**NATIONAL ASSEMBLY**

**WRITTEN REPLY**

**QUESTION 1736**

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**INTERNAL QUESTION PAPER: 14/2015**

**1736. Ms A T Lovemore (DA) to ask the Minister of Basic Education:**

(1) What are the full details of the readiness of (a) her department and (b) the nine provincial education departments to implement the newly revised curriculum for schools of technology in 2016, including (i) curriculum, (ii) workshop, (iii) textbook and (iv) teacher readiness;

(2) (a)(i) how many learners and (ii) what percentage of total Grade 12 learners registered to study within a technological discipline in Grade 12 in the (aa) 2005, (bb) 2008, (cc) 2010, (dd) 2012 and (ee) 2015 academic years in each province and (b) to what factor(s) does she attribute any drop in numbers or percentages that might have occurred over the specified academic years;

(3) whether she is aware that every form of technology is listed as a critical skill on the Minister of Home Affairs' list of skills or qualifications determined to be critical for the Republic of South Africa (*Government Gazette* 37716, 3 June 2014);

(4) (a) for what reason(s) is the number of learners studying technology lower than expected, (b) what steps will she take to ensure that the number of learners studying technology will increase, (c) what targets has she set in this regard and (d) what (i) are the current challenges and (ii) challenges does she foresee that will hamper efforts to provide technological schooling to the desired number of learners? NW1954E

1. (a)(b) (i) curriculum

The development of Curriculum Assessment and Policy Statements (CAPS) for Technical subjects was completed and signed by the Minister of Basic Education on the 13 April 2015; this is in accordance with the Government Gazette No 37840 dated July 2014. Printing is currently in progress and distribution of the CAPS documents will be completed before the training of teachers in June 2015. A total of 52, 750 copies of the CAPS documents for Technical Mathematics, Technical Sciences, Civil Technology, Electrical Technology and Mechanical Technology will be printed and distributed as indicated below:

* 5 copies ( 1 for each subject) to the National office DBE
* 5 copies ( 1 for each subject ) to each provincial office
* 5 copies ( 1 for each subject ) to each district office; and
* 10 copies (2 for each subject) to each school offering a technical subject

(b) (ii) Workshop

Since the inception of the grant, the objective of training 2,749 teachers, building 118 new workshops, refurbishing 266 existing workshops and supplying equipment, machinery and tools to participating schools has been achieved. The grant was reconfigured in 2014 and it now forms part of the new Mathematics, Science and Technology Conditional Grant. The outputs of the new grant include the supply of machinery, equipment and tools and the training of teachers. Based on the total number of technical schools and the state of physical infrastructure at most schools, the schools have the capacity to implement the curriculum. Those that had challenges were recapitalised by the conditional grant.

(b) (iii) Textbooks

The development process of both Technical Mathematics and Technical Sciences textbooks sponsored and co-managed by Sasol-Inzalo Foundation and DBE will be finalised by July 2015. Publishers are in the process of developing Civil Technology, Electrical Technology and Mechanical Technology textbooks due to be finalised in August 2015. Printing and distribution of all technical textbooks will be completed by 30 October 2015.

(b)(iv) Teacher readiness

The changes introduced in the revised CAPS necessitated the need for orientation of subject advisors and re-training of teachers on theory and practical teaching methodologies.

An audit of skills centres in preparation for the training of FET Technical schools subject advisors and teachers and Technology Senior Phase (Grade 7 – 9) subject advisors and teachers was conducted and finalised.

The Department issued letters to HOD’s on 16 April 2015 to inform them of the training process and to request them to ensure that notifications to all partners are issued.

A National Task Team (NTT) for the development of CAPS training guideline document for the three (3) Technical subjects specialisation; Civil technology, Electrical technology, and Mechanical technology have been developed and finalised.

A National Task Team (NTT) for the development of CAPS training guideline document for Technical Sciences and Technical Mathematics has been developed and finalised.

