



REPUBLIC OF ZAMBIA

REPORT OF THE

COMMITTEE ON EDUCATION, SCIENCE AND TECHNOLOGY

FOR THE

FIFTH SESSION OF THE TWELFTH NATIONAL ASSEMBLY

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REPORT OF THE COMMITTEE ON EDUCATION, SCIENCE AND TECHNOLOGY FOR THE FIFTH SESSION OF THE TWELFTH NATIONAL ASSEMBLY

1.0 Membership of the Committee

The Committee consisted of Mr G K Mwamba, MP (Chairperson); Ms A M Chisangano, MP (Vice Chairperson); Prof G Lungwangwa, MP; Mr S Tembo, MP; Mr K H S Kamboni, MP; Mr E Machila, MP; Mr K Sampa, MP; Mr P C Mecha, MP; Mr H S Chansa, MP; and Mr M Mutelo, MP.

The Honourable Mr Speaker
National Assembly
Parliament Buildings
LUSAKA

Sir

The Committee has the honour to present its Report for the Fifth Session of the Twelfth National Assembly.

2.0 Functions of the Committee

The functions of the Committee are set out in Standing Order Number 157 (2).

3.0 Meetings of the Committee

The Committee held eleven meetings to consider the topical issue and execute its programme of work for the Fifth Session of the Twelfth National Assembly.

4.0 Programme of Work

At the Committee's first meeting held on Tuesday, 29th September, 2020, the Committee considered and adopted the Programme of Work set out below.

- (i) Consideration of the Action-Taken Report on the Committee's Report for the Fourth Session of the Twelfth National Assembly.
- (ii) Study on Skills and Career Development in Primary and Secondary Schools.
- (iii) Local and Foreign Tours.
- (iv) Consideration and adoption of the draft report.

5.0 Procedure Adopted by the Committee

The Committee requested detailed written memoranda on the topic under consideration from concerned stakeholders and invited them to appear before it in order to render oral submissions and clarify issues arising from their submissions. A list of the stakeholders who interacted with the Committee is at Appendix II.

6.0 Arrangement of the Report

The Report of the Committee is in two parts. Part I deals with the topical issue, local and foreign tours, while Part II deals with the Action - Taken Report and the conclusion of the Report.

PART I

CONSIDERATION OF THE TOPICAL ISSUE

The findings of the Committee on the topical issue are presented hereunder.

7.0 TOPIC: SKILLS AND CAREER DEVELOPMENT IN PRIMARY AND SECONDARY SCHOOLS

Background

The relevance of Zambia's education system had been a subject of debate since the 1970s, when the first education reforms were initiated. The same debate had continued even after the recently implemented Zambia Education Curriculum Framework of 2013. The education sector as a whole had been criticised for not being responsive to the socioeconomic needs of the country. For example, it had been observed that the school curriculum at both primary and secondary levels was too academic and did not adequately provide for the knowledge and skills necessary for social and economic development. The school curriculum was perceived as orienting learners toward white-collar jobs only. Statements such as, "the Zambian Education System has been churning out thousands of primary and secondary school leavers with white-collar job aspirations yet without the necessary vocational skills to contribute to the country's socioeconomic development" had been echoed many times.

It was stated that this had been the trend since colonial times; throughout the colonial period, vocational skills were undervalued and relegated to Africans, while academic education was perceived as the preserve of the whites as colonial masters. As a result, at Zambia's independence in 1964, vocational training and skills development was widely despised and underdeveloped. To date, academic education was highly preferred as opposed to vocational and skills development, which was still perceived as a gateway to low class jobs.

Additionally, school guidance and counseling was acknowledged worldwide to be key to realising career development among the learners with the sole purpose of ensuring that they remained focused. Unfortunately, in Zambia's education system, the provision of counseling and guidance services in the education system had not been fully implemented.

It was noted that while the recently declared vocational career pathway was progressive and a giant step in imparting the secondary school learners with various skills for self-reliance and for the country's social and economic development, its implementation remained uncertain. It was not clear how such a huge reform programme would be realised amidst limited infrastructure, limited material resources, critical teacher shortages and limited budgetary allocation to the education sector. It was against this background that the Committee resolved to undertake a study on Skills and Career Development in Primary and Secondary Schools.

7.1.1 Objectives

The objectives of the study were to:

- (i) ascertain the adequacy of the policy and legal framework regarding skills and career development in primary and secondary schools;
- (ii) appreciate the measures that the Government has put in place to enhance skills and career development in primary and secondary schools;
- (iii) establish progress made in developing skills and careers among the learners in primary and secondary schools;
- (iv) understand the challenges faced in providing for skills and career development in primary and secondary schools; and
- (v) make recommendations to the Executive on the way forward with regard to skills and career development in primary and secondary schools.

7.1.2 Stakeholders

The following institutions made written and oral submissions to the Committee on the topical issue:

- (i) Ministry of General Education;
- (ii) Ministry of Higher Education;
- (iii) Ministry of Youth, Sport and Child Development;
- (iv) Zambia Qualifications Authority;
- (v) Teaching Council of Zambia (TCZ);
- (vi) Zambia Open Community Schools (ZOCS);
- (vii) National Science and Technology Council (NSTC);
- (viii) Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA);
- (ix) Zambia National Union of Teachers (ZNUT);
- (x) Secondary Schools Teachers' Union of Zambia (SESTUZ);
- (xi) Basic Education Teachers' Union of Zambia (BETUZ);
- (xii) National Union of Public and Private Educators of Zambia;
- (xiii) Zambia Institute for Policy Analysis and Research (ZIPAR);
- (xiv) University of Zambia (UNZA); and
- (xv) Members of the Public

SUMMARY OF SUBMISSIONS FROM STAKEHOLDERS

This paragraph presents a synopsis of the submissions made by the various stakeholders on the topical issue under consideration by the Committee.

