REQUEST FOR PROPOSALS

Terms of Reference – Capacity Building Assignment

Title:	Training for the Capacity Building of ICT Administrator/ Developer of the TEVETA, under the BEAR II Project
Domain:	Training and Capacity Building
Consulting Level Grade:	Senior level
Organizational Unit:	UNESCO Regional Office for Southern Africa
Location:	Lusaka, Zambia
Type of contract:	Training Consultancy on OpenEMIS
Duration of the contract	Indicative – 25 working days
Deadline *(midnight, Paris time)***:**	September 20, 2019
Application to be sent to:	vacancies.harare@unesco.org

A. Introduction

The Better Education for Africa's Rise II (BEAR II) project is a joint initiative between UNESCO and the Republic of Korea to improve the TVET systems of five beneficiary countries in Eastern Africa over 2017-2021. The BEAR II project builds on the BEAR I project (2011-2016) that has yielded positive and sustainable outcomes in five countries of the Southern Africa Development Community (SADC), namely Botswana, Democratic Republic of the Congo, Malawi, Namibia and Zambia.

In Zambia, the BEAR Team had worked on labour market analysis and developing curricula for new courses in carpentry and joinery; electricity and construction; welding and metal fabrication; bricklaying and plumbing; and finally, housekeeping. The team also worked on teacher training covering pedagogy, administration and management; and subject-specific skills. In addition to this, a TVET Management Information System called OpenEMIS was developed by Community Systems Foundation (CSF). OpenEMIS was launched in 2017.

To operationalize the OpenEMIS, UNESCO included follow-up activities for Zambia into the BEAR II project, and earmarked USD 75,000 for them, after the consultation with the Zambian government. In order to ensure the operationalization and further scaling up of the OpenEMIS, the following actions are planned:

a) Capacity development : Technical assistance will be provided to the central data repository and the TVET institutions covered by the MIS in order to, among other things: i) solve technical problems and challenges of entering, processing, cleaning and/or extracting data to be used for decision making, ii) modify the configuration of the software in view of the changing and emerging data needs in Zambia; iii) facilitate the better use of data collected by TVET-MIS, including the calculation, production and dissemination of relevant indicators and collecting new data items from TVET institutions. In addition, technical support will be provided to increase the number of TVET institutions covered by the MIS.

b) Provision of equipment: Due to the government policy of managing public data, using external cloud hosting services is not an option in some cases. The provision of minimum required equipment, such as servers, will be considered with a view to ensuring the continuous operation of TVET-MIS. Provision of technical support for the installation of the equipment and initial technical maintenance will also be taken into account.

c) Scaling-up : Based on the capacity development and the equipment provided by BEAR project, technical support will be provided to assist Zambia to scale-up the TVET-MIS, focusing on: i). increasing the number of TVET institutions covered by the MIS, ii) increasing and updating the items covered by the MIS, and iii) engaging new stakeholders to update the MIS.

The server to host the TVET-MIS has been procured and installed. Capacity building of ICT administrators is the next step to be taken.

B. Requisite of Training Programmes

Currently, the OpenEMIS is under the responsibility of the TEVETA (Technical Education, Vocational and Entrepreneurship Training Authority) in Zambia. After discussions with the TEVETA, three training programmes were identified and raised for the TEVETA to operate, manage and scale up the OpenEMIS:

a) Cake-PHP
- TEVETA and other relevant stakeholders note that some terminology used in the OpenEMIS is not in line with what is used in the Zambian TEVET sector.
- They also note that OpenEMIS does not follow the established workflow processes in Zambia's TEVET.
- OpenEMIS was developed using Cake PHP. Therefore, in order to customize and modify the system, training of Cake-PHP is necessary.
b) Red Hat System Administration
- The OpenEMIS needs to be installed on a Linux platform (Red Hat).
- The system installed on Linux needs to be very secure and stable.
- So, to protect the OpenEMIS from hackers, viruses, ransomwares, and others, the training for Red Hat System Administration is necessary.
c) Certified Information System Auditor (CISA)
- The OpenEMIS should be well audited, monitored, and managed.

