



## CHALLENGES OF ASSESSMENT AND CERTIFICATION ON ACCESS TO HIGHER EDUCATION: THE KENYAN EXPERIENCE

*BY*

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### 1.0 INTRODUCTION

The Kenyan education system has three major levels commonly referred to as 8-4-4 i.e. eight years of primary education, four years of secondary education and a minimum four years of university education. After 8 years of primary education pupils sit for Kenya Certificate of Primary Education (KCPE) Examination. The results of KCPE are used for selection to secondary school. After four years of secondary education candidates sit for Kenya Certificate of Secondary Education (KCSE) Examination and the results of this examination are used for selection to institution of higher learning or for further training.

The Kenya Certificate of Secondary Education therefore forms the basis for admission to university and other tertiary institutions. Selection for higher education therefore depends on performance in the Kenya Certificate of Secondary Education. In this paper the term – ‘*higher education*’ is used to mean *university education* and ‘*assessment*’ refers to *KCSE examination*. Most candidates who sit for KCSE examination aspire to join university; university education is seen not only as training highly qualified human resources but is also associated with higher economic returns to individuals. In Kenya there are *6 public* and *10 private universities*.

## 2.0 SUBJECTS OFFERED AT KCSE LEVEL

The present secondary school curriculum offers **32 subjects** and candidates are expected to take a minimum of seven (7) and maximum nine (9) subjects selected from the five groups as follows:

- (a) **GROUP 1 (Compulsory)**  
 101 English  
 102 Kiswahili  
 121 Mathematics
- (b) **GROUP 2 (Any two)**  
 231 Biology  
 232 Physics  
 233 Chemistry  
 234 Biological Sciences (taken by Blind candidates only)
- (c) **GROUP 3 (one)**  
 311 History & Government  
 312 Geography
- |                                   |   |                       |
|-----------------------------------|---|-----------------------|
| 313 Christian Religious Education | } | Only one may be taken |
| 314 Islamic Religious Education   |   |                       |
| 315 Hindu Religious Education     |   |                       |
| 316 Social Education and Ethics   |   |                       |
- (d) **GROUP 4**
- |                           |                         |
|---------------------------|-------------------------|
| 441 Home Science          | 447 Power Mechanics     |
| 442 Art & Design          | 448 Electricity         |
| 443 Agriculture           | 449 Drawing and Design  |
| 444 Woodwork              | 450 Aviation Technology |
| 445 Metalwork             | 451 Computer Studies    |
| 446 Building Construction |                         |
- (e) **GROUP 5**
- |            |                                      |
|------------|--------------------------------------|
| 501 French | 561 Accounting                       |
| 502 German | 562 Commerce                         |
| 503 Arabic | 563 Economics                        |
| 511 Music  | 564 Typewriting with Office Practice |

Sighted candidates **must** sit:-

All subjects in Group I

At least two subjects in Group 2

At least one subject from Group 3

Any other one subject selected from Groups 2, 3, 4 or 5.

## **2.1 Challenges Associated with Curriculum**

2.1.1 Out of 32 subjects, students sit for a minimum of seven subjects and a maximum of 9 subjects.

2.1.2 Three of the subjects are **compulsory** (group 1).

2.1.3 They have to take two (2) science subjects.

2.1.4 They have to take one humanity subject from group 3.

Out of the wide choice of 32 subjects it would be expected that students would have the leeway to choose their preferred subjects; however, they are restricted to a narrow range of subjects. The policy disregards that students are not a homogeneous group; some students are inclined to science subjects, others are inclined to humanities while yet others to vocational subjects. Due to the rigidity and formalism in the education system, learners' interests and aspirations are ignored and they are forced to conform to the set rules and regulations irrespective of their areas of strength and endowment. The education policy does not allow for credit accumulation an approach that the Koech Report has recommended.

Critics of the Kenyan education system are of the opinion that education planners should consider providing equitable and appropriate education for all by developing and offering several curriculum options for secondary school education based on student's talents and abilities (Daily Nation of 24<sup>th</sup> June 2002).