7.2 POLICY AND LEGAL FRAMEWORK GOVERNING SKILLS AND CAREER DEVELOPMENT IN PRIMARY AND SECONDARY SCHOOLS

(a) Policy framework

The Committee was informed that the Government had formulated an adequate policy and legal framework to support skills and career development in primary and secondary schools. Key among the policy instruments were the Seventh National Development

Plan, the National Education Policy of 1996, the Education and Skills Sector Plan (2017 – 2021), the Zambia Education Curriculum Framework of 2013, the National Higher Education Policy of 2018 and the National Science, Technology and Innovation Policy of 2019. Some detail on these key policy instruments vis-à-vis skills and career development in primary and secondary schools is provided below.

(i) **National Education Policy of 1996**

The Committee learnt that the National Education Policy of 1996 provided direction and information on the management of general education in the country. Emphasis was placed on ensuring that all Zambians had equal access to education. The policy offered pupils knowledge, understanding and skills by integrating the programmes across the curriculum. Other programmes were structured as special modules which were offered within the framework of an appropriate discipline. The policy ensured that every child had access to nine years of good quality basic education by 2015. The National Education Policy was currently being revised to take into account various developments in education which included the transformation of basic and high schools into primary and secondary schools.

(ii) **Seventh National Development Plan**

The Committee learnt that the Ministry of National Development and Planning formulated the Seventh National Development Plan (7NDP) which departed from a sector-based planning to an integrated (multi-sectoral) development approach. The strategy promoted entrepreneurship skills training and development in training institutions. The implementation of the strategy resulted in the attainment of the enrolment ratio of 100 per cent through the construction of new schools and additional classrooms in existing schools in order to enhance access.

(iii) **Zambia Education Curriculum Framework of 2013**

The Committee was informed that in 2013, the Ministry of Education, Science, Vocational Training and Early Education (MESVTEE) reviewed the education curriculum in order to redefine the teaching content so that relevant knowledge, skills and values were incorporated into the curriculum. Besides redefining the teaching content, the Ministry also introduced a two-tier curriculum for Grades 8 to 12. The two-tier curriculum provided for learners to pursue either an academic or a vocational career pathway at a secondary school level. This accorded learners an opportunity to progress according to their abilities and interests.

(iv) **Education and Skills Sector Plan (2017 – 2021)**

The Committee was informed that the Education and Skills Sector Plan was aligned to the aspirations of the Seventh National Development Plan in ensuring quality education for all, as well as promoting skills development at all levels of the education system. It further amplified the aspirations of the two-tier curriculum system which was introduced in the year 2013. The strategy had been reviewed and aligned to the 2017-2021 Strategic Plan. The Committee heard that the Strategic Plan had been designed to re-establish education as a key catalyst for

national development which sought to deliver quality and relevant lifelong education and skills training for all. The Strategic Plan integrated solutions in the provision of education opportunities in issues of curriculum relevance, teacher skills and learning skills.

(v) **National Higher Education Policy of 2018**

The Committee was informed that the Higher Education Policy of 2018 contained aspirations that sought to leverage skills and career development in the provision of higher education in Zambia. The aspiration was aimed at producing graduates that were not only knowledgeable but also skilled, innovative and creative in their endeavours.

(vi) **National Science, Technology and Innovation Policy (2019)**

The Committee learnt that the policy provided for promotion of skills and career development in the scientific and technological sectors for learners and human resource in schools. In addition, it established and strengthened career counseling programmes to address problems which hindered girls' progression in science and technology. The policy had promoted continuous professional development and appropriate skills balance in science, technology and innovation. This resulted in increased young innovator skills recognition in schools through provision of awards to the deserving learners.

(b) **Legal framework**

The Committee was informed that the legal framework governing skills and career development was adequate and it comprised the *Science and Technology Act, No. 26 of 1997*, the *Technical Education, Vocational and Entrepreneurship Training Act, No. 13 of 1998* read together with the *Technical Education, Vocational and Entrepreneurship Training (Amendment) Act, No. 11 of 2005*, and the *Education Act, No. 23 of 2011*.

(i) ***The Science and Technology Act, No. 26 of 1997***

The *Science and Technology Act, No. 26 of 1997* provided a legal framework for the promotion of science and technological subjects in schools by making the subjects compulsory for all learners.

(ii) ***The Technical Education, Vocational and Entrepreneurship Training Act, No. 13 of 1998 read together with the Technical Education, Vocational and Entrepreneurship Training (Amendment) Act, No. 11 of 2005***

The *Technical Education, Vocational and Entrepreneurship Training Act, No. 13 of 1998* read together with the *Technical Education, Vocational and Entrepreneurship Training (Amendment) Act, No. 11 of 2005* provided for the establishment of the Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA), an authority which was responsible for the provision of technical education, vocational and entrepreneurship training. TEVETA was also responsible for setting the standards and qualifications for skills and trades acquired in TEVET institutions.

The mandate of TEVETA did not extend to learning institutions which were established under the *Education Act, No. 23 of 2011* such as primary and secondary schools. TEVETA was, however, mandated to certify the skills acquired by learners in secondary schools under the vocational pathway.

(iii) ***The Education Act, No 23 of 2011***

The Committee heard that the *Education Act, No, 23 of 2011* provided for counselling and career guidance as essential components of the learners' welfare at all levels of the education system, and being part of the overall management and administration of the education system. The Act provided for a legal framework for upgrading teachers' skills and competences through the Continuing Professional Development Programme. This resulted in a downward delivery of the acquired knowledge, thereby developing skills and careers among the learners in primary and secondary schools.

7.3 MEASURES INSTITUTED BY THE GOVERNMENT TO ENHANCE SKILLS AND CAREER DEVELOPMENT IN PRIMARY AND SECONDARY SCHOOLS

The Committee was informed that in order to enhance skills and career development in primary and secondary schools, the Government put in place a number of measures which included the following:

(i) **Curriculum Enhancement**

The Committee was informed that the Government enhanced the curriculum for both primary and secondary schools in order to include practical skills subjects. The curriculum for primary education focused on mastery of literacy and numeracy, and development of problem-solving skills, while at secondary school level the curriculum focused on communication, numeracy and problem solving skills. This was evidenced by the kind of subjects which were offered at both primary and secondary schools. Subjects such as home economics, wood work, metal work, geometrical drawing, music, agriculture science and entrepreneurship were covered in business studies and were included in the curriculum.