Subject Advisors and Teacher training on the three (3) Technical subjects has been scheduled for 29 June – 03 July and 05-09 October 2015 (School Holidays) and these dates have been communicated to all provinces. The training of Technical Mathematics and Technical Sciences has been scheduled for July 2015 and these dates have also been communicated to all provinces. The training is aimed at 70% skills transfer and 30% on the strengthening of theory of the specialisation.

The funding for this training will be sourced from the reconfigured MST Conditional Grant. The objective of the grant is to, supply machinery, supply of equipments and tools. The objective of the grant is to train subject advisors and teachers, building of new workshops, refurbishing of existing workshops and supplying equipment, machinery and tools.

1. (a)(i)(aa) (a)(ii)(bb)(cc)(dd)(ee) Numbers and percentage of learners offering Technology subjects per Province from 2005, 2008, 2010 and 2012.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **YEAR** | **Civil Technology** | **Engineering Graphics And Design (EGD)** | **Electrical** | **Mechanical** |
| **NUMBER WROTE** | **%** | **NUMBER WROTE** | **%** | **NUMBER WROTE** | **%** | **NUMBER WROTE** | **%** |
| (aa) 2005 | 10283 | 2% | 20653 | 4% | 6510 | 1% | 6728 | 1% |
| (bb) 2008 | 10392 | 2% | 26491 | 5% | 7526 | 1% | 7890 | 1% |
| (cc) 2010 | 9359 | 2% | 26350 | 5% | 5843 | 1% | 6859 | 1% |
| (dd) 2012 | 8759 | 2% | 25070 | 4% | 5010 | 1% | 5975 | 1% |
| (ee) (2015) | data is not yet available |

(b)All technology subjects are non-designated; i.e. HEIs do not recognise these subjects as requirements to university entrance.

1. The Department is aware that the National Curriculum Statements (NCS) present foundational skills to all learners and these skills create opportunities for learners to enter further and higher education. Therefore the list of critical skills according to the *Government Gazette* 37716 dated 3 June 2014 contains occupations that require the foundational skills, which are acquired through the basic education sector.
2. (a)The Universities do not consider these subjects as requirements for entrance into engineering courses at a university. This puts learners at a disadvantage if after three years of studying they change their minds and no longer want to become artisans but engineers, they are then not credited at HEIs.

(b)Based on the targets set by the National Development Plan (NDP), the Department is committed to contributing to the production of 30,000 artisans per year by 2030 (NDP, Chapter 9, p277), through the strengthening and refocusing of technical schools and increasing the learner enrolments from 27,000 to 57,000 in 2030. The revision of the curriculum and the recapitalisation process at technical schools will also ensure that the industry requirements in terms of technical specialisation are met and thereby increase participation in the technical education sector.

In order to further strengthen articulation between GET and FET Technology, Senior Phase Subject Advisors and Teachers will be part of the training for specialisations scheduled for June and October 2015 as mentioned above. Advocacy on the Decade of the Artisan in partnership with Department of Higher Education (DHET) is currently being rolled out in all provinces with the intention to increase participation in artisanship and engineering.

The Department and DHET have embarked on a process of aligning the curriculum for basic education with that of Technical Vocational Education and Training (TVET) Colleges.

(c) The enrolment of learners in the technical fields has been declining since 2008 due to the changes in the National Curriculum Statement (NCS). The revision of the Nated 500 to remove areas of specialisation resulted in the overload of subject content areas and the decline in learner enrolment. The reintroduction of the specialisation by the revised Curriculum and Assessment Policy Statement (CAPS) for technical schools and the implementation of the recapitalisation programme will ensure that sector is expanded.

