

## **Terms of References (ToR)**

### **Primary Survey on**

# **“State of STEM Education in Urban Schools of Bangladesh and Their Gender Dimensions: Assessment, Integration & Implementation”**

### **ToR for Procurement of a Survey Firm**





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## 1. Introduction

### 1.1 Background

STEM, which stands for education on science, technology, engineering, and mathematics, is a key factor for innovation, economic growth, and social progress of a country. Women are more likely to enroll in education, health, and welfare courses, while their representation remains lowest in STEM fields such as Information Technology, Engineering, and Manufacturing.

Bangladesh is one of the countries which is behind in STEM education, especially female learners of the country in STEM fields are way behind - one of the lowest in South Asia. In fact, gender disparity in STEM education in Bangladesh is visible from the early stages of the educational journey, which further worsens progressively through secondary and tertiary levels due to cumulative socio-cultural, institutional, and structural barriers.

There is widespread gender-based discrimination in Bangladesh, particularly for adolescents and young women in STEM education and STEM professions. Unlike other developing countries, Bangladesh suffers from a dearth of evidence on women's exposure to STEM education and STEM professional careers, major social, economic and structural barriers, as well as policy gaps in addressing those barriers.

To generate evidence on the current status along with existing status and barriers, the study aims to **conduct a primary survey and administer a short exam for STEM literacy assessment.**

### 1.2 Objective of the Survey

1. To assess the state of STEM literacy of urban students through short test across urban general schools around Bangladesh;
  - a. To share the answer scripts via an excel spreadsheet having student's answers against each questions
2. To collect data through a structured questionnaire from the students in the selected schools and to clean and encode the data for analysis
  - a. To share dataset in excel spreadsheet and in stata file (.dta format as encoded)

## 2. Details of the Survey Design

### 2.1 Survey Coverage

The survey and the short test will be conducted parallelly with the same set of students:

#### Primary Survey on Students

- This survey will assess the state of STEM education and identify key systemic, cultural, and institutional barriers to urban students, especially adolescent girls' participation, retention, and progression in STEM education, including gaps in curriculum integration, teacher capacity, and social norms.
- A total of **420 students** will be surveyed across **all 8 divisions** of Bangladesh (Table 1).
- Respondents will include **only class 9 students of one boys' and one girls' school per districts** (as specified in the sample frame).

#### Short test on the same set of students

- This short test will evaluate the state of STEM literacy of urban students

- A total of **420 students (who completed the primary survey)** will be surveyed across **all 8 divisions** of Bangladesh (as specified in the sample frame in Table 1).
- Respondents from **only class 9 students (one girls' and one boys' schools)** (as specified in the sample frame in Table 1).

