

Khyber Pakhtunkhwa
Education Sector Plan Support
Programme (KP-ESPSP)
Technical Cooperation Services

Discussion Paper - 3

Driving System Improvement through the Development of Quality Standards

May 2018



Published by

Khyber Pakhtunkhwa - Education Sector Plan
Support Programme (KP-ESPSP)

House # 26 CA-1, Circular Road, University Town
Peshawar, Pakistan
T: +92 91 – 584 3293-4 (Ext 32)
F: +92 91 – 584 3296

Contributing Editor:

Dr. Philip Powell-Davies

Design:

Amjad Husain Alvi

Acknowledgements:

Aamad Ali Yousafzai, KP-ESPSP
Asadullah Khan, KP-ESPSP
Fazle Manan
Nighat Lone
I-SAPS

May 2018



This project is funded by
the European Union

**Khyber Pakhtunkhwa
Education Sector Plan Support Programme (KP-ESPSP)
Technical Cooperation Services**

This is the third in a series of four Discussion Papers produced by the KP-ESPSP Programme in early 2018. All of the papers are based on learning derived from the Programme's first 15 months of activity and are intended to stimulate thinking around key areas of the E&SED's work to enhance the provision of education services in the province of KP.

This publication has been produced with the assistance of the European Union. The contents of this publication are the sole responsibility of the KP-ESPSP Programme and can in no way be taken to reflect the views of the European Union.

Contents

Acronyms	ii
Executive Summary.....	1
Introduction	2
Context.....	3
Topic.....	5
1. Data Quality Standards	5
2. Teacher Educator Standards.....	7
Opportunities & Challenges	9
Recommendations	11
1. Building Local Capacities:.....	11
2. Pilot and Monitor the Draft Standards for Teacher Educators:.....	11
3. Developing Comprehensive Data Standards:	12
4. Extending Data Standards:.....	12
References	12

Acronyms

CPD	Continuous Professional Development
DCTE	Directorate of Curriculum and Teacher Education
DEO	District Education Officer
DE&SE	Directorate of Elementary and Secondary Education
DFID	Department for International Development (UK Government)
E&SED	Elementary and Secondary Education Department
EMIS	Education Management Information System
ESP	Education Sector Plan
EU	European Union
iEMIS	Integrated Education Management Information System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH (German Corporation for Development Cooperation)
IMU	Independent Monitoring Unit (now an Authority)
IPEMC	Inter-Provincial Education Ministers Conference
KP	Khyber Pakhtunkhwa
KP-ESPSP	Khyber Pakhtunkhwa Education Sector Plan Support Programme (EU-funded)
MNSQE	Minimum National Standards for Quality Education
PITE	Provincial Institute for Teacher Education
RITE	Regional Institute for Teacher Education
SDG	Sustainable Development Goals
SIF	School Improvement Framework

Driving System Improvement through the Development of Quality Standards

Executive Summary

The development and adoption of agreed standards is an important step along the path to attaining quality education in Khyber Pakhtunkhwa. The process of developing minimum quality standards in two key areas – for data management and use, and for teacher educators - has recently been initiated by E&SED with support from the KP-ESPSP programme. The benefits of investing in this type of work are discussed in this Paper, and early signs of progress towards achieving them are outlined. The Paper also presents the case for prioritising standards as one of the essential elements of an enabling environment in which E&SED staff at all levels can focus on the management and implementation of quality education at classroom, school, district and provincial levels in support of the ambitions outlined in the KP Education Sector Plan.

Introduction

The Sustainable Development Goals (SDG 2015), and SDG 4 in particular, have highlighted the importance of conceptualising and delivering quality education to drive forward system-reforms. Quality education drives the achievement of better results and outcomes. It empowers students through the acquisition of the knowledge, skills and attitudes that enable them to become economically, socially and personally active citizens and lifelong learners.

The concept of standards is central to the quality education agenda. In Pakistan it has found its expression in initiatives such as the introduction of a standards-based curriculum in 2006; the National Professional Standards for Teachers, and the standards for accreditation of teacher education published in 2009; and the Minimum National Standards for Quality Education (MNSQE), adopted in 2016. Implicitly, the concept of minimum quality standards (which define what is to be done, to what agreed benchmarks, and how they interact with other standards to produce a coherent and holistic system) is also to be found in the work done by the E&SED and GIZ under the School Effectiveness Framework between 2013-15¹, and the piloting of the School Improvement Framework under DFID's KESP II programme in 2017/18.

