

CHAPTER IX.

EDUCATION AND EMPLOYMENT

(1) *Introduction.*

1. There are two rather conflicting trends which are observable in the educational programmes of all countries and particularly in our country. There is the desire, on the one hand, to transmit knowledge from one generation to another through the educational organization; on the other, there is the desire to provide the new generation with the necessary mental, moral and physical equipment, so that it can work for the progress of Social Welfare and Cultural advancement. The latter, the more comprehensive view is frequently brought home to us by a few thinkers in each generation, and in each land. But the former, being the more easy task, tends generally to dominate the educational programme.

2. If the aim of education is to equip each generation to work for the progress of culture and the welfare of all beings in the world, obviously the educator cannot divest himself of the responsibility to see that each individual becomes rational, moral and efficient. Each individual should be given the necessary training so that he not only develops to his full stature, but also contributes his best to the social organization and the advancement of the welfare of humanity.

3. The great thinker Alfred Adler, on the basis of his vast experience of treating the mentally disordered persons in the two continents of Europe and America, stressed that an individual could be mentally healthy only when he is able to adjust himself properly in the social, marital and vocational fields. Our country has all along recognized that in the Brahmacharya Asrama the individual should be equipped properly, so that he can undertake and fulfil satisfactorily the dharma of the Grihastha, *viz.*, to earn his livelihood by doing some useful work,

contribute to the continuation of the human race by marrying and bringing up children, and contribute to the general welfare of society by serving every human being with whom he comes into contact. It is only after fulfilling his Grihastha Dharma and after realizing the first three purusharthas of Dharma, Artha and Kama, that he can devote himself to the pursuit of the final purushartha, *viz.*, Moksha in the last two asramas of Vanaprasta and Sanyasa.

4. These considerations show that we cannot educate a person in a vacuum. His education should be based, on the one side, on his mental and physical characteristics, and on the other on the social needs. In other words, the educational programme should be geared to the social needs, the aim being not only to equip the individual to fulfil his role in society but also to work for its advancement. He should not only fit into the present social pattern but also be equipped properly, so that he can strive for social advancement.

(2) *The present position and defects in the existing system.*

5. Obviously, the present system of education in our country is far from these ideals. It is not making use of all the advancement in the fields of Psychology and Sociology. We are prone to be content with giving some kind of education without making sure that the teacher is fit to impart it and the pupil able to assimilate. If the ordinary principles of business organization were to be applied to test our educational system, the latter might be found wanting in many respects.

6. We have been guided by the following principles and objectives in formulating the proposals contained in this Chapter :—

(3) *Basic Principles.*

(1) Equality of opportunity for every child consistent with his innate abilities and aptitudes, should be ensured.

(2) Every citizen should be engaged in gainful employment producing goods or rendering service.

(3) Individual differences exist in regard to general abilities and special aptitudes. The various occupations require different grades of general ability and special aptitudes.

(4) Provision should be made for mobility from one stage of education to the next if the candidate exhibits the necessary level of attainment.

(4) *Objectives.*

7. (1) To conserve and utilise talent to the best advantage of the individual and society.

(2) To reduce educational wastage and frustration to the absolute minimum.

(3) To make the educational system functional and effective by regulating the admission of students to the various levels of education according to their abilities and the needs of the society.

(4) To get the best return on educational investment.

(5) *Employment Structure and Education.*

8. The Employment structure may be divided into the following categories :—

(a) *Professions*—Law, Medicine, Engineering, etc. ;

(b) *Semi-Professional Level*—Supervisors, Managers, Technicians, etc. ;

(c) *Skilled Workers*—Tailors, Carpenters, Mechanics ;

(d) *Semi-skilled Workers*—Machine operators, Cane-men, Greasers, Cobblers, etc. ; and

(e) *Unskilled Workers*—Labourers.

9. Preparation for the above levels of appointments :—

Professions—Education at the University level.