## 2.2 Sampling Frame for the Survey

**Table 1: Sample Frame for the Survey and Short Test**

SL No	Division	District	School Name	School type	Students to be surveyed
1	Barishal	Barisal	BARISAL ZILLA SCHOOL , BARISAL SADAR, BARISAL	BOYS	10 students from class nine of each school will be surveyed and sit for the test
2	Barishal	Barisal	GOVT. BAKERGANJ GIRLS HIGH SCHOOL	GIRLS	
3	Barishal	Bhola	BHOLA GOVT. HIGH SCHOOL	BOYS	
4	Barishal	Bhola	BHOLA GOVT GIRLS HIGH SCHOOL	GIRLS	
5	Chittagong	Chattogram	NASIRABAD GOVT.HIGH SCHOOL,CHITTAGONG	BOYS	
6	Chittagong	Chattogram	ABDUR RAHMAN GOVT.GIRLS HIGH SCHOOL	GIRLS	
7	Chittagong	Khagrachhari	RAMGARH GOVT HIGH SCHOOL	BOYS	
8	Chittagong	Khagrachhari	KHAGRACHARI GOVT. GIRLS HIGH SCHOOL	GIRLS	
9	Dhaka	Dhaka	NAWABPUR GOVT HIGH SCHOOL	BOYS	
10	Dhaka	Dhaka	DHANMONDI GOVT GIRLS HIGH SCHOOL	GIRLS	
11	Dhaka	Narayanganj	I.E.T. GOVT. HIGH SCHOOL	BOYS	
12	Dhaka	Narayanganj	NARAYANGONJ GOVT. GIRL'S HIGH SCHOOL	GIRLS	
13	Khulna	Kushtia	KUSTIA ZILLA SCHOOL	BOYS	
14	Khulna	Kushtia	KUSTIA GOVT. GIRLS HIGH SCHOOL	GIRLS	
15	Khulna	Meherpur	MEHERPUR GOVT. HIGH SCHOOL	BOYS	
16	Khulna	Meherpur	GANGNI PILOT SECONDARY GIRLS SCHOOL	GIRLS	
17	Rangpur	Lalmonirhat	LALMONIRHAT GOVT. HIGH SCHOOL	BOYS	
18	Rangpur	Lalmonirhat	LALMONIRHAT GOVT. GIRLS HIGH SCHOOL	GIRLS	
19	Rangpur	Rangpur	RANGPUR GOVT. ZILLA SCHOOL	BOYS	
20	Rangpur	Rangpur	GOVT GIRLS HIGH SCHOOL,RANGPUR	GIRLS	
21	Rajshahi	Rajshahi	GOVT. LABORATORY HIGH SCHOOL	BOYS	
22	Rajshahi	Rajshahi	GOVT P N GIRLS HIGH SCHOOL RAJSHAHI	GIRLS	
23	Rajshahi	Sirajganj	B.L.GOV. HIGH SCHOOL,SIRAJGANJ	BOYS	
24	Rajshahi	Sirajganj	KAZIPUR A. M .U. GOVT. GIRLS HIGH SCHOOL	GIRLS	
25	Mymensingh	Sherpur	TARAGONJ MODEL PILOT GOVT. HIGH SCHOOL	BOYS	
26	Mymensingh	Sherpur	SHERPUR GOVT GIRLS HIGH SCHOOL	GIRLS	
27	Mymensingh	Mymensingh	GOURIPUR R.K. GOVT. HIGH SCHOOL	BOYS	
28	Mymensingh	Mymensingh	VALUKA GOVT. GIRLS HIGH SCHOOL	GIRLS	
29	Sylhet	Sunamganj	GOVT. JUBILEE HIGH SCHOOL	BOYS	
30	Sylhet	Sunamganj	GOVT. S. C GIRLS HIGH SCHOOL SUNAMGONJ	GIRLS	
31	Sylhet	Sylhet	ZAKIGANJ GOVT. HIGH SCHOOL	BOYS	
32	Sylhet	Sylhet	ZAKIGANJ GOVT GIRLS HIGH SCHOOL	GIRLS	
Sample size = 10*32 = 320					
Sample from Project Areas					
33	Chittagong	Bandarban	Sample schools list will be provided later	BOYS	10 students from class nine of each school will be
34	Chittagong	Bandarban		GIRLS	
35	Dhaka	Kishoreganj		BOYS	
36	Dhaka	Kishoreganj		GIRLS	

SL No	Division	District	School Name	School type	Students to be surveyed
37	Dhaka	Gazipur		BOYS	surveyed and sit for the test
38	Dhaka	Gazipur		GIRLS	
39	Dhaka	Dhaka (Mirpur)		BOYS	
40	Dhaka	Dhaka (Mirpur)		GIRLS	
41	Dhaka	Dhaka (Savar)		BOYS	
42	Dhaka	Dhaka (Savar)		GIRLS	
Project area sample size: 10*10 = 100					
Total sample size (study area + sample area) = 320+100 = 420					
Same sample size will also sit for the Assessment					

### 3. Timeline

The assigned activities must be completed **in between February to March 2026, considering national election and Ramadan**. The firm should plan considering any upcoming challenges that may deter the survey.