In KP, several initiatives promoted by the E&SED are fundamentally based on the concept and logic of standards:

- **Continuous Professional Development (CPD)** programme for teachers
- **Leadership and Management** programme for school principals
- **School Improvement Framework (SIF)** pilot, with its strong focus on the gathering and analysis of data to identify progress and areas for improvement
- development of **minimum quality standards for data management and use**
- development of **minimum quality standards for teacher educators.**

Standards help to underpin accountability – holding teacher educators, teachers and schools responsible for what goes on in classrooms; and holding bureaucrats responsible for the management of the system as a whole. The practice of aligning learning to standards helps ensure that a higher level of learning is attained. This applies as much to the relationship between students and teachers as it does to that between teachers and teacher educators. Standards-based instruction and training helps guide the planning, implementation, and assessment of student learning, and the use of standards to streamline instruction and training ensures that practices deliberately focus on agreed targets. Teachers and teacher educators follow standards-based instruction to ensure that their students meet the demands that have been identified by policy makers. Following a standards-based model for classroom assessment and instruction is an approach that teachers use to track student performance,

¹ Powell-Davies (2015)

and plan instruction to meet the specific needs of students. And precisely the same applies to assessment and instruction in teacher education.

All systems require standards to measure their effectiveness and efficiency, and they are all fundamentally based on reliable data – quantitative and qualitative. As a consequence, it is of central importance that the data function in the education system is also strengthened through the identification of agreed standards for data quality, reliability, verification and so on. Standards drive the quality of a system and help to define and ensure system-level improvements. Within the education system, standards provide benchmarks against which the effectiveness of the system can be monitored, managed and evaluated. Standards not only provide guidance for all stakeholders (education managers, teachers, parents and students), but also help policy makers to assess the progress and impact of their initiatives.

Context

The school system in Pakistan as a whole has historically struggled to raise participation rates, enhance student outcomes and implement quality education for learners. A significant number of children still do not attend any kind of schooling² in KP, for example, and those who are in schools often do not perform well and experience a less than stimulating learning environment. Without a strong commitment to implementing minimum standards for quality education, the education system has found it difficult to manage, monitor and evaluate the many well-meaning attempts made over the years to improve educational quality in KP.

The National Education Policy (2009) articulated the need for a standards-based education system in Pakistan stating that, “the quality of education provided in government-owned institutions must be raised through setting standards for educational inputs, processes and outputs and institutionalising the process of monitoring and evaluation from the lowest to the highest levels”³. It also clearly articulated two of the main benefits of implementing standards-based education⁴:

- standards help improve the quality of education and provide a systematic way of evaluating the performance of the education sector;
- development and implementation of common standards is expected to ensure intra- and inter-provincial compatibility, diminish the impacts of parallel systems of education and develop harmony between the public and private sectors.

² According to the KP Out of School Census 2017, currently 1.5 million children are out of school.

³ Government of Pakistan (2009); page 39

⁴ Government of Pakistan (2009); page 18, 26, 29, and 48; Government of Pakistan (2016)

Recognition and awareness of a standards-based education system was increasingly felt during the interprovincial dialogue process on education that followed on from the promulgation of the 18th Amendment to the Constitution in 2011.

In February 2016 the Inter-Provincial Education Ministers Conference (IPEMC) approved the Minimum National Standards for Quality Education (MNSQE) for all provinces and areas. This addressed a key gap in the education systems of all the provinces and articulated the minimum standards underpinning the provision of quality education to children in Pakistan⁵. The MNSQE has provided detailed standards for learners, curriculum, teachers, textbooks, assessment and the learning environment. All of the standards in the MNSQE are interconnected and provide the space to develop additional standards to complement the existing ones. This is the case with standards for data management and use, and standards for teacher educators, neither of which was included in the MNSQE.

Both of these new areas form the focus of this paper.

Khyber Pakhtunkhwa emerged as the first province to initiate implementation of the MNSQE standards through various reform efforts including the improvement of textbooks, examination reform and the development of teachers' competencies (based on the teachers' standards). All these efforts are designed to enhance the quality of education delivery under a standards-based approach and enable the elaboration of indicators that makes tracking progress possible.