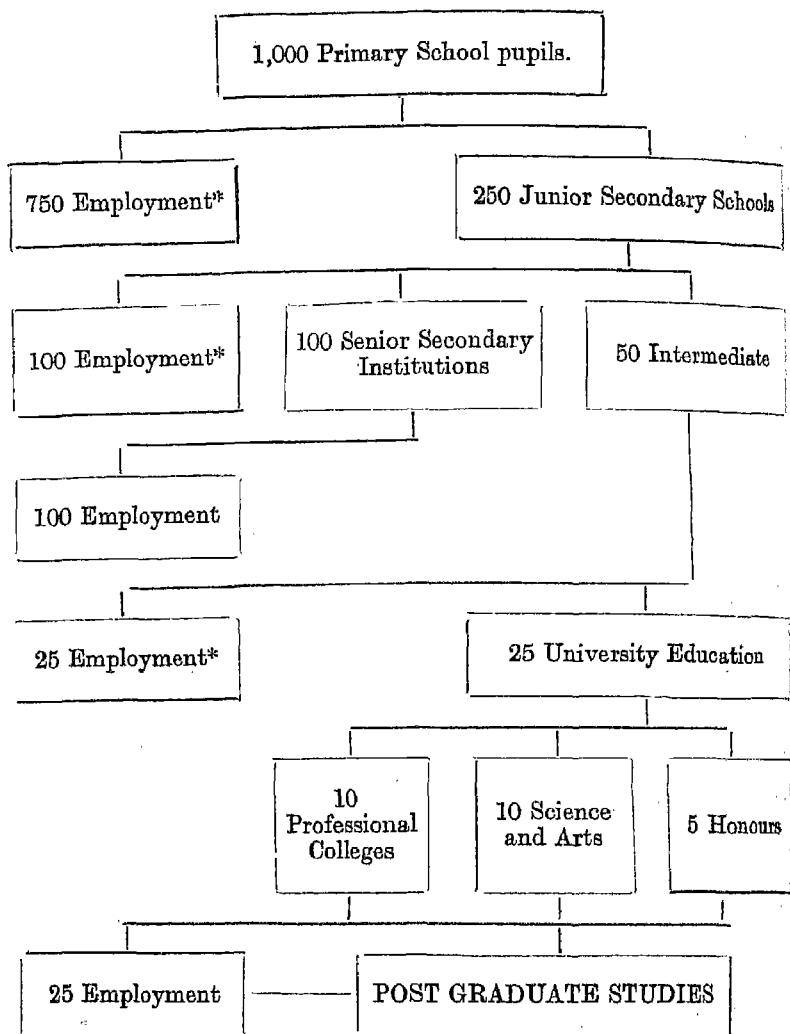
Semi-Professional Level—Higher Secondary stage.

Skilled Workers—Secondary stage.

Semi-skilled Workers—Apprenticeship.

Unskilled Workers—No special occupational training is necessary except what one learns on the job.

10. Chart indicating the ideal relationship between the various levels of Education and Employment :—



*Provision should be made for the further education (Adult Education, in-service training, evening classes, apprenticeship training, etc.,) of those branching off to employment at these stages of education.

11. Explanation of the Chart on the previous page :—

Junior Secondary Schools.

Four-year Secondary Schools, Technical Schools, Agricultural Schools and Commercial Schools.

Senior Secondary Schools.

Two-year Intermediate Colleges, Technical Institutions, Agricultural Institutions, Institute of Practical Arts and Social Services.

Education and training have to be adapted to the abilities and aptitudes of the students. This would reduce, if not altogether eliminate, the enormous wastage that is a sad and persistent feature of our present educational system. This also implies the urgency of vocational and educational guidance at all levels of education.

Out of every 1,000 pupils finishing their primary education, 250 may be expected to proceed to the Junior Secondary Schools, the other 750 branching off to employment.