## 2.2 *Challenges Associated with Admission Criteria to Higher Education*

In Kenya, like in many other countries the number of applicants for admission to higher education far exceeds the number of available places. This is particularly true regarding applicants wishing to join the public universities. Due to the limited number of places in the public universities, a stringent selection and admission procedures are followed through the Joint Admissions Board (JAB).

- ◆ Candidates must fulfill the minimum grade **C+** and **above**, based on the 7 best subjects.
- ◆ Male and female students must attain 62 and 61 points respectively based on the seven subjects.
- ◆ Candidates must have attained minimum points based on the cluster of **four** subjects appropriate to the programs of their choice.

For example, for an applicant to be considered in the 2002/2003 Bachelor of Laws degree program, they have to have a minimum of 44 points in the following subject cluster:-

One Language: -English or Kiswahili

Either Mathematics or a science subject in Group 2

A subject from Group 3

A subject in either Group 4 or 5

While a good KCSE examination result is the sole requirement for admission to the university, not all those who fulfill the minimum entry requirements of C+ and the minimum points on the cluster of four subjects for a particular degree are selected for admission in the public universities.

Table 1 shows the number of candidates who sat KCSE examination in the last 5 years 1997 – 2001 and obtained a minimum grade of C+ and better and the number that gained admission to the university in each year under review.

**Table 1**

<i>Year</i>	<i>Candidature</i>	<i>No. scoring C+ and above</i>	<i>No. selected for admission to public universities</i>
1997	156,714	31,294 (19.97%)	9,017 (5.75%)
1998	168,398	30,244 (17.96%)	8,150 (4.84%)
1999	172,883	30,667 (17.74%)	8,899 (5.15%)
2000	181,996	40,535 (22.27%)	11,147 (6.12%)
2001	194,883	42,271 (21.69%)	10,996 (5.64%)

(Source JAB June 2003)

### 2.3 Observations from Table 1

The table clearly shows that there is minimal chance of being admitted to university even when one has qualified; hence making the KCSE and extremely high stakes examination.

*Table II shows the number of applicants to some faculties at the University of Nairobi, the cut off points and the numbers admitted in 2002/2003 programs*

<i>Faculty</i>	<i>*Course Applicants</i>	<i>Number Admitted</i>	<i>Capacity</i>	<i>Cut-off Points Based on a cluster of 4 subjects</i>	<i>Gender Distribution</i>	
					<i>Male</i>	<i>Female</i>
Bachelor of Science: - Agriculture	36	121	120	33	82	39
Bachelor of Science: - Civil Engineering	144	59	60	43	44	15
Bachelor of Science: - Mech. Engineering	165	50	45	43	46	4
Bachelor of Science: - Medicine	1076	148	120	47	108	40
Bachelor of Education - (Arts)	177	388	350	34	222	166
Bachelor of Education - (Science)	155	10	10	40	7	3
Bachelor of Laws (LLB)	611	132	120	44	66	66
Bachelor of Architecture	89	33	30	43	31	2

(Source JAB June 2003)

\*Course applicants applies to those applicants who met the minimum cut-off points for the course.

## **2.4 Observations from Table 2**

- 2.4.1 The number of qualified applicants outweighs the university's capacity.
- 2.4.2 Some courses are over-subscribed, for example Law and Medicine while other courses have fewer applicants than the capacity for example Bachelor of Science Agriculture.
- 2.4.3 Some applicants are not admitted to their specified areas of choice even though they meet the minimum requirement for the programs.
- 2.4.4 There is a gender imbalance in accessing higher education in public universities with Science based courses registering the lowest number of female students.

According to the 1998 Economic Survey, in the 1997/1998 academic year, the proportion of females in public universities was 29.2%. This is an area of critical concern and through the concerted effort of the government, female students are being encouraged to enroll in Mathematics and Science based subjects as well as in technical courses with a view to eliminating gender imbalance at all levels of education. Applicants who fail to be admitted to public universities and can afford to pay the high fees seek admission in private and foreign universities. Other seeks admission to polytechnics, diploma level or primary teachers colleges.