The draft standards for teacher educators supplement the existing standards for learners and teachers outlined in the MNSQE. They define the minimum level of practice expected of teacher educators and set a clear reference point against which to measure their performance, knowledge and behaviours. The standards are intended to support the Provincial Institute for Teacher Education (PITE) & the Directorate of Curriculum and Teacher Education (DCTE) to put in place a suite of professional development measures for all tiers of teacher educators to strengthen their skills and knowledge, and bring them in line with the requirements of the minimum standards. The standards also provide DCTE and PITE with a tool to assess the extent to which all teacher educators demonstrate the positive indicators outlined in the standards.

Standards for data management and use work in a similar way. They help to define a quality assurance system with clear operating practices, roles and responsibilities to achieve reliable, accurate, verifiable data that inform decision-making across the E&SED. As such, they simultaneously strengthen the *system* of data management and use, and professionalise the

⁵ Government of Pakistan (2016)

service dimension of the data and knowledge management function in relation to its end-users (typically non-technical managers who need to receive reliable data in simple formats they can use for planning and monitoring).

Topic

While KP adheres to the 2006 standards-based curriculum, and by virtue of that has developed student learning outcomes and textbooks in line with the curriculum, it has yet to adopt fully the national MNSQE standards for teachers or for teacher education accreditation and certification. However, in other areas good progress has been made⁶. In practice, without a full-scale adoption of a standards-based approach, the likelihood of achieving many of the strategic goals for the provision of quality education in the system is compromised. The absence of standards for data management and use further affect the ability of the E&SED to monitor progress, identify issues and design corrective measures as part of the policy-making process.

The EU's KP-ESPSP programme has been working with the E&SED to strengthen a working culture based on minimum standards in two areas identified as priorities in the 2017 Needs Assessment Studies carried out by the KP-ESPSP programme together with E&SED:

- development of data quality standards; and
- development of quality standards for teacher educators.

1. *Data Quality Standards*

A reliable data management and use information system and service needs to fulfil a number of characteristics. Its data need to be relevant, accurate, timely, accessible, open to interpretation, coherent, methodologically sound and reliable. The absence of standards for data management and use in KP goes a long way to explaining the perception that data are not fit for purpose. This was outlined in the first Discussion Paper in this series⁷. With agreed standards in place, detailed verification and validation can be better managed. Standards also clearly articulate the service function that data providers should make available to the rest of the education department. In the light of recent changes in the mandate of the Independent Monitoring Unit (IMU), these issues apply equally to its work going forward as the supplier of data to the E&SED as they do to the future role of the EMIS cell. Without standards and trust in the system, data will not routinely be used for planning and decision-making.

⁶ KP has initiated the implementation of textbook standards from the MNSQE, aligning the activities of DCTE and Textbook Board through standard operating procedures and a revised textbook policy based on the implementation of the standards

⁷ KP-ESPSP 2018

Data quality control and verification processes are essential for ensuring a quality information system and service. Collection of reliable data, (together with accurate entry, cleaning, analysis and reporting) requires well-defined procedures and standards. As we have seen, absence of clear quality standards reduces the trust and confidence of education managers and other end-users in EMIS data resulting in its limited use in planning and decision-making. The 2017 Needs Assessment Study of the EMIS Cell undertaken by the KP-ESPSP programme highlighted this area of risk and recommended that standards should be developed for data collection, verification, validation and dissemination procedures and for data use across the E&SED.

The KP-ESPSP programme initiated a process in late 2017 to develop data quality standards with stakeholders from E&SED as part of its capacity development initiative. Scoping work has been completed and initial design and development has been started with a wide range of E&SED officials. This remains a work in progress, and the E&SED needs to examine the implications of the work done to date and formulate a plan for further development work.

At the current time, serious consideration needs to be given to undertaking a systems analysis of data needs, data production and data use in the E&SED. This will identify where the system can be strengthened so that it meets the needs of technical *supply* teams gathering and analysing data, and the *demand* needs of non-technical managers who are required to use data as the basis for

their planning and decision-making. A systems analysis will help the E&SED to address challenges in the production and use of data for evidence-based decision making and planning in the E&SED. It will provide recommendations about how best to improve the identification of data needs, and the systems of data production and data use in the E&SED.

This should be regarded as a problem-solving exercise which will help to improve the system and ensure that all the components of the system work efficiently to accomplish their

Data Quality Standards in KP

Data standards define criteria to outline and measure best practice and establish benchmarking capabilities for the EMIS system.