In the second stage, out of the 250 pupils entering the Junior Secondary Schools, 150 may be expected to proceed to the Senior Secondary Stage, while 100 branch off to employment.

It is visualised that of the 150 students entering the Senior Secondary Stage, 50 may proceed to the Intermediate Colleges and the rest to the Institutes giving terminal courses leading to semi-professional employment.

Of the 50 going to the Intermediate Colleges, 25 may be expected to qualify for University Education, the rest 25 branching off to employment.

(6) *University Education and Recruitment to Public Services.*

12. There is no single factor which has had a more baneful influence on all forms of University Education than the practice of using university examinations as qualifying examinations for entry to the public service in India. Government is still by far the largest employer

of educated persons in India, and the minimum qualifications now insisted upon even for the lower grades of executive and clerical posts is a degree in Arts or Science. The result has been that candidates flock to the universities and colleges, not motivated by a passion for knowledge but solely for the purpose of acquiring diplomas which serve as a passport to the services.

13. The situation is extremely dangerous. Time and again various bodies have complained of the very low standards of Indian University Education. If the present state of affairs is allowed to continue, irreparable damage will be done to higher education in India. It is, therefore, of utmost importance that the Governments, the leaders of public opinion and the Public Service Commissions should take immediate steps to put an end to the present colossal wastage of educational effort.

14. The task of the university is not to prepare the rank and file for the services of the country but to produce its leaders. The meagreness of the number of leaders produced in any field of Arts or Science becomes particularly glaring if we consider the number of students entering the universities.

15. The aims of university education should be clearly borne in mind :—

(a) The Arts and Science Degree courses in the university are intended for the dissemination of culture and the preparation of the leaders of society.

(b) The Honours and Post-Graduate courses are expected to prepare men who will advance, interpret and transmit knowledge.

(c) The professional courses prepare leaders (in the various professions requiring high grade training) who are capable of transmitting and advancing specialist knowledge.

Those who are unable to pursue these ideals of university education should be dissuaded from entering the university.

16. Success in an academic course does not mean a guarantee of success in every field of life and work.

Experimental investigation as well as experience has shown that high grade academic work and high grade achievement in life's tasks do not necessarily go together.

17. The Radhakrishnan Report has been very clear on this subject and contains the following specific recommendations :—

“A university degree should not be required for government administrative services. Special state examinations for recruitment to the various services should be organised and should be open to whosoever cares to take them.” (Page 341—Chapter X).

18. The first essential thing to be done to reform university education is to do some clear and independent thinking about the methods of recruitment to public services of various grades and to separate them as far as possible from university examinations.

19. In most of the western countries there are three age levels at which persons are recruited :—

Recruitment to General Services.

	<i>Clerical</i>	<i>Executive</i>	<i>Administrative</i>
Age groups	15—16	17—18	21—23
Approximate ratios of numbers of personnel	100	10	1

Depending upon the ability of the individual concerned, there is opportunity for rising from one grade to another, and the wages or salaries of each group are so graded as to avoid great disparity.

20. At present in India, there is no distinction between executive and administrative cadres in regard to initial qualifications. The tragedy is that, even for first grade clerks government prescribes a university degree as the minimum qualification. The rationalisation of methods of employment is most urgently called for in order to train people suitably, to get the most out of them and to avoid wastage of talents and efforts.

21. It may be suggested that junior clerks (second grade clerks) be employed only at the age level of 15 to 16 years. One advantage of this proposal is that from the age of 16 onwards the employee will be at his job and all the time will be learning his work without being a further charge on the public educational system. In two or three years he will become quite efficient in his work. Opportunities for the further education of abler boys should be provided. They might attend evening classes and a certain proportion of posts in higher cadres may be reserved for specially gifted persons.

