



SINDH CURRICULUM IMPLEMENTATION FRAMEWORK (CIF)

Sindh Education Sector Support Programme (SESSP), Reform Support Unit

**Education and Literacy Department
Government of Sindh
Karachi**

Note

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Government of Sindh
Education & Literacy Department
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Preface

The Framework for Curriculum Implementation is designed to support the Education & Literacy Department's approach to establishing a process of curriculum implementation as an integrated system. The implementation matrix outlines an ongoing continuous improvement process and aims to offer guidance on how to formulate robust annual work / implementation plans which clearly articulate how programs and services are delivered on time and to expectations. It supports the active involvement of the private sector in the realization of the objectives of curriculum implementation whereby the schools will be able to provide evidence that each and every student is learning the essential concepts and skills as required by the curriculum.

This framework aims to assist the implementing and monitoring agencies of the school curriculum to understand how to formulate their own work / implementation plans in line with objectives and targets of the Education & Literacy Department. It is not intended to be a mechanical guide to be used in isolation, as the Education & Literacy Department has defined the roles and responsibilities of the implementing and monitoring agencies with a required coordination mechanism. The implementation planning requires a much deeper understanding of management approaches.

Departments and agencies are encouraged to refer to this guide while developing their implementation plans and to coordinate with each other to make the most effective use of expertise, experiences and relevant resources for improvement of the quality of education. A step-by-step approach is not essential to the planning process — planning is an iterative exercise, and multiple rounds are necessary.

Dr. Fazlullah Pechuho
Secretary
Education & Literacy Department

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INTRODUCTION

Curriculum defines what our children learn in schools

Defining what all children must learn, what all children should learn, and what some children could learn (in accordance with their special interests and circumstances) is no easy task. The body of knowledge, skills, and values which we could deliver to our children is virtually infinite. Societies have to be selective in deciding what is most important for the growth and development of children and the future welfare of society. This process of selecting what children should learn is always difficult and in a fast-changing world, never static.

Curriculums must change in order to prepare young students to cope with the challenges of socio-economic demands and technological changes. Governments keep on revising the school curriculum with a view to meet the global market trends and technological advancements of the new century. The Government of Pakistan also started a major revision process of its national curriculum in the year 2006 in line with a competency based model instead of an objective based model. Subject curriculums for 23 core compulsory subjects were notified as a first batch in 2006-07 with implementation to start in 2008. From 2006 to 2010, subject curriculums for 61 core/compulsory and elective subjects were revised.

At the same time in 2007 the National Textbooks and Learning Materials Policy and Plan of Action was introduced to produce quality textbooks through a competitive process among private sector publishers. Due to a number of factors including uncertainties within Provincial Textbook Boards about their future role, the textbooks for the new curriculum could not be introduced till Academic Year 2012-13. Since then, the Government of Sindh has introduced textbooks for Grades I – IV.

Apart from delays related to understanding new roles and responsibilities as laid down in the National Textbook and Learning Materials Policy, the absence of a comprehensive, holistic Curriculum Implementation Framework was considered as one of the main reasons for non-implementation of the 2006 Curriculum.

Rationale

Even though the new curriculum for core subjects was notified as early as December 2006, many textbooks are not yet in schools. Several factors contributed to this delay including political uncertainty, frequent transfers of provincial stakeholders and senior staff and lack of clarity regarding the role and responsibilities of key implementers of the curriculum.

In 2010, the Government of Pakistan decided to devolve the Federal Ministry of Education to the provincial level by omitting the Concurrent Legislative List under the 18th Constitutional Amendment Act. This jurisdictional change has had its implications on the process of implementing the National Curriculum 2006 in Sindh. On the one hand, it has empowered the Education & Literacy Department, Government of Sindh and its allied departments to improvise and innovate in the area of implementing the curriculum. However, the devolution process has simultaneously created a gap, at least temporarily, as the support and coordination mechanism that was in place at the federal level is no more available for the province. This has also created the need to look into the current capacity of the different provincial departments and its allied institutions on whether they are empowered enough to take the process forward in Sindh with regard to:

- Alignment of learning materials including textbooks to curriculum.
- Alignment of Initial Teacher Education with the standards, benchmarks and learning outcomes of the new curriculum in consultation with the provincial stakeholders.
- Alignment of the pre-service programme curricula to the requirements and standards of the curriculum.
- Alignment of examination level (school assessment – internal and external) to assess the achievement of standards and student learning outcomes

Curriculum Implementation Framework

The Curriculum Implementation Framework (CIF) presents a set of shared guidelines about the roles and responsibilities of various stakeholders in the implementation of the curriculum, mainly the publishers of teaching and learning materials, teachers and teacher educators, community, experts and bodies for examination and assessment, curriculum developers together with the Education & Literacy Department, Government of Sindh, which has the overall responsibility for providing quality education to the masses.

All these stakeholders need to work coherently to decide how the curriculum will be practiced in schools and the milestones that will be met at different stages in the implementation process. Over the time, material developers and teachers need to be given different kinds of support, tailored to their changing needs. Teachers need to share insights with one another as they implement the new curriculum.

It is crucial that curriculum implementers understand that implementing a curriculum takes time, resources, and an overall commitment to reform. In addition, the change needs to be institutionalized by ensuring the continued use of the curriculum. Systems must be in place for the holistic implementation of the curriculum through quality teaching and learning materials development and ongoing professional development for all existing teachers and curriculum oriented induction of new teachers.

Briefly, the Curriculum Implementation Framework is a broad set of policy guidelines regarding the dissemination of the new curriculum, development of learning materials, professional development of teachers / instructional delivery system, assessment and testing of students' achievements / learning outcomes and feedback and evaluation for the changes required for an effective future revision of the curriculum.

Objectives

The Curriculum Implementation Framework does not necessarily mean a set of instruction or rules to be followed but rather presents a set of shared guidelines about roles and responsibilities of various stakeholders in making the new curriculum a Practiced Curriculum. The main objectives of the Curriculum Implementation Framework are to:

1. define parameters (outcomes, indicators, implementation steps, activities, data sources, time frame, and required resources) for putting the curriculum into effect;
2. identify key implementers including partners to be engaged while defining their roles and responsibilities with regard to:
 - a. dissemination of new curriculum
 - b. developing learning materials
 - c. designing learning methods and materials for teacher education
 - d. assessing the attainment educational achievement of students
 - e. providing feedback to the curriculum developers and policy makers for future planning / revision of the curricula
3. promote formal links between implementing partners to coordinate, provide additional opportunities, make the most effective use of these opportunities and work as an integrated modal for making the implementation process successful; and
4. provide relevant information and strategies for monitoring and evaluation of implementation process

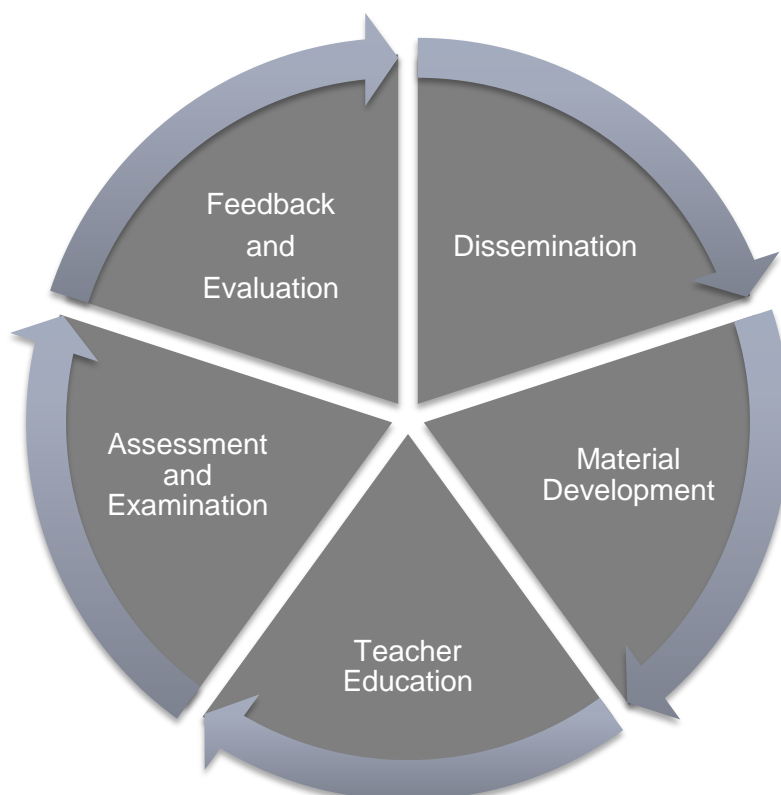
PROCESS OF CURRICULUM IMPLEMENTATION

The Curriculum Implementation Framework is designed as a flexible matrix for guiding the process of curriculum implementation to continue in Sindh in the absence of the Federal Ministry of Education. The objective is to develop a curriculum implementation plan which outlines implementation strategies with regard to dissemination, learning material development, teacher education and assessment strategies in order to ensure the delivery of the curriculum in its true spirit down to the level of the teacher and the learner.

This framework aims to assist those involved in the implementation of the curriculum to understand the process of curriculum implementation as an integrated system in order that they can formulate their own implementation plans as part of an overall implementation plan of the Education & Literacy Department. It is not intended to be a mechanical guide on how to complete an implementation plan, because it is not possible to formulate an implementation plan using a mechanistic or template-driven approach. Nor is it intended to be used in isolation from other implementation agencies as: implementation planning requires a much deeper understanding of different management approaches than can be conveyed in a single guidance document.

The **lead** and **partner** (supporting) agencies and departments are strongly encouraged to refer to this guide while developing their implementation plans. A step-by-step approach is not essential to the planning process—planning is an iterative exercise, and multiple rounds are necessary.

