Terms of Reference
STEM and Coding Education CONSULTANCY
Establishing STEM and Coding education in Maldives

1. Overview

Science, Technology, Engineering, and Mathematics (STEM) education aims to incorporate the four specific disciplines as an interdisciplinary and applied approach in students learning and development. Instead of teaching the four subject areas separately STEM aims for a cohesive learning paradigm based on a modern, practical and a real-world application approach.

Computer Coding which is also a key component of STEM education is gaining significant recognition and popularity in the field of education. Many schools and other learning institutions throughout the world are introducing computer coding for children as an important area of learning. As the world is rapidly becoming technologically advanced, knowledge of computer programming and coding plays an important part in future job markets.

STEM and Coding Education which is also an essential aspect of the National Curriculum of Maldives, helps to foster ingenuity and creativity in students, assists in building resilience, encourages teamwork, collaboration & adaptation, develops problem solving skills, creates a platform for knowledge application, develops tech skills in students and prepare them for future job markets and meet the demands of the dynamic and evolving workforce of the nation.

2. Rationale / purpose for Identifying a consultant

Even though some components of STEM and Coding Education are randomly taught in a few schools and learning institutions, it is a relatively new concept in the Maldivian education system. Both, Ministry of Education and National Institute of Education lack the expertise needed to develop and implement STEM and Coding Education in Maldives.

Hence, Ministry of Education is seeking a qualified Expert as a consultant to establish STEM and Coding Education in the Maldivian schools.

Timeline: Approximately 6 months (based on completion of work)

Start date: 1ˢᵗ May 2021 (tentative)

End date: 31ˢᵗ October 2021

Location: Ministry of Education, Male', Republic of Maldives

3. <u>Scope of Work</u>

The consultant will work with the officials of MOE, NIE and other relevant bodies to conceptualize a suitable STEM and Coding Education approach for Maldives. During the period of consultancy, the consultant will;

a. develop a concept paper for establishing STEM and Coding education in Maldives;
b. develop a syllabus of STEM and Coding education;
c. develop a rollout/implementation plan;
d. prepare training manual and tools; and
e. provide TOT training and train teachers of the selected/pilot schools for STEM and Coding education

4. <u>Deliverables</u>

a. Conduct a situation analysis of STEM and Coding education in Maldives.
b. Analyse current documents (syllabus, books, other curriculum support documents, research, survey)
c. Meet with stake holders and collect relevant information/data on current teaching practices and how it is implemented.
d. Collect Information on existing resources available in schools
e. Field visits to selected schools and observe current practices
f. Develop **a concept paper, and syllabus** for STEM and Coding Education

i. Develop a Concept Paper for STEM and Coding Education

ii. Develop a STEM and Coding Education Syllabus for each key stage

iii. Validate the concept paper and the syllabus after meeting with different stake holders

iv. Map the developed syllabus with the existing national curriculum and identify gaps and interventions

g. Develop a rollout /implementation plan for STEM and Coding education in the selected/pilot schools

i. Identify interventions needed

ii. Identify Resources Needed (Human Resource/Infrastructure/Equipment)

iii. Identify Training Needs

h. Develop training manual and tools

i. Conduct TOT and training of teachers for selected/pilot schools

j. Prepare and submit a final report of consultancy

5. <u>Qualification Criteria</u>

The candidate must:

a. Have at least a Master's degree or equivalent in the field Information Communication Technology, Education Technology or Educational Leadership;

b. Have at least 3 years of work experience in the area of education technology or STEM education.

c. Have experience in working with schools or educational institutions

d. Be fluent in written and spoken English.

6. <u>Remuneration</u>

Monthly payment of MVR 25,000.00

7. <u>Facilities to be provided</u>

The holder of the position would be entitled to the following facilities:

A workstation from Ministry of Education / National Institute of Education with equipment including a computer/laptop telecommunication services, printing, photocopying and scanning services.

8. <u>Submission of application</u>

Eligible candidates should submit:

a. Application Form

b. Academic qualifications

c. Personal Profile

d. Detailed CV