(ii) **Implementation of the two-tier Career Pathway System**

The Committee learnt that collaboration was initiated between the Ministry of General Education and Ministry of Higher Education through Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA) to expose learners to practical skills training while at secondary school. The two-tier approach focused on the creation of two curriculum pathways: academic and vocational. The academic path was meant for learners who had a passion and strength for academic subjects and a desire for careers in that direction. Learners who had ambitions and interest in technical and hands-on subjects took the vocational pathway. The curriculum provided practical skills to such learners from Grade 8 up to Grade 12. Under this collaboration, learners on the vocational pathway obtained trade certificates as well as Grade 9 and Grade 12 academic certificates. The trade certificates were awarded by TEVETA, while the academic certificates were awarded by the Examinations Council of Zambia.

(iii) Recruitment of Career Guidance Teachers in Schools

The Committee was informed that the Government had continued the recruitment of career guidance teachers in schools. The Committee learnt that career guidance teachers played an important role in the dissemination of information relating to post primary and secondary school training and employment opportunities.

(iv) Enhancement of Teacher Skills

The Committee was informed that the Government had continued providing in-service training of teachers for vocational skills training. This was aimed at providing education which was relevant and up-to-date.

(v) Establishment of the Higher Education Authority

The Committee learnt that, through the establishment of the Higher Education Authority, the Government was able to provide for a career path for learners from secondary school, for them to pursue further studies in their various career choices at university level. In this regard, the Higher Education Authority ensured that universities adhered to delivering quality education which was relevant to industry.

(vi) Establishment of the Technical Education, Vocational and Entrepreneurship Training Authority

The Committee was informed that the establishment of the Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA), provided for the creation of technical education, vocational and entrepreneurship training institutions. These institutions provided a career path for learners from primary and secondary schools, thereby enabling them to pursue further studies in various skills training at various TEVET institutions.

(vii) Establishment of the Zambia Qualifications Authority

The Committee was informed that the Government, through the establishment of Zambia Qualifications Authority (ZAQA) had developed and implemented a national qualifications framework which facilitated access to mobility and progression within education, training and career pathways. Further, ZAQA enhanced the quality of education and training; and promoted education, training and employment opportunities. In this vein, the qualifications at primary and secondary schools had been assessed by ZAQA in order to ensure international comparability and compatibility.

7.4 PROGRESS MADE IN PROVIDING SKILLS AND CAREERS AMONG LEARNERS IN PRIMARY AND SECONDARY SCHOOLS

The Committee heard that some progress had been made in developing skills and careers in primary and secondary schools. The key milestones of this progress included those listed below.

(i) Implementation of a Two-tier Career Pathway

The Committee learnt that the Curriculum Framework of 2013 provided for a two-tier career pathway, which equipped learners with practical skills throughout secondary education, as contained in the table below.

Programmes offered under the two-tier Career Pathway Education System

Academic Pathway	Vocational Pathway
Business Studies (Entrepreneurship integrated)	Agriculture
English Language	Technology
Computer Studies	Performing and Creative Arts (PCA)
Integrated Science	Physical Education and Sports (PES)
Social Studies	Home Economics and Hospitality (HEH)
Mathematics	
Religious Education	
Zambian Languages	

Source: Zambia Education Curriculum Framework of 2013

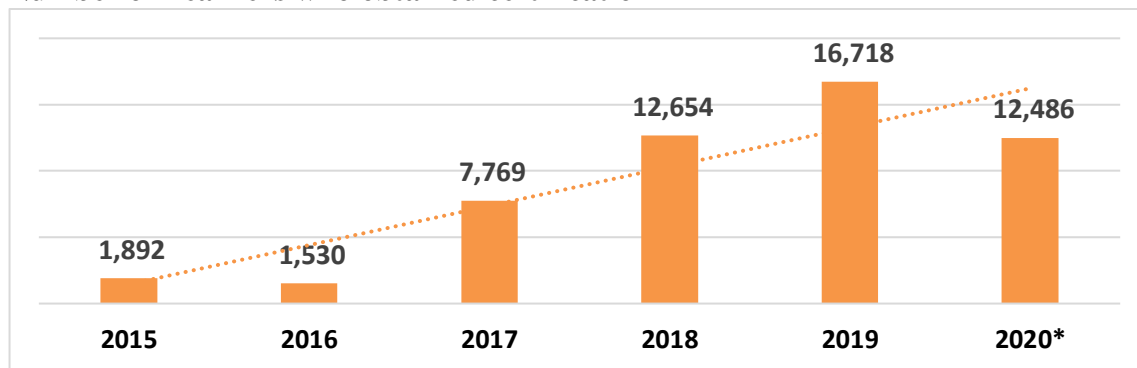
(ii) Implementation Certification of Skills acquired by Learners

The Committee was informed that following the implementation of the Curriculum Framework in 2013, TEVETA embarked on a process of accrediting learners using trade test certificates. The trade testing was implemented at secondary school level where learners were given a level three trade certificate. In this vein, the certification of learners commenced in 2015 and by 2019, there were 424 schools countrywide which had participated in the assessments. The schools which participated in trade assessments were from nine provinces, namely: Copperbelt; Eastern; Central; Lusaka; Southern; Western; North Western; Luapula; and Northern Province. The figures were as shown in the table below.

Province	Number of Schools
Copperbelt	173
Eastern	63
Central	30
Lusaka	10
Southern	30
Western	39
North Western	26
Luapula	38
Northern	23

The Committee was informed that in the first year of implementation, over 1,800 learners received certification, and the number increased to over 16,000 in the year 2019. In this vein, the number of learners who received certification between 2015 and 2019 increased as shown in the table below.

Number of Learners who obtained certification



Source: TEVETA Records 2016-2020

The Committee learnt that the figure for the year 2020 as contained in the table above, represented learners who enrolled and were to be assessed by September 2020, and subsequently be able to obtain certificates.

(iii) Introduction of Careers Day in Schools

The Committee was informed that since the enactment of the *Education Act, No. 23 of 2011*, some schools had introduced careers day in primary schools where pupils were told to report to school dressed in an outfit depicting a career of their choice. This was aimed at stimulating pupils towards identifying and associating themselves with a particular career for future aspirations.