## **3.0 IMPACT OF ASSESSMENT AND CERTIFICATION ON TEACHING AND LEARNING AND THE ASSOCIATED CHALLENGES**

In the Master Plan on Education and Training 1997-2010, on Improving Selection and Certification, it was noted that 'Because of the importance attached to KCSE examination, regardless of what is stipulated in the curriculum, most schools concentrate on the examinations and ignore anything that they think will not be examined'. It recommends: -

- i) developing test papers which predominantly measure as opposed to mastery of content, the abilities and skills specified in the (revised) curriculum.
- ii) adopting more decentralized testing approaches (including continuous assessment) and performance of practical skills.

It further recommends that the criteria for selection for further education and training should be broadened through special selection tests in addition to the secondary school leaving certificate.

The use of KCSE as the only criteria for access to higher education and for admission to the university programs brings with it challenges in the teaching and learning process.

### **3.1 *Learning for Examination Purpose***

First there is the tendency to regard the passing of examinations as the main if not the only reason of being in school at the expense of other reasons such as development of values, attitudes and life skills. Secondly, there is the tendency by teachers to teach what they think will come in the examination and place emphasis on book knowledge. The focus is to assist students to be able to answer questions and not to master specific knowledge and skills and meet the objectives of the curriculum.

### **3.2 *Unhealthy Competition***

The competition to do well and gain admission to university is so rife that schools have set unrealistic goals that students have to achieve and maintain. Teachers have come up with private coaching of students at a fee which is carried out during weekends and holidays, and this has impacted negatively not only on students but also on parents who have to pay the cost of coaching. Poor students are neglected as concentration is given to bright students and to those who can afford to pay. Schools that perform well are determined to maintain that standard and those known to be non-performers are determined to excel.

### **3.3 *Category of Schools***

In Kenya, there are **4 categories** of schools:

- National Schools
- Provincial Schools
- District Schools
- Private Schools

The schools are differently endowed, with National and high cost Private schools at the top ladder, with good facilities and laboratories. At the bottom are the district schools with inadequate or non-existent facilities; yet all go through the same curriculum and the same assessment procedures. When the results are released, students from National and the high cost Private schools are always on top of the performance league. In 2001, there was a change of policy that required all secondary schools to take pure sciences as opposed to the option between pure and general sciences previously. Prior to 2001 the poorly equipped schools had opted for general sciences. These changes were made without considering the problems poorly endowed schools would experience in trying to raise the resources in order to set up laboratories.

### **3.4 *Forced Repetition***

Because of the determination to do well, there is high wastage in secondary schools. Teachers set target marks that students must achieve in the various subjects. Those who fail to achieve the set minimum marks/grades are either forced to repeat classes or transfer to other schools.

### **3.5 *Examination Irregularities***

In their attempt to gain undue advantage during examinations some students apply unfair means by cheating in the examinations. In the 2000 KCSE examinations, there was substantive cheating which saw the results of 2880 candidates cancelled in 100 centres.

Due to the hue and cry from stakeholders, politicians and the general public, the government appointed a commission to investigate the causes of examination irregularities. The commission concluded that KNEC had genuinely dealt with the cases of examination irregularities. The growing concern by the government and the general public has forced KNEC to revise its criteria for cancellation of results to make it more punitive and as a deterrent to would be examination cheats.

### **3.6 *Values and Attitudes***

The examinations mainly test mastery of knowledge and therefore the results issued and certificates awarded reflect mainly the academic achievement. Assessment of attitudes, values, aptitude and life skills necessary in laying in an individual a firm foundation for higher education and further training and which may provide efficient transition from secondary schools to institutions of higher learning, are not assessed.

### **3.7 *Students with Special Needs***

Assessing candidates with special needs brings out the challenge of the conflict between assessing centrally mandated curriculum and the idea of taking into account the needs of learners. In Kenya, a small minority of students' population are either physically or visually challenged.

With regard to the visually handicapped students, the only existing syllabuses are in Biological Sciences and Home Science and KNEC has therefore to resort to relying heavily on experts to advice on questions that are suitable for the visually impaired students.

