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Education, Training and Development Practices Sector Education and Training Authority

BID NO: SCMU NO: 06 - 2024/25

REQUEST FOR BIDS

TERMS OF REFERENCE FOR THE APPOINTMENT OF A SUITABLY QUALIFIED SERVICE PROVIDER TO CONDUCT TRAINING OF 400 EDUCATORS ON ROBOTICS AND CODING

1. INTRODUCTION

The Education Training and Development Practices Sector Education and Training Authority (ETDP SETA) is a public entity established in terms of Section 9(1) of the Skills Development Act, No. 97 of 1998 to advance skills levels in accordance with the National Skills Development Plan (NSDP). The Mandate of the ETDP SETA is to promote and facilitate the development and improvement of the skills profile of the sector's workforce to benefit employers, workers and employees in the ETD sector.

The ETDP SETA will host a **Compulsory** virtual briefing session for **BID NO: SCMU: 06 - 2024/25 – Appointment of a suitably qualified service provider to conduct training of 400 educators on Robotics and Coding on 30 September 2024 at 11h00 – 13h00**. Access details will be available on www.etdpseta.org.za as from **27 September 2024**. Kindly note that interested service providers may submit their questions until **01 October 2024 at 16h30**. **No further questions will be accepted after this date**. We thank you for your cooperation.

2. PURPOSE & OBJECTIVES

2.1 PURPOSE OF THE PROJECT

The GDE is planning to train 400 Educators on Robotics and coding. In line with the intended stance on preparing our learners for a system that requires the necessary digital technological skills, training of Educators and resourcing them with the required tools is essential and will be conducted through teacher development programmes

3. PROJECT SCOPE AND REQUIREMENTS

The training of 400 Educators on Robotics and Coding for the Gauteng Department of Education (GDE).

Key areas identified for support:

- Content knowledge
- Optimal utilization of resources both ICT and Traditional.
- Differentiated teaching and differentiated support of learners.
- Classroom management
- Time on task
- Assessment for Learning with ICT application

Focused Target group for intervention:

- Secondary schools: Grade 8 Coding & Robotics.
- Focus on All grades (R-3; 4-6 and 7& 8)
- Subject Advisors capacity training
- Educators
- ROS: Twinning and Schools of Specialization

EDUCATOR SUPPORT

As part of the National and provincial initiative teachers need to be developed through additional resources to enhance the current draft policy on Coding & Robotics. Teachers in the Foundation; Intermediate and Senior Phase will be supported through resources to improve quality of learning and teaching. These resources include training on content; application of ICT mediums and required hardware and software.

The material was developed to assist and support teachers in their understanding of the Learning Area. The mediation of the material will ensure that teachers understand its value thus ensuring effective usage to enhance classroom practice. The document (resource) is CAPS aligned making it useful in the future.

At the core of improving learning outcomes and exposure to Coding & Robotics is assisting teachers to improve their classroom teaching. To improve teaching, it is crucial to improve the quality of the resources of teaching, to improve the assessment to ensure that we teach at the right level, and better understanding and mastery of appropriate pedagogical techniques aligned to the Coding & Robotics Draft CAPS curriculum. Evidence from studies of both early grade reading and ICT in education has shown that teachers need a combination of approaches to learn and master new teaching approaches.

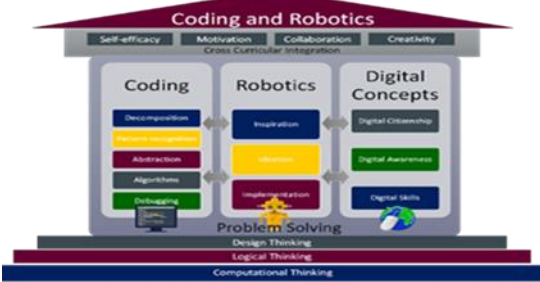
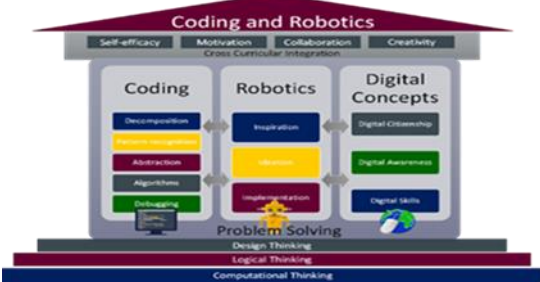
Key areas identified for support:

