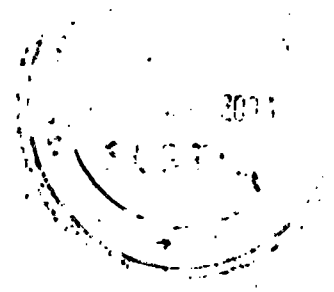


375-4

3220

NA-284



A MEMORANDUM SUBMITTED TO THE SECTORAL COMMITTEE  
OF THE NATIONAL PLANNING COUNCIL ON SOCIAL  
OVERHEADS, MASS MEDIA, HOUSING  
AND TRANSPORT

" ENTRY INTO THE UNIVERSITY - STANDARDIZATION  
AND DISTRICT QUOTA SYSTEM "

BY

THE NATIONAL SCIENCE COUNCIL OF

SRI LANKA

NA-284

Date:- 1975-02-26

"ENTRY INTO UNIVERSITY - STANDARDIZATION AND DISTRICT QUOTA SYSTEM"

This memorandum was prepared by a Sub-committee and approved by the National Science Council of Sri Lanka.

MEMBERS OF THE SUB-COMMITTEE

Dr. O.W. JAYARATNE (CHAIRMAN)  
Prof. C. DAHANAYAKE  
Prof. P.C.B. FERNANDO  
Dr. G.C.N. JAYASURIYA  
Prof. M.L.T. KANNANGARA  
Mr. D.B. PATTIARATCHI  
Mr. M.M. PILLAI  
Mr. M. RANAWEEERA  
Prof. P.P.G.L. SIRIWARDENA  
Dr. R.O.B. WIJESEKERA  
Dr. SEETHA RODRIGO ( SECRETARY )

CONTENTS

	<u>Page</u>
A) PREAMBLE	3
B) STANDARDIZATION	4
1. Reasons for Standardization	4
2. Method of Standardization	5
3. Critical Comments on Various Aspects of Standardization	6
C) ADMISSIONS TO UNIVERSITY ON A DISTRICT QUOTA SYSTEM	9
1. The need to introduce a District Quota System	9
2. The present form of Admissions on a District Quota System	10
3. Critical Comments on District Quota System	13
D) RECOMMENDATIONS	16
E) CONCLUDING REMARKS	17

"ENTRY INTO THE UNIVERSITY-STANDARDIZATION AND DISTRICT QUOTA SYSTEM"

A. PREAMBLE

1. Consequent to the decision to request the Sectoral Committee of the National Planning Council on Social Overheads, Mass Media, Housing and Transport to review the standardization scheme and the District Quota System of University Admissions, the National Science Council appointed a Sub-committee to study "Entry into the University" with reference to these two matters.
2. The Sub-committee had discussions with representatives of the Examinations Department and the Registrar of the University of Sri Lanka.
3. The following publications were also studied by the Sub-committee.
  - 3.1 Education Ministry Booklet on Standardization of marks for University Admissions.
  - 3.2 Working paper on University Admissions 1975 - issued by the University of Sri Lanka.
  - 3.3 G.C.E. (Advanced Level) examination April 1972 - Science subjects - Statistical report issued by the Department of Examinations.
4. The Sub-committee sought to obtain the relevant statistical data such as the means, standard deviations and the distribution curves medium-wise separately for paper I and paper II for Physics, Chemistry, Botany, Zoology, Pure Mathematics, and Applied Mathematics for the years 1973 and 1974 from the Examinations Department. The Sub-committee also requested from the Secretary, Ministry of Education, information regarding the cut off points at which selections were made to the University for each district for 1973 and 1974. When this information was initially requested from the Registrar of the University, it was stated that it could not be released without the permission of the Ministry of Education. These data, we must state with regret, were not made available to us.

5. We presume that the reference of this problem to the Social Overheads Sectoral Committee was prompted by growing dissatisfaction about University Admissions. In this context, it is singularly unfortunate that the Examinations Department and the Ministry of Education failed to provide the Sub-committee with the pertinent data.

## B. STANDARDIZATION

### 1. Reasons for Standardization

- 1.1 At discussions with officials from the Examinations Department and the University, it transpired that as far back as 1970, there had been allegations that selections to the Engineering Faculty at Peradeniya had been unfair.
- 1.2 A linguistic basis for deciding admissions had been decided upon by the Government.
- 1.3 The maximum mark varied between subjects - the best script in one subject may score 90 marks, while in another subject it may fetch only 65 marks. Similarly, the minimum marks will also differ between subjects.
- 1.4 Where the marking is subjective particularly in the essay type of paper, there can be disparities in the student performance between the different media. It has also been submitted that the intrinsic differences in the languages result in the same question being comprehended differently in the different language media.

