



Survey on perception of Educators with respect to STEM skills

The Human Resource Development Council is conducting a study to gauge the perception of educators on STEM* subjects and skills. We thank you for taking the time to respond and assure you that your answers will remain confidential.

**STEM stands for Science, Technology, Engineering and Mathematics*

* 1. Please enter the code of your school

(The code was sent to you by message/email- please put only the number)

* 2. Which class(es) do you currently teach?

Grade 7

Grade 9+ (extended programme)

Grade 7 (extended)

Grade 10

Grade 8

Grade 11

Grade 8 (extended)

Grade 12

Grade 9

Grade 13

Grade 9 (extended)

* 3. Which **main** subject(s) do you currently teach?

Please select a maximum of 3 subjects.

- | | | |
|---|---|--|
| <input type="checkbox"/> Agriculture | <input type="checkbox"/> French Literature | <input type="checkbox"/> Music |
| <input type="checkbox"/> Arabic | <input type="checkbox"/> Geography | <input type="checkbox"/> Physical Education |
| <input type="checkbox"/> Art and Design | <input type="checkbox"/> German | <input type="checkbox"/> Physics |
| <input type="checkbox"/> Biology | <input type="checkbox"/> German | <input type="checkbox"/> Principles of Accounts |
| <input type="checkbox"/> Business Studies | <input type="checkbox"/> Hindi | <input type="checkbox"/> Religious Studies (Bible Knowledge) |
| <input type="checkbox"/> Design and Communication | <input type="checkbox"/> Hindi Literature | <input type="checkbox"/> Sanskrit |
| <input type="checkbox"/> Chemistry | <input type="checkbox"/> Hinduism | <input type="checkbox"/> Science - Combined |
| <input type="checkbox"/> Commerce | <input type="checkbox"/> History (Modern World Affairs) | <input type="checkbox"/> Science for All |
| <input type="checkbox"/> Computer Science | <input type="checkbox"/> History (for Mauritius) | <input type="checkbox"/> Sociology |
| <input type="checkbox"/> Design and Technology | <input type="checkbox"/> Islamic Studies | <input type="checkbox"/> Spanish |
| <input type="checkbox"/> Economics | <input type="checkbox"/> Islamiyat | <input type="checkbox"/> Spanish |
| <input type="checkbox"/> English - Language | <input type="checkbox"/> Literature in English | <input type="checkbox"/> Statistics |
| <input type="checkbox"/> Enterprise | <input type="checkbox"/> Marathi | <input type="checkbox"/> Tamil |
| <input type="checkbox"/> Environmental Management | <input type="checkbox"/> Marine Science | <input type="checkbox"/> Telugu |
| <input type="checkbox"/> Fashion and Textiles | <input type="checkbox"/> Mathematics | <input type="checkbox"/> Travel and Tourism |
| <input type="checkbox"/> Food and Nutrition | <input type="checkbox"/> Mathematics - Additional | <input type="checkbox"/> Urdu |
| <input type="checkbox"/> French | <input type="checkbox"/> Modern Standard Chinese | |
| <input type="checkbox"/> Other (please specify) | | |

* 4. Have you ever heard of STEM skills before?

- Yes No

* 5. Do you think that Mathematics should be made compulsory up to **Grade 13**?

- Yes No

* 6. Do you think that the following STEM subjects be made compulsory up to **Grade 11**?

	Yes	No
Mathematics	<input type="radio"/>	<input type="radio"/>
Biology	<input type="radio"/>	<input type="radio"/>
Physics	<input type="radio"/>	<input type="radio"/>
Chemistry	<input type="radio"/>	<input type="radio"/>
Computer studies	<input type="radio"/>	<input type="radio"/>

* 7. How important do you think STEM skills/education are for students?

Not at all important	Moderately important	Very important	Don't know/ No idea
			<input type="radio"/>

* 8. Please rate how important are the following skills for the students:

	Very important	Important	Neutral	Slightly important	Not at all important
i. Flexibility and versatility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ii. Analytical skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
iii. Problem-solving skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
iv. Basic ICT Skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
v. Ability to learn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
vi. Ability to work methodically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
vii. Accuracy and attention to detail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
viii. Ability to analyse technical and statistical data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ix. Good communication skills (spoken, written)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
x. Innovative skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
xi. Technical skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
xii. Creative skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
xiii. Customer handling skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
xiv. Mathematical skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 9. As from which level of education do you think STEM (subjects or skills) should be promoted?