22. In western countries most of the candidates for the executive posts are selected out of the age group 17-18. Here also, for the vast majority of executive posts there appears to be no reason why graduates should be taken. For reasons similar to those mentioned in connection with the clerical services, it appears rational to recruit people who have completed the Senior Secondary stage of education. If necessary, special courses may be provided for them as also continuation courses. The abler candidates selected at this stage should be allowed to enter the administrative services in due course. It will also be advantageous to have special staff-colleges for training such personnel.

23. Now we come to the topmost level: the administrative cadre. The numbers involved are very small and the vacancies arising every year, few. It is in the best interests of the country to select the ablest candidates for these posts. The following procedure may be adopted:—

An open competitive examination followed by a selection procedure involving personality and intelligence tests.

24. If a rational scheme based on these proposals is developed, it will prevent the overcrowding of universities by persons who are not interested in academic studies. Administrative services will also greatly profit by better trained and more experienced personnel. The need is specially urgent as there is acute dearth of specialists in all walks of life, and the country cannot afford to continue the present wasteful system.

(7) *Recommendations.*

25. (1) An agency should be established—

(i) for psychological testing to give educational and vocational guidance at all levels,

(ii) to conduct a periodical survey of occupational demand,

(iii) to indicate the lines of training programmes at all levels,

(iv) to assist students in getting suitable employment,

(v) to advise employment agencies on the selection of personnel, and

(vi) to bring together information regarding the existing training programmes conducted by the Government departments, industries, business concerns, etc.

(2) An Institute of Practical Arts at the Senior Secondary level should be established to provide courses of training in various branches of public and social services.

(3) (i) Recruitment at various levels of the Government services should be on the basis of competitive tests.

These competitive tests should be of an objective nature based on the job analysis of the service concerned.

(ii) Special courses should be designed for the various kinds of services and introduced at the different levels of education.

(iii) University degrees should not be declared as the minimum qualification for any Government appointment where such degrees are not necessary.

(iv) Highly specialised university men, especially scientific personnel, should not be diverted to the general services.

(4) Admissions to educational institutions should be strictly limited to the facilities and accommodation available.

26. We recommend that the proposals for the Research Scheme for introducing standardised tests and the institution of Vocational Guidance should be implemented as early as possible as, in our view, they are of great educational value.

(8) *Financial Estimates.*

Estimate for a Research Scheme for conducting investigations and for preparing standardised tests in Mysore State for measuring Intelligence, Education and other aptitudes for use in the Technical and General Junior Secondary Schools, Senior Secondary Schools and Professional and non-Professional Colleges :—

					Rs.
1. Non-recurring—					
Two typewriters	..	750 × 2	..	..	1,500
Furniture	..	..	..	..	1,000
					<hr/>
					2,500
					<hr/>

I. Recurring—					
Two Assistant Research Officers : Grade 250-25-400 (325 × 2 × 12)					7,800
Eight Junior Research Officers 100 × 8 × 12	..			..	9,600
Two typists—60 × 2 × 12	..	..	..	..	1,440
Stationery, etc.	..	..	..	..	500
Printing and Block-making	..	..	..	..	1,200
Conveyance allowance to the Chief Research Officer (75 × 12).					900
					<hr/>
					21,440
					<hr/>

Expenditure in the first year :—

(a) Non-recurring	..	..	..	..	2,500
(b) Recurring—					
(i) Two Assistant Research Officers 250 × 2 × 12	..			..	6,000
(ii) Eight Junior Research Officers 100 × 8 × 12	..			..	9,600
(iii) Two typists—60 × 2 × 12	..	..	..	..	1,440
(iv) Stationery, etc.	..	..	..	..	500
(v) Printing and Block-making..	..	..	..	..	1,200
(vi) Conveyance allowance to the Chief Research Officer.					900
					<hr/>
Total					22,140
					<hr/>

(2) ESTIMATE FOR AN INSTITUTION OF EDUCATIONAL AND VOCATIONAL GUIDANCE.