### 2. The present Form of Standardization

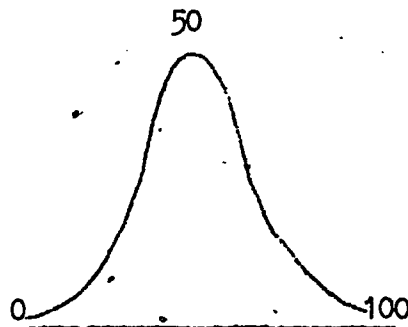
- 2.1 According to officials of the Examinations Department, the Government directed them to prepare a scheme of standardization. This is the scheme in operation today. The booklet issued by the Ministry of Education on the subject of standardization explains the present form of standardization - subject-wise and medium-wise.

- 2.2 Pass marks are decided for each subject by comparing the performance of the previous year. A constant percentage of passes is aimed at.
- 2.3 Grading is done for each subject depending on the pass mark. We quote from the booklet on Standardization.

"Method of Standardization"

The method used for standardization of marks is a universally accepted one. There are several reasons why this method of standardization is preferred.

1. Measurement of many natural phenomena and of many mental and social traits tend to be distributed symmetrically about their means (mid-points) which approximates the bell shaped figure called the normal probability curve. Whether it be height, intelligence, memory span or barometric readings, they tend to approximate the normal curve if a large enough sample is used.



The Normal Curve

- In the G.C.E. (Advanced Level) Examination, the raw marks are standardized to a scale which approximates this normal curve or distribution.
2. This method of standardization does not change the original rank order of the candidates found in the raw marks of any particular subject.
  3. It does not result in standardized marks exceeding one hundred or becoming negative i.e. below zero.

### 3.2 Selection of the mean for standardization

The standardization of the raw mark in the manner that is being carried out at present by the Examinations Department is in principle academically sound. However, although it has been found in the previous years that the mean of the raw mark is in the range of 35-40%, standardization is made to a mean of 50%. This has resulted in bloating the aggregates to unrealistic values, giving the impression of a performance way above the actual. For example, it has been found that three simple passes and a failure on the basis of the raw marks at the G.C.E. 'A' Level collected a standardized aggregate consistent with a credit grading. Also the cut off point for University Admissions comes in the region of 250 out of 400. (If raw marks were considered, this would usually be an aggregate of about 160) Since the public impression of eligibility for University Admissions is guided by the aggregate, the use of the standardized aggregate in this context has created the misconception that a large proportion of students fit for University Education are now being left out. Also, the earlier example mentioned of three simple passes and a failure adding up to a standardized aggregate consistent with a credit gives room for the belief that there has been an error or that the marks have been "manipulated".

The above shortcomings would be largely overcome if the mean of the standardization curve were fixed closer to the actual mean of the raw mark viz: 35-40%.

### 3.3 Medium-wise Standardization

3.3.1 Before resorting to medium-wise standardization, one must be quite sure that there are differences in marking standards from medium to medium. A good check would be the remarking of a representative number of both Sinhala and Tamil scripts

by a group of examiners proficient in both media. It is not certain whether such an objective test has been made. The arguments heard for the need for a medium-wise standardization are based on an alleged difference in the distribution of the pattern of marks between the various media in the essay type questions whereas no such difference is alleged to appear in the Multiple Choice Question paper, where there can be no subjective bias in the marking. The Multiple Choice Question paper is supposed to be a good test of the intrinsic ability of a student, not merely a test of his ability to memorise facts. The same sort of mark distribution shown in the Multiple Choice question tests therefore indicate that the distribution of intrinsic ability of the students working in the different media are the same. The differences in the distribution of marks from medium to medium must then be attributed to causes other than the distribution of the intrinsic ability of the students. It is not proper to jump to the hasty conclusion that the difference is due to different marking standards. Amongst the causes may be different learning habits or more attention to detail being given by teachers in one medium than in another.

3.3.2 From the only statistics (1972 'A' level examination) made available to the Sub-committee from the Department of Examinations, there is no evidence to support the case for medium-wise standardization. We have already commented on the fact that the statistics of the marks at the examinations of 1973 and 1974

were not made available to us. If these statistics had been made available to us, it is conceivable that different aspects of this problem may have come to light.

3.4 'A' Level Gradings

The 'A' level grades are given on raw marks. If there is a need for medium-wise standardization for University Admission, it must necessarily follow that this need exists for assigning 'A' level grades too. It is quite illogical to have medium-wise standardization for one and not for the other.

C. ADMISSIONS TO UNIVERSITY ON THE DISTRICT QUOTA SYSTEM

1. The need to introduce a District Quota System of Admission

1.1 From the discussions that took place with the Education Department officials, it transpired that the Education Ministry was concerned about the continuing influx of students to Colombo schools, seeking mainly the extra facilities available. It was therefore envisaged that if admissions to University were decided on a District Quota System, an incentive for good students to remain in their home towns would be created. Thus one of the objectives of admissions to the University on a District Quota System is to ensure that the best scholars from rural schools gain admission to the University from schools in their own districts.