(iv) Creation of Science-based Production Units and School Clubs

The Committee learnt that a number of schools had created science-based production units in order to provide learners with an opportunity to acquire practical skills. Further, the Committee was informed that schools formed subject matter clubs in order to register and mentor learners towards building relevant skills.

7.5 CHALLENGES FACED IN THE PROVISION OF SKILLS AND CAREER DEVELOPMENT IN PRIMARY AND SECONDARY SCHOOLS

The Committee was informed that the country had experienced a lot of challenges in the implementation of skills and career development in primary and secondary schools. Some of these challenges were as set out below.

(i) Inadequate Infrastructure to support Skills and Career Development

The Committee was informed that most schools lacked adequate and appropriate infrastructure to support vocational education. Further, the Committee learnt that most of the schools had a unit responsible for career development, where only one staff was providing both career guidance and counselling. The Committee was further informed that career guidance and counselling were different interventions which required different skills. The case where a non-general practitioner was providing both services proved to be a challenge.

(ii) **Limited Equipment and Materials to support Skills and Career Development in Schools**

The Committee was informed that most of the schools in the country did not have adequate equipment and materials necessary to conduct proper instructions in the vocational pathway. In this vein, the Committee learnt that equipment and materials played a critical role in developing the learners' skills.

(iii) **Lack of Trained Teachers as Instructors of TEVET Programme in Schools**

The Committee was informed that the instructors responsible for TEVET programme in schools were not appropriately trained to deliver the required skills to the learners. Further, the Committee heard that the delivery of TEVET programmes in schools required instructors who possessed both academic and vocational training.

(iv) **Lack of Innovation and Pro-activeness by the School Management Teams**

The Committee learnt that some schools, especially those situated in the rural areas were not innovative enough to introduce activities which enhanced skills and career development.

(v) **Lack of Evaluation on the Vocational Education Training in Schools**

The Committee learnt that the vocational education training which was being implemented in schools had not been evaluated, thereby making it difficult to measure the success or otherwise of the programme.

(vi) **Misalignment of Classifications between the TEVET Qualification Framework and the Zambia Qualifications Framework.**

The Committee learnt that the skills acquired by learners in the vocational pathway from TEVET did not reflect in the national qualifications framework provided by the Zambia Qualifications Framework. In this regard, the level 2 and level 3 Trade Test Certificates awarded to the learners by TEVETA were not included in the Zambia Qualifications Framework. Further, the Committee learnt that the classifications used by TEVETA differed from the classifications used by the Zambia Qualifications Authority. The Committee learnt that the mismatch in classifications affected the employability of learners because employers had challenges in understanding the level of qualification.

(vii) **Inadequate Financial and Material Resources to support Skills and Career Development**

The Committee was informed that the current financial allocations to the education sector were not sufficient to support skills and career development in primary and secondary schools. The Committee learnt that skills and career development required sufficient financial and material resources to adequately provide for the development of skills among the learners.

(viii) **Partial Implementation of the Secondary School Vocational Education Training**

The Committee learnt that the secondary school vocational education training was only adequately implemented up to Grade 9 where the free education policy was in effect. The Committee was informed that since the free education policy only applied up to Grade 9, learners who were taking vocational subjects at senior secondary school level were required to pay for their assessment. In this regard, learners at the senior level had not been assessed in vocational

education training, owing to the fact that a policy decision had not been made on the payment for vocational assessment at senior secondary school level.

7.6 COMMITTEE'S OBSERVATIONS AND RECOMMENDATIONS

The Committee notes that the Government has over the years generally made positive strides in implementing skills and career development in primary and secondary schools. However, a number of concerns still exist that require the Executive's urgent attention if more sustainable results are to be attained. The Committee is of the view that if developing skills and career development in primary and secondary schools is to yield the desired results, the Government should take concrete steps to address identified challenges. In this vein, and having considered the submissions made by various stakeholders, the Committee makes the observations and recommendations set out below.

- Lack of Adequate and Appropriate Infrastructure to support Vocational Training**
- (i) The Committee is greatly concerned that most of the schools in the country lack adequate and appropriate infrastructure to support vocational training.

The Committee, therefore, strongly recommends that the Government should immediately put in place the necessary facilities such as workshop tools and equipment, and laboratories to support vocational education training in schools. This will enhance practical rather than theoretical teaching of the skills subjects in schools.

- Lack of Appropriately Trained Instructors in TEVET Programmes**
- (ii) The Committee expresses great concern that the instructors responsible for TEVET programmes in schools are not appropriately trained to deliver the required skills to the learners.

The Committee, therefore, urges the Government to ensure that teachers who are conducting TEVET programme in schools are appropriately trained without delay.

- Non-inclusion of TEVETA Level 2 and Level 3 Trade Test Certificates in the Zambia Qualifications Framework.**
- (iii) The Committee observes with great concern that the skills acquired by learners under vocational pathway from TEVET do not reflect in the national qualifications framework developed by the Zambia Qualifications Framework. In this regard, level 2 and level 3 trade test certificates awarded to the learners by TEVETA are not included in the Zambia Qualifications Framework.

The Committee, therefore, strongly recommends that the Government takes measures to harmonise the mismatch that exists in the classification of qualifications by TEVET and Zambia Qualification Authority. This should be attended to as a matter of urgency.

Lack of Evaluation Mechanism in the Implementation of the Vocational Training

- (iv) The Committee is greatly concerned about the lack of an evaluation mechanism in the implementation of the vocational training which is being conducted in schools. This makes it difficult to measure the success that has been scored in the programme.

The Committee urges the Government to urgently take concrete steps to put in place an evaluation mechanism of the implementation of vocational education training. This will help in measuring the success scored in the programme, and in providing recommendations for improvement where necessary.

Inadequate Financial Allocations to Vocational Training Programmes

- (v) The Committee expresses concern that the current financial allocations to the education sector, and particularly to vocational training programmes, are not sufficient to support skills and career development in primary and secondary schools.

The Committee, therefore, recommends that adequate financial resources should be channeled to vocational education training programmes, in order to support skills and career development in primary and secondary schools.