The KNEC has made the following provisions to ensure fairness in assessing visually impaired students by:-

- ◆ Administering Braille papers and adapting questions to suit them,

- ◆ Allowing extra time of 30 minutes per paper to the blind candidates,
- ◆ Administering large print question papers to the partially sighted.

As much as KNEC has tried to accommodate the interests of the visually impaired, the admission criteria to higher learning does not make any concession to this special group.

#### 4.0 STANDARD SETTING

KNEC regards examinations as very important due to the crucial role they play in selection to university. It therefore ensures that the examinations it administers are of the right standard, are valid, reliable and relevant and that they are efficiently administered.

The moderation panels are made of individuals who are competent and qualified and have an insight into what goes on in the subject. They are also well versed with the national education policies, national goals of education and the objectives of the secondary school education. According to the present education policy, secondary education is expected to:-

- i) lead to all round mental, social and spiritual development of the learner;
- ii) enable the learner to choose with confidence and cope with vocational education after school;
- iii) build a firm foundation for further education training and self-employment;
- iv) ensure parity in cognitive, psychomotor and affective skills for all students at this level in the country.
- v) lead to acquisition of attitude of national patriotism, self-respect, self-reliance, cooperative, adaptability, sense of purpose, integrity and self-discipline, respect and consideration for others, loyalty and service to home, society and nation;
- vi) prepare the learner to make positive consideration to the development of the society.

Developing and administering tests that can measure the degree of attainment of these objectives is a big challenge especially because most of the examinations are through pen and paper.

Although KNEC has varied ways of examining, for example; through written, Practical examination, Projects, Orals and Aurals, it has realized that the examinations mainly test mastery of knowledge and therefore the results issued and certificates awarded reflect mainly academic achievement.

Faced with this challenge, the Kenya National Examinations Council has been discussing the need to include Continuous Assessment of School Based Assessment as a component of the examination marks as an added approach to testing. The issue of resources required in terms of costs and logistics, compounded by the sheer numbers has to be addressed

#### **4.1 Administration of Examinations**

The way in which examinations are administered in the field can affect reliability and hence conditions must of necessity be controlled and standardized. The Kenya National Examinations Council has in place rules and regulations to be followed and applied during administration of examinations. There is the issue of training examiners and the cost of running marking centres and payments to examiners.

#### **4.2 Marking and Processing of Examination Results**

The Council strives to ensure that the marking and processing of examinations is done properly in accordance to the rules of psychometrics. Poor marking would certainly affect the reliability of examinations. To ensure accuracy in marking, the Council uses examiners who are qualified professionals and who have undergone further training as examiners. The examiners use a marking scheme developed alongside the question paper

which is coordinated before the marking of the live scripts begin. During marking, 10% of the script marked by examiners are checked by senior examiners to ensure that there are no deviations and that accuracy is being maintained. Throughout the marking exercise therefore, examiners are expected to adhere to strict guidelines.

### 4.3 *Certificates*

It has already been noted that a good KCSE certificate is a highly valued document and is therefore in great demand. The Council must ensure that unprinted certificates are securely stored, to ensure that blank certificates do not land in the wrong hands. The Council does not issue duplicate certificates and those who lose their certificates are issued with letters of confirmation that are sent to the third party only and not to the owner of the certificate. The confirmation of results is done on a special paper with pre-printed serial numbers, to ensure that fake letters of confirmation of results are not produced and sold.

## 5.0 CONCLUSION

All stakeholders expect that examinee abilities and achievements are assessed in a fair manner. The selection procedure adopted by the Universities Admissions Board for admission to public universities enjoys a high level of public confidence as it is based on merit or what is referred to as '*meritocratic principle*'. Since the admission is based on the Kenya Certificate of Secondary Education examination, the Kenya National Examinations Council must ensure that the national curriculum on which the assessment is based is efficiently assessed and evaluated and that the results released are accurate and reliable and that the certificates awarded reflect meaningful information regarding the candidates' academic achievements. Admission to private and foreign universities and other tertiary institutions is also based on the same results, so the Council must objectively test and evaluate the curriculum to enhance and safeguard globally acceptable certification standards.

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