### 4. Issues to be Considered

**Survey Equipment and Software:** The data must be electronically collected using tablet computers running on an Android platform and uploaded to a server daily, allowing for remote quality control and tracking study team. Hardware and software to be used by organisational convenience. We propose to use Survey CTO or KoboToolbox for conducting this survey. The survey firm is expected to collect and verify the phone number and addresses of all respondents whenever available. GPS coordinates of the interviewed respondent's addresses need to be collected.

**Implementation of training for the Survey Team:** For survey implementation, training will be provided to the interviewers and field officers according to the questionnaire of the field survey. The selected firm will conduct the training while CPD will provide necessary input if needed.

**Survey Fieldwork:** The survey firm will be responsible for writing, getting approval for, and sending letters and/or e-mails, making phone calls, setting appointments, visiting in person, and otherwise making attempts to secure high levels of participation. However, CPD will issue its cooperation letter if needed.

**Survey completion:** For a survey to be completed, relevant information must be obtained and entered into the database. No questions should be left blank except the ones skipped due to correctly applied skip patterns. The integrity and accuracy of the data are vital. The firm will establish procedures to check the quality of the surveys. At least ten percent (10%) of the completed surveys will be backchecked by telephone. Representatives of the Research team may accompany survey teams to monitor effectiveness, ensure quality and check for progress in the field.

**Data Entry, Format and Sharing:** The survey firm will share the access of the database to the Research team so that the researchers can check the data in real time during the data collection process. The Research team may download the data for checking inconsistencies and to advise

accordingly. The final data set will be delivered after the completion of 100% of the interviews. The survey data will be delivered to the Research team in Microsoft Excel (including codebook) and STATA electronic format.

**Data Quality and Non-Participation:** In order to ensure data quality and consistency, a survey data quality control procedure is in place. The first checking of the data will be completed and documented by the survey firm—

- There are no errors in variables codes, questionnaire flow, skip patterns, number of missing values, etc.
- There is no “double counting
- Monitoring of collected data
- Flagging implausible data
- There are no errors in data’s logical consistency or outliers
- Checking for straight-line answers, etc.

**Ethical Consideration:** The survey be guided by the following ethical considerations:

- Safeguarding – demonstrating the highest standards of behaviour towards respondents
- Sensitive – to gender rights, inclusion, and cultural contexts
- Openness – of information given to the highest possible degree to all involved parties
- Confidentiality and data protection - measures will be put in place to protect the identity of all participants and any other information that may put them or others at risk.
- It is expected that: Informed consent will be ensured for all the surveys.

## 5. Deliverables

The selected firm will deliver all activities related to the primary survey including data cleaning and processing of the surveys.

Specific deliverables will be as follows:

- Undertaking the primary survey and the short test, in collaboration with the CPD study team;
- Provide the clean answer sheet by inputting the exam marks in a separate excel files having answers of the students against each questions (like a database); Additionally, provide excel file and Stata file (encoded) of the survey dataset
- Engage qualified enumerators for conducting the primary surveys;
- Conduct training of the enumerators based on the questionnaires prepared by CPD;
- Supervise and monitor enumerators in order to ensure quality and standard of data to be collected by the enumerators;
- Conduct pilot survey on 1-2 area prior to launching the surveys;
- Provide the survey data to the CPD in appropriate format as per data sharing mentioned above;
- Undertake repeat survey by the enumerators, if necessary, in order to ensure accuracy and authenticity of data to be collected by the enumerators;
- Provide regular Staffing Reports noting any changes in staffing;
- Design the structure of data entry by using appropriate software as suggested by the CPD study team;
- Compile and do the entry of the survey data as per the design frame and software suggested by the CPD study team;

- Undertake coding and cleaning of the data after data entry;