		Rs.	Rs.
A. Recurring—			
One Guidance expert 650-50-1000	650×12	7,800	
One Deputy 450-20-650 ..	450×12	5,400	
Two Statistical Assistants 150-15-450.	150×12×2	3,600	
Eight Careers Masters 150-15-450.	150×12×8	14,400	
Two Clerks (I Division) 60-6-150.	60×12×2	1,440	
Two Attenders 25-1-30 ..	25×12×2	600	
Two Peons 20-1-30 ..	20×12×2	480	
House rent with light and water charges.	250×12	3,000	
Test Materials .. ..	..	2,000	
Library .. ..	..	2,000	
Postage and contingencies ..	50×12	600	
Add 25% of establishment charges as Dearness Allowance ..	..	8,430	
	Recurring Grant	<u> </u>	49,750
B. Non-recurring—			
Office Equipment—			
Furniture .. ..	..	5,000	
Two Typewriters .. ..	..	2,000	
Two Calculating Machines ..	..	3,000	
One Duplicator .. ..	..	2,000	
Test Materials .. ..	..	5,000	
Library Grant .. ..	..	5,000	
	Non-Recurring grant	..	22,000
	Grand Total	..	<u>71,750</u>

EXPANSION SCHEME WITH PROBABLE COST PER YEAR

First two years <i>one</i> Institution in Mysore .. ..	..	72,000
At the end of five years <i>four</i> Institutions .. ..	..	2,88,000

TABLE 1.

Statement showing the qualifications of the people who had registered themselves in the Employment Exchange in Bangalore in September 1952 :—

	<i>Number registered</i>
A. Professional—Engineer, Railway Administrator, Geologist, Chemist, Botanist, Dairy Superintendent, College Professor, Research Fellow, Head Master, Author ..	127
B. Semi-Professional—Draughtsman, Oevrseer, Station Master, Permanent Way Inspector, Matron, Nurse, Elementary School Teacher, Surveyor, etc. ..	163
C. Skilled Workers—Blacksmith, Moulder, Turner, Machinist, Fitter, Electrician, Tinsmith, Welder, Driver, Mason, Plumber, Carpenter, Wireless Operator, Compounder, Clerk, Typist, Stenographer, Store-keeper, Book-binder, etc., (Clerks, Typists, etc., 1,671) ..	2,284
D. Semi-skilled Workers—Cleaner, Greaser, Oilman, Mate, Battery Attender, Machine Operator, Painter, Winder, Weaver, Postman, Cook, Gardener, Barber, Watchman, etc. ..	900
E. Unskilled Workers—Mill Labourer, Office Peon, Domestic Worker, Aya, Sweeper, etc. ..	722
Total ..	4,196

TABLE 2.

*Intelligence levels in various occupations.**

Intelligence quotients.

Occupation	Twenty-five Per-centile	Average	Seventy-five Per-centile
Secondary School and University Teachers ..	138	151	153
Physicians and Surgeons ..	125	146.5	152
Central School Teachers ..	136	145	151
Civil Engineers ..	136	142	151
Elementary School Teachers ..	127	137	150
General Manager—Business ..	122	137	148
Shorthand Typists ..	112	129	141
Commercial Clerks ..	112	127	142
Typists ..	106	126	135

*Cattell—British Journal of Psychology, Volume 25. 1934.

TABLE 2—concl'd.

Occupation	Twenty-five percentile	Average	Seventy-five Percentile
Commercial Travellers ..	112	123	136
Nurses ..	102	122	136
Telephone Operators ..	105	115	136
Precision Fitters ..	101	114	125
Coach body-builders ..	90	106	111
Sheet Metal workers ..	88	102	113
Shop Assistants ..	90	99	125
Carpenters ..	77	98	112
Machine Operators ..	83	96	110
Hair dressers ..	72	89	104
Upholsterers ..	73	87	104
Welders ..	62	87	100
Factory workers ..	57	78	92

TABLE 3.

Distribution of Mental Ability.

