

NATIONAL COUNCIL OF PROVINCES

WRITTEN REPLY

QUESTION 1218.

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1218. Ms L P Mhlongo (KwaZulu-Natal: MKP) to ask the Minister of Basic Education:

Aligning education with job market

- (1) What plans her department has put in place to ensure that children are aligned and well equipped with subject that will suit job market as artificial intelligence is taking over from the outdated syllabus (details furnished);
- (2) whether any subjects on artificial intelligence will be added to the syllabus; if not, what is the position in this regard; if so, what are the relevant details?

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Response

The Department of Basic Education (DBE) acknowledges the rapid pace of technological advancement and the growing influence of Artificial Intelligence (AI) in reshaping the future world of work. In response, the DBE has adopted a forward-looking approach to ensure that learners are equipped with the knowledge, skills and values necessary to participate meaningfully in a technology-driven economy.

The following aspects are being looked at:

- **Curriculum Reform and Modernisation:** The DBE is reviewing and modernising the national curriculum to align it with the skills demand of the Fourth Industrial Revolution (4IR). A key intervention in this regard is the introduction of Coding and Robotics as a new subject for Grades R–9.
- **Coding and Robotics Curriculum:** This curriculum has been designed to develop learners' problem-solving abilities, computational thinking, creativity and innovation skills, which are relevant to AI. The DBE has completed the development of the Coding and Robotics Curriculum and Assessment Policy Statement (CAPS), and pilot implementation is currently being undertaken in selected schools across all provinces. The subject will be incrementally implemented from Grades R–3 in 2026, with progressive rollout to higher grades thereafter.

Given the costs of rolling out Coding and Robotics as a subject (including the high costs for educator development and training and information technology infrastructure equipment and related maintenance), Coding and Robotics cannot for the foreseeable future be rolled out as a mandatory subject for all learners. Therefore, the roll-out of Coding and Robotics as a subject must be progressively realised in line with available resources and the readiness of our schooling system.

While Coding and Robotics is an important subject to allow learners to acquire knowledge and skills regarding coding and autonomous systems, the key focus of the Department of Basic Education (DBE) is currently on improving literacy and numeracy in the Foundation Phase. If learners are unable to read for meaning and count by the time they reach Grade 4, they will face significant barriers when taking Science, Technology, Engineering and Mathematics-related subjects, including Coding and Robotics. It is therefore important that the limited resources available to our schooling system are first focused on improving learning outcomes in the Foundation Phase before we can expand the roll-out of Coding and Robotics as a mandatory subject.

- **Integration of Future-Oriented Skills in Existing Subjects:** Beyond the new subject introduction, the DBE is infusing digital literacy, AI-related

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content and data-driven problem-solving into existing subjects such as Technology, Mathematics, Natural Sciences and Computer Applications Technology (CAT). Through this integration, it is intended that learners will be introduced to basic and ethical use of technology in age-appropriate ways as part of the broader effort to develop their computational and digital fluency.

- **Teacher Development and Capacity Building:** The successful implementation of these initiatives relies heavily on teacher readiness. The DBE has therefore prioritised training and professional development of educators to teach Coding and Robotics and digital pedagogy. Training programmes are being implemented through the Provincial Education Departments, in partnership with institutions such as the University of South Africa (UNISA), the Council for Scientific and Industrial Research (CSIR) and other stakeholders. These capacity-building efforts aim to ensure that every classroom is led by a confident and competent teacher capable of delivering technology-aligned instruction.
- **ICT Infrastructure and Digital Learning Platforms:** To support digital learning, the DBE continues to work with other partners to improve school connectivity, infrastructure and access to learning devices. The DBE's e-Education strategy promotes the integration of Information and Communication Technologies (ICTs) into teaching and learning. The rollout of digital content platforms and virtual learning resources forms part of the plan to make quality learning materials accessible to all learners. Engagements with Sector Education and Training Authorities (SETAs) and industry bodies ensure that the schooling system is responsive to evolving labour market demands.
- **Long-Term Curriculum Planning:** The DBE is currently engaged in a curriculum review process to ensure that it aligns with future skills needs. This process includes exploring pathways for the inclusion of AI and Data Science concepts at the Further Education and Training (FET) phase, particularly in Grades 10–12. These developments are being informed by consultations with higher education institutions, industry experts and international education bodies to ensure global competitiveness and relevance.

The DBE remains firmly committed to ensuring that South Africa's education system keeps pace with the demands of a rapidly changing world. The integration of Coding and Robotics and digital literacy into the national curriculum marks a decisive step toward preparing learners for the future world of work shaped by AI and automation. These reforms form part of the Minister's broader priority to modernise the curriculum, strengthen foundational learning and future-oriented skills, and align schooling outcomes with the country's economic growth and innovation objectives. Through

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strategic partnerships, sustained teacher development and strengthened delivery of a relevant curriculum, the DBE seeks to ensure that every learner is equipped to participate in, and lead, the digital economy of the future.