After detailed consultations with key public as well as private sector stakeholders the following process was agreed upon to facilitate the implementation of curriculum in Sindh:



Dissemination

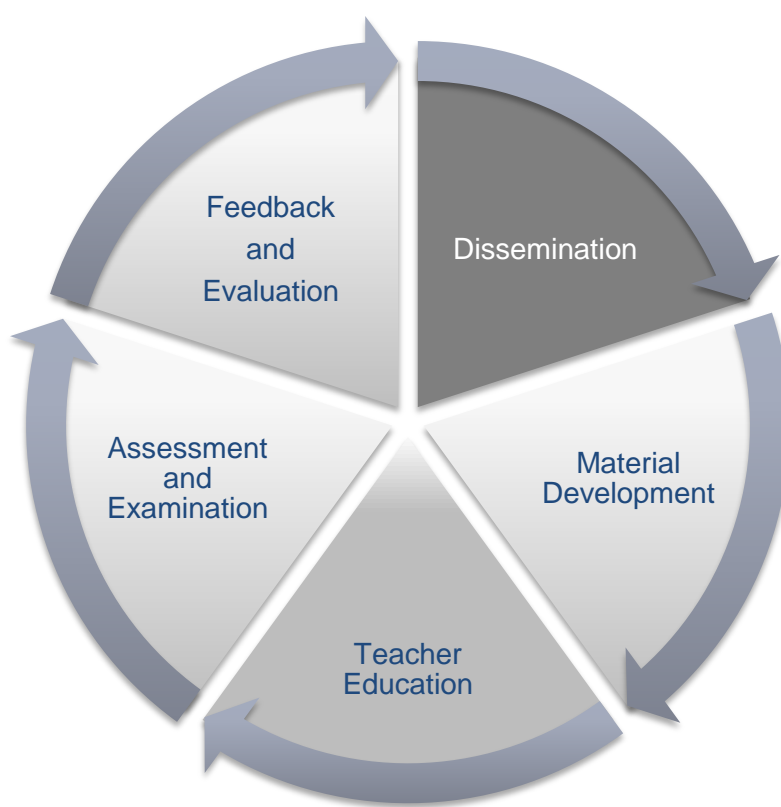
Curriculum dissemination is the process of effectively informing developers of learning materials including textbooks, the teachers and teacher educators, educational administrators and supervisors, the assessment and evaluation experts and other relevant stakeholders including civil society. Customized resource materials and information about new or revised curriculums is to be transmitted to all concerned as soon as it is approved and notified, so that they understand and accept the desired change and make necessary preparations for implementation of the curriculum.

The foremost task for the Education & Literacy Department, Government of Sindh is to communicate the desired change to all those who bear a shared responsibility for making this change happen at the level of schools. The education authorities will develop plans to bring about the change in the schools under their supervision.

The Education & Literacy Department, Government of Sindh is committed to sustain efforts for achieving increased awareness about curriculum by using new technologies as we need to move beyond the traditional approach of posting the curriculum documents to relevant stakeholders and hoping for change. Dissemination needs to focus more on building understanding of the new approaches and informing the public at large on the importance and relevance of the proposed change. The process of dissemination will encompass creation of ownership and support for the reform by engaging the private sector in spreading the message to as large a group of stakeholders as is necessary.

Following are the proposed steps to disseminate the new / revised curriculum to the relevant stakeholders for implementation.

- Develop a communication strategy as part of the communication plan of the Education & Literacy Department, Government of Sindh.
- Prepare and notify Phase-wise curriculum implementation schedule preferably according to the developmental stages learning
- Develop customized curriculum resource / support materials in easy and understandable formats
- Mobilize print and electronic media by partnering with private sector for creating awareness about the curriculum
- Organize meetings, seminars/ workshops for all stakeholders for curriculum orientation



DISSEMINATION

Outcome 1 **The provision of the curriculum to all stakeholders in a simple and understandable (English, Urdu, Sindhi) form in stipulated timeframe.**

- 1.1 Resource material (customized extracts, charts, leaflets, brochures etc.) produced to translate the curriculum in an easy, understandable and implementable form.
- 1.2 Number of workshops/ seminars/ conferences/ meetings/ SMCs/ book fairs held with all stakeholders and beneficiaries to disseminate information on the curriculum.
- 1.3 Increased use of technological innovations for creating awareness and soliciting support for the new curriculum.

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
1.	Develop communication / coordination plan/strategy for curriculum implementation	<ul style="list-style-type: none"> Constitute technical committee to design plan/strategy Organize meeting(s) to share and agree on plan/strategy Approval of plan / strategy from competent authority Notification and dissemination of plan / strategy 	<ul style="list-style-type: none"> Technical working group constituted Draft plan / strategy designed Number of consultative meetings held Plan / strategy developed and agreed. Plan / strategy Approved Plan/strategy notified and shared 	<ul style="list-style-type: none"> Notification of Technical working group Copy of the draft plan / strategy Record notes Draft Plan / strategy Approval letter Notification and distribution list Websites of E&LD, BCEWS 	30-60 days	One-off	E&LD	RSU, BCEWS, STBB, DSEs, Media groups, CBOs, NGOs	Technical Assistance Financial	<p>Assumption: The Government is committed to sustain efforts for achieving increased awareness about curriculum by using new technologies.</p> <p>The notified plan / strategy shall form the basis for the following implementation steps in this matrix.</p> <p>The plan / strategy shall answer:</p> <p>Who Why What How When Whom</p>

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
2.	Prepare and notify Phase-wise curriculum implementation schedule.	<ul style="list-style-type: none"> Prepare phase-wise curriculum implementation schedule Approval from the competent authority Notify and disseminate curriculum implementation schedule to stakeholders 	<ul style="list-style-type: none"> Curriculum implementation schedule prepared Curriculum implementation schedule approved Curriculum implementation schedule notified and shared with stakeholders Number of press releases in leading newspapers 	<ul style="list-style-type: none"> Curriculum implementation schedule Approval letter Notification and distribution list Copy of press releases Website of E&LD, BCEWS 	15 days	One-off	BCEWS	E&LD, RSU, STBB, PITE, TTIs, BISE		<p>Guiding principles from Communication Strategy as part of the overall Communication Plan of the Education & Literacy Department.</p> <p>Phase-wise implementation could be according to the Development Levels of Learning:</p> <p>Grades ECE-I-II Grades III-V Grades VI-VIII Grades IX-X Grades XI-XII</p>
3.	Upload curriculum documents on website	<ul style="list-style-type: none"> Identify the relevant websites Produce e-versions of curriculum documents for websites Upload curriculum documents on the identified websites Update curriculum information on websites 	<ul style="list-style-type: none"> Number of websites identified Number of curriculum documents for websites produced and uploaded Number of coordination meetings regarding upkeep of identified websites held Number of feedbacks received 	<ul style="list-style-type: none"> Addresses / URLs of the websites E-versions of the curriculum documents Meeting notes 	30-45 days	Initially one-off then based on the feedback and revisions	BCEWS	E&LD,RSU, STBB, PITE	Human, Financial, Material	<p>The soft versions of curriculum documents shall be produced in formats which are easily downloadable even where the speed of internet is low.</p> <p>The existing IT resources and infrastructure in the lead and partner organizations shall be analyzed and strengthened accordingly.</p>

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
		<ul style="list-style-type: none"> Printing of websites addresses on textbooks 	<ul style="list-style-type: none"> Number of periodic updates made Web addresses on textbooks 	<ul style="list-style-type: none"> E-feedbacks Periodic reports Textbooks having URLs 						
4.	Develop Resource Material for dissemination of Curriculum	<ul style="list-style-type: none"> Identify key beneficiaries Develop hard and soft versions of focused Resource Material according to the needs Approval from the competent authority for dissemination. Disseminate the curriculum extracts / key messages through workshops, seminars, trainings, face-to-face meetings etc. 	<ul style="list-style-type: none"> Number of key beneficiaries identified Number of hard and soft versions of resource material developed Resource material (hard and soft versions) approved Number of workshops, trainings, seminars, meetings held Number of parents, community mobilisers oriented 	<ul style="list-style-type: none"> List of beneficiaries / audience Copies of the resource material Approval letter Schedules, outlines, reports of the workshops, trainings, seminars, meetings 	60-90 days	One-off	BCEWS	E&LD, RSU STEDA, STBB, PITE, TTIs, Directorate of Private Schools, Development partners	Technical Assistance, Financial, Material	<p>Resource Material on Curriculum: Customized extracts, training manuals, charts, leaflets, brochures, scheme of studies etc.</p> <p>Answers to who, why, what, how, when, whom in the Communication Plan/Strategy shall help in terms of time and cost efficiency.</p> <p>BCEWS shall mobilize technical and financial resource for the development of hard and soft versions of customized curriculum extracts / key messages.</p> <p>BCEWS shall coordinate with other key institutions involved in Teacher Education for dissemination of resource material on curriculum through workshops, orientations etc.</p>

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
5.	Mobilise print and electronic media for creating awareness about the curriculum.	<ul style="list-style-type: none"> Identify media (print and electronic) sources and partners. Create links with identified partners both in public and private sectors Coordinate with identified partners both in public and private sectors on regular basis Upload customized curriculum extracts / key messages on relevant websites (public and private sector). Publish curriculum extracts / key messages in relevant newspapers, newsletters Display these materials in book fairs, education expos etc. 	<ul style="list-style-type: none"> Number of media sources and partners identified. Number of meetings resulted in establishing links Number of coordination meetings with partners held Number of websites showing these material Number of newsletters with curriculum extracts / messages published Number of book fairs, education expos participated 	<ul style="list-style-type: none"> List of media sources and partners Meeting notes Minutes of the meetings Addresses of websites Newsletters List of book fairs, expos 	Initially 60 days then as and when required	Ongoing	E&LD	BCEWS, RSU, STBB, Print and electronic media organization, Publishers Association, NGOs, CBOs, Telecom Companies	Human, Financial	<p>Guidelines from the Communication Plan/strategy.</p> <p>Network with private sector institutions/bodies shall ensure wider access.</p> <p>Book fairs e.g. Karachi International Book Fair and education expos provide an excellent opportunity to reach school systems, administrators, teachers, parents, students, publishers, printers, media personnel etc.</p> <p>The existing setup for Public Relations in E&LD, RSU, BCEWS, STBB shall be revisited as they shall play a pivotal role in mobilizing print and electronic media for creating awareness about the key messages / aims of curriculum.</p> <p>Use of mobile technology for creating awareness about curriculum shall be explored with the support of telecom companies.</p> <p>Assumption: Target groups are interested and willing to participate in the process.</p>

Material Development

Curriculum implementation largely relies on development of learning materials including textbooks. Textbook is arguably the mainstay of classroom teaching. It contains up to date, well laid out, concise, easy to understand and relevant narrations on the subject. Content is one feature of a textbook that concerns Curriculum. Its language, graphics, style, methodology, quality of printing, cost and size also matter. Textual material development attends to all these matters. In addition to textbooks, related support material is necessary to assist learners and teachers in the learning process.

In 2007, a National Policy on 'Textbook and Learning Materials and Plan of Action' was notified in order to introduce a well regulated system of competitive publishing in Pakistan with the objective of 'improvement in the quality of education at all levels through better quality textbooks at affordable prices'.