(Percentage of different professions in each Ability Group).*

	A+	A	B	C	D	E
Graduate Teachers (in Schools, Universities, etc.) ..	33	30	17	0	0	0
Science Graduates in Industry ..	28	50	21	1	0	0
Graduate Engineers ..	23	50	24	3	0	0
Barristers and Solicitors ..	21	54	23	2	0	0
Physicians and Surgeons ..	28	46	19	7	0	0
Dentists ..	21	38	32	9	0	0
Non-Graduate Teachers ..	20	37	33	10	0	0
Ministers of Religion ..	13	35	37	13	2	0
Army, Navy and Air Force Officers ..	13	35	37	13	2	0
Civil Service (Administration, Diplomatic and Colonial) ..	21	56	23	0	0	0
Civil Service (Executive) ..	15	35	36	14	0	0
Nurses ..	4	12	24	36	15	9
Shorthand Typists ..	9	25	37	24	5	0
Architects, Chartered Accountants, Surveyors and Estate Agents ..	22	42	28	8	0	0
Whole population ..	2.5	7.5	20	40	24	10

*Michael Roberts 'The Estate of Man' Faber and Faber. London 1951. Page 82.

TABLE 4.

Talent in various professions.*
(In thousands).

	<i>At present</i>		<i>Proposed</i>	
	A+	A	A+	A
Graduate Teachers ..	15.3	23.2	23.0	34.9
Science Graduates in Industry.	5.6	10.0	8.4	15.0
Graduate Engineers ..	6.9	15.1	10.4	22.6
Barristers and Solicitors ..	4.3	11.0	4.3	11.0
Physicians and Surgeons ..	15.4	25.3	20.0	32.9
Dentists ..	3.3	5.9	4.2	7.7
Non-Graduate Teachers ..	34.6	64.0	51.9	96.0
Ministry of Religion ..	3.8	10.2	3.8	10.2
Army, Navy and Air Force Officers ..	9.3	25.0	9.3	25.0
Civil Service (Administration, Diplomatic and Colonial) ..	0.9	2.4	0.9	2.4
Civil Service (Executive) ..	7.6	17.7	7.6	17.7
Nurses ..	6.7	20.2	8.4	25.9
Shorthand Typists ..	9.1	25.3	9.1	25.3
Architects, Chartered Accountants, Surveyors and Estate Agents ..	11.2	21.3	11.2	21.3
Total ..	134.0	276.7	172.5	347.2

"In Britain in 1947, there were 29 million people between the ages of 21 and 65 giving 7,25,000 people of A—intelligence. If we are to increase the proportion of scientists, doctors, engineers and teachers without lowering standard in any occupation we must find 40,000 very able recruits from among the 6,00,000 very able people who do not appear in the above lists."

TABLE 5.

INTELLIGENCE RELATING TO EDUCATIONAL GROUP†
INTELLIGENCE QUOTIENT.

Institutions	25 Per- centile	Average	75 Per- centile
Elementary School	82.5	99.5	118.5
Private School	92.5	110.0	128.0
Central School	112.0	121.5	130.5
Secondary School	111.5	124.0	139.0
University	129.5	134.0	147.5

* (Michael Roberts 'The Estate of Man Faber and Faber London 1951, Page 82).

† Cattell—'Guide to Mental Testing'—University of London Press 1936.

TABLE 6.

Table showing the results of Earle in his follow-up study of 1,265 students who were admitted to a Scottish Senior Secondary School during eight years from 1929 to 1936 (Earle: Reconstruction in the Secondary School, 1944).

I. Q. LEVEL.

Description of later achievement	120 and over	112-119	106-111	Below 106	Total	Per cent
(a) Went to University after taking senior certificate.	76	8	1	0	85	6.8
(b) Took jobs after taking senior certificate.	87	56	14	2	159	12.5
(c) Took only the junior certificate.	229	152	72	39	492	38.9
(d) Failed to get even the junior certificate.	91	120	130	188	529	41.8
Total ..	483	336	217	229	1,265	100.0
Percentage ..	32.2	26.6	17.1	18.1	100.0	..

