**TERMS OF REFERENCE FOR INDIVIDUAL CONSULTANT TO SUPPORT STEM IN EDUCATION**

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| **PART I** | | |
| Title of Assignment | Individual Consultancy to Support an Analysis of Science, Technology, Engineering and Mathematics (STEM) in Education in Rwanda | |
| Category of the Consultancy | National or International | |
| Proposed level of Consultancy | **Middle Level** | |
| Section | **Education** | |
| Location | Kigali, Rwanda | |
| Duration | 6 months | |
| Start date | **1 July 2020** | **30 December 2020** |

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| **PART III: Signatures** | | | |
| **Function** | **Name** | **Signature** | **Date** |
| Prepared by | Sara McGinty  Chief of Section |  |  |
| Reviewed by | Brian Nyakanda  HR Specialist |  |  |
| Approved by | Nathalie Hamoudi  Deputy Representative |  |  |

**Background and Purpose**

Rwanda’s long-term development vision is to ensure a high standard of living for all Rwandans.

Rwanda targets economy-wide improvements in productivity and an economic transformation from subsistence agriculture towards commercial agriculture, manufacturing, and services. The wide range of Vision 2050 strategies are expected to increase demand for better and more appropriately skilled workers. In this regard, there is a strong need for building appropriate skills and competencies in the country.

Ensuring that Rwandan citizens have the appropriate skills and human capital will be essential for realizing this vision of national socio-economic development.

To that end, the Ministry of Education (MINEDUC) has the mandate to ensure equitable access to quality education, focusing on combating illiteracy, promotion of science and technology, critical thinking, and positive values.

To ensure that the goals of Rwanda, in general, and the Ministry of Education, specifically, are being met it is necessary to ensure strong integration of teaching and learning of science, technology, engineering, and mathematics (STEM) within the education system, from pre-primary to tertiary levels of education.

In this line, the Ministry of Education is developing a STEM Strategy, which will guide and oversee implementation of the scaling-up of STEM in Rwanda.

And, there is some investment by partners to support STEM from upper primary (Grades 4 – 6) to tertiary levels of education. But, there is a minimal support and interventions from pre-primary to lower primary levels of education in STEM.

**Justification**

It is against this background that UNICEF and MINEDUC are hiring an individual consultant to support MINEDUC to support the components from pre-primary to lower primary (Grades 1 – 3).

The scope of the work within this consultancy would complement the overall STEM Strategy, by the Ministry of Education.

**Objectives**

Specifically, the objectives of the ToR are for support to MINEDUC to:

1. Review global best practice in STEM in education, from pre-primary to lower primary education;
2. Map and identify pre-primary and lower primary initiatives and best practices in STEM within Rwanda;
3. Outline internationally compatible core competencies that students must acquire from pre-primary through P3
4. Develop a series of recommendations on key activities for improving STEM at pre-primary to lower primary levels of education in Rwanda;
5. Draft a pilot for STEM from pre-primary to lower primary education in Rwanda;
6. **Review Global best practice on STEM in Education (Focusing on Pre-primary and Lower Primary)**

The consultant will undertake a desk review of global best practise of integrating STEM in education, from pre-primary to lower primary education, with a particular focus and emphasis on African contexts.

The consultant will provide an analysis including, but not limited to, the following topics: policy; monitoring and evaluation; curriculum; teacher training; teaching and learning material; pedgagogy; learning assessment; cost efficient use of teaching learning materials for STEM; disability inclusion, and climate change resilience. International student learning assessments on STEM, such as TIMSS, shall be reviewed for guidance on core competencies to be acquired in early grades building to learning compatible with international standards.

Given the need for countries to adapt and show resilience to emergencies and natural disasters, successful use of technology and innovative methods (such as virtual science labs) will be reviewed to draw lessons for Rwanda contexts.

The consultant will then compile the findings into a comprehensive report.

**B. Map and identify pre-primary and lower primary initiatives and best practices in STEM within Rwanda**

The individual consultant will undertake a mapping of STEM initiatives and best practices in pre-primary to lower primary education in Rwanda, including, but not limited to following topics: policy; monitoring and evaluation; curriculum; teacher training; teaching and learning material; pedagogy; assessment; disability inclusion, and climate change resilience. This shall also include identification of practices that may be obsolete and ineffective in the current context of teaching and learning.

The consultant will liaise with Ministry of Education, its agencies, and other stakeholders within this process.

The consultant will then compile the findings into a comprehensive report.

1. **Develop a series of recommendations on how to scale-up STEM in education in Rwanda** (focusing on pre-primary and lower primary)

The consultant will work with the Ministry of Education to review the analysis of STEM initiatives in Rwanda from pre-primary to lower primary against the Desk Review of Global Best Practices of STEM in Education and develop a series of activities with the aim to scale-up STEM from pre-primary to lower secondary, in Rwanda.

These recommendations should be formulated, but not be limited to, the following areas: policy; monitoring and evaluation; curriculum; teacher training; teaching and learning material; pedagogy; assessment; cost efficient use of teaching learning materials for STEM; disability inclusion, and climate change resilience.

The recommendations should take into consideration and be contextualised to the situation of Rwanda as well as for anticipated shocks induced by crisis such as COVID19.

1. **Draft a pilot for STEM in pre-primary to lower primary education**

The consultant will work with the Ministry of Education, its agencies, and other relevant stakeholders, to draft a pilot for classroom level implementation of STEM from pre-primary to lower primary education, in Rwanda.