- Content knowledge
- Optimal utilization of resources
- Differentiated teaching and differentiated support of learners
- Classroom management
- Time on task
- Use of practical resources and ICT applications

Evidence that the developmental needs have been informed:

- Introduction of draft policy on Coding & Robotics
- No previous content mastery by teachers that are to teach the current Coding & Robotics curriculum
- School Oversight Visit Reports (Pilot Schools)

- International Studies on Digital Technology Education and Coding & Robotics as a skill
- Teacher Self Diagnostic Assessment Reports in Pilot Schools
- Baseline Assessments on Skills Knowledge

SKILLS PROGRAMME NAME:	Programme duration	Contact and Virtual Sessions
SUBJECT CONTENT & METHODOLOGY Coding & Robotics Grade R-3 (Foundation Phase) – 140 learners  <ul style="list-style-type: none"> • Pattern Recognition • Algorithms and Coding • Internet and e-Communications • Applications software <ul style="list-style-type: none"> - Scratch Junior - Computer Hardware - Electrical Components Bread boards - Propulsion through elastic band fan. - Mechanical systems - Digital safety Robotics <ul style="list-style-type: none"> - Introduction to Robotics - Gears and mechanical components 	10 sessions	Saturdays and school holidays Proposed min 10 days (5 days face to face and 5 days virtual) Central training venue
Grade 4- 6 (Intermediate Phase) 140 learners  Introduction to Coding & Robotics Introduction to Scratch (Block based Coding) <ul style="list-style-type: none"> • Loops- Repeat and Infinite Loops and Pen Block • Adding Sprites and Backgrounds • Operators -addition, subtraction, multiplication, division, and integer division. • Variables – Strings and integers 		

- Types of variables
- Calculations - using variables
- Creating new variables using Scratch
- Renaming a variable in Scratch
- Deleting a variable

Coding in Scratch

Using IPO tables

Flowcharts- select structures e.g., **IF THEN ELSE. IF-THEN statements.**

Algorithm and Flowchart

Project Based Scenarios

Robotics

Introduction to Robotics

Building circuits using a breadboard

Connect a micro-controller and upload a program

Micro-controllers (Different types)

- Input and output process

Basic programming of a Micro-controller, Buzzer and Multiple LED's.

Connect a LED to a micro-controller using a digital I/O ground pin (on /off)

DC motors

-Diode and H-Bridge Connectors

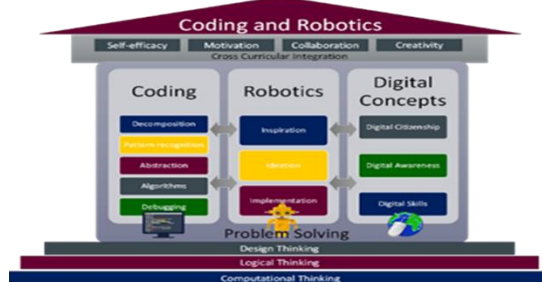
-Rotation

Sensors (Motion, Thermal, Light and Humidity)

Tinker cad- Introduction

Project Based Scenarios

SENIOR PHASE (Grade 7 – 8) – 120 learners



Algorithms and Coding

Introduction to Block Based and Text Based Coding

- Block Based Coding -Scratch
- Flow Diagrams
- Algorithms and Flow Charts
- Flow Chart symbols

Data types (Variables)

- Integer
- Floating point number
- Character
- String
- Boolean

Variables to store data

- Variables to do calculations
- Text based variables

Logic operators

Logic gates

- AND/OR/NOT

Robotics

Introduction to Robotics

Design tools

- 2D drawing tools
- 3D drawing tools
- 2D shapes
- 3D shapes

Applications

MS Paint 3D

- Tinkercad
- Solid Edge

Micro-controllers (types)

- Micro-bit
- Arduino
- NodeMCU
-

Servo's

- 360° motors

Potentiometers

Three terminal resistors and voltage dividers

IPO tables

Line (text) Based Coding – Python

Using Text data/Numerical data

<ul style="list-style-type: none"> - User input - Assign variables - Outputs - Print <p>Labelling, storing, and handling data with variables</p> <p>Operators</p> <ul style="list-style-type: none"> - Arithmetic - Assignment - Comparison - Logical - Identity <p>Control Flow</p> <ul style="list-style-type: none"> - Boolean and Comparisons - IF Statements - Else statements - While Loops <p>List</p> <ul style="list-style-type: none"> - List operators - For Loops <p>Functions</p> <ul style="list-style-type: none"> - List functions - String functions <p>Built a robot (PBL Scenario)</p> <p>METHODOLOGY:</p> <ul style="list-style-type: none"> - Method & approach to teach and train the above topics - Different teaching and training methods & strategies <p>GENERAL SKILLS:</p> <p>Application – PBL approach</p>		
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4. PROFILE OF THE SERVICE PROVIDER

- The programme must be a university accredited.