Data standards drive the production of relevant, accurate, timely and comprehensive education statistics and useable information.

Adopting quality standards for data management and use strengthens the EMIS system and helps to develop a *service* culture in the Department providing:

- Regular standardised reporting
- Analysis of education data resulting in better quality and more reliable reports
- Clarity on what is required to resource and strengthen the EMIS system and service
- Regular reviews and compliance across the education system
- Strong interdependencies between the supply and demand side of data management and use.

purpose. This is especially important at the present time when the relationship between the IMU Authority and the E&SED is yet to be fully defined.

2. *Teacher Educator Standards*

The standards for teacher educators have taken as their reference point the standards for teachers and learners⁸. Work to date has focused both on qualification requirements and professional competencies. In one sense, the development of standards for teacher educators is an enlargement of the scope of the 2016 minimum standards for quality education. In another sense, this work addresses an important gap in the 2016 standards, as teacher educators play a key role in the achievement of many of the other standards, especially those of teachers.

The draft standards for teacher educators have been developed over a period of months in 2017 and 2018 through a highly participatory and consultative process involving the Directorate of Elementary and Secondary Education (DE&SE), PITE, DCTE, RITEs and the Planning Cell. The aim has been to help PITE and DCTE develop the skills and standards of its teacher educators, professionalise their way of working and contribute to the improved delivery of teaching and learning across KP.

The design process has supported the stakeholders in defining and analysing the key functions of teacher educators. It has also facilitated thinking about the construction of appropriate standards and indicators for these key functions, and how this system needs to be used to manage the teacher education function more effectively going forward.

The Process of Developing the Teacher Educator Standards

A series of 4 workshops over five months, involving a core working group from PITE, DCTE, DEOs, RITEs and the Planning Cell, were used to develop the draft standards for teacher educators. Each workshop was tied into the next through tasks and extension activities carried out collaboratively in the workplace.

The process of development followed the following pattern:

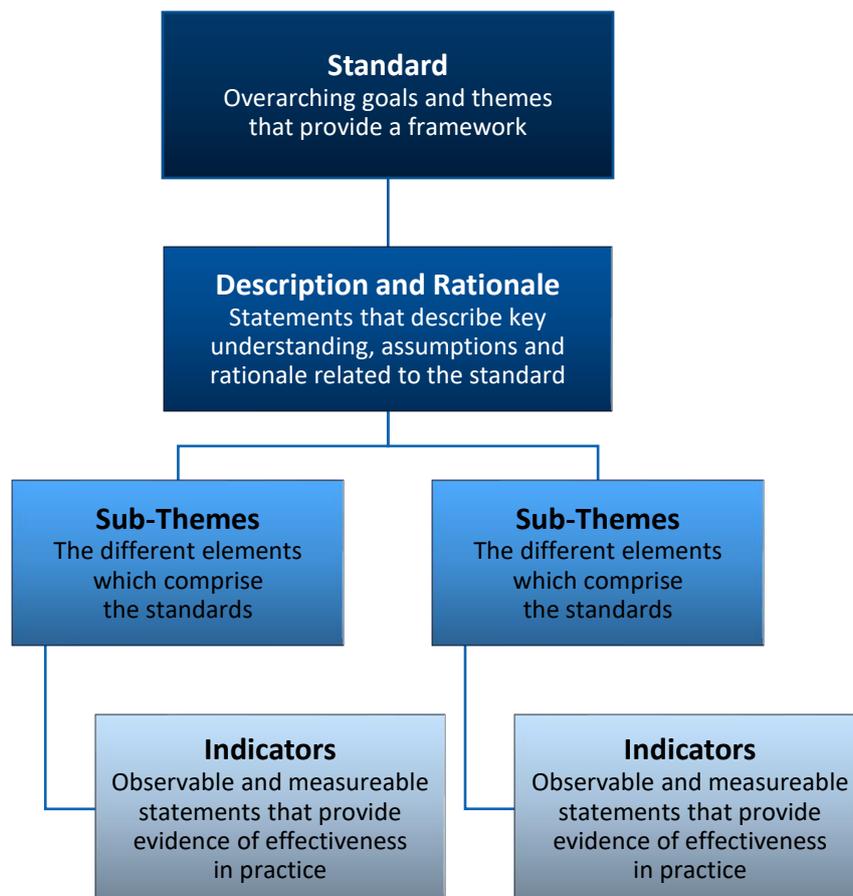
- Understanding the concept and value of standards
- Familiarisation with the MNSQE and how teacher educator standards feed into the achievement of standards across the board
- Brainstorming and discussion to produce a long list of themes/categories for the standards
- Refinement and shortlisting of themes and drafting of core standards and sub-themes
- Drafting of indicators
- General review and revision of draft standards structure
- Designing the operationalisation framework to implement the standards