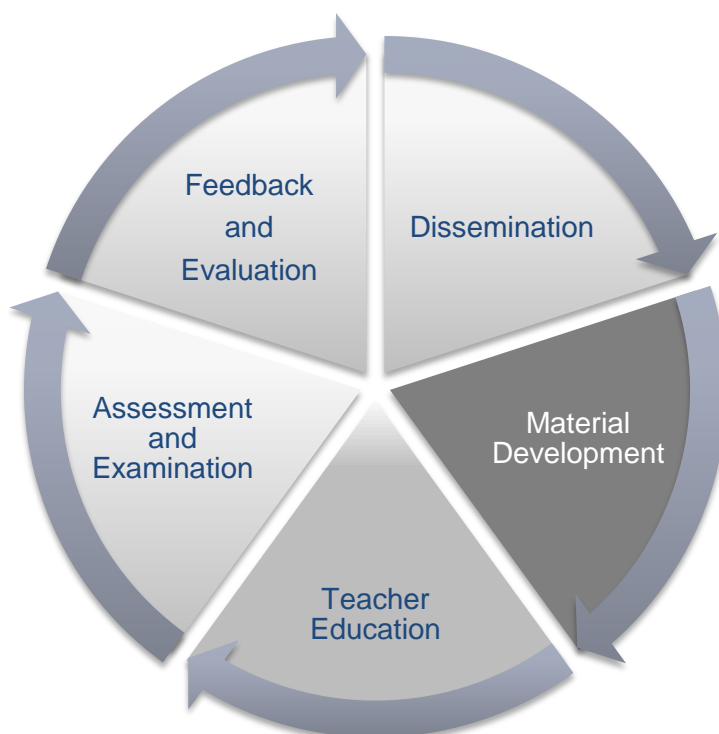
The main difference in the old and new approach was that the development of textbooks was no longer done by the Textbook Boards but by private sector publishers. Textbook Boards were to play the very vital role of regulation, facilitation and monitoring of the textbook development process.

However, due to the following reasons implementation of the new policy could not start in letter and spirit in Sindh.

- Issues related to the new role of Textbook Board vis-à-vis private publishers as per National Textbook Policy.
- Selection of textbooks from the multiple textbooks and its free distribution to schools.
- Textbook authors' comprehension of new revised competency based national curricula and absence of overall guidelines for the authors to write quality textbooks.
- Time-consuming review process of textbook manuscripts for quality assurance based on a comprehensive textbook review criteria.

How can we increase the effectiveness of our textbooks is one of the questions that need to be answered to enhance the quality of our education and students' learning achievement. Some of the main strategies / steps which shall lead towards this are suggested here.

- Review the existing structures for textbook development in Sindh and develop a Textbook and Learning Material Policy/Framework for Sindh
- Develop new quality textbooks (Grades V-XII of textbooks at present) for Sindh according to textbook development and review standards
- Print and distribute the Certified Textbooks to schools at the start of the Academic Year
- Develop a coordination and monitoring mechanism for the textbook development process



MATERIAL DEVELOPMENT

Outcome 2 Development of quality learning materials including textbooks based on learning outcomes specified in the curriculum.

- 2.1 Number of quality textbooks developed based on new curriculum in every curriculum implementation phase / year.
- 2.2 Number of new textbooks reviewed and approved according to the prescribed procedures, criteria and quality standards.
- 2.3 Number of teaching and learning materials (other than textbooks) produced based on new curriculum.

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
1	Review and/or develop Policy on Textbook and Learning Material for Sindh	<ul style="list-style-type: none"> Constitute technical committee to manage the review process Organize review / consultative meeting on textbook policy Amend Textbook policy as per recommendation of review meeting Approval from the competent authority Notification and dissemination 	<ul style="list-style-type: none"> Technical committee on textbook policy constituted Number of review meetings held Sindh Textbook Policy ensuring quality standards finalized Textbook Policy for Sindh approved by the Competent Authority Sindh Textbook Policy notified and shared 	<ul style="list-style-type: none"> Constitution of Technical Committees Recommendations of review meetings Copy of the textbook policy Approval letter of the revised policy Notification & distribution list 	30 – 60 days	Initially once then need-based	E&LD	STBB, RSU, BCEWS	Technical experts	<p>The Textbook and Learning Material Policy was introduced by the Federal Government in 2006-7.</p> <p>In pursuance of Sindh Education Sector Plan, the National Textbook and Learning Material Policy shall be revised to align it with specific needs of the textbook development and publishing in Sindh after 18th Constitutional Amendment 2010.</p> <p>The objective is to introduce a well regulated system of competitive textbook production in Sindh.</p> <p>Assumption: Sindh Textbook Board shall be strengthened as a competent facilitating, regulating and monitoring authority to improve efficiency in managing authorship, production, copyrights, printing and distribution of textbooks and learning material in a timely manner.</p>

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
2	Develop Quality Standards / Indicators for Textbook Development & Review	<ul style="list-style-type: none"> Constitute Technical Working Group(s) Organize meetings of Technical Working Group(s) to draft quality standards for: <ul style="list-style-type: none"> Textbook development & review Printing of textbooks Finalize the quality standards in consultation with key stakeholders Approval of Quality Standards from competent authority Dissemination of Quality Standards 	<ul style="list-style-type: none"> Technical Working Groups with requisite qualification constituted Number of consultative meetings held Quality standards for textbook development, review, and printing drafted Quality standards shared and finalized Approval obtained from the concerned authority Number of orientation sessions 	<ul style="list-style-type: none"> Notification of Technical Working Group (s) Minutes of meeting and reports/ reporting Draft Quality Standards Copy of the finalized Quality Standards Approval letter and Notification of Quality Standards Record notes of orientation sessions for stakeholders 	30 days	One-off	E&LD	STBB, RSU, BCEWS	Technical Experts, Financial	<p>Assumption: The E&LD is committed to introduce a well regulated system of competitive textbook production.</p> <p>The quality standards for textbook production, review and printing shall serve as resource material / guidelines for those professional who are involved in textual material development and review process.</p> <p>The Textbook Board shall regulate the textual material development process and shall monitor compliance with these quality standards for ensuring quality and affordability.</p> <p>The dissemination and accessibility of these standards / regulations shall make the textual material development process more transparent and accountable.</p>
3	Prepare textbook development schedule according to development levels	<ul style="list-style-type: none"> Organize meeting of experts / stakeholders 	<ul style="list-style-type: none"> Number of consultative meetings held Schedules for Textbook development prepared 	<ul style="list-style-type: none"> Minutes of the meetings and reporting 	30 days	One-off	E&LD	STBB, RSU, BCEWS		<p>Development Levels of Learning: Grades ECE-I-II Grades III-V Grades VI-VIII Grades IX-X Grades XI-XII</p>

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
		<ul style="list-style-type: none"> Approval of Textbook Development Schedules from the Competent Authority Notification and dissemination of Schedules 	<ul style="list-style-type: none"> Textbook Development Schedules approved Textbook Development Schedules notified and shared with relevant stakeholders 	<ul style="list-style-type: none"> Letter of approval from the Competent Authority Notified Schedule and distribution list 						
4	Develop resource materials for educational book developers / publishers	<ul style="list-style-type: none"> Constitute Technical Working Group(s) Organize meetings of Technical Working Group(s) to draft resource materials Finalize the resource material in consultation with key stakeholders Approval of resource materials from competent authority Dissemination of resource materials 	<ul style="list-style-type: none"> Technical Working Groups with requisite qualification constituted Number of consultative meetings held Drafts of resource materials prepared Resource materials shared and finalized Approval obtained from competent authority Number of orientation and training sessions 	<ul style="list-style-type: none"> Notification of Technical Working Group (s) Minutes of meeting and reports/ reporting Draft resource materials Copy of the finalized resource materials Approval letter and Notification of resource materials Record notes of orientation sessions for stakeholders 	30 days	One-off	STBB	E&LD, RSU, BCEWS, Development Partners	Technical Experts, Financial	Book Developers: <ul style="list-style-type: none"> Authors Copy Editors Proofreaders Illustrators Type-setters Graphic Designers Reviewers Resource Materials: <ul style="list-style-type: none"> Textbook Development Process - Guiding Principles Guidelines for Book Developers Textbook Style Sheet / Guide Registration Manual for Publishers SOPs and Parameters for Textbook Development / publishing
					5 days per session / training	Initially one-off then on need basis	STBB	BCEWS, PITE, DSEs	Finances will be managed by STBB	

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
5	Advertise the Textbook development process according to Schedules.	<ul style="list-style-type: none"> Prepare timeframe for the textbook submission, production, and approval process Prepare content for advertisement according to the Textbook Policy and curriculum implementation schedule Obtain approvals from relevant department(s) Advertise in selected Sindhi, Urdu and English newspapers and electronic media 	<ul style="list-style-type: none"> Schedules for textbook submission, production, and approval prepared Content for advertisement prepared Content for advertisement approved by the relevant authorities Advertisements sent to the selected dailies for publication Number of adverts in Sindhi, Urdu, and English newspapers 	<ul style="list-style-type: none"> Copies of Schedules / timeframe Draft content for advertisement Approval letter for advertisement Advertisements in national dailies 	30 days	One-off	STBB	E&LD, RSU		Textbook development schedules prepared and notified in implementation step 3 (page 13) of this matrix.
6	Short list successful publishers/firms/ educational book developers and agree on terms and conditions for Textbook development	<ul style="list-style-type: none"> Technical and Financial evaluation of publishers/firms/educational book developers 	<ul style="list-style-type: none"> Number of publishers/firms/educational book developers evaluated 	<ul style="list-style-type: none"> Evaluation report 	30 days	One-off	STBB	E&LD, BCEWS		More weightage shall be given to Technical capacity of a competing service provider /publisher / firm / educational book developer than their financial capacity during the evaluation.