1.2 Comments made by the officials with whom we had discussions on this subject implied that the facilities available to G.C.E. 'A' level students varied widely from district to district. Therefore, it is thought that selections on a District Quota System would eliminate the handicaps created by the lack of sufficient satisfactory facilities in certain areas.

2. The present form of admission on a District Quota System

2.1 From the working paper issued by the University of Sri Lanka and the discussions we had with the Registrar of the University on the District Quota System of admissions, we gather that :

2.1.1 The eligibility for following various courses on guidelines laid down by the University is decided on the raw marks of the G.C.E. 'A' Level Examination.

2.1.2 The marks of the eligible candidates are standardized subject-wise and medium-wise and the aggregates of the standardized marks are then sent to the University.

2.2 Allocation of places

We quote from the working paper on University Admissions 1975.

- " 4. The allocation of places will be done on the basis of the following groups of courses of study:
1. Medicine and Dental Surgery
  2. Agriculture, Biological Science and Veterinary Science
  3. Engineering and Applied Science
  4. Physical Science and Built Environment
  5. Arts including Law and Management Studies.
5. The latest figures for the mid-year population available with the Department of Census and Statistics will be used to calculate the allocation for each district. Thus if district A has 15% of the total population of the country, 15% places available for any particular group of courses would be allocated to that district where as a district with a population equivalent to 6% of the total population will get only 6% of places in that particular group of studies.
6. The selection of students from any district will be purely on the standardized aggregate marks in the four subjects at the G.C.E. (A.L.) Examination, provided the candidates

have satisfied the minimum criterion for admission for the particular course of study. Thus, in any district, twenty five students have satisfied the criteria for admission to a particular course of study, but only fifteen places are allocated to that district the fifteen students for admission will be selected solely on the order of their aggregate marks.

3. Allocation of unutilized places

It is possible that certain districts will not be able to utilize all the places allocated for a particular course of study (when a lower number of students obtain the minimum criteria for admission than the number of places.)

All such unfilled places will be pooled and re-distributed amongst the districts which have more students (qualifying for admission) than the number of places allocated on the basis of population. The re-distribution will be done once again on the ratio of the population of the latter districts.

Where a student gains admission to the University by providing false information regarding his place of origin, he will be liable to be dismissed from the University at any time, even after registration as a student."

2.3 Determination of the District

Once again we quote from the working paper on University Admission 1975.

"7. Determination of the district

- (a) In the case of school candidates, successful in the G.C.E. (A.L.) Examination, the district in which the school is situated will be considered as the district of origin provided that he has had --

- (i) at least three years study in grades 10, 11, and 12 in that district:

OR

- (ii) at least 2 years study in grades 10, 11 and 12 in that district and his family is permanently resident in the district for a period of more than 3 years.
- (b) In the case of school candidates who do not fall into the category in (a) the district in which they had their major part of education from Grade 5 and above will be considered in determining the district of origin.
- (c) In the case of private candidates, the school in which they have received the major part of their secondary education including Grades 10, 11 and 12 will be regarded as their district of origin.  
THE CENTRE FROM WHICH THEY SIT THE EXAMINATION WILL NOT BE REGARDED AS THE DISTRICT OF ORIGIN.
- (d) To ensure that the scheme is not abused, in addition to the above safeguards, the place of birth of the candidate and the place of permanent residence of the parents may also be taken into consideration where any doubt arises as to the place of origin.
- (e) In the case of Government Scholars the district in which they received their education, (i.e. their place of birth/residence) prior to receiving the scholarship will be regarded as the district of origin. (This procedure will be effective until 1976 only and will be reviewed in 1977).
- (f) Since there are only very few Muslim Schools with General Certificate of Education (Advanced Level) Classes in the island, provision will be made in the case of Muslim students to reckon the

area in which they and the parents reside as their district of origin. (This procedure will be effective until 1976 only and will be reviewed in 1977)."

3. Critical Comments on Admission on District Quota System

3.1 The need for selection on a District Quota basis is based on the inequalities in the various factors affecting the performance of a candidate at the 'A' Level examination.

3.1.1 Students at termination of secondary school education will have to varying degrees -

- (a) an inherent aptitude for tertiary education
- (b) an educational attainment level
- (c) leadership qualities.

Perhaps the only quality that is measurable even to some extent is the educational attainment level - the measuring instrument being the G.C.E. Advanced Level Examination.

