



**Punjab Examination  
Commission**  
Towards Equal Education



## **TERMS OF REFERENCES FOR RESEARCH CONSULTANT**

### **SHORT TERM CONSULTANCY SERVICES FOR LARGE SCALE ASSESSMENT**

<b>Position:</b>	<u>Research Consultant/Educational Research Expert</u>
<b>Job Type/Duration:</b>	Contract / 140 Days
<b>Salary:</b>	Competitive / Negotiable
<b>Reports to:</b>	Director (Research and Analysis) / Chief Executive Officer, PEC
<b>Location:</b>	Punjab Examination Commission, Lahore

#### **1. Background**

Punjab Examination Commission (PEC) was established in 2006 as an autonomous body in Punjab to conduct elementary school examinations across all 36 districts of Punjab. Each year around 2.5 million students appear in PEC examination, which acts as a gateway examination to promote Grades 5 and 8 students to middle and secondary schools, respectively. The mandate of PEC includes designing, conduct, maintenance and implementation of elementary examination policy; carry out research on elementary school education, generate annual reports and recommend the Government and other allied departments on improving the education system.

#### **2. Introduction**

PEC assessments are based on Students' Learning Outcomes (SLOs) and reflect students' learning achievement at elementary school level. In order to maximize the benefits of Exam data obtained after each exam cycle, PEC aims to conduct a comprehensive research program for a District wide Large Scale Assessment (DLSA) throughout Punjab that may include multiple sub-studies or educational assessment analysis to support the larger research study. The evidence based outcomes/themes emerging from analysis of LSA research data would support in improving system related processes, provide disaggregated data as an evidence to key actors for policy guidelines for stronger emphasis on equitable financial allocation for design and conduct of quality assessments for all children of elementary education and examinations/assessments led by the School Education Department. Also, PEC is commitment to translate the evidences from LSA research into frameworks and actionable short-to-long term strategies to improve access and quality of education. In this regard, services of a Research Consultant are required who in close collaboration and engagement with the Research and Assessment wings at PEC, will develop a comprehensive Large Scale Assessment (LSA) research program. The details of the services and specific deliverables to support the organization have been listed below.

### 3. Scope of the Services<sup>1</sup>

Consultant <sup>2</sup>with a commitment to evidence-based research using rigorous research methodologies to generate meaningful and credible knowledge is required. The consultant shall be responsible for assisting and supporting the research wing in developing and undertaking research project i.e. Large Scale Assessment by using the PEC data. Additionally, the consultant is required to:

) Develop a comprehensive research proposal/plan and well-organized procedures for undertaking Large Scale Assessment. The research proposal/plan will include:

- o Clear cut purposes of Large Scale Assessment in terms of Pakistani context and state-of-the-art of education in Punjab;
- o Detailed information of domains, scope and scale of the assessment;
- o Operational definitions of all the constructs to be measured through instruments of Large Scale Assessment;
- o Research based evidences and rationale for linking/mapping of contextual variables with assessments of students' learning achievements;
- o Conduct review of literature on approved research themes/ areas/ research questions;
- o For students of Punjab province, why and what types of contextual variables should include in assessment of students' learning achievements for making valid inferences about students' achievements and directions for futuristic interventions to improve students' learning and quality of education incognizant with the wide comprehensive sector;
- o Operational procedures to draw a valid and reliable sample to achieve the purposes of assessment and make the study credible;
- o Develop a research design, research framework/operational procedure and methodology for conduct of the Large Scale Assessment;
- o Operational procedures for valid and reliable marking/scoring of instruments;
- o Guidelines for reporting trends, inferences, correlations etc.

#### **The consultant will:**

) Develop subjects' assessment frameworks (Science, Math, & English) for Grade-6 assessment. Each subject framework will consist of table of specification, definition of abilities to be measured, alignment of test design and National curriculum.

) Develop frameworks for background instruments of contextual variables. Each framework will consist of detailed information of contextual variables to be included and their significance in terms of local and international context. Detail of types of questions/items/statements to explore the impact of out-of-school and within-school factors on students' learning achievements.