The following targets for the increase in learner enrolment have been set for 2014-2019:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Targets** | **Mechanical Technology** | **Electrical****Technology** | **Engineering****Graphics &Design** | **Computer****Technology** | **Technical Maths** | **Technical Science** | **Maths** | **Physical Science** |
| **2014** | 6,410 | 5,278 | 28,919 | 9,527 | 0 | 0 | 21,214 | 21,214 |
| **2015** | 6,602 | 5,436 | 30,943 | 10,003 | 0 | 0 | 22,275 | 22,275 |
| **2016** | 6,800 | 5,599 | 33,109 | 10,503 | 11,694 | 11,694 | 11,694 | 11,694 |
| **2017** | 7,004 | 5,767 | 35,427 | 11,028 | 12,279 | 12,279 | 12,279 | 12,279 |
| **2018** | 7,214 | 5,940 | 37,907 | 11,580 | 12,893 | 12,893 | 12,893 | 12,893 |
| **2019** | 7,431 | 6,118 | 40,560 | 12,159 | 13,538 | 13,538 | 13,538 | 13,538 |

**Targets: National Learner Enrolment in Technical Schools (2014 – 2019)**

**Provincial Targets per Technology Subject:**

|  |
| --- |
| **2015 Targets** |
| **PROVINCE** | **MT** | **ET** | **EGD** | **CT** | **Tech Maths** | **Tech Science** | **Maths** | **Science** |
| EC | 507 | 418 | 2,377 | 768 |   |   | 1,711 | 1,711 |
| FS | 582 | 479 | 2,727 | 882 |   |   | 1,963 | 1,963 |
| GP | 1,753 | 1,443 | 8,214 | 2,655 |   |   | 5,913 | 5,913 |
| KZN | 1,046 | 861 | 4,901 | 1,584 |   |   | 3,528 | 3,528 |
| LP | 323 | 266 | 1,512 | 489 |   |   | 1,088 | 1,088 |
| MP | 360 | 297 | 1,689 | 546 |   |   | 1,216 | 1,216 |
| NC | 126 | 104 | 591 | 191 |   |   | 425 | 425 |
| NW | 539 | 444 | 2,527 | 817 |   |   | 1,819 | 1,819 |
| WC | 1,367 | 1,125 | 6,405 | 2,071 |   |   | 4,611 | 4,611 |
| **TOTAL** | **6,602** | **5,436** | **30,943** | **10,003** |  |  | **22,275** | **22,275** |
| **2016 Targets** |
| **PROVINCE** | **MT** | **ET** | **EGD** | **CT** | **Tech Maths** | **Tech Science** | **Maths** | **Science** |
| EC | 681 | 560 | 3,314 | 1,051 | 1,170 | 1,170 | 1,170 | 1,170 |
| FS | 530 | 436 | 2,581 | 819 | 912 | 912 | 912 | 912 |
| GP | 1,808 | 1,489 | 8,804 | 2,793 | 3,110 | 3,110 | 3,110 | 3,110 |
| KZN | 1,685 | 1,387 | 8,202 | 2,602 | 2,897 | 2,897 | 2,897 | 2,897 |
| LP | 558 | 460 | 2,718 | 862 | 960 | 960 | 960 | 960 |
| MP | 465 | 383 | 2,266 | 719 | 800 | 800 | 800 | 800 |
| NC | 186 | 153 | 904 | 287 | 319 | 319 | 319 | 319 |
| NW | 495 | 408 | 2,410 | 764 | 851 | 851 | 851 | 851 |
| WC | 392 | 323 | 1,910 | 606 | 675 | 675 | 675 | 675 |
| **TOTAL** | **6,800** | **5,599** | **33,109** | **10,503** | **11,694** | **11,694** | **11,694** | **11,694** |
| **2017 Targets** |
| **PROVINCE** | **MT** | **ET** | **EGD** | **CT** | **Tech Maths** | **Tech Science** | **Maths** | **Science** |
| EC | 635 | 523 | 3,211 | 999 | 1,113 | 1,113 | 1,113 | 1,113 |
| FS | 584 | 481 | 2,955 | 920 | 1,024 | 1,024 | 1,024 | 1,024 |
| GP | 2,063 | 1,699 | 10,436 | 3,249 | 3,617 | 3,617 | 3,617 | 3,617 |
| KZN | 1,550 | 1,276 | 7,841 | 2,441 | 2,718 | 2,718 | 2,718 | 2,718 |
| LP | 306 | 252 | 1,547 | 482 | 536 | 536 | 536 | 536 |
| MP | 436 | 359 | 2,205 | 687 | 764 | 764 | 764 | 764 |
| NC | 190 | 157 | 963 | 300 | 334 | 334 | 334 | 334 |
| NW | 603 | 497 | 3,052 | 950 | 1,058 | 1,058 | 1,058 | 1,058 |
| WC | 636 | 524 | 3,217 | 1,001 | 1,115 | 1,115 | 1,115 | 1,115 |
| **TOTAL** | **7,004** | **5,767** | **35,427** | **11,028** | **12,279** | **12,279** | **12,279** | **12,279** |