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
		<ul style="list-style-type: none"> Physical verification (as and when required) of publishers/firms/educational book developers Short list the successful publishers/firms/educational book developers Maintain data bank of shortlisted publishers/firms/educational book developers Notify shortlisted publishers/firms/educational book developers Agreement with successful publishers / firms / educational book developers 	<ul style="list-style-type: none"> Number of publishers/firms/educational book developers complied with the required standard Number of successful publishers/firms/educational book developers Database of shortlisted publishers/firms/educational book developers maintained by STBB Number of successful publishers/firms/educational book developers notified Number of contract signed 	<ul style="list-style-type: none"> Compliance reports List of successful publishers/firms/educational book developers Copy of notifications, mailing list, websites of E&LD and STBB Copy of the contractual agreements 						<p>The intended material development firms / publishers / service providers shall prepare sample chapter / page proof and shall submit them along with scope and sequence of the intended book to Sindh Textbook Board for technical evaluation.</p>

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
7.	Carry out orientation / training of publishers/firms/ educational book developers based on developed resource materials	<ul style="list-style-type: none"> Carry out needs assessment of publishers/firms/educational book developers Prepare orientation / training pack(s) on the basis of identified needs Prepare training/orientation schedule and notify Orientation / training workshop for material developers Impact analysis of training measures 	<ul style="list-style-type: none"> Training needs identified Number of orientation packs designed Number of copies of the schedule received by the invitees Number of resource persons that conduct the orientation / training Number of workshops organized Number of publishers / material developers oriented / trained Number of pre and post evaluation reports prepared and shared 	<ul style="list-style-type: none"> TNA report Copies of orientation pack Copy of schedule Workshop reports Onsite attendance of Departmental Representatives or Officials at the event Evaluation reports 	Need based	Need based	STBB	E&LD, BCEWS	Financial Technical Assistance	<p>Assumption: Target groups are interested and willing to participate in orientation / trainings.</p> <p>Orientation / training packages shall be selected from the already developed resource materials as per implementation step 4 (page 14) of this matrix.</p>

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
8.	Review of Textbooks for quality assurance	<ul style="list-style-type: none"> Prepare internal review schedule Identify experts and constitute subject-wise review panels Training of reviewers on curriculum and review criteria Carry out review on basis of schedule <ul style="list-style-type: none"> ➤ Internal review by STBB ➤ External review by BCEWS ➤ Select committee (quality assurance) Incorporate feedback given by the review teams at all levels 	<ul style="list-style-type: none"> Schedule for review of textbooks prepared Number of review panels constituted Number of reviewers trained for the review task Number of text books reviewed Feedback incorporated 	<ul style="list-style-type: none"> Review Schedules List of review panels List of participants Pre and Post training evaluations Minutes of review meetings Updated copies of textbooks 	30 – 60 days	On going	BCEWS	STBB	Technical Experts	<p>The Reviews Criteria / Standards developed as per implementation step 2 (page 13) of this matrix shall be used for ensuring quality of textual materials.</p> <p>BCEWS shall need financial resources for carrying out the external reviews and making sure the quality of textual materials.</p>
							BCEWS	E&LD, STBB	Financial Resources	
							BCEWS	STBB		
							STBB	BCEWS		
							BCEWS	E&LD, STBB		
9.	Approval of the textbook	<ul style="list-style-type: none"> Submission note of textbook to E&LD for issuance of NOC Final approval and issuance of NOC 	<ul style="list-style-type: none"> Number of Textbook(s) submitted for NOC Number of NOC(s) issued for printing 	<ul style="list-style-type: none"> Submission Note NOC 	15 days	One-off	BCEWS	STBB		<p>The E&LD is the competent authority to issue a No Objection Certificate (NOC) for the printing and distribution of textbook.</p>
							E&LD	BCEWS		

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
10.	Printing of Textbooks	<ul style="list-style-type: none"> Constitute a procurement committee Develop procurement standards / criteria Invite expression of interest from printers Select printers as per policy and assign printing task 	<ul style="list-style-type: none"> Procurement committee constituted Procurement standards / criteria developed Number of expression of interests received Number of Printers assigned with printing tasks 	<ul style="list-style-type: none"> Notification of procurement committee Copy of procurement standards / criteria Notification of selected bidders Copies of Print Orders 	60 – 90 days	One-off	STBB	RSU		<p>Sindh Textbook Board shall carry out all procurements in accordance with Sindh Public Procurement Rules. This shall include but not limited to development, printing, and distribution contracts for a minimum of three-years (subject to satisfactorily performance) in recognition of major investment on the part of service provider.</p> <p>Yearly demand for Textbooks is prepared and submitted by RSU in a timely manner.</p>
11	Distribution of free textbooks	<ul style="list-style-type: none"> Revise / Develop mechanism for textbook distribution Finalize Textbook distribution mechanism Approval from relevant authority 	<ul style="list-style-type: none"> Textbook distribution mechanism revised / developed Textbook distribution mechanism shared and finalized Textbook distribution mechanism approved by competent authority 	<ul style="list-style-type: none"> Copy of distribution mechanism Letter of approval 	30 days	One-off	STBB	RSU, DEOs and ADO		<p>The notified distribution mechanism for free textbooks shall ensure timely availability of textual material in schools.</p> <p>The distribution mechanism shall promote the use of innovative methods e.g. text messages, e-ordering system based at the district office, SEMIS coded packaging, use of mobile technology for tracking textbooks down to classroom level.</p> <p>The E&LD shall make efforts to involve the existing SMC and other civil society / community based organizations in monitoring the</p>

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
		<ul style="list-style-type: none"> Notification and dissemination Distribution of textbooks 	<ul style="list-style-type: none"> Relevant stakeholders notified in a timely manner Textbook distributed at all levels 	<ul style="list-style-type: none"> Notifications and mailing lists, website of E&LD Receipts from focal persons at all levels 						distribution of textbooks in their respective areas of working.
12	Develop a coordination and monitoring mechanism for the quality textbook development	<ul style="list-style-type: none"> Design monitoring tools Coordinate with relevant departments / offices Conduct field monitoring Prepare reports for feedback 	<ul style="list-style-type: none"> Number of monitoring tools developed Number of Monitoring visits scheduled in consultation with involved departments / offices Number of field monitoring visits conducted Number of feedback reports shared with concerned stakeholders 	<ul style="list-style-type: none"> Copies of monitoring tools Record notes, Schedules of visits Field visit reports Copies of monitoring and other relevant reports 	30 days	One-off	STBB	BCEWS, Directorate of M&E-E&LD, RSU	Technical Experts from M&E	<p>Assumption: The target groups are interested and willing to participate in the process. Financial resources shall be provided by STBB. Linkages with universities and research organizations shall provide the STBB much needed set of research skills and knowhow. STBB shall coordinate and communicate research areas / topics to universities and research institutions. Basic academic studies on role of textual materials and their desirable form. Research studies on relationship between textual material and teaching methodologies. How do teachers use textual material in planning and making decisions about instructions? What is the role of textual material in education reforms?</p>
					60 days	On-going (need based)	STBB	BCEWS, RSU, M&E, SMCs, Directorates of Schools, CBOs, Universities		

Teacher Education

Change in the curriculum requires new or additional skills in Teacher Education programmes in terms of provision of new knowledge and skills. This is because changes in the curriculum may not be part of the existing repertoire of teacher skills. Teacher Education, therefore, becomes essential in implementation of curriculum. After adoption of the change, teacher education/training institutes (TEIs/TTIs) need to be informed of the change. Education & Literacy Department and TEIs/TTIs review the new curriculum; identify the areas requiring training and design teacher education programs for the required skills. Existing programs are the first to adopt the change. Depending upon the nature and the extent of the change and existing human resource and capacity of TEIs/TTIs, roll out of training programs may take time but what is essential is the acknowledgement that this needs to be done as priority.

New textual material requires additional effort from teachers in learning the new material and adopting them in their teaching. The change affects reach right down to the individual lesson plans developed by the teachers. In most cases as witnessed in the past curriculum reviews a change in the curriculum is confined to introduction of new textbooks while training of teachers in adoption of new teaching methodologies is ignored. Implementation requires changes not only in textbooks but also in parallel in teaching methodologies. Therefore more efforts are required on part of the teachers training institutes to ensure that the required change is communicated to the teachers accordingly and in due course of time.

The importance of effective communication with teachers, explaining the purpose of the change and the potential for improving learning outcomes cannot be overemphasized. Teachers should be treated as the most important actors in Curriculum Implementation. Their points of view and conditions should not be ignored. It should be kept in view that the best possible results for implementation may not be achieved by just passing out instructions to the teachers for the change, but rather by taking teachers on board and convincing them about the need for the change.

A continuing professional development system is being designed in Sindh which will provide continuous ongoing professional support to teachers at school level and also fosters their participation in their own professional development through reflective practices and peer learning ways.

Initial Teacher Education of teachers normally focuses on equipping the teachers with necessary pedagogical skills to deliver a variety of contents at different age groups of learners. The National Education Policy 2009 has the following provision for pre-service teacher education in Pakistan;

- Teacher education curriculum shall be adjusted to the needs of the school curriculum and scheme of studies. The curriculum shall include training for student-centered teaching and cross- curricular competencies.

Under the provisions of National Education Policy 2009, the existing initial teacher education programmes are being replaced with Associate Degree and Bachelor of Education Degree in Sindh. This means that newly established Sindh Higher Education Commission has to take over the responsibility of preparing teachers for the whole system of school education. Therefore, the liaison between Sindh HEC and STEDA is required to implement new curriculum effectively.

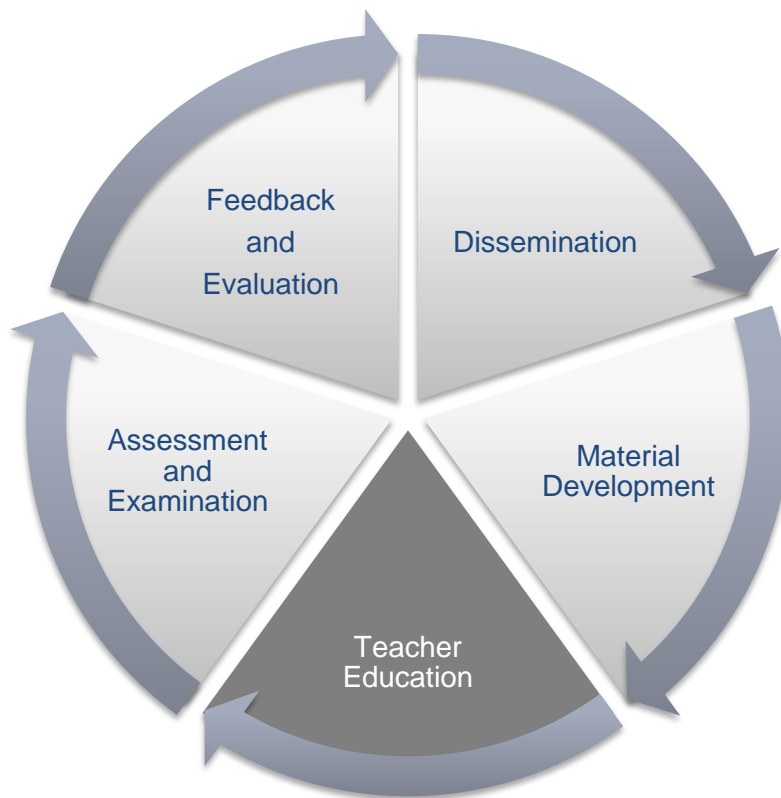
The steps to be taken to improve the quality of teacher education are proposed as under.

