for reliable decision-making.
- ***Implement Secure Data Sharing Practices***

Prioritise data security and privacy. Implement encryption, access controls, and other security measures to protect sensitive information. Ensure compliance with relevant data protection regulations.

- ***Facilitate Inter/Intradepartmental Collaboration***
Encourage collaboration between different departments or teams. Establish channels and platforms for sharing insights, best practices, and data-driven findings. Foster a collaborative environment that values cross-functional knowledge sharing.
- ***Create Data Sharing Policies and Agreements***
Develop precise data sharing policies and agreements that outline the terms, conditions, and expectations for sharing data. Ensure that all parties involved understand and adhere to these policies.
- ***Monitor Data Sharing Practices***
Conduct regular monitoring to ensure compliance with data sharing policies and identify areas for improvement. Implement tools to track data usage, access patterns, and potential security incidents.
- ***Stay Compliant with Regulations***
Keep abreast of data protection regulations in KP and Pakistan. Ensure that data sharing practices align with legal requirements and ethical considerations.

iii) Horizontal and Vertical Coordination and Communication

It is important for the E&SED to make sure that there is regular close coordination among its attached and autonomous departments for information sharing, planning, implementation, monitoring and reporting against all activities. At present this coordination is mostly limited to a need basis, and there is no set routine requiring all concerned stakeholders to come together regularly to review and report progress.

Under a previous Foreign Commonwealth and Development Office (FCDO) initiative, the KESP, monthly meetings were held at the provincial level bringing together district and provincial stakeholders under the leadership of the Education Secretary for a progress overview of education. The monthly stock-take ensured coordination and communication among stakeholders, created accountability and incentives for departments and individuals. During KESP regular budget tracking meetings were also held under the leadership of Secretary Education, engaging provincial department heads under the E&SED. Such regular progress updates and reviews under the highest leadership ensure the required coordination and communication among stakeholders and may be initiated by the E&SED yet again.

In consultations with the departments, suggestions were made to formulate multi-tiered committees for enhancing coordination and communication at the horizontal and vertical levels. The suggestions are included as recommendations.

- A high-level committee that brings together Secretary E&SED, BISE Chairmen, and departmental heads of DCTE, DPD, TBB, EMA, EMIS and EEF should be notified to meet once every quarter for sharing progress and identifying areas for collaboration. All challenges requiring policy level attention should be part of the agenda.
- Smaller sub-committees involving technical leads from the attached and autonomous departments should also be notified for meeting every four to six weeks to share progress, seek collaboration and resolve issues.
- A sub-provincial level committee involving district education offices, and including representation from E&SED institutions should also be notified for a quarterly progress review of education.
- The details about these committees including their membership, functions and responsibilities will be shared subsequently under a separate task in the Bridging Technical Assistance for Government B-TAG workplan.



iv) **Communication Strategy**

E&SED will need to develop a provincial communication strategy and its attached departments should develop their respective communication platforms/frameworks. The communication strategy will principally aim to enable coordination and communication routines between tiers of E&SED and its departments at the provincial, district and sub-district levels to administer and manage delivery of the school education initiatives. In addition, the strategy will facilitate informing and raising awareness among stakeholders, communities and amongst end line beneficiaries, and pronounce accountabilities and rewards on duty bearers for the functions entrusted upon them.

v) ***Sustainability***

The foundation of sustainability hinges on effective coordination among stakeholders and the harmonization of collective efforts. Sustaining impact entails keeping the system dynamic, necessitating not only collaboration among stakeholders but also synchronization among diverse innovations striving for a common objective. Adapting and adjusting innovations to align with evolving government priorities can prevent the need for entirely new systems and the duplication of resources. Therefore, within a project-based ecosystem, ensuring alignment in the scaling system and maintaining ongoing coordination becomes crucial.



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