) Assist in developing and reviewing the instruments (questionnaires, surveys, items etc.) for research participants.

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<sup>1</sup> The scope of assignment includes gender, equity and Childs' rights perspective.

<sup>2</sup> Consultant to abide by UNICEF Ethical research guidelines in all assignment processes, manner and deliverables.

) Develop framework for Data Analysis. It will include operational procedures, protocols including descriptive and inferential statistical methodologies for data analysis. Procedures for linking/mapping results of background instruments with students' performance for valid interpretation and inferences about domains of interest.

) Implement the plan/agenda and present the results after undertaking econometric/statistical analysis;

) Advise on areas/fields/parameters to be added at every focal point of information during the Exam cycle to obtain data that is relevant and significant in terms of research;

) Assist and support in writing papers/reports and policy briefs as needed, and assist in dissemination in relevant policy spheres;

) Identify research policy priority areas keeping in view the context of PEC and School Education Department;

#### 4. Output and Deliverables

i. Development of comprehensive and credible research proposal/plan for conduct of Large Scale Assessment (LSA);

ii. Development of frameworks for Grade-4/6 subjects i.e. Science, Mathematics, & English;

iii. Development of background questionnaires and data analysis procedure for Large Scale Assessment (LSA).

Activity	Timeline (12 weeks)	Deliverable
Comprehensive research proposal with defined parameters.	2 weeks	✓
Research design (including sampling, piloting, analysis plan & methodology of data analysis).	2 weeks	✓
Subject Frameworks for the subjects of English, Mathematics, and Science.	2 weeks	✓
Development of SOPs and guidelines for subject construct/ item developers with orientation lecture.	1 week	✓
Development of table of specifications for background instruments/questionnaires.	1 week	✓
Development of SOPs and guidelines for background instrument writers with orientation lecture.	1 week	✓
Review and finalizing subject items and background instruments.	1 week	✓
Piloting conduction plan/design	1 week	✓
Data Analysis and report writing regarding the piloted instruments/ questionnaires to be used in research study.	1 week	✓

## **5. Implementation Arrangements**

This consultancy role comprises of the short-term technical support at each of the stages *viz a viz* design, research methodology, frameworks, development of appropriate instruments, data analysis and presentation of the evidences in the form of technical report(s). The Consultant/ Expert will work in close coordination with Director (Research and Analysis), Psychometrician, and team at PEC; and possibly with other stakeholders (as appropriate) to ensure quality, validity and reliability of the study. During the conduct, the Consultant/ Expert may be requested to work on supplementary information and technical material developed to support the research and communication with the stakeholders abiding by gender, equity and Child's rights' based approaches and guidelines.

## **6. Copyright**

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## **8. Qualifications and Competencies**

### **a) Education**

PhD in Education/Educational research, Educational Planning, Public Policy, Educational Economics, Sociology, Gender Studies, Economics or any other social/ natural sciences subjects from a reputed university is required with at least five publications in international peer-reviewed journals. Excellent research, writing, IT and presentation skills are mandatory. The candidate should also demonstrate sound knowledge of research methodologies, research designs and statistical analysis used in educational research specifically and in social sciences generally.

### **b) Work experience**

- ) A minimum of 10 years' experience in research and development in public sector organizations or well-reputed universities
- ) Experience of working with local or international research organizations shall be an added advantage.
- ) Experience of teaching/research in education sector shall be an added advantage.
- ) Must have deep understanding of educational assessment theories and international assessment practices/assessment studies and their contextual backgrounds.
- ) Having extensive experience in designing, conducting, data collection, and data analyzing, undertaking and managing large scale assessments/educational researches.

***c) Languages***

) Fluency in English and Urdu.

***d) Competencies***

- ) Experience and demonstrate competency of working on statistical software like SPSS, SAS etc.
- ) Excellent communication skills including presentation, writing and research.
- ) Excellent IT skills including Microsoft Office Excel, Word and PowerPoint.
- ) Strong report/research paper writing and presentation skills.
- ) Excellent analytical skills and attention to details.

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