Initial Teacher Education (Pre-service)

- Exchange information about new curriculum with Sindh Higher Education Commission and other related institutions responsible for teacher education in Sindh
- Liaison with the concerned TEIs/TTIs for aligning teacher education curricula with revised/new school curricula

Continuing Professional Development (In-service)

- Develop framework for training all teacher educators, education managers, supervisory personnel and teachers on curriculum.
- Develop training and support materials.
- Plan and implement teacher training for the new curriculum.
- Develop and implement continuous support system for enhanced professional competence.
- Agree upon steps to align pre-service training with the new curricula.



TEACHER EDUCATION

Outcome 3 All pre-service and in service teachers are trained and supported in applying the curriculum in their teaching learning process, assessment and evaluation.

- 3.1 Number of Teacher Educators trained in designing and delivering training programs as per the curriculum
- 3.2 Percentage increase in professional competence / development of teachers to apply the curriculum.
- 3.3 Number of teaching learning resources (teacher guides, lesson plans, supervision guides) developed as per subject curriculum and disseminated.
- 3.4 Continuous support system for teachers in applying curriculum is in place.

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
In-Service Teacher Education Programs/ CPD framework										
1	Develop framework for training all teacher educators, education officials, supervisory personnel and teachers on curriculum	<ul style="list-style-type: none"> Organize consultative meetings for agreement on framework for training Prepare plan for training according to the aims of the curriculum Identify phases for the training Approval of framework and plan for training from competent authority Notify and disseminate the Training Plan 	<ul style="list-style-type: none"> Number of consultative meetings held Framework for training on curriculum developed Phase-wise plan for training developed Phase-wise training plan in curriculum approved Training Plan for Sindh notified and disseminated 	<ul style="list-style-type: none"> Meeting Records Agreed upon framework Phase-wise Training Plan Approval letter Notification and distribution list, website of E&LD 	60 days	One-off	STEDA	E&LD, RSU, BCEWS, PITE, DSEs	Financial, Human and Material	STEDA will provide policy guidelines and training standards for training framework/design.

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
2	Develop training and support / resources materials	<ul style="list-style-type: none"> Identify the required resources Review available resources (developed by other organization, Provinces) Identify and train experts in development of training material Develop / adapt / adopt training and support material as agreed Approval of developed / adapted /adopted training and support material Print training and support material 	<ul style="list-style-type: none"> Need assessment carried out Number of available resources identified and reviewed Number of training material developers identified and trained Number of training and support material developed / adapted / adopted Number of training and support material approved Number of training and support material printed 	<ul style="list-style-type: none"> Report of need assessment List of reviewed resources List of experts Workshop reports Developed / adapted/ adopted material Letter of approval Printed material 	120 days	One-off / need based	BCEWS	PITE, STBB, DSE, DPS, TEIs/TTIs, NGOs,	Technical Experts, Subject Experts, Financial Material	Need assessment in terms of resources and training Training Resources (modules, manuals, lesson plans, personnel, logistics and other training material) BCEWS will need additional finances for material development and printing. Assumption: Standards of Certification Programmes at STEDA are in place.

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
3	Conducting Training of Teacher Educators (TOT) on curriculum	<ul style="list-style-type: none"> Design the training schedule / outline Design selection criteria and process for Teacher Educators Select qualified Teacher Educators Conduct / launch TOT Evaluation of TOT 	<ul style="list-style-type: none"> Training schedule / outline of TOT designed and approved Pool of Teacher Educators for TOT selected as per set criteria Implementation Plan for TOT approved Number of TOTs held Number of pre and post evaluation done 	<ul style="list-style-type: none"> Training Schedule / outline Selection criteria List of qualified Teacher Educators Copy of Implementation Plan and list of training venues Training reports Evaluation reports 	30 days	Ongoing (need based)	BCEWS	PITE DSE TTIs, Universities	Financial Technical Experts Material	Guiding Principle: Provision of funds for conducting TOT in the regular budget of BCEWS.

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
4	Training of teachers and supervisory personnel on curriculum	<ul style="list-style-type: none"> Design phase-wise training schedules/outline Design subject and level-wise batches of teachers & supervisory personnel for training Approval and notification of training schedules and participants Launch / implement phase-wise training of Teachers Evaluation of Teacher trainings 	<ul style="list-style-type: none"> Design outline and seek approval of training outline Number of teachers and supervisory personnel categorized (subject and level-wise) Training schedules and participants notified Number of phase-wise trainings implemented Pre and post capacities of teachers and supervisory personnel analyzed 	<ul style="list-style-type: none"> Phase-wise Training schedules / outline / Plans List of subject and level-wise batches Notification of approved schedules and participants Training Reports Evaluation Reports 	90-120 days	Initially one-off then need based.	PITE	BCEWS DSE Developmental Partners	Financial Resource Human Resources Physical and Technical Resources	<p>Assumption: Effective coordination amongst development partners is in place.</p> <p>Training plans/programs endorsed by STEDA</p> <p>Trainings may be planned in June-July and then in December</p>

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
5	Develop and implement continuous support system for enhanced professional competence	<ul style="list-style-type: none"> Conduct baseline and follow up studies Discuss and agree upon continuous support system Approve continuous support system to apply curriculum. Explore and channelize resources for the continuous support system Execute continuous support system Prepare case for regularizing the CPD 	<ul style="list-style-type: none"> Baseline study designed and conducted Existing resources for continuous support system identified Continuous support system developed and agreed. Continuous support system approved Resources for continuous support system rationalized and allocated Monitoring and evaluation tools designed and responded Rationalized plan / Case prepared 	<ul style="list-style-type: none"> Baseline study report List of existing resources Agreed upon continuous support system for teachers Approval letter and copy of the support system Resource mobilization plan Monitoring Tools Evaluation Reports Copy of the Case / plan 	30-60 days	On-off	STEDA	BCEWS DSE PITE Public / Private Institutions Development Partners	Financial Resources Human Resources Physical and Technical Resources	<p>Analysis: There are 43 teacher training institutes out of which 28 are offering pre-service teacher education programs and the remaining 15 are supposed to provide technical support to in-service teacher for improving their competencies in teaching learning process.</p> <p>Assumption: The GoS is committed to sustain efforts for</p> <ul style="list-style-type: none"> Establishing (Phase-wise) taluka-based centers for continuous support of teachers at school level Functionalizing existing educational technology resource centers as part of continuous support system <p>Assumption: Effective coordination amongst development partners is in place.</p>

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
		<ul style="list-style-type: none"> Approval from the competent authority Allocation of funds for CPD 	<ul style="list-style-type: none"> The plan / Case presented and approved Appropriate funds allocated 	<ul style="list-style-type: none"> Approval letter and notification Copies of the Budget 						
Initial Teacher Education (ITE)										
6	Agree upon steps to align pre-service training with the new curriculum	<ul style="list-style-type: none"> Exchange information about new curriculum with Sindh HEC and other related institutions responsible for teacher education in the Province of Sindh Network with the concerned institutions for aligning teacher education curriculum with school curriculum Develop framework (way forward) for aligning pre-service training with new school curriculum Approve, notify, disseminate the way forward 	<ul style="list-style-type: none"> Database of relevant institutions for exchange of information developed Number of coordination meetings held Number of record notes/reports produced Network mechanism agreed The way forward for aligning pre-service training with school curriculum developed and agreed The way forward approved and notified 	<ul style="list-style-type: none"> List of relevant stakeholders Minutes of the meetings Record notes Copy of the way forward Approval letter Notification 	30-60 days	Ongoing	BCEWS	Sindh HEC, Universities PITE STEDA	Human Resources Financial Resources Physical and Technical Resources	Under the provisions of National Education Policy 2009, the existing initial teacher education programmes are being replaced with Associate Degree and Bachelor of Education Degree in Sindh. This means that newly established Sindh Higher Education Commission has to take over the responsibility of preparing teachers for the whole system of school education. Therefore, the liaison with Sindh HEC is required to implement new curriculum effectively.

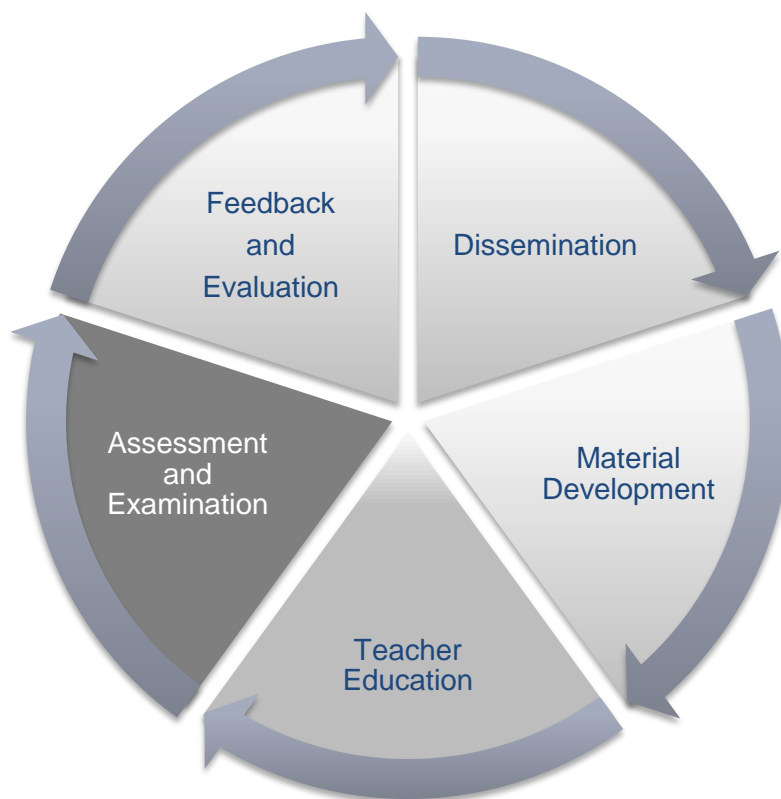
Assessment and Examination

Curriculum Implementation includes bringing about the necessary changes in assessment and examination practices to match the requirements of the new curriculum. For instance a shift toward testing the comprehensive understanding and application of the content from rote learning of the textbook entails a major change in teaching methodology and vice versa. At the first level changes in curriculum require assessment and examination authorities to be informed accordingly. They carry out suitable modifications in examination practices and give new instructions to examiners. At a deeper level, the change will require new types of assessment and examination techniques and systems. Curriculum construction lays out the details of changes in assessment and examination practices that will be required in each phase of Curriculum Development. Without it the objectives of the changes in the curriculum cannot be achieved satisfactorily.