3.1.2 Factors affecting the performance of a student at the G.C.E. 'A' Level

The factors affecting the performance of a student at the 'A' Level may be classified as -

- (a) I.Q.
- (b) School
- (c) Home Environment
- (d) Extra curricular activities
- (e) Attitude and aptitude for learning

Although the possibility of laying down parameters for quantifying these factors was debated, the Sub-committee finally came to the conclusion that the only factor for which even broad parameters could be considered was the school. However, grading of schools even broadly is difficult. For example, a so called good school may have a bad chemistry teacher in a particular year and for that year that particular school will be bad as far as chemistry is concerned.

3.2 The Sub-committee considered the Role of the University in the context of the development of the country.

3.2.1 The University is one of the Institutions which must provide the future leadership of the country in important fields of national activity. Accordingly, it should be geared to produce people of the best intellect for a variety of needs. For example --

- (a) Research Institutes
- (b) Universities
- (c) Medical Profession
- (d) Engineering Profession
- (e) Teaching Profession
- (f) Management and Administrative Services etc.

3.2.2 On a brief analysis of the immediate demands made of the University today, it is obvious that there should be an inescapable commitment to educate the best available talent. The determination of either the percentage or the number of students to be admitted to the University on a pure performance basis could well be based on an estimate of the number of first and second class degree holders that should graduate to meet the requirements spelt out above. Allowance must of course be made for students who shine at 'A' level but do not perform as well at the degree examination on the one hand and late developers on the other.

3.3 In the absence of relevant data, the committee could not assess the impact of the quota system as it operated in 1973 and 1974. If the point at which students in the so called better areas had been shut out were made known and this compared with the performance of those from deprived areas who have succeeded in entering the University, a more informed comment could have been made.

Generally, however the committee was anxious to support the policy of helping students from the deprived areas but not at the cost of the best students being shut out. The country cannot afford to lose this category of students who have a vital role to play in national development. Although ratios of say the first 40% to be on merit and the balance 60% on District Quota System appeared generally acceptable, the lack of data prevented submission of any basis on which precise figures could be worked out.

- 3.4 The committee noted with regret that the so called better areas also had schools in which the facilities available could well be less than the facilities available in the bigger schools in the so called deprived areas. Further, whilst the District Quota System gives a degree of weightage to the rural districts it creates a serious handicap for the urban working classes.
- 3.5 The committee failed to understand the need for clause (f) in paragraph 7 of the working paper on University Admissions 1975. The argument that has been advanced in that paragraph is that because there are very few Muslim schools with G.C.E. 'A' Level classes, district allocated will not be the district in which the student attends school but the district in which the parents reside. On the one hand, if this concession was applied to Sinhalese or Tamil children from deprived areas, the whole argument for the District Quota System would be destroyed. On the other hand, this concession can well destroy the benefit that the scheme intended to confer on the students of deprived areas. The committee felt that opening 'A' level classes in existing Muslim schools would meet the problem in a better way.

D. RECOMMENDATIONS

1. Subject-wise Standardization

"Subject-wise standardization is a statistically valid, academically desirable and easily workable method." We endorse this statement taken from the booklet on standardization. As such, the subject-wise standardization which is adopted at present should continue.

2. Standardization-Mean

The mean of the standardization curve should be fixed at a more realistic point - maybe by taking the average of raw mark mean over a few years and not at 50% as it is done now.

3. Medium-wise Standardization

In spite of all efforts made to obtain convincing statistical data for the necessity for medium-wise standardization, we were unable to get any objective proof. Medium-wise standardization is indefensible without proof. As such, we recommend that further study on this subject, supported by complete statistical evidence is required before resorting to medium-wise standardization.

4. 'A' Level Gradings

If there is a need for medium-wise standardization at the University entrance, then this must also be introduced for 'A' Level grades.

5. The first 40% to be purely on merit - the balance to be on a district quota basis provided that its ratio is such that the cut out gap between better and deprived areas be around 25 marks out of the aggregate. It is further recommended that its ratio be reviewed annually and modified in accordance with the criteria above. No exception of the type referred to in clause (f) of paragraph 7 of the working paper on University Admissions 1975, (c.f. page 12 above) should be made.

6. The possibility of giving some kind of extra weightage to students from schools with very poor facilities, specially in the better areas like Colombo and Jaffna be further studied and a quota be assigned to those students.

E. CONCLUDING REMARKS

1. We consider this report to be of an interim nature, necessitated by the time limit imposed for submission of views.
2. The committee is still hopeful that necessary data requested from the Ministry of Education and the Examinations Department would be forthcoming in the near future. Immediately these data are available, the committee would be pleased to make a detailed study of these data and their implications.
3. The committee noted that the position with regard to pre-university qualifying Examination would alter with the introduction of N.C.G.E. and H.H.C.E. Examinations. A further review of the policy on standardization and District Quota System would then become necessary.