## 6. Evaluation Criteria

The table below outlines the evaluation criteria

**Table: Evaluation Criteria**

Area(s)	Criteria	Weight
Technical	Understanding of the survey objectives	5
	Experience in similar projects	5
	Plans for conducting <b>exam</b> and <b>data collection</b> via survey	30
	Qualification of enumerators	5
	Time plan and data quality plan	20
Financial	<b>Competitive pricing with a reasonable and justifiable financial proposal (in one document covering both Lot 1 and 2)</b>	<b>35</b>
<b>Total</b>		<b>100</b>

**The main body of the technical proposal should not exceed 2500 words.**

## 7. Submission Procedure

Bidders are requested to submit their proposal via email to [procurement@cpd.org.bd](mailto:procurement@cpd.org.bd) by **26 January 2026**. Proposals submitted after this deadline will not be accepted.

When submitting, bidders must use the subject line **Proposal for STEM Education Survey**.

Proposals should be concise and must include three parts: **Technical Proposal (outlining information mentioned in the evaluation criteria)**, **Financial Proposal**, and **Supporting Documents**.

**Supporting documents must be submitted in a combined zipped folder.**

### Supporting Documents

For this part, bidders are requested to provide:

- Acknowledgment receipt for the last annual TAX return
- TIN Certificate
- Bank Account details
- Incorporation certificate
- Provide the contact information of the organization.
- Contact information of the project focal person.
- CVs of the project personnel

## 8. Finance Related Special Notes

- All payments for the selected vendor will be made through Account Payee Cheque in favour of the selected vendor.
- CPD will deduct TDS from the billed amount as per Section 52A, Income Tax Ordinance 1984.
- Selected vendor will need to provide CPD Mushak-6.3 with the bill at 15% rate, as per Statutory Regulatory Order (SRO) 235.

- The selected vendor must provide Mushak-6.3.
- The selected vendor will need to produce original invoices for each delivery made under each Purchase Order within this contract period

## 9. Disclaimers

- CPD reserves the right to select or reject any vendor who will drop the proposal for providing the service.
- Any attempt to unlawfully acquire and/or persuade to get the assignment will lead to immediate rejection of the respective service-provider, and CPD may also take legal actions, if required.
- Failure to deliver according to the terms of the contract shall subject the vendor to penalties as will be stipulated in the final contract.
- CPD will not be liable to indemnify any third party in respect for any claims, debt, damage, or demand arising out of this contract.
- CPD will not accept any Liability for the compensation for death, disability or hazards. Which maybe suffered by the Supplier/Supply chain through this contract while supplying CPD, no such claims will be made against CPD.
- If the bidder breaches any term or condition of this agreement (part or all), or the conditions set out in any given Purchase Order/Contract, including, but not limited to, quality of the Goods/Services, Price and Delivery requirements, the buyer shall be entitled to immediately purchases goods/services from any other source/Suppliers, in addition to any remedy available in law or equity.
- Bidders must avoid actions conflicting with CPD's principles or creating real or perceived conflicts of interest and must uphold integrity, independence, and impartiality, refraining from public statements that could harm their relationship with CPD.
- CPD enforces zero tolerance for fraud, corruption, or terrorist financing, requiring vendors and consultants to act with honesty and integrity. Violations may result in disciplinary measures, legal action, and reporting to law enforcement for prosecution.
- CPD may unconditionally terminate any agreement if a supplier violates national labour laws or fails to protect children's rights, including safeguarding them from violence, abuse, exploitation, or harm.
- CPD enforces zero tolerance for sexual exploitation and abuse (SEA) and requires adherence to its Safeguarding Policy by all staff, vendors, and associated personnel.

## 10. Contact Person

The study will be coordinated by the following person, and any queries regarding the ToR can be clarified by her:

**Ms Sabiha Sharmin**

Research Associate

Email address: **sabiha@cpd.org.bd**

Phone : **01704755303** (9.30 AM to 6 PM)

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