Teachers must be trained both in formative and summative assessment. Summative assessment measures the degree of student achievement at the end of an instructional process; whereas formative assessment is used to facilitate student' improvement by identifying gaps in the achievement of learning outcomes. The results of formative assessment should be fairly shared with the students as well as the parents. As part of educational process we need to recognize the importance of assessment in achieving overall goals of education.

Steps to be taken for curriculum based assessment are suggested below.

- Situation analysis of current assessment and examination practices.
- Develop assessment and examination framework (SLO based) to align existing system (internal & external) with the curriculum standards.
- Orientation of relevant institutional stakeholders on assessment & examination frameworks.
- Training of all stakeholders in aspects of assessment.
- Develop test Items Pool / Bank based on curriculum and the SLOs for formative and summative assessment.
- Develop strategies for introducing the revised assessment system on a large scale.
- Use assessment data/results for school performance evaluation and / or reviewing the curriculum.



ASSESSMENT and EXAMINATION

Outcome 4 Assessment and Examinations are based on the Framework of Curriculum.

- 4.1 Key institutional partners oriented in assessment and examination based on curriculum framework.
- 4.2 Textbook authors, paper setters, teachers, supervisory personnel trained for improving the assessment and examination practices as per curriculum framework.
- 4.3 Improved internal and external assessment and examinations are practiced to assess student learning outcomes as specified in the curriculum.
- 4.4 Uniform assessment and examination system is introduced at classes V and VIII in each district.
- 4.5 Assessment and examination results are used for school performance evaluation and / or reviewing the curriculum.

S. No.	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
1.	Situation analysis of current assessment and examination practices	<ul style="list-style-type: none"> Analysis of existing assessment and examination practices tools Validate analysis 	<ul style="list-style-type: none"> Analysis Report developed Analysis report/findings validated and reported. 	<ul style="list-style-type: none"> Analysis report Validation report 	60 days	One-off	PEACe-BCEWS	RSU, STBB, BISEs, DG Colleges, DSEs, DEOs, Directorate of Registration of Private Institutions, Directorate of M&E-E&LD	Human Financial Technical Assistance	<p>Tools: Previous papers, record of assessment, mechanism for sharing results with students and parents.</p> <p>Assumption: Education & Literacy Department, Government of Sindh is committed to strengthen the institutional capacity of PEACe</p>
2.	Develop assessment and examination framework (SLO based) to align existing system (internal & external) with the curriculum standards.	<ul style="list-style-type: none"> Develop framework for implementation Approval and notification of the framework from the competent authority 	<ul style="list-style-type: none"> Framework developed Framework is notified and disseminated 	<ul style="list-style-type: none"> Framework Notification and distribution list Websites of E&LD, BCEWS 	30 days	One-off	PEACE-BCEWS	STBB, BISEs, DG Colleges, DSEs, DEOs, Director Directorate of Registration of Private Institutions, Directorate of M&E-E&LD, representation of private institutions, universities	Financial Technical Assistance	<p>The framework will guide on the structure, frequency, administration, weightage to quarterly assessment, consolidation and sharing of data, and its usage.</p> <p>Framework shall help in identifying and establishing links with partners for using assessment results for updating Curriculum, text books, teacher education, and school environment</p> <p>Assumption: Establishment of Sindh Examination Commission.</p>

S. No.	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
3.	Orientation of relevant institutional stakeholders on assessment & examination frameworks	<ul style="list-style-type: none"> Develop orientation material for stakeholders Organize meetings and Orientation workshop(s) with stakeholders 	<ul style="list-style-type: none"> Orientation materials developed. Schedule / outline of orientation workshop developed and disseminated. Number of orientations held 	<ul style="list-style-type: none"> Orientation material Workshop schedule Workshop reports 	15 days	One-off	PEACE-BCEWS	RSU, STBB, PITE, BISEs, DG Colleges, DSEs, DEOs, Directorate of Registration of Private Institutions, Directorate of M&E-E&LD	Human Financial Material	Stakeholders: STBB, BISEs, DG Colleges, DSEs, DEOs, Director General Registration of Private Institutions, representatives of private institutions, Universities, Director M&E, PITE and TTIs
4.	Training of all stakeholders in aspects of assessment	<ul style="list-style-type: none"> Develop IT integrated Training Manual on Assessment Organize phase-wise training workshops Impact analysis of training 	<ul style="list-style-type: none"> Number of training manual on assessment developed Training workshops schedule / outline prepared Number of training workshops held Number of pre and post evaluation reports prepared and shared 	<ul style="list-style-type: none"> Assessment training manual Workshop Reports Evaluation reports 	One year	One-off	PEACE-BCEWS	RSU, STBB, BISEs, DEOs, PITE and Assessment Expert, Teacher, Head Teacher, Supervisory personnel (from private sector as well)	Human, Financial, Logistic	Duration: Orientation and trainings shall spread over 12 months. Phase-wise trainings for LMTs and MTs shall be organized. Stakeholders: paper setters, test item developers, textbook writers, reviewer, teacher, Head Teacher, supervisory personnel, moderators, head examiners

S. No.	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
5.	Develop test Items Pool / Bank based on curriculum and the SLOs for formative and summative assessment	<ul style="list-style-type: none"> Development of <ul style="list-style-type: none"> Subject framework Test specification Rubrics Test Items Test administration manual Student Report Format 	<ul style="list-style-type: none"> Framework for Item Development designed # of samples of test items developed Draft of Test Administration manual developed 	<ul style="list-style-type: none"> Copies of Framework, Test Items, Test Administration Manual 	30-60 days	One-off	PEACE-BCEWS	STBB, BISEs, DEOs, PITE, Assessment Expert, Teacher, Head Teacher, Supervisory personnel (from private sector as well)	Human Financial Technical Expert	<p>Assessment shall but not limited to:</p> <ul style="list-style-type: none"> provide information from the students' perspective support self-assessment provide samples of students' work as evidence of learning provide visual representations of how and what student think provide immediate feedback on students' learning provide evidence of learning in context indicate achievement compared to performance nationally and internationally
6.	Pilot testing of items / tests / questions	<ul style="list-style-type: none"> Printing of material Pilot testing Analysis of data Finalization of test items Dissemination of finalized assessment tools 	<ul style="list-style-type: none"> Number of material printed Schedules of X number of piloting Number of stakeholders contacted Plan for analysis developed Statistical data on test questions available Number of test items finalized Finalized assessment tools accessible in hard and soft versions 	<ul style="list-style-type: none"> Printed material Schedule / outline of pilot testing Reports of pilot testing Analysis Plan Statistical Reports Test items Distribution list and websites of E&LD, BCEWS, BISE 	150-180 days	One-off (development) Ongoing (based on revisions)	PEACE-BCEWS	RSU, DSE, DCE, STBB, PITE, STEDA, Directorate of Private Schools, CBOs, NGOs M&E-E&LD	Human Technical Assistance Financial	<p>Dissemination of finalized assessment tools means the:</p> <ul style="list-style-type: none"> Subject framework Test specification Rubrics Sample Test Items Test administration manual Student Report Format as a resource material

S. No.	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
7.	Develop strategies for introducing the revised assessment system on a large scale	<ul style="list-style-type: none"> Organize consultative workshops with experts/stakeholders to develop strategic plan Approval of the strategic plan Notification and dissemination of strategic plan Implementation of the notified strategic plan Follow up/monitoring of the strategic plan 	<ul style="list-style-type: none"> Number of experts / stakeholder identified Number of consultative workshops held Strategic plan developed and agreed Strategic plan approved by competent authority Strategic plan notified and disseminated Number of dissemination activities (meetings, seminars, workshops) held Revised internal and external assessment practiced in schools (private and public) Unified assessment and examination held at classes III, V and VIII Follow-up / monitoring Performa / tools developed Number of follow-ups / M&Es 	<ul style="list-style-type: none"> List of identified experts / stakeholders Workshop reports Copy of the Strategic Plan Approval letter Notification and distribution list Websites of E&LD, BCEWS Record notes of dissemination activities Assessment schedules, Sample papers, reports cards Sindh Examination Commission Monitoring Performa / tools Monitoring report 	150-180 days	Need based	BCEWS -PEACE	RSU, BISEs, DCEs and DSEs, Directorate of Registration of Private Institutions, Directorate of M&E-E&LD NGOs, CBOs, Development partners, STBB, PITE	Human, Financial, Technical Expertise	<p>Assumption: Coordination amongst development partners is in place.</p> <p>Sindh Examination Commission is in place.</p> <p>Incorporation of modal test papers in the textbooks at appropriate intervals (i.e. After every 2 to 3 units / chapters) could be considered as strategy to introduce teachers and learners to the new mode of assessment.</p>

S. No.	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
8.	Use assessment data/results	<ul style="list-style-type: none"> • Design structural support mechanism for data use: <ul style="list-style-type: none"> ○ Learning areas ○ Cognition Standards for these areas ○ Tasks that allow observation of that cognition ○ Guidelines for interpreting these observations • Constitute / form Data Teams for doing research / inquiry into assessment data • Design strategies for improving students' achievements • Share / disseminate the strategies 	<ul style="list-style-type: none"> • Technical working team to design structural support mechanism formed • Number of learning areas identified • Observation tasks / tools developed • Interpretation guidelines developed and agreed • Number of Data Teams formed based on notified qualifications / TORs • Number of areas identified for improvement based on the findings of Data Teams • Number of reports developed for dissemination • Number of dissemination seminars, meetings held • Number of reports uploaded on websites 	<ul style="list-style-type: none"> • Copy of the support mechanism • Composition and notification of Data Teams • Strategies for improvements • Dissemination Reports • Distribution lists 	60-90 days	Annually	BCEWS -PEACE	RSU, BISEs, DCEs and DSEs, Directorate of Registration of Private Institutions, M&E-E&LD, NGOs, CBOs, Development partners	Human, Financial, Technical Expertise	<p>Possible Data Sources: Annual tests, Interim tests (curriculum based measures, quarterly classroom tests, data from day-to-day activities), demographic and behavioral data i.e. background, attendance, social and behavioral issues, retention and dropout rates.</p> <p>Support Mechanism: Before researchers / assessment experts can engage in inquiry into assessment data, we need a support mechanism to be in place. The mechanism highlights:</p> <ul style="list-style-type: none"> • the key learning areas (outlined in the curriculum), • students' cognition in each domain / learning area, • tasks that allow observation of that cognition, and • guidelines for interpreting the observations. <p>The Data Teams shall be devoted to setting learning goals, organizing data collection, analysis, and interpretation by using rubrics, protocols etc. After agreeing on strategies to address a problem, the system should set specific, measureable, and manageable goals (short-term, medium-term, and long-term) to determine whether the strategy for improvement is working.</p>

Feedback and Evaluation

Feedback and evaluation of the curriculum is a process of monitoring its implementation by employing a number of means. Monitoring is a purposeful activity designed to serve one of the two:

1. Provide timely information for review and minor revision
2. Provide end of phase evaluation for the following phase of curriculum development.