5. PROJECT REQUIREMENTS

The ETDP SETA is looking for training providers to facilitate the implementation of Robotics and Coding Skills Programmes for Educators in the ETD sector for the 2024/25 financial year.

A) ACCREDITATION

1. The institution must be accredited, and the programme offered must be credit bearing.

B) FUNCTIONAL RESOURCES

1. The Training Provider must be adequately equipped with necessary physical resources in province:
 - 1.1. Workshop facilitation rooms
 - 1.2. Resource packs to be given to learners
 - 1.3. Resource Centers at the offices of the training provider
2. The training provider must have the required Human Resource Capacity in the following areas:
 - 2.1. Qualified Facilitators in terms of the programmes that you want to train.
 - 2.2. Project Management Skills - No changes will be accepted without the prior written consent of the ETDP SETA.
 - 2.3. Curriculum Vitaes of staff that will be involved on the projects

3. Functional Quality Management System

C) PROOF OF SIMILAR PROJECTS

1. Must provide the SETA with proof of any Skills programmes projects undertaken in the past five years.

D) ADMINISTRATION OF THE SKILLS PROGRAMME

The provider must:

1. Establish and maintain the learner database.
2. Comply with training provider duties as per the signed SLA.
3. Monitor learner progress, resolve problems related to provisioning.
4. Submit reports as per the SLA.
5. Assist the ETDP SETA in conducting induction programmes for learners.

E) PLANNING AND SUPPORT

1. Develop rollout plans with time frames for the structured learning.

6. COSTING MODEL (PRICE SCHEDULE)

COST COMPARISON FOR THE SKILLS PROGRAMMES

THIS COSTING MODEL MUST NOT BE MODIFIED AT ALL AND IF RETYPED ALL LINE ITEMS IN ORDER AS STATED BELOW TO BE INCLUDED

COSTING FOR NUMBER OF LEARNERS AS PER PROVINCIAL REQUIREMENTS				
NAME OF BIDDING ORGANISATION:				
NAME OF SKILLS PROGRAMME:				
NUMBER OF TRAINING DAYS:				
ITEM DESCRIPTION	NO: OF LEARNERS	UNIT COST	AMOUNT	COMMENTS
Training Costs (including training material, assessment, moderation, certification and any other related training costs)				
SUB-TOTAL				
Admin Expenses (includes travel, venue hire and catering)				Not exceeding 7.5%
TOTAL COSTS				
				Cost Per Learner
ALL COSTS MUST BE INCLUSIVE OF VAT				

NAME OF BIDDER: _____

POSITION/ ROLE: _____

SIGNATURE: _____

All pricing shall be in South African Rand (ZAR). All project milestones with costing should be listed on the pricing schedule.

PROPOSED STANDARD MENU FOR LEARNERS:

Breakfast: 2 slices of bread / sandwiches with tea/coffee/juice

Lunch: 1 meat dish, 1 starch, 1 salad, 1 vegetable dish, 1 soft drink

7. DURATION OF THE PROJECT

The proposed number of training days is a minimum 10 days, and the training will be concluded within 3 months, with five physical training days and five online training sessions and will commence after the signing of the Service Level Agreement (SLA).

8. EVALUATION CRITERIA

THE ETDP SETA applies the provisions of the Preferential Procurement Policy Framework Act, ACT NO 5 OF 2000 and Preferential Procurement Regulations, 2022. The evaluation will be guided by ETDP SETA procurement policy.

Note: Folder A (USB) must have documents for Stage 1 and Stage 2

8.1. STAGE 1 [Folder A (USB)]

Bidders will be evaluated on the submission of the requested mandatory documents. Fully completed and signed forms with witnesses' signature must be submitted and all applicable boxes be ticked.

8.1.1. MANDATORY DOCUMENTS TO BE SUBMITTED IN ORDER TO BE ELIGIBLE FOR EVALUATION

1. Proof of CHE registration/accreditation.
2. Proof of Credit bearing programme.

NB: Failure to submit any of the above-requested mandatory documents will lead to disqualification.