- The CISA training is very important to the TEVETA staff and it will help them audit, monitor, access, and control data of the OpenEMIS.
d) Certified Information Security Manager (CISM)
- The OpenEMIS should be well secured.

The CISM training is very important to the TEVETA system administrator, who needs to have knowledge and competency on how to implement the information security and protect the ICT assets in TEVETA.

C. Scope of the work:

This assignment will directly contribute to TEVETA to operate, manage and scale up the OpenEMIS, which will be installed into a newly purchased server.

Under the overall supervison of the HQ(ED/PLS/YLS) of UNESCO, and the direct supervision of the Director-General of the TEVETA, this request for proposals for a consultancy service focusing on on-site training (TEVETA) is to develop the capacities of ICT staff who are in TEVETA and other TVET Institutions which are utilizing the OpenEMIS is announced. The winning bidder will undertake the following tasks

a) To equip a system administrator and a developer with knowledge and skills on how to program, manage and administer projects in a Cake-PHP
b) To equip a system administrator with knowledge and skills on how to manage and administer systems on a Red Hat platform
c) To equip a system administrator with knowledge and skills on how to conduct an information system audit (CISA)
d) To equip a system administrator with knowledge and skills on how to manage the information security system (CISM)

The details of the four training programmes (Cake-PHP, Red Hat Platform, CISA and CISM) are outlined in the ANNEX below.

D. Timetables, Deliverables and payment Schedules

Timetable of training
a) Within 20 working days from contract signature, the first training programme should be delivered. The second training programme should be done within 30 working days.
b) All four training programmes should be finished within 50 working days after the contract signature.
c) Under the above two conditions of a) and b), the detailed training timetable can be decided after negotiating with the TEVETA.

Deliverables after completing all the training programmes
a) To the TEVETA
- Certificates of training to each participant
- All training materials for four training programmes
- Manuals, guide books, and relevant official books regarding four training programmes
- For the CISA, a Hard Copy CISA Review Manual, 26th Edition by ISACA; Accredited Material & Learner Reference Guide; and CISA Review Questions, Answers & Explanations, 9th Edition by ISACA.

- For the CISM, a Hard Copy CISM Review Manual, 26th Edition by ISACA; Accredited Material & Learner Reference Guide; and CISM Review Questions, Answers & Explanations, 9th Edition by ISACA.
b) To the UNESCO HQ and UNESCO ROSA
- The completion report of consultancy service
- In the completion report, the below things should be included.
- Training programmes, curriculum, timetable and participants
- An evaluation of training programmes by the participants
- Copies of the certificates of training to all participants
- The lists of training materials
- The lists of manuals, guide books and relevant official books regarding three training programmes provided to TEVETA

Payment Schedule
The payment (in the currency of US dollars) will be transferred to the contractor's bank account.
a) The first payment
- The limit of the first installment is 30% of total contracted money.
- The contractor can claim the first installment before the starting of first training programme, with the timetable of 4 trainings and training programmes.
b) The second payment
- The limit of the second installment is 30% of total contracted money.
- The contractor can claim the second installment after the finish of the two training programmes, with submission of 2 training reports.
c) The final payment
- The rest of total contracted money can be transferred, based on the contractor's claim, after the finish of the third and fourth training programmes, with all of the deliverables.

E. Qualifications of Trainers
a) All consultants (trainers) should have relevant certificates to train.
b) All consultants (trainers) should have training experiences for at least 3 years.