⁸ In an interconnected hierarchy, learners' standards set the benchmark for the remaining standards

At the time of writing, this process has resulted in the design of a draft set of standards and indicators that will support the future engagement, management and monitoring of teacher educators. The standards will set the benchmark for high quality training delivery by teacher educators and will help the E&SED, DCTE, PITE and the Regional Institutes for Teacher Education (RITEs) to assess which candidates should be recommended as potential trainers. Subsequently, training and capacity development programmes for prospective teacher educators (including DCTE, RITEs and PITE academic staff) can be more effectively designed in line with standards in order to enhance their skills and align them to the required benchmarks⁹.

The draft standards for teacher educators have been constructed around five themes:

- Knowledge of content and methodology
- Demonstrating knowledge and skills through practice
- Planning, delivery and monitoring
- Communication and facilitation, and
- Professional development.



⁹ The minimum quality standards report for teacher educators is due for publication by the end of May 2018.

The specific standards have been grouped under the five themes above. Each contains a statement of the standard outlining the key knowledge and competencies required of a teacher educator. This statement is further broken down into sub-themes relating to knowledge, skills and behaviours. The sub-themes are then further elaborated through indicators that are clear, observable and measurable statements which describe the aspects of effectiveness.

The standards will embody the agreed criteria about the professional performance of teacher educators. At the same time, they can be used by the teacher educators themselves to evaluate their own practice and as a tool for further professional development. This initial design of the standards will serve as a core document for designing a strategic framework for piloting, implementing, operationalising and monitoring the standards with clearly defined roles and responsibilities across E&SED, PITE and DCTE.

Opportunities & Challenges

The KP-ESPSP programme has initiated a standards-driven approach with the E&SED in the areas of data and teacher education which are intended to strengthen the management and implementation of quality education once the standards are piloted, finalised and adopted. Along with the opportunities being created through this approach, the adoption and implementation of these standards will face certain challenges. These are presented below:

Topic	Opportunities	Challenges
Finalising the draft standards for teacher educators and for data management and use	<p>A great deal of good work has been done to develop draft standards for teacher educators, meaning they are already well-developed in draft form. The process used to formulate the teacher educator standards can be used to promote further work on developing draft standards for data management and use.</p> <p>This is very relevant to the work of the E&SED in helping it to shape the relationship between the new IMU Authority, the EMIs Cell and the other institutions that fall under the</p>	<p>Development of standards is a time-consuming process. The E&SED will need to take a long-term view of this work and continue to invest in the development of standards by allocating financial and human resources.</p> <p>Time needs to be taken to raise awareness and understanding of standards so that all stakeholders are on board and see their roles and responsibilities to make the new system operate effectively.</p>

	Department. This presents E&SED with a timely and appropriate opportunity to move this work forward through piloting and finalisation of the standards.	A strong articulation of the demand and supply dynamics involved is needed. This will help to clarify the purpose and value of the work.
Action planning for continuing work on standards for teacher educators	Sufficient work has been completed in phase I of the KP-ESPSP to focus on constructing an action plan for the next stage of work on the teacher educator standards. The plan would present the core activities plus responsibilities and timelines for the commencement of the piloting and implementation of the standards.	A key challenge is the level of coordination between various implementing partners and allied institutions of the Education Department. Too little emphasis is placed on communication and coordination. It is important therefore to design the action plan with clearly delineated responsibilities necessitating communication and coordination. This will facilitate smooth and effective delivery of teachers' professional development in the province.
Systems analysis of data needs, management and use in E&SED	Conducting a systems analysis of data needs, management and use across E&SED and the IMU Authority will provide the Department with a clear set of priorities and actions to incorporate in the continuing work on data standards. It will also enable the development of clear working relationships between the IMU Authority, the EMIS Cell and end-users of data in the E&SED. The KP-ESPSP is well-placed to provide technical assistance to the systems analysis work.	Conducting a systems analysis is a complex undertaking. It will require strong ownership and direction from the E&SED with the active cooperation of the Planning and EMIS cells, all attached institutions and the IMU Authority. It will be important to communicate the purpose of the exercise and the planned positive outcomes in relation to a wide range of stakeholder perspectives.
Integrating datasets	The E&SED has commenced work to produce an integrated EMIS (iEMIS). This presents the opportunity to develop a framework to strengthen data reliability and the service function of the data owners to their end-users. Further work on data standards needs to take this into	Once in place, all end-users will need to be trained in how to access and use data from the iEMIS. The owners of the iEMIS will require complementary training in how to present and market their data service to end-users. At the same time, the systems analysis needs to be used to articulate precisely how