Non-assessment of Skills acquired by Learners at Senior Secondary School Level

- (vi) The Committee is greatly concerned that the secondary school vocational education training is only adequately implemented up to Grade 9 where the free education policy applies. The Committee also finds it unacceptable that the senior secondary schools learners are not being assessed under the vocational education programme despite them having satisfactorily attended the necessary training.

The Committee urges the Government to provide policy guidance on the plight of the learners at the senior secondary school level who are not being assessed in vocational training due to lack of guidance on the payment for vocational assessment. Alternatively, the Committee urges the Government to consider using part of the Skills Development Fund to finance the trade tests in vocational training for senior secondary school learners.

Lack of Modern Infrastructure and Machinery to support the Vocational Career Pathway

- (vii) The Committee is greatly concerned over the fact that the Government is implementing the two-tier career system without equipping schools with modern infrastructure and machinery to support the vocational career pathway.

In this vein, the Committee urges the Government to urgently develop and implement a medium-term plan to equip schools with appropriate modern infrastructure and machinery necessary to deliver high quality training.

Inadequate Trained Teachers to provide Guidance and Counselling in Schools

- (viii) The Committee observes with great concern that most schools do not have adequately trained teachers to provide guidance and counselling.

The Committee, therefore, implores the Government to consider providing appropriate training to the teachers responsible for providing guidance and counselling in schools.

Limitation of the Two-tier Career System to a few selected Schools

- (ix) The Committee is seriously concerned that the two-tier career system is only being implemented in selected secondary schools in the country, leaving out many secondary schools. This is inhibiting many learners from acquiring the necessary lifelong skills.

The Committee, therefore, urges the Government to consider rolling out the two tier career system to all secondary schools countrywide in order to provide learners with both academic and lifelong skills training at secondary school level.

PART II

8.0 CONSIDERATION OF THE ACTION-TAKEN REPORT ON THE REPORT OF THE COMMITTEE ON EDUCATION, SCIENCE AND TECHNOLOGY FOR THE FOURTH SESSION OF THE TWELFTH NATIONAL ASSEMBLY

8.1 THE TEACHING OF SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS IN ZAMBIAN SCHOOLS

(i) Policy Framework to support the teaching of Science, Technology, Engineering and Mathematics

The Committee in the previous Session was greatly concerned that the policy framework was fragmented and having no stand-alone policy to support the teaching of science, technology, engineering and mathematics in schools. In the view of the Committee, this had resulted in the lack of an aggressive focus in the teaching of these subjects. This had also led to the poor results in science, technology, engineering and mathematics.

The Committee had, therefore, strongly recommended that the Government should immediately formulate a stand-alone policy which would specifically guide the teaching of science, technology, engineering and mathematics in schools. Alternatively, the Government was requested to consider redrafting the National Science and Technology Policy so as to clearly provide for the teaching of these subjects.

Executive's Response

It was stated in the Action-Taken Report that the Ministry of General Education had developed a number of policy documents on science, technology, engineering and mathematics (STEM) education, and these included the following:

- (i) Strategic Note on the Implementation of STEM Education (2019);
- (ii) Secondary School STEM Education Curricula (2020);
- (iii) Report on the Assessment of STEM Education Implementation (2020)
- (iv) Assessing Learning in STEM Education (2020); and
- (v) STEM Education Chapter Policy Document (2020).

Committee's Observations and recommendations

The Committee takes note of the response given by the Executive and resolves to await the formulation of a consolidated and stand-alone policy which will specifically guide the teaching of science, technology, engineering and mathematics in schools.

(ii) Non-inclusive Teaching of STEM in all Secondary Schools

The Committee in the previous Session observed with great concern that the teaching of science, technology, engineering and mathematics was only seriously considered at secondary school level where selected schools were established as STEM schools. The Committee had found this highly unacceptable as it was depriving primary school learners of the needed foundation through learning science, technology, engineering and mathematics at an early stage.

The Committee had, therefore, strongly recommended that the Government takes measures to ensure that science, technology, engineering and mathematics subjects were taught in all schools starting from primary, secondary and finally into tertiary education.

Executive's Response

It was stated in the Action-Taken Report that the monitoring exercise on implementation of STEM education in the fifteen pilot STEM Secondary Schools was conducted in February 2020. Consequently, a baseline report on assessment of STEM education in secondary schools had since been produced. The findings were being used to improve the implementation at primary school level.

It was further reported that the implementation plan of the 2020 National Science, Technology and Innovation (STI) Policy, had measures which were aimed at promoting STEM at all levels of the education systems through the following activities:

- (i) establishment of specific colleges and universities focused on training in STEM;
- (ii) establishment of centres of excellence for scientific and technological research that cut across primary, secondary and tertiary levels;
- (iii) establishment of a STEM mentorship programmes;
- (iv) provision of incentives to attract STEM teachers that cut across primary, secondary and tertiary; and
- (v) review current STEM curriculum from primary, secondary and tertiary levels;

It was reported that these plans were expected to enhance the teaching of science, technology, engineering, and mathematics subjects at all the levels of the education system, including primary, secondary, and through to tertiary education.

Committee's Observations and Recommendations

The Committee takes note of the response given by the Executive and resolves to await a progress report on the measures which are aimed at rolling out the teaching of science, technology, engineering and mathematics to all schools countrywide and at all levels of the education system.

(iv) Lack of Equipped Laboratories in most Schools

The Committee in the previous Session was greatly concerned over the lack of equipped laboratories in schools in most parts of the country. The Committee had found this unacceptable as it was negatively impacting on the teaching of science, technology, engineering and mathematics, which ultimately impacted negatively on the overall development of the country. The Committee had, therefore, strongly urged the Government to come up with a robust programme to ensure that all schools in the country were equipped with science and computer laboratories for effective teaching of those subjects. The Committee had further recommended that the Government should also ensure that laboratory assistants were recruited and deployed to support laboratory activities in all schools.

Executive's Response

It was reported in the Action-Taken Report that the Government through the Directorate of Standards and Curriculum and the National Science Centre, would endeavour to equip science and computer laboratories in schools with necessary equipment for effective teaching of science, technology, engineering and mathematics. Further, the Government would strive to employ suitably qualified laboratory and workshop assistants.