In other words, the instruments of feedback and evaluation may have a short term use: they generate data which is then used to carry out any revisions that may be necessary in the curriculum even prior to the next phase of new curriculum construction and implementation. No major changes are ordinarily contemplated during curriculum implementation phase. Feedback and evaluation is initiated in the form of studies and reviews. Data generated from the feedback and evaluation mechanisms generates reports. These reports also inform the work of curriculum construction that is undertaken at the beginning of the next phase of curriculum development. This review is different from the one that may be carried out periodically and results in minor revisions.

Principles of Curriculum Evaluation

Curriculum evaluation involves data collection, review of implementation and technical studies. It is based on the following principles:

1. Data collection should be from a representative sample to be able to draw credible conclusions;
2. Baseline situation should be sketched out to assess the impact of curriculum implementation;
3. Sufficient number of observations at different time intervals should be taken to formulate an assessment on Implementation;
4. Communication and administrative systems in which curriculum implementation is taking place should be studied;
5. Data already available should be used where possible. For instance, examination data on student achievements contains information which is relevant to effectiveness of the curriculum;
6. In-depth analyses should include detailed interviews with teachers, students, district education managers and other stakeholders.

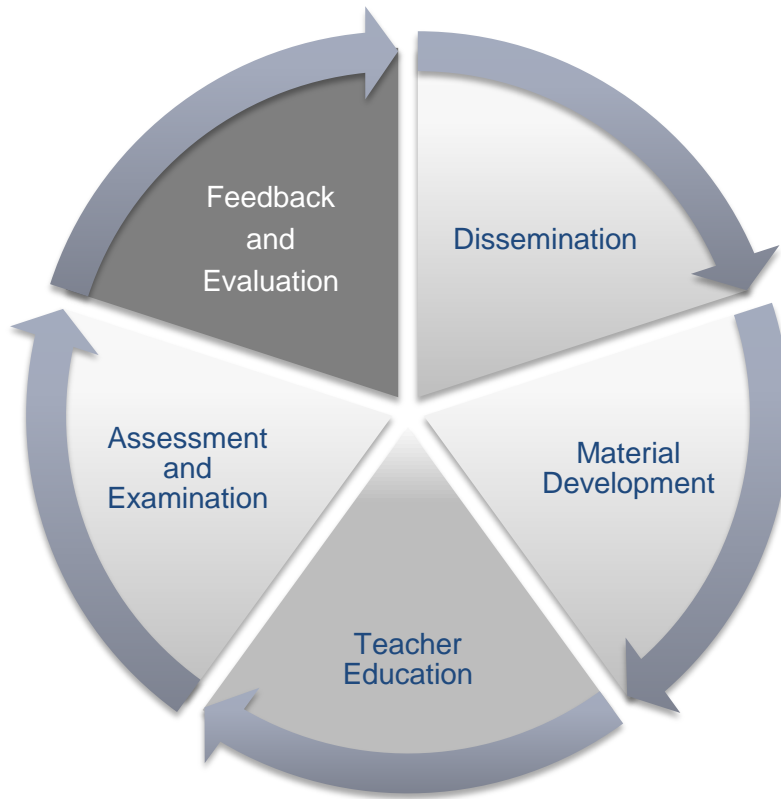
Methods (not limited to) to be adopted

Different methods are used for data collection. They include:

- Surveys for data collection
- Classroom observations
- Questionnaires sent to teachers, students and school heads
- Interviews with district education managers
- Studies including impact analysis
- Benchmarking and follow up studies

In the context of Curriculum Implementation Framework following steps are suggested to institutionalize the feedback mechanisms for school curricula.

- Sensitization of institutional stakeholders on importance of curriculum evaluation / feedback.
- Develop conceptual framework for Curriculum Evaluation / Feedback.
- Establish Evaluation / Feedback mechanism.
- Develop Steering / Coordination mechanism (linkages with partners (internal and external)).
- Develop way forward / framework for curriculum revision.



FEEDBACK and EVALUATION

Outcome 5 Research-based System is in place for assessing the implementation as well as the effectiveness of curriculum.

- 5.1 Standard procedures and tools developed for feedback and evaluation
- 5.2 Research studies conducted based on developed standard procedures and tools on regular basis.
- 5.3 Findings of the research studies shared and made accessible to stakeholders
- 5.4 Results of research studies used for informed decision making and implementation of education programs / schemes

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
1	Sensitization of institutional stakeholders on importance of curriculum evaluation / feedback	<ul style="list-style-type: none"> Mapping of institutional stakeholders Develop support material Organize seminars, workshop 	<ul style="list-style-type: none"> Number of stakeholders identified Number of support material developed Number of orientations / workshops / seminars held Number of relevant stakeholders / partners orientated 	<ul style="list-style-type: none"> List of identified stakeholders Copies of support material Reports of workshops / seminars 	5 days per activity	One-off then Need based	BCEWS	RSU, Directorate of M&E – E&LD, BCEWS, STBB, PITE, Development Partners	Technical Assistance	<p>Orientation about purpose and scope of evaluation / feedback, how it enriches decision making process about the next revision cycle of curriculum.</p> <p>Stakeholders:</p> <ul style="list-style-type: none"> Institutions SMC, BCEWS, TTIs, OC, PITE, BISE, STEDA, RSU, Universities, SAT, CBOs, NGOs, <p>Assumption: E&LD, GoS is committed to strengthen the institutional capacity of BCEWS as Research oriented institution.</p>
2	Develop conceptual framework for Curriculum Evaluation / Feedback	<ul style="list-style-type: none"> Constitute technical committee to develop concept framework Organize meeting(s) to share and agree on conceptual framework Approval of conceptual framework from competent authority 	<ul style="list-style-type: none"> Technical working group constituted Draft plan / strategy designed Number of consultative meetings held Conceptual framework developed and agreed. Conceptual framework approved 	<ul style="list-style-type: none"> Notification of Technical working group Copy of the draft conceptual framework Record notes Agreed upon framework Approval letter 	30 days	One-off	BCEWS	RSU, Directorate of M&E-E&LD, Universities STBB, PITE, STEDA, SMCs BISE, TTIs	Financial Technical Assistance.	<p>Evaluation / feedback typically concerned with:</p> <ul style="list-style-type: none"> Impact of curriculum on students, society, economy Process through which curriculum was developed Content and design of the curriculum compared with recent educational changes and advances <p>It provides the basis for curriculum policy decisions for feedback on continuous curriculum adjustments and processes of curriculum implementation</p>

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
3.	Establish Evaluation / feedback mechanism	<ul style="list-style-type: none"> Design evaluation / feedback mechanism based on the conceptual framework Organize consultative meetings to share and agree on the mechanism Approval of the mechanism form the competent authority Disseminate the approved mechanism to stakeholders 	<ul style="list-style-type: none"> Evaluation / feedback mechanism drafted Number of meetings held Evaluation / feedback mechanism developed and agreed. Evaluation / feedback mechanism approved Number of orientation / meetings held with stakeholders Number of press releases appeared in leading newspapers Number of support material developed on the approved mechanism 	<ul style="list-style-type: none"> Draft of evaluation / feedback mechanism Meeting reports Agreed upon evaluation / feedback mechanism Approval letter Orientation / meeting notes Press releases, distribution lists Websites of E&LD and of institutional partners Copies of leaflets, matrix, charts etc. 	30-60 days	One-off	BCEWS	RSU, Directorate of M&E – E&LD, Universities, STBB, PITE, STEDA, SMCs BISE, TTIs	Financial Technical Assistance	<p>Assumption: The GoS is committed to sustain efforts for introducing research and development in the curriculum construction and administration.</p> <p>The mechanism shall answer:</p> <ul style="list-style-type: none"> Who, why, what, how, when Purpose and scope of evaluation / feedback What type of data would we need? Is there any existing data we can access? Do we need other data How do we go about getting these? Analyze data Generate and share reports <p>The approved evaluation / feedback mechanism shall form the basis for the subsequent implementation steps in this matrix.</p> <p>This step is closely linked with implementation step 8 (page 36) of Assessment and Examination.</p>

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
	a) Develop tools for feedback on all aspects of curriculum implementation	<ul style="list-style-type: none"> Identify experts Analysis of existing practices and tools Organize consultative meetings / workshops to design and agree on tools Develop tools (Questionnaires, videos, checklist, interviews) 	<ul style="list-style-type: none"> Number of experts identified The available practices and tools analyzed Number of meetings held Number of tools agreed upon Number of tools for feedback on aspects developed 	<ul style="list-style-type: none"> List of experts Analysis report Meeting record Copies of Tools 	6 months	Annually	BCEWS	Directorate of M&E – E&LD, Universities, STBB, PITE, STEDA, SMCs BISE, TTIs	Financial Research experts Material (Software)	<p>Experts: Researchers, teacher recruiters, teachers' educators, curriculum developers, advisers, textbook writers.</p> <p>Though it shall be done on annual basis, it should be informed by and linked with the previously done research work so that progression can be determined.</p>
	b) Piloting & validation of tools	<ul style="list-style-type: none"> Identify pilot areas Select institutions Identify field staff Mobilize required resources (finances, material etc.) Piloting Validation of tools 	<ul style="list-style-type: none"> Number of pilot areas identified Number of institutions identified Number of field staff identified Operational plan for piloting developed and approved. 100 % completion of forms / instruments 75% questions responded from the tool Number of tools / instruments validated by experts 	<ul style="list-style-type: none"> List of pilot areas List of identified institutions List and composition of field staff Resource mobilization and action plan Pilot report Validation reports 	6 months	Annually	BCEWS	RSU, Directorate of M&E – E&LD, Universities, STBB, PITE, STEDA, SMCs BISE, TTIs	Human, Technical, Financial, Material	After the pilot testing the tool can be revised on meaningfulness, Language usage, ambiguity etc.