|  |
| --- |
| **2018 Targets** |
| **PROVINCE** | **MT** | **ET** | **EGD** | **CT** | **Tech Maths** | **Tech Science** | **Maths** | **Science** |
| EC | 574 | 473 | 3,018 | 922 | 1,027 | 1,027 | 1,027 | 1,027 |
| FS | 487 | 401 | 2,560 | 782 | 871 | 871 | 871 | 871 |
| GP | 2,059 | 1,695 | 10,818 | 3,305 | 3,679 | 3,679 | 3,679 | 3,679 |
| KZN | 1,817 | 1,496 | 9,545 | 2,916 | 3,247 | 3,247 | 3,247 | 3,247 |
| LP | 447 | 368 | 2,347 | 717 | 798 | 798 | 798 | 798 |
| MP | 440 | 362 | 2,312 | 706 | 786 | 786 | 786 | 786 |
| NC | 135 | 111 | 708 | 216 | 241 | 241 | 241 | 241 |
| NW | 499 | 411 | 2,621 | 801 | 891 | 891 | 891 | 891 |
| WC | 757 | 623 | 3,978 | 1,215 | 1,353 | 1,353 | 1,353 | 1,353 |
| **TOTAL** | **7,214** | **5,940** | **37,907** | **11,580** | **12,893** | **12,893** | **12,893** | **12,893** |
| **2019 Targets** |
| **PROVINCE** | **MT** | **ET** | **EGD** | **CT** | **Tech Maths** | **Tech Science** | **Maths** | **Science** |
| EC | 592 | 487 | 3,230 | 968 | 1,078 | 1,078 | 1,078 | 1,078 |
| FS | 502 | 413 | 2,739 | 821 | 914 | 914 | 914 | 914 |
| GP | 2,121 | 1,746 | 11,575 | 3,470 | 3,864 | 3,864 | 3,864 | 3,864 |
| KZN | 1,871 | 1,541 | 10,213 | 3,062 | 3,409 | 3,409 | 3,409 | 3,409 |
| LP | 460 | 379 | 2,511 | 753 | 838 | 838 | 838 | 838 |
| MP | 453 | 373 | 2,474 | 742 | 826 | 826 | 826 | 826 |
| NC | 139 | 114 | 758 | 227 | 253 | 253 | 253 | 253 |
| NW | 514 | 423 | 2,804 | 841 | 936 | 936 | 936 | 936 |
| WC | 780 | 642 | 4,256 | 1,276 | 1,421 | 1,421 | 1,421 | 1,421 |
| **TOTAL** | **7,431** | **6,118** | **40,560** | **12,159** | **13,538** | **13,538** | **13,538** | **13,538** |

(d) (i) Negotiations between the Department and Higher Education South Africa (HESA) and Umalusi are in progress for considering the designation of these technology subjects

(d)(ii)The non-designation is the only challenge that the Minister foresees.