F. Application Process
Interested applicants shall submit an application file comprising the following documents to the following email: ws.kim@unesco.org before 6 p.m. (in Paris time) of 21 (Tuesday) May, 2019.
a) Letter of expression of interest
b) Up to date curriculum vitae & relevant certificates of the trainers
c) Technical proposal : the delivery plan of 4 training programmes including syllabuses
d) Financial proposal (separately to the technical proposal)

Annex: Detailed Training Programme

A.   Cake-PHP

a)   Target group : Two (2) system administrators/developers in the TEVETA

b)   Duration: Five (5) working days.

c)   Curriculum for the training programme

- Understanding MVC (Model View Controller)
- Installing Cake-PHP
- Creating your first CakePHP application
- Controller: Controlling the logic flow in your CakePHP application
- Model: Modeling your data in CakePHP
- ORM (Object Relational Mapping): Mapping table relationships
- View: creating the user interface for your CakePHP application
- Baking your CakePHP application
- Setting up user authentication
- Creating and using components
- Adding SEO functionality
- Optimizing your application
- Debugging your application
- Data validation
- Error and exception handling
- Unit testing your code
- Customizing the view to improve the user experience
- Configuring Helpers in the presentation layer
- Adding support for I18N (internalization) and L10N (localization)
- Implementing Javascript and Ajax features
- Tracking application changes with the Events System
- Enhancing the Model using Behaviors
- Changing your database scheme using the Migrations plug-in
- Routing in CakePHP
- Creating your own APIs for Rest, authentication, etc
- Caching and optimization
- Deploying your web application
- Migrating existing websites to CakePHP

B.   Red Hat System Administration

a)   Target group : One (1) system administrator/developer in the TEVETA

b)   Duration: Five (5) working days

c)   Curriculum for the training programme

- The command line
- Managing physical storage
- How to install and configure software components and services
- Network connections and firewall access
- Monitoring and managing processes
- Managing and securing files
- Administrating users and groups
- Accessing Linux file systems
- Installing and using virtualized systems

- Reviewing the system log files and journal

C.   The Training for the Certified Information Systems Auditor
a)   Target group : One (1) system administrator/developer in the TEVETA
b)   Duration: Ten (10) working days
c)   Curriculum for the training programme
-    Domain 1
- The process of auditing information systems;
- IT-audit: definition, basic concepts, goals and objectives;
- Overview of standards, tools and approaches used in IT audit;
- Risks assessment within audit process;
- Techniques of planning and management of the audit process;
- Collection of the information and audit evidence
-    Domain 2
- Governance and Management of IT;
- IT strategy, policies, standards and procedures;
- Risk management within organization;
- IT governance, organizational structure and segregation of duties;
- Maturity and process improvement models;
- IS management practices:
- Business continuity planning
-    Domain 3
- Systems and infrastructure life cycle management;
- Project management practices;
- Methodology and tools for software development;
- Configuration and releases management;
- Data migration and information systems implementation;
- Goals and practices of system launch quality assessment;
-    Domain 4
- Information systems operations, maintenance and support;
- Practices in IT services management and operational management;
- Planning and capacity management;
- Problems and incidents management;
- Disaster recovery planning and plans testing
-    Domain 5
- IT security audit;
- Information security controls;
- Access management;
- IT infrastructure security;
- Physical security

D.   The Training of Certified Information Security Manager
a)   Target group : One (1) system administrator/developer in the TEVETA
b)   Duration: Five (5) working days
c)   Curriculum for the training programme
-    Domain 1: Information Security Governance
- Designing a strategy and governance framework

- Gaining management support and approval
- Implementing the security strategy
- Domain 2: Information Risk Management
  - Risk identification
  - Risk analysis and treatment
  - Risk monitoring and reporting
- Domain 3: Information Security Programme Development and Management
  - Alignment and resource management
  - Standards, awareness and training
  - Building security into processes and practices
  - Security monitoring and reporting
- Domain 4: Information Security Incident Management
  - Planning and integration
  - Readiness and assessment
  - Identification and response

For more information, contact Mr. Hiromichi Katayama at h.katayama@unesco.org and Mr. Whan Sik Kim at ws.kim@unesco.org