Committee's Observations and Recommendations

The Committee takes note of the response given by the Executive and resolves to await a progress report on the equipping of schools with laboratories, and the recruitment of laboratory and workshop assistants.

(v) Inadequate Funding towards the Teaching of Science, Technology, Engineering and Mathematics

The Committee in the previous Session was seriously concerned over the under-funding experienced in the teaching of science, technology, engineering and mathematics in Zambian schools. The Committee had observed that the inadequacy of resources was slowing down the efforts towards achieving set targets in the teaching of science, technology, engineering and mathematics.

The Committee had urged the Government to allocate more funds towards the teaching of science, technology, engineering and mathematics. The Committee had further recommended the establishment of a sustainable Science, Technology, Engineering and Mathematics Education Fund as a way of promoting, strengthening and improving the teaching and learning outcomes. The Committee had also urged the Government to come up with a mechanism of costing the implementation of STEM from primary level to tertiary level for the purpose of guiding future implementation of STEM programmes.

Executive's Response

It was stated in the Action-Taken Report that following the approval of the Policy framework by Cabinet, the 2020 Science, Technology and Innovation (STI) Policy had provided for Objective 2: to strengthen and build the human resource capacity in STI and one of the measures was to promote the teaching and learning of science, technology, engineering, and mathematics. Under this objective, a number of activities such as the promotion of the Junior Engineers, Technicians and Scientists (JETS) in schools and the provision of incentives to attract STEM teachers were

introduced in order to support the teaching of STEM. In addition, under Objective 5: activities were introduced which aimed to improve investment and funding to science and technology innovation which would provide for establishment of centres of excellence for scientific and technological research.

Further, the Ministries of Higher Education and General Education would come up with a costing mechanism on the implementation of STEM from primary level to tertiary level for the purpose of guiding future implementation of STEM programmes. This could be achieved through collaborating the measures of the STI Policy and those of the Educational Policy on STEM. This policy position was set to provide a base for promoting, strengthening, and improving the teaching and learning outcomes.

Committee's Observations and Recommendations

The Committee takes note of the response given by the Executive and appreciates the plans that have been put in place. However, the Committee resolves to await a progress report on actual increase in funding towards the teaching of science, technology, engineering and mathematics in schools and a specific response on its recommendation to establish a STEM Fund.

9.0 CONSIDERATION OF THE ACTION TAKEN REPORT ON THE REPORT OF THE COMMITTEE ON EDUCATION, SCIENCE AND TECHNOLOGY FOR THE THIRD SESSION OF THE TWELFTH NATIONAL ASSEMBLY

9.1 The Teaching of Computer Studies in Zambian Schools

(i) Policy Framework to support the teaching of Computer Studies

The Committee in the previous Session was concerned that there was no policy framework to support the teaching of computer studies in schools, which had resulted in fragmentation and non-coordination in the teaching of computer studies in the country.

The Committee had recommended that the Government should immediately finalise the draft 2007 ICT Policy in Education so that it could provide guidance on how ICT programmes and the teaching of computer studies could be implemented.

It was stated in the previous Action-Taken Report that the Government had taken note of the Committee's recommendation and that the Ministry of General Education had been working on the Education ICT Integration Master Plan, which would replace the Draft 2007 ICT Policy in Education. The Education ICT Integration Master Plan was expected to supersede the Draft 2007 ICT Policy owing to the fact that the passage of time since the Draft 2007 ICT Policy was produced had seen a lot of developments and changes in ICT that the Draft Policy may not have considered at the time. In this regard, the primary goal of the Master Plan was to prepare all students for the 21st century skills and ICT integration in order to help actualise Zambia's Vision 2030, aimed at moving Zambia to be a leader in research, technology, innovation and become a knowledge-based society. It was further reported that the Education Master Plan addressed in broad terms the underlying goals as outlined below:

- (i) improving the quality of education and training; and

- (ii) strengthening the relevance of education and training to the labour market by the insertion of 21st century skills.

The objectives of the Education Master Plan included:

- (i) to accelerate the adoption of ICT tools in teaching and learning;
- (ii) to transition to education e-resources (videos, interactive lessons, e-books, e-assessment, self-paced learning;
- (iii) to integrate adaptive learning; and
- (iv) to create a self-sustainable model with parents, community, development partners, private sector players, and NGO participation.

In this vein, the Ministry had been working with Smart Zambia Institute and the Ministry of Transport and Communications in order to operationalise the Education Master Plan which was expected to be finalised by 2020.

The Committee had in the previous Session taken note of the response given by the Executive and resolved to await an ICT Policy which was expected to give guidance to the mentioned Education ICT Integrated Master Plan, realising that there could not be that Master Plan in the absence of the ICT Policy.

Executive's Response

It was reported in the Action-Taken Report that the Education ICT Policy was at final draft stage. In that regard, the Ministry of General Education was in consultation with Smart Zambia Institute and the Ministry of Transport and Communication in order to align the draft ICT Policy to the National ICT Policy, Smart Zambia e-Government Master Plan and the 7NDP strategic outcomes.

Committee's Observations and Recommendations

The Committee takes note of the response given by the Executive and resolves to await a progress report on the finalisation of the ICT Policy to provide guidance on how ICT programmes and the teaching of computer studies can be implemented.

(ii) Lack of Technical Experts in Schools to repair faulty Computers

The Committee in the previous Session had observed with great concern that there were no technical experts in schools to repair computers whenever they developed faults.

The Committee had, therefore, recommended that the Government should consider employing computer technicians in each district to support the teaching of computer studies.

It was reported in the previous Action-Taken Report that the Government had approved a new staff establishment structure which would be implemented in a phased manner. It was reported that the computer technicians would be deployed once Treasury authority was granted.

The Committee had taken note of the response given by the Executive and resolved to await an update regarding the deployment of computer technicians after Treasury authority was granted.

Executive's Response

It was stated in the Action-Taken Report that the Government remained committed to promoting and strengthening the education sector, particularly in the field of Information and Communications Technology (ICT) in Zambia. It was reported that the 2020 fiscal year had been characterised with the adverse effects of the Covid-19 pandemic that resulted in the Government recruiting medical personnel to fight the Covid-19 pandemic. In this regard, the Committee was requested to note that all the funds that were allocated for recruitment of personnel in other sectors, including ICT, were exhausted by the recruitment of frontline medical personnel.