TABLE 7.

SHOWING THE RELATIONSHIP BETWEEN GENERAL ABILITY AND EDUCATION.*

I. Q.	Per cent of population	Level of education
More than 120	.. 12.6	University
From 104 to 119	.. 32.2	High School
From 70 to 104	.. 52.6	Elementary School
Less than 70	.. 2.6	Special School for mental defectives.
Total ..	100.0	

*Distribution according to Terman Merrill Standardization Group of 1937 (Merrill: Significance of I. Q.'s on the Revised Stanford-Binet Scales.) (Jrl. Ed. Psy. 1938, Vol. XXXIX).

TABLE

TABLE SHOWING THE METHODS AND AGE OF RECRUITMENT,

Description	Method of Recruitment	Age of entry	No. in service	Educational* qualifications	Educational level
1	2	3	4	5	6
1. Clerical Assistants, Typists and Office Machine Operators.	Open competitions	15	105,000	None prescribed	School Certificate
2. Clerical Grade.	do	16—18	145,000	do	School Certificate
3. Executive	do	17½—18½	65,000	do	Higher School Certificate (Grammar School).
4. Administrative.	do	20½—24	3,000	do	University Honours.

NOTE.—“It should be understood, however, that the standards mentioned are educational degree or certificate before sitting for any of these examinations.” “The is recruited not only by the examinations mentioned, but also by special competitions which all who show merit may advance.” “Civil Service” Choice of Careers, new series

UTIES, SALARIES IN THE BRITISH CIVIL SERVICE

Examination	Salary	Duties	Promotion to Higher Classes
7	8	9	10
One and half hours test in the use of words and in spelling, punctuation and grammatical construction of sentences.	£ 143 or £ 156 to £ 265 or £ 302.	Office routine, Filling letters or documents, Typing, Shorthand, Accounts, Statistics.	Promotion to Secretarial work, clerical officer grade.
School Certificate standard Compulsory-English Arithmetic Optional Three.	Lower— £ 150 to 450. Higher— £ 525 to 850.	General correspondence, Handling claims and requests, checking accounts, compilation of Statistics, Preparation, Summarising and annotating of documents, Interviewing people, Assisting Administrative and Executive Officers.	Annual competition confined to clerical workers confined to those between 21—28.
Compulsory-English, Arithmetic, General knowledge. Optional Three. Interview.	Executive— £ 239 to 650. Higher Executive Officer— £ 675 to 800 Senior Executive Officer— £ 850 to 1,000 Chief Executive Officer— £ 1,000 to 1,200	Much more than routine tasks, Ability to exercise considerable discretion and initiative, responsibility to see that the policy is observed and carried out promptly and efficiently. Not only general ability but high measure of judgment and resource.	Annual competition confined to established Civil servants between 21 and 30 for entry into Assistant Principal Grade.
Method I— (i) Compulsory—300 Essay English Present Day History (ii) Optional— (iii) Interview— Method II— (i) Examination— English and General subject. (ii) Personality Tests (iii) Interview.	Asst. Principal— £ 400 to 750 Principal— £ 950 to 1,250 Asst. Secretary— £ 1,320 to 1,700 Under Secretary— £ 2,000 Dy. Head of Department £ 2,500 Head of Department— £ 3,500	Formation of future policy ; not only an intelligent understanding of Government to put forward new ideas. Advise Ministers on new proposals. Assist Ministers in their parliamentary and other duties. Forecast probable effects of new Acts and Regulations. Organising and directing the work of Departments.	....

given only as a guide. It is not necessary, in general, for you to hold any sort of your general classes are not water-tight compartments. Each class from clerical upwards and promotion from the class below. Thus a steady upward stream is maintained by No. 1 H.M.'s Stationery Office, May 1950, page 3.