	account so that the scope and impact of its work extends across the E&SED.	the system will function and clearly define roles and responsibilities.
Capacity development and strengthening	The active involvement of a large number of E&SED staff from DCTE, PITE, EMIS cell, Planning cell, IMU and D&ESE provides an opportunity to further strengthen skills and knowledge in the area of standards for data management and teacher educators, and to identify champions to drive the work forward. This will involve a commitment to on-going professional development and capacity strengthening in the core institutions.	Developing a set of documents outlining standards is one (very positive) thing, but it needs to be supported with clear plans to strengthen skills and knowledge in order to make the standards a reality. This requires commitment and it comes at a cost, but support can be sought from development partners so that the work continues without losing momentum.

Recommendations

The following recommendations should be considered to use quality standards to drive system-level improvement:

1. *Building Local Capacities:*

Access to quality and timely data can improve education decision-making in the province and ensure that resources are targeted at areas in most need and where returns are expected to be the highest. While developing data standards will help in resolving issues around data quality, timeliness and use, the EMIS Cell and IMU teams will need to develop expertise in executing the protocols and conforming to the standards. In the same way, non-technical users of data need to be trained in accessing and making use of data for their own purposes of planning, implementation and monitoring.

2. *Pilot and Monitor the Draft Standards for Teacher Educators:*

A considerable amount of progress has made to define the draft standards for teacher educators. It is recommended that the E&SED institutes the next step and pilots the standards to assess how they will work and what issues need to be fine-tuned. Intensive monitoring will ensure that lessons are captured so that a principled decision can be made about officially adopting the standards and establishing a pool of specialist pool of teacher educators to drive improvement in the quality of professional development provision through PITE and DCTE.

3. *Developing Comprehensive Data Standards:*

As mentioned earlier, eight dimensions of quality statistics exist for data (relevance, accuracy, timeliness, accessibility, interpretability, coherence, methodological soundness and integrity). The E&SED needs to ensure that in developing standards for data management and use, these dimensions are addressed from both the supply and demand sides so that a stronger data management *system* and *service* are created as a result.

4. *Extending Data Standards:*

Apart from work coordinated by the EMIS Cell and the IMU Authority, a number of other data collection exercises operate in the education sector of KP. For example, DCTE conducts Grade 2 and Grade 8 assessments on a regular basis, and the Boards of Intermediate and Secondary Education conduct grade 10 and 12 examinations. The E&SED has already started the development of an integrated EMIS in order to bring together all the available education-related datasets in the province. It is therefore important that the E&SED thinks beyond the EMIS Cell and the IMU Authority, and extends the scope of data standards work to construct an inclusive framework for the Department that can use improved data management and use to drive system improvement across all areas.

References

- Government of Pakistan (2009). *National Education Policy*.
- Government of Pakistan (2016). *Minimum Standards for Quality Education in Pakistan*.
- KP-ESPSP (2017). *EMIS Needs Assessment Study*.
- KP-ESPSP (2018). *Developing a Knowledge Management Culture in the Elementary & Secondary Education Department. Discussion Paper 1*.
- Powell-Davies, P. (2015). *School Effectiveness in KP: A Status Report*.
- The Commonwealth (2017). *Universal Standards for Quality in Education*.



Implemented by:
giz | International
Services

Khyber Pakhtunkhwa - Education Sector Plan
Support Programme (KP-ESPSP)

House # 25 CA-1, Circular Road, University Town
Peshawar, Pakistan
T: +92 91 – 584 3293-4 (Ext 32)
F: +92 91 – 584 3296