8.2. STAGE 2 [Folder A (USB)]

The evaluation of this bid shall include functionality whereby the bids will be evaluated in terms of the evaluation criteria embodied in the bid documents.

1. The minimum qualifying score for functionality will be **70 points** and bids that fail to achieve the minimum qualifying score will be disqualified.
2. Only bids that achieved the minimum qualifying score for functionality will be evaluated further in accordance with the 80/20 preference point systems prescribed in Preferential Procurement Regulations **5 and 6**.

The evaluation criteria for functionality will be as below:

NO	QUALIFYING CRITERIA FOR SHORT LISTING	POINTS
1.	<p>Experience & References: of any skills programmes trained and references to be provided on the client's letterhead. The minimum of three contactable reference letters on the letterhead of the referee and it must be signed by the referee.</p> <p>1.1. Experience and contactable references: (25)</p> <ul style="list-style-type: none"> 3 projects and above = 25 2 projects = 15 1 project = 10 <p>*[Each reference must clearly indicate;</p> <ul style="list-style-type: none"> the name of the bidder and the project objectives of the project (nature of the project) duration of the project recommendation and contact details of the referee as well as indication on the successful completed of the project(s) and must be signed the referee <p>• NB: If any of the above information is omitted, the bidder will not be allocated points.</p>	25
2.	<p>Project plan for the delivery of Skills programme;</p> <ul style="list-style-type: none"> Structure of the Skills programme in terms of the outcomes to be achieved = 15 Method and delivery of Skills program = 10 Learning support plan = 10 	35
3.	<p>Profile of key staff (Please attached CVs and proof of qualified Facilitator)</p> <p>3.1 Project Management structure = 5</p> <p>3.2 Relevant experience of Project Manager in managing similar projects +5yrs of experience = 15</p> <ul style="list-style-type: none"> 5 years plus = 15 3 - 4 years = 10 1 - 2 years = 5 <p>3.3 Facilitators (relevant experience facilitating the selected Skills programme) = 15</p> <ul style="list-style-type: none"> 5 years plus = 15 3 - 4 years = 10 1 - 2 years = 5 <p>NB: Bidders are to complete Annexure A for Project Manager and Facilitator experience, failure of which will result to a disqualification.</p> <p>NB: The initial resources need not change during the course of the project without prior approval of the ETDP SETA.</p>	35
4.	<p>Proof of physical training resources available and the infrastructural resources of the organization = 5</p>	5
TOTAL		100

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Bidders must provide documents to justify awarding the above points, and such include details of contactable references to validate the information submitted.

Points will be awarded on a sliding scale

Please take note of the value and scoring point system of your bid.

8.3. STAGE 3 [Folder B (USB)]

PRICING SCHEDULE DOCUMENTS

- a. Costing Model (***Price must be final, include VAT and signed***)
- b. Submit a "Unique security personal identification number (PIN) issued by SARS" ***which the SETA will use to verify the bidder's tax matters prior to the award***
- c. Invitation to Bid - **SBD1**
- d. Declaration of Interest – **SBD 4 (New)**
- e. Preferential Points Claim Form in terms of the Preferential Procurement Regulations, 2022 -**SBD 6.1 (If claiming preferential points) - this will be used to verify points to be allocated for specific goals**
- f. B-BBEE certificate or sworn affidavit (***If claiming preferential points) – this will be used to verify points to be allocated for specific goals.***

80/20 preference point system shall be applicable as follows:

✓ Price	80
✓ Allocation of specific goals	20

In order to facilitate a transparent selection process that allows equal opportunity to all service providers, the ETDP SETA will adhere to its policy on the appointment of service providers.

9. BID CONDITIONS

The ETDP SETA Supply Chain Management Policy will apply:

1. ETDP SETA does not bind itself to appoint a bidder with the highest points.
2. ETDP SETA reserves the right to negotiate the bidder's price.
3. ETDP SETA reserve the right to cancel the bid and not award the bid to any of the bidders.
4. Bids which are late, incomplete, unsigned **will NOT** be accepted.
5. ETDPSETA reserves the right to include a penalty fee should the training programme not be completed as per the service level agreement.
6. Bidders must submit a valid certified B-BBEE Certificate from SANAS Accredited Verification Agency or issued by Companies and Intellectual Property Commission (**CIPC**) or a signed Sworn Affidavit for allocation of points for specific goals.
7. Specific goals shall not be allocated where supportive documents as stated in the bid documents are not provided as stated in the bid document.
8. Bids submitted are to hold good for a period of **90 days**.
9. Companies who bid as a joint venture must submit a **consolidated B-BBEE Verification certificate prepared for this bid only**, from **SANAS Accredited Verification Agency** in order to be eligible for empowerment points. Companies who form part of this joint venture **MUST** provide an accreditation certificate with relevant authority as stated in Mandatory documents.
10. Failure on the part of a bidder to submit proof of B-BBEE Status level of contributor, sworn affidavit or a B-BBEE Certificate, together with the bid, will be interpreted to mean that points for specific goals for B-BBEE status level of contribution are not claimed.
11. Deregistered and blacklisted companies including directors/owners/individuals linked to the company will not be considered. Due diligence will be conducted with successful bidders to validate submitted information.
12. All suppliers must be registered on the Central Supplier Database. No bid shall be awarded to any supplier that is not registered on the Central Supplier Database.
13. Companies that are in the process of de-registration in the CIPC will not be considered.
14. The ETDP SETA remains the sole owner and custodian of all content, material, or any other form of development. No information of or on behalf of the ETDP SETA may be shared, during the duration or after the closing period of the project. It remains the responsibility of the appointed service provider to hand over all material to the ETDP SETA. Should a service provider wish to have the ETDP SETA as a referral, permission for this must be sought.

10. BID DOCUMENTS / PROPOSAL PACKS

Bid documents for participation **must** be downloaded from the ETDP SETA website: www.etdpseta.org.za, Main Menu > Supply Chain Management > Open Tenders as from **12h00** on **13 September 2024**.

Bidders must submit technical and financial proposals in **one (1) USB** clearly marked **“Folder A-Technical Proposal” and “Folder B- Financial Proposal”**.

Folder B - (Financial Proposal) Costing Model (*Price must be final, include VAT and signed*), Submit a *“Unique security personal identification number (PIN) issued by SARS” which the SETA will use to verify the bidder’s tax matters prior to the award*, Invitation to Bid - **SBD1**, Declaration of Interest – **SBD 4 (New)**, Preferential Points Claim Form in terms of the Preferential Procurement Regulations, 2022 -**SBD 6.1 (If claiming preferential points) - this will be used to verify points to be allocated for specific goals** and B-BBEE certificate or sworn affidavit (*If claiming preferential points*) – *this will be used to verify points to be allocated for specific goals*.

The financial proposal will only be opened when the tender is responsive in Stage 2 or at the discretion of the ETDP SETA.

All Bids/Proposals (completed in [one (1) USB] must be courier or hand delivered to:

The ETDP SETA – Head Office
Hosken’s House
45 Mooi Street
Johannesburg South - CBD
2091

Submissions can be delivered into the tender box between **08h00 and 16h30 Monday to Friday BEFORE** the closing date and time of **11h00** on **10 October 2024**.

No late submission will be accepted!

11. CLOSING DATE

All Proposals should reach the ETDP SETA Offices on or before **11h00** on **10 October 2024**.

12. CONTACT PERSON

NO telephonic or any other form of communication relating to this bid will be permitted with any other ETDPSETA member of staff either by Bidders (as collective bidding team or individual of the bidding team), representative of Bidders, associates of Bidders, shareholders of Bidders, other than with the named individual stated below. **ANY MEANS OF ATTEMPTING TO INFLUENCE THE ADJUDICATION PROCESS OR OUTCOMES OF THE ADJUDICATION PROCESS WILL RESULT IN IMMEDIATE DISQUALIFICATION OF THE ENTIRE BID.** All enquiries regarding this bid must be in writing only and be directed to:

Supply Chain Management: Email: Tenderers@etdpseta.org.za

Note: Blacklisted companies appearing on the National Treasury database and prohibited from conducting business with public entities, will be disqualified.

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ANNEXURE A

1. PROJECT MANAGER EXPERIENCE

Name of Project Manager: _____

Project/Company name	Position/Role	Responsibilities	Start date	End date	Reference (Name & Surname)	Reference (Position)	Reference (Contact details)

2. RELEVANT EXPERIENCE OF FACILITATOR

Name of Facilitator: _____

Project/Company name	Position/Role	Responsibilities	Start date	End date	Reference (Name & Surname)	Reference (Position)	Reference (Contact details)