Pre-primary education level

Secondary/vocational education level

Primary education level

Tertiary education level

* 10. Which pedagogical approaches do you use in class? (select the most appropriate ones)

Lessons are focused on the delivery of content and the acquisition of content knowledge by the students

Experiments are used in the classroom to explain the subject matter

Students are engaged in learning through the investigation of real-world challenges and problems

Students are involved in group works with their peers or with their teachers and peers

Students gain the first exposure to new material outside of class, and then use classroom time to discuss, challenge and apply ideas or knowledge

Research work on internet

Other (please specify)

* 11. How far do you agree with the following statements

	Strongly agree	Agree	Don't know/Can't say	Disagree	Strongly disagree
STEM subjects enhance student learning in the subjects of critical need	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
STEM is an excellent way to synthesise and give more meaning to closely related subjects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students gain knowledge and abilities in an integrated environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students are encouraged to be more innovative in what they are learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students describe STEM as appealing and fulfilling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
STEM requires systemic change by policymakers, administration, and teachers to set the agenda and make the transition.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Many teachers are not prepared (nor want) to teach in an integrated environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teaching STEM subjects may require additional resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
STEM is the integration of Science, Technology, Engineering, and Mathematics into a trans disciplinary subject in schools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 12. In your opinion, does STEM teaching have a positive impact on the following?

	Yes	No	Don't Know
i. Students concentrate more on their learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ii. Students can repeat exercises (if needed, explore in more detail topics that they are interested in, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
iii. Students understand more easily what they learn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
iv. Students remember more easily what they've learnt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
v. Students develop their critical thinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
vi. Students become more interested in STEM careers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
vii. ICT improves students' engagement in class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 13. Statistics show that there are fewer and fewer students opting for STEM subjects as from Grade 9 to 11 as compared to the other subjects. According to you, what could be the reason(s)? *(Please select a maximum of 5 reasons that you consider most important)*

- STEM subjects are tougher than non-STEM (e.g. arts, economics) side
- Too much competition (for scholarship)
- STEM subjects do not lead to high paid jobs
- Students do not think STEM subjects are important for their careers
- Students are not aware of the skills that STEM subjects can develop
- Parents are not aware of the skills that STEM subjects can develop
- There is a lack of resources at schools
- Peer pressure
- Students fail to achieve the required grade in STEM subjects
- Influence of parents
- Not encouraged by teachers/ schools
- Limited combination of subjects available in schools
- Finding work is more difficult with STEM subjects
- No career guidance on STEM related occupations
- Previous students experience

* 14. According to you what should be done to promote STEM education at secondary level? Select all that applies

- More funding
- More equipment/labs
- Virtual labs
- Continuous professional development of teachers
- More computational thinking to be included in curriculum
- Access to kits (e.g. science kit...)
- Integration of STEM into a trans-disciplinary subject in schools
- Other (please specify)

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Digital Technologies and Coding Skills

* 15. To the best of your knowledge, does your school offer classes or units on coding* or programming?

**Put simply, Coding is a method of communicating with a computer. It is using a language that a computer understands to give a computer instructions in order to perform specific functions. Coding allows us to create things such as computer software, websites, apps and video games.*

Yes No Don't Know

* 16. Is coding important?

Yes No Don't Know

* 17. According to you, as from what level should coding be taught?

Primary school Tertiary/Post secondary level
 Secondary school Can't say

* 18. Should coding be introduced as a complementary activity in schools?

Yes No Don't Know

* 19. How confident are you in your **Grade 9** students' abilities to.....?

	Totally confident	Somewhat confident	Not confident at all	Don't know/ No idea
use digital technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
analyse and interpret data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
design solutions to problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
carry out experiment & investigations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
learn coding and programming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 20. How confident are you in your **Grade 11** students' abilities to.....?

	Totally confident	Somewhat confident	Not confident at all	Don't know/ No idea
use digital technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
analyse and interpret data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
design solutions to problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
carry out experiment & investigations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
learn coding and programming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21. How important do you think knowing how to program, design and make content for digital technologies will be for your students' future career?

Not important all	Somewhat important	Extremely important	Don't know/No idea
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

22. Any other comments