It was reported that the Government would endeavour to recruit personnel in ICT in phased approach during the 2022-2023 medium term, revenue permitting.

Further, the Government, through the Ministry of General Education, reported that the new ICT staff establishment structure was presented in August, 2020 and, once approved for implementation, computer technicians would be deployed in a phased approach once Treasury authority was granted for Provinces and District Offices.

Committee's Observations and recommendations

The Committee takes note of the response given by the Executive and resolves to await a progress report on the deployment of computer technicians after Treasury authority is granted.

(iii) Lack of Sufficient Computers in Schools for Teaching Computer Studies

The Committee in the previous Session had observed with great concern that most primary and secondary schools in the country did not have sufficient computers to be used for the teaching of computer studies. The Committee had stated that this had a negative impact on the quality of training offered. The Committee had, therefore, recommended that the Government should take measures to supply all primary and secondary schools in the country with computers for the purpose of teaching computer studies as a matter of urgency.

It was stated in the previous Action-Taken Report that the Ministry of General Education had from the year 2013 when the first ICT lessons were conducted based on the revised curriculum, made tremendous achievements in the supply and distribution of computers to most Government schools for the purpose of teaching and learning. For example, in 2016, the Government distributed 4000 computers to schools and in 2017, 3000 computers were distributed to schools. Furthermore, Zambia Information and Communications Technology Authority (ZICTA) working with the Ministry had distributed 4,342 computers to school under Phases 1 and 2 of the Connecting Learning Institutions in Zambia Project.

It was further reported that in 2020, the Ministry of General Education, through ZICTA planned to distribute 5,000 computers under Phase 3 of the Connecting Learning Institutions in Zambia project. The Ministry and ZICTA had finalised the assessment readiness report for 500 schools to benefit from the lot. The 5000 computers were planned to be distributed in all the ten provinces of Zambia where forty primary schools and ten secondary schools would be selected per province. Those schools in each province had already been identified. In order to ensure sufficient computers to be used for the teaching of computer studies, the Ministry would continue to procure and distribute computers for teaching and learning in schools. It was

reported that more partners such as ZAMTEL, First Quantum Mining Company, CAMARA Zambia and Lafarge had come on board to assist schools by donating computers through their Corporate Social Responsibility (CSR) engagements.

The Committee took note of the response given by the Executive and resolved to await an update on the distribution of 5,000 computers under Phase 3 of the Connecting Learning Institutions in Zambia Project to schools in 2020 by the Ministry of General Education through Zambia Information and Communications Technology Authority.

Executive's response

It was stated in the Action-Taken Report that the Zambia Information and Communications Technology Authority (ZICTA), in collaboration with the Ministry of General Education had been donating computers to primary and secondary schools under the "Connecting Learning Institutions Project".

In 2019, the Authority undertook an exercise to assess schools that would benefit from the computer donating programme from the year 2020. In this regard, 558 schools were identified to receive computers in a phased manner in the year 2020. However, ZICTA indicated that in view of competing demands, there was no budgetary allocation towards the provision of computers to schools. The Authority had prioritised enhancing access to mobile communications technology in underserved parts of the country by building communication towers. As a way forward, the Authority had assured to donate computers to the schools which were assessed and had met the ICT readiness criteria.

Committee's Observations and recommendations

The Committee takes note of the response given by the Executive and requests a progress report on the schools which were assessed and had met the ICT readiness criteria to be provided with computers.

9.2 A STUDY ON THE PROVISION OF QUALITY HIGHER EDUCATION IN ZAMBIA

(i) Clinical Fees Charged to Students in the Private Medical Learning Institutions

The Committee in the previous Session was concerned that there were clinical fees charged to students in the private medical learning institutions during their practical attachments in the public health institutions.

The Committee had urged the Government to abolish the clinical charges slapped on students of private universities as they undertook clinical attachments in public health institutions. The Committee had stated that clinical fees needed to be abolished because while those students undertook practical attachments, they contributed to the much needed staff on the wards in the public health institutions.

It was stated in the previous Action-Taken Report that the Ministry of Higher Education in collaboration with the Ministry of Health were still working on the amendments to the clinical fees which were slapped on students in private universities.

The Committee had taken note of the response given by the Executive and resolved to await an update report on the outcome of the amendments to the clinical fees being slapped on students in private universities during clinical attachments in public health institutions.

Executive's Response

It was stated in the Action-Taken Report that the Ministries of Higher Education and Health had commenced negotiations on the revision of payment of clinical placement fees charged on students of private and public universities as they undertook clinical attachments in the public health institutions. It was expected that once negotiations were completed, the placement fees would either be abolished or revised downwards. The Committee would be updated on further developments regarding the matter in subsequent reports.

Committee's Observations and Recommendations

The Committee takes note of the response given by the Executive but is concerned over the inordinate delay in concluding the matter. The Committee calls for quick finalisation of the negotiations between the two ministries on the review of clinical fees being charged to students in private universities during clinical attachments in public health institutions and resolves to await a progress report on the outcome thereof..

(ii) Lack of Mechanisms of Graduating Higher Education Institutions

The Committee in the previous Session had observed that there was no mechanism of graduating higher education institutions from colleges to university colleges and finally into fully-fledged universities.

The Committee had recommended that the Government should institute mechanisms to have a graduated system of higher learning institutions from colleges, university colleges and finally into fully-fledged universities. The Committee had emphasised that clear parameters for graduation be set out, such as infrastructure and resources that the institution should have.

It was stated in the previous Action-Taken Report that the Government had taken note of the Committee's recommendation and reported that the Ministry of Higher Education had come up with amendments to the *Higher Education Act, No 4 of 2013* and those had since been submitted to the Ministry of Justice.

One of the proposed amendments was to have higher education institutions segregated into colleges, technical university colleges, university colleges, technical universities and universities. Once the amendments were completed, the existing higher education institutions would be placed in these categories after carrying out forensic audits.