The pilot should align with the Education Sector Strategic Plan; the STEM Strategy; as well as other key strategic Government documents.

It should span pre-primary to lower primary levels of Education.

Close to the time of pilot, the consultant should consider any pressing circumstances that warrant relevant adaptations to the priorities and methdology of the intervention.

**Desired competencies, technical background and experience**

**Minimum qualifications of individual consultant**

1. The individual consultant should, at a minimum, have a Master’s degree in any of the following areas: Education, Social Sciences, Science and Technology
2. The consultant should have at least 5 years of proven experience in STEM and Education;
3. The consultant should be familiar with education systems; pedagogy; curriculum design; and/or education policy and frameworks;
4. The consultant should have the ability to meet the deadlines;
5. The consultant should have strong communication and facilitation skills;
6. Proficiency in written and spoken English is required, French and/or Kinyarwanda would be an advantage;

**Evaluation Criteria**

All bids will be evaluated according to the following standard procedure:

* Review of qualifications, CV, and past work;
* Candidates that are successful on technical review requested to submit financial proposal;
* Review of financial proposal; and
* Final decision.

The technical review will represent 70% weighting. The financial criteria will represent 30% of the weighting.

The criteria for evaluation will be as follows:

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| Category | Criteria | Marks |
| Technical criteria | Education background (Master’s in appropriate subject) of consultant | 20 |
| 5+ years of professional experience in working STEM and Education; | 20 |
| Familiarity with education systems; pedagogy; curriculum design; and/or education policy and frameworks; | 20 |
| Language skills of individual consultant | 10 |
| Financial criteria | Overall cost of the proposal and clarity of budget | 30 |

**Please note that the final remuneration will be negotiated by HR.**

**Payment Schedule**

The individual consultant will be required to deliver the following:

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| **Deliverable** | **Deadline** | **Percentage payment** |
| Report on Global Best Practice for integrating STEM in Education | 3 weeks after signing | 20% |
| Mapping of Initiatives of STEM in Education | 2 months after signing | 20% |
| Series of recommendations on strengthening STEM in Pre-primary to lower secondary education in Rwanda | 3 months after signing | 20% |
| A draft pilot for strengthening STEM in Education | 5 months after signing | 40% |

All the deliverables need to meet UNICEF requirement and quality standards. Payment will only be made for work satisfactorily completed and accepted by UNICEF and MINEDUC. UNICEF reserves the right to withhold all or a portion of payment if performance is unsatisfactory, if work/outputs is incomplete, not delivered or for failure to meet deadlines.

**General Conditions: Procedures & Logistics**

For all contractual issues, the individual consultant will report to UNICEF, Chief of Education. For technical issues, the individual consultant will work directly with UNICEF and MINEDUC. All deliverables must be approved by MINEDUC and UNICEF in order to be considered complete.

The following modalities will be applied during the contract:

* Consultation meetings will be held regularly between key focal persons at MINEDUC and UNICEF, either in person or remotely;

The individual consultant shall not make use of any unpublished or confidential information made known to her/him in the course of performing her/his duties under the terms of this agreement, without written authorization from MINEDUC, REB, and UNICEF. The individual consultant shall respect the habits and customs of the local population and abstain from interfering in the country's political affairs.

The corporate UNICEF ICT Policy on intellectual property right will be applicable, where necessary.

Policies both parties should be aware of:

* Under the consultancy agreements, a month is defined as 22 working days.
* Consultants are not entitled to payment of overtime. All remuneration must be within the contract agreement.
* No work may commence unless the contract is signed by both UNICEF and the consultant or Contractor.
* For international consultants outside the duty station, signed contracts must be sent by email. Signed contract copy or written agreement must be received by UNICEF with receipt acknowledged before travel to Rwanda.
* The individual consultant will arrange for their own travel and travel expenses, however tickets should be based on “most economical and direct route” and should be clearly estimated in the budget.

The assignment will be supervised by UNICEF Chief of Education, in cooperation with MINEDUC.

The individual consultant is expected to use their own hired vehicles, equipment, including computers. UNICEF will be under no operational obligation to pay for operational costs related to this assignment. All costs required to operationalize this assignment shall be borne by the hired individual consultant and should be included into the proposed financial proposal.

**How to Apply**

UNICEF is committed to gender equality in its mandate and its staff. Well-qualified candidates, particularly females are strongly encouraged to apply.

Interested candidates should send their complete Personal History (P11) form, which can be downloaded form (<http://www.unicef.org/about/employ/files/P11.doc>). or a CV/resume, as well as a cover letter explaining what makes them suitable for this consultancy.

In their cover letter, candidates should highlight their previous work experience relevant to the assignment, the attributes that make them suitable, their proposed approach to the assignment.

Qualified candidates are requested to submit their **Technical proposal** that includes the consultant’s overall understanding of the terms of reference, relevant expertise and experience for this assignment, the proposed approach to the consultancy, a workplan and a realistic implementation timeline and relevant documentation of previous assignments to demonstrate level of expertise

The application is submitted to the provided online portal before the indicated deadline on the advert.

Only candidates who Qualify for the technical proposal will be contacted for submitting **a financial proposal** outlining the total costs for this consultancy

*UNICEF has a zero-tolerance policy on sexual exploitation and abuse, and on any kind of harassment, including sexual harassment, and discrimination. All selected candidates will, therefore, undergo rigorous reference and background checks.*

**Only shortlisted candidates will be contacted.**