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
	c) Training of field staff	<ul style="list-style-type: none"> Prepare selection criteria for field staff Selection of field staff Develop training toolkit / manual Conduct training of field staff Evaluate training measures 	<ul style="list-style-type: none"> Selection criteria for field staff prepared Number of field staff selected Training toolkit, manual, orientation. Number of trainings held Number of pre and post evaluation reports produced 	<ul style="list-style-type: none"> Copy of the selection criteria List of staff selected Training toolkit, manuals Training reports Evaluation reports 	60 days	Annually	BCEWS	Directorate of M&E – E&LD, Universities, STBB, PITE, STEDA, SMCs BISE, TTIs	Technical, Material, Financial	Training of field staff shall be contextualized as they would be going to parts of the province with unique features
	d) Data collection (when, how frequent and for what)	<ul style="list-style-type: none"> Design tools / material for Data Collection Design Data Collection Plan Mobilise resources for carrying out the field visits Develop Undertake Field Visits 	<ul style="list-style-type: none"> Number of tools / material for Data Collection designed. Data collection toolkit developed Plan for Data Collection designed and approved. Resource Mobilisation / Action Plan developed and approved Number of target areas visited 75 % of forms / tools responded 	<ul style="list-style-type: none"> Data collection tool kits Data Collection Plan Approved Resource Mobilisation Plan Visit Reports Forms/tools filled Feedback report 	60 days	Annually	BCEWS	RSU, M&E-E&LD, Universities, STBB, PITE, STEDA, SMCs BISE, TTIs	Research experts, Financial	<p>Data come from a variety of sources. It is important to have representatives with different perspectives to ensure that various sources of vital data are not overlooked.</p> <p>Data Types (not limited to)</p> <p>Achievement Data: What evidence can we collect about our students' learning?</p> <p>Demographic Data: Who are our students?</p> <p>Programme Data: How successful are our programs in bringing about the academic excellence articulated in our standards?</p> <p>Perception Data: How satisfied are school community members about our educational programs?</p>

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
	e) Analyse data patterns	<ul style="list-style-type: none"> Organize data screening (coding, entry, compiling) Analyse data patterns Prepare reports for dissemination Notify and disseminate the findings to stakeholders 	<ul style="list-style-type: none"> Number of entries scrutinised (Data Files - SPSSC) Plan for analysis developed and agreed Statistical data available Number of reports prepared Number of reports approved and notified Number of reports disseminated to X of stakeholders Number of reports uploaded on the website(s) Number of activities (meetings, seminars, workshops) held for dissemination 	<ul style="list-style-type: none"> Entries scrutinised that become part of the report Copy of the Analysis Plan Statistical Reports Distribution list and websites of E&LD, BCEWS, and BISE Record notes of the activities 	60 days	Annually	BCEWS	Directorate of M&E – E&LD, Universities, STBB, PITE, STEDA, SMCs BISE, TTIs	Technical Assistance, Material (software), Financial	<p>Achievement, demographic, program, and perception data are best analyzed through each of their own lenses. Then, when brought all together by comparing everything to the achievement data, clear patterns can appear. These patterns help in developing improvement plans and strategies.</p> <p>Based on all the data we have studied and the patterns we have observed, what is the sum of problems that have emerged from the data?</p> <p>What outcome of improvement will we set for our students regarding this problem?</p> <p>What specific actions will we take to achieve this improvement goal?</p> <p>How will we know if our strategies are successful?</p>

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
4.	Develop Steering / Coordination mechanism (linkages with partners (internal and external))	<ul style="list-style-type: none"> Organize consultative meetings to design a coordination mechanism Approval of coordination mechanism from competent authority Notification and dissemination of coordination mechanism Implementation of coordination mechanism 	<ul style="list-style-type: none"> Number of consultative meetings held Coordination mechanism designed and agreed. Coordination mechanism approved Coordination mechanism notified and shared Number of coordination meetings held Number of areas/topics identified for research Number of reports produced and shared 	<ul style="list-style-type: none"> Meeting notes Copy of the Coordination mechanism Approval letter Notification and distribution list Websites of E&LD, BCEWS Meeting notes Copies of reports 	30-60 days	One-off	BCEWS	RSU, Directorate of M&E – E&LD, Universities, STBB, PITE, STEDA, SMCs BISE, TTIs	Technical Assistance Material Financial	<p>Linkages with universities and research organizations shall provide the BCEWS the much needed set of research skills and knowhow.</p> <p>Roles and structures of SMCs shall be revisited and strengthened to play their due role.</p> <p>Effective coordination amongst partners shall ensure sustainability of feedback process.</p> <p>BCEWS shall coordinate and communicate research areas / topics to universities.</p> <p>What is curriculum for excellence?</p> <p>What measure or means will indicate that students have achieved the competencies stated in the curriculum?</p> <p>How will the teacher determine whether students have learned and identify further steps in the teaching process?</p> <p>What are the factors that determine the performance of schools?</p>

S. No	Implementation Steps / Strategies	Activities	Indicators	Data Source	Timeline		Responsibility		Resources	Additional Information
					Duration	Frequency	Lead	Partners		
5.	Develop way forward / framework for curriculum revision	<ul style="list-style-type: none"> Identify experts / working group Analysis of existing practices and tools Organize consultative meetings / workshops to design and agree on way forward / framework Approval of way forward / framework from competent authority Notification and dissemination of approved way forward / frameworks 	<ul style="list-style-type: none"> Number of experts identified The available practices and tools analyzed Number of consultative meetings held Way forward / framework designed and agreed. Way forward / framework approved Way forward / framework notified and shared 	<ul style="list-style-type: none"> List of experts Analysis reports Meeting records Way forward / framework Approval letter Notification and distribution list 	30 days	One-off	BCEWS	E&LD, RSU, STBB, PITE, BISE, NGOs, CBOs, Development Partners	Technical Assistance Financial	<p>Curriculum revision is aimed at identifying the strengths and weakness of current curriculum and to create a plan of action to address areas needing improvement.</p> <p>The information gained from data analysis shall be used to guide appropriate adjustments to the curriculum documents. Such adjustments incorporate the strengths and address any apparent weakness of the implemented curriculum.</p> <p>Because of technological developments and the resulting ease with which new information can be shared, continuously evolving curriculum is now possible.</p> <p>The Curriculum Revision Framework shall stipulate the parameters, guidelines, and steps to be taken by relevant stakeholders for managing the revision process in a more logical way.</p> <p>Assumption: The E&LD, GoS is committed to strengthen the institutional capacity of BCEWS for its extended tasks.</p>

Institutional Roles and Responsibilities

The Education and Literacy Department shall be responsible for the overall realization of curriculum implementation with its true spirit and shall coordinate with its allied departments and agencies established for curriculum development, implementation, monitoring and evaluation. It shall delegate certain aspects of the curriculum implementation to its departments and agencies established for that purpose. It shall:

- (a) provide guidelines for developing education standards
- (b) frame policy on curriculum, assessment, textbooks and learning materials
- (c) provide advice on the facilities, equipment and instructional materials to support the curriculum implementation
- (d) certify curriculum, textbook and learning material submitted by relevant educational institutions;
- (e) provide guidelines for commissioning research on curriculum, assessment and related elements of quality of education
- (f) provide guidelines for period review / evaluation / revision of curriculum and instructional material
- (g) establish an effective coordination mechanism to promote formal links between institutions for sharing expertise, experiences and relevant resources for improving quality of education
- (h) design capacity building strategies to strengthen the agencies/institutions under the administrative control of Education and Literacy Department.

Bureau of Curriculum and Extension Wing

The existing Bureau of Curriculum and Extension Wing shall:

- (a) devise school education standards in line with guidelines provided by the Education and Literacy Department
- (b) commission evidenced-based research to inform policy, curriculum design, development and review, textbook and learning material development, and assessment of and /or for learning
- (c) develop, implement and evaluate curriculum by working closely with Sindh Textbook Board, Directorates of School Education and other related line departments
- (d) review textbooks and learning material for alignment with the school education standards and curriculum goals
- (e) develop training packages for TOTs / Master Trainers
- (f) conduct training of TOTs / Master Trainers

Provincial Education Assessment Centre (PEACe)

The existing PEACe shall:

- (a) develop assessment framework (SLO based) to align existing system (internal & external) with the curriculum standards
- (b) conduct students' achievement tests at grade 3, 5 and 8
- (c) promote continuous assessment of students learning across all school levels.

Boards of Intermediate and Secondary Education

The existing Boards of Intermediate and Secondary Education shall conduct annual examination of students at Secondary and Higher Secondary levels.

Sindh Textbook Board

The Sindh Textbook Board shall continue to **arrange** for the production and publication of textbooks and learning material for all stages and types of school education as per Sindh Textbook Ordinance of 1970 and notified in the Sindh Government Gazette on November 26, 1970. It shall further be strengthened as an effective regulating and monitoring authority to

improve efficiency in managing authorship, production, copyrights, printing, and distribution of textbooks and learning materials in a timely manner by:

- (a) ensuring performance and service standards at every stage of textbook and learning material supply chain processes
- (b) outsourcing textbook and learning material development and production as packages in a transparent and competitive manner; and
- (c) using EMIS supported technological innovations in the timely delivery and tracking of textbooks and learning materials down to classroom level.

Sindh Teacher Education Development Authority (STEDA)

The Sindh Teacher Education Development Authority (STEDA) shall certify and accredit teacher education programmes and ensure the quality of both pre and in-service teacher education programmes to prepare professionally competent teachers to teach curriculum effectively. It shall also be responsible for teacher licensing for promoting culture of professionalism among teachers.

Provincial Institute of Teacher Education (PITE)

The Provincial Institute of Teacher Education (PITE) shall implement pre-service teacher education and continuous professional development programmes based on school education standards and curriculum for developing professionally competent teachers, teacher educators, and head teachers. PITE shall be responsible for academic supervision of teacher education programmes, whereas all constituent teacher education institutes as well as PITE shall work under the administrative control of Education and Literacy Department.

Directorates of School Education

The Directorates of School Education through their District Education Officers shall monitor implementation of curriculum and gather relevant information on the attainment of school education standards and report to the Education and Literacy Department in a timely manner.

Public Private Partnerships

Public private partnership is a mutual collaboration between the government and the private sector that could help reduce public spending, improve access, quality, equity and relevance in education.

The Framework for Curriculum Implementation in Sindh, therefore, recommends taking advantage of the specialised skills offered by certain private organizations. The government shall create an environment that is conducive to the establishment of well-designed PPPs to maximise the potential for improving the education outcomes.