The Committee had taken note of the response given by the Executive regarding the segregation of higher education institutions into colleges, technical university colleges, university colleges, technical universities and universities. However, the Committee requested the Executive to consider the Committee's recommendation of graduating newly established higher learning institutions by starting them as colleges, later graduating them into university colleges and finally into fully-fledged universities.

Executive's Response

It was stated in the action-Taken Report that the Higher Education Bill 2020, currently before the Cabinet Legislative Committee, provided for the graduating of newly established higher learning institutions operating from colleges, university colleges into fully-fledged universities. The Committee would be updated on the progress recorded once Parliament passed the Bill.

Committee's Observations and Recommendations

The Committee takes note of the response given by the Executive and resolves to await a progress report on the proposed Higher Education Bill. The Committee reiterates its earlier recommendation that clear parameters for graduation be set out, such as infrastructure and resources that the institution should have in order to qualify in any category.

10.0 CONSIDERATION OF THE ACTION TAKEN REPORT ON THE REPORT OF THE COMMITTEE ON EDUCATION, SCIENCE AND TECHNOLOGY FOR THE SECOND SESSION OF THE TWELFTH NATIONAL ASSEMBLY

10.1 The Role of Community Schools in Enhancing Access to Education in Zambia

10.1.1 Local Tour - Lusaka and Eastern Provinces

(i) Non-deployment of Enough Government Teachers in Community Schools

The Committee in the previous Session had observed that most community schools did not have enough Government teachers. The Committee had recommended that the Government should institute a deliberate policy to provide qualified Government teachers at all community schools.

In response, the Government had noted the Committee's recommendation and confirmed that a deliberate effort was being made to deploy qualified Government teachers at all community schools.

The Committee had in the previous Session resolved to await a progress report on what deliberate efforts had been put in place to deploy enough qualified Government teachers to community schools which had been absorbed by the Government. The Committee had also sought an update on the number of qualified teachers who had been deployed to these schools in the year under review.

It was indicated in the previous Action-Taken Report that the Ministry of General Education only deployed teachers to schools that had staff establishments. Once teachers were deployed, the provincial office may decide to redirect some teachers to community schools that did not have staff establishments but had a shortage of teachers.

The Committee had taken note of the response given by the Executive and resolved to await a progress report on the deployment of enough Government teachers to community schools.

Executive's response

It was reported in the Action-Taken Report that once the authority for recruitment and deployment of teachers was given, teachers would be deployed to the Government Aided Community Schools.

Committee's Observations and Recommendations

The Committee takes note of the response given by the Executive and resolves to await a progress report on the recruitment and deployment of teachers in community schools.

11.0 CONSIDERATION OF THE ACTION-TAKEN REPORT ON THE REPORT OF THE COMMITTEE ON EDUCATION, SCIENCE AND TECHNOLOGY FOR THE FOURTH SESSION OF THE ELEVENTH NATIONAL ASSEMBLY**11.1 The Structure of the Zambian Education System: from Basic- High School to Primary-Secondary School: Challenges and Opportunities.****11.2 Local Tours****(i) Upgrading of Dipalata Secondary School**

The Committee in the previous Session had resolved to await a progress report on the matter. It was reported that while Dipalata Secondary School was upgraded, Phase II of constructing additional infrastructure had not commenced due to lack of funds. It was reported that the Committee would be updated in due course.

The Committee had noted the response given by the Executive and awaited a progress report on the construction of the additional infrastructure at the school.

It was reported in the previous Action-Taken Report that the status quo of Dipalata Secondary School remained the same due to lack of funding.

The Committee had taken note of the response given by the Executive and resolved to await a progress report on the full upgrading of Dipalata Secondary School by ensuring construction of additional infrastructure which was intended to be undertaken under Phase II.

Executive's Response

It was reported in the Action-Taken report that the status quo remained the same due to extreme and unforeseen constraints on the national fiscal space which had resulted in the non-availability of funds.

Committee's Observations and Recommendations

The Committee takes note of the response given by the Executive and is disappointed over the undue delays in completing the upgrade of Dipalata Secondary School. The Committee resolves to await a progress report on the full upgrading of the school by ensuring construction of additional infrastructure which is intended to be undertaken under Phase II. The Committee implores the Executive to construct this additional infrastructure expeditiously considering that it is long overdue.

12.0 CONCLUSION

Given the prominent and critical role of skills and career development, it is imperative that the Zambian education system is transformed to be able to produce learners that are critical thinkers, innovative and creative.

It became apparent in the course of this study that most of the schools in the country lack the infrastructure and facilities necessary to support skills and career development. At the same time, vocational education training cannot be adequately implemented without the necessary tools critical for practical purposes. This, therefore, affects the manner in which vocation education is provided, thereby producing learners who were not skilled and ready to face the challenges of the modern world of work.

Other hindrances in skills and career development include lack of trained teachers to offer vocational education training in primary and secondary schools; the inability to roll out the two-tier career system to all secondary schools; failure to provide trade test assessment for the learners at senior secondary school level; and the non-evaluation of the implementation of the vocational education training programme in schools.

The Committee on Education, Science and Technology has made some far reaching recommendations on the topical issue. Therefore, the Committee is confident that the Executive will act upon the findings and the recommendations contained in its Report as the country strives to achieve better outcomes from the education system vis-a-vis skills and career development in primary and secondary schools.

Finally, the Committee expresses its gratitude to the Honourable Mr Speaker and the Clerk of the National Assembly for the guidance and services rendered to it throughout its deliberations. Gratitude also goes to the stakeholders for their oral and written submissions.

G K Mwamba, MP
CHAIRPERSON

May, 2021
LUSAKA

APPENDIX I – LIST OF NATIONAL ASSEMBLY OFFICIALS

Ms C Musonda, Principal Clerk of Committees
Mr F Nabulyato, Deputy Principal Clerk of Committees (SC)
Mrs C K Mumba, Senior Committee Clerk (FC)
Mr E Chilongu, Committee Clerk
Mrs D Manjoni, Personal Secretary II
Mr D Lupiya, Committee Assistant
Mr M Chikome, Committee Assistant
Mr M Kantumoya, Parliamentary Messenger