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ABSTRACT

This study is concerned with informal education activities (in France) to promote socio-professional advancement for adolescents up to the age of majority and for adults up to the age of about 40. The three types of activity considered (training, retraining, and further training) are carried on by many organizations--all under the authority of the State--run by professional bodies, firms themselves, or by private enterprise. State activities include the Conservatoire National des Arts et Metiers and the Association pour la Formation Professionnelle des Adultes, set up by the Ministry of Labour. Research bodies were set up at the University of Nancy and others. Recently created "vocational education sections" are intended for adolescents who have left school early. Training is also provided by corporative bodies and by firms, either through their own facilities or through those of professional or private activities. There is a need for synthesis of this informal education with formal aspects; this will call for a new approach to formal education and organization of the system of informal education. (NL)

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**PERMANENT
EDUCATION
FRANCE**

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STUDIES ON PERMANENT EDUCATION

No. 1/1968

THE DEVELOPMENT OF PERMANENT EDUCATION
IN FRANCE

by

Jean CAPELLE

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Learners and teachers are we all

"The entire succession of mankind down the centuries should be looked upon as one man who lives on, continually learning."

Blaise Pascal

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INTRODUCTION

The organisation of society has led to the progressive construction, usually according to the pressure of need, of a whole educational system which touches every individual, though to a very uneven extent, depending on the level of responsibility he aspires to or possesses in working life.

I. THE PHASES IN EDUCATION

The successive phases in this system may be divided up as follows:

1. The pre-school phase covers children up to compulsory school age and the institutions concerned are kindergartens, infant or nursery schools. The value of pre-school education lies not merely in helping mothers to go out to work but above all in giving the child a favourable start to his studies; by developing means of expression and facilitating the child's integration in a group. pre-school education helps to lessen the handicaps suffered in the course of their normal studies, at least during the years of compulsory schooling, by children from uneducated backgrounds.

Having thus emphasised the value of pre-school education in the execution of any plan to democratise education, we shall not refer to it again in the present study.

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2. The phase of formal education extends from the start of compulsory schooling to the end of the period during which an adolescent or adult works specifically, on a particular course and with proper facilities, with a view to obtaining a certain qualification. It comprises, first of all, the period of compulsory education - which, since the ordinance of 6 January 1959, covers the period from the age of 6 to 16; it also comprises any subsequent training of a threefold kind in that it applies to young people in a particular age-group, follows a set pattern and demands full-time attendance. The formal education phase may be a homogeneous process when education takes place entirely in an academic environment; it may be a combined process when work in the academic environment is coupled with work in the profession which is then essentially a form of apprenticeship. The alternating type of "sandwich" training current in England, that of the BERUFSCHULEN in Germany and of medical students, who alternate between medical school and hospital are all types of training which come within the phase of formal education.

3. The phase of post-formal or informal education is the most complex, for it embraces the widest variety of "clientèle" which, to start with, may be divided into two groups:

- (a) adolescents who have just emerged from the educational system (with or without a professional qualification) and are not yet of age. In the case of boys, military service marks the end of the phase which we term here "post-school adolescence".
- (b) adults who comprise all persons who are of age and no longer come within the formal educational system.

From the point of view of their relation to educational activities, adults may be divided into three age-groups on the following basis:

- the period of professional consolidation, which we may limit to the age of about 40, bearing in mind the pronouncement by PEGUY that "40 is a terrible age, for it is the age at which we become what we are"
- the period of professional maturity, from the age of 40 to retirement age.
- retirement.

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II. EDUCATIONAL ACTIVITIES

The present study is concerned with those informal educational activities and particularly with the two following groups:

- adolescents up to the age of majority,
- adults up to the age of about 40.

Educational activities for these two groups may be described as follows:

1. Activities to promote socio-professional advancement which may themselves be sub-divided under two headings:

- (a) those which seek to improve the individual's general education without a view to any immediate professional advantage, the aim being to enrich his means of self-expression (lack of ease of expression is perhaps the most frustrating handicap of many workers) and to keep him well-informed in social, economic and scientific matters;
- (b) those which aim to instil or improve professional competence through training, refresher training (this covers many ways of bringing knowledge up-to-date, including retraining) and further training (not necessarily with a view to promotion).

2. Cultural leisure pursuits which may take very varied forms (sport, music, drama, excursions, etc.) and, although designed for relaxation and entertainment, may have particularly beneficial effects on the development of the individual - and hence, on his socio-professional behaviour.

3. Indirect education through environment, the sum of which in the end plays a very important part in the moulding of every individual's way of life and, even, his way of thinking: the influence of conversations within his family or social background, of newspapers, radio or television, films, travel, etc.

Of these three kinds of educational activities we shall only deal here with those linked with socio-professional advancement.

Having thus defined educational activities, we shall have to take a brief look at formal education which forms the foundation of informal education insofar as the latter's efficacy depends on the view attached to the finality, and hence to the completion, of formal education; the important thing is that informal education should represent an easy continuation of formal education instead of, as is too often the case, a haphazard and laborious return to studies.

III. THE CONCEPT OF PERMANENT EDUCATION

Professional techniques, in the face of the hard laws of competition, call for ever-increasing scientific rigour and the ability to adapt to new changes. Moreover, the general rise in standards of living, coupled with the spread of information in every form, has given rise at all social levels to a generalised awareness of the need for education. In a modern society this means a more complex basic equipment than our grandfathers were content with.

On the occasion of the Study Course on adult education, organised by the Council of Europe at MARLY, near Paris, in May 1967, it was stated that every individual's basic right to education should comprise the following elements:

- (1) basic education (of varying length depending on the country, in France from the age of 6 to 16)
- (2) vocational education (generally outside the period of compulsory schooling).
- (3) further education in the dual form of further vocational training and opportunities for cultural leisure pursuits.

The achievement of these basic rights will mean a complete revision of the educational system. In fact, at present this system is without continuity in the sense that the formal phase is regarded as a complete entity and informal educational activities are not co-ordinated either with it or among themselves.

The kind of education that is needed to benefit every citizen should integrate all educational activities, whatever their nature and whatever the category of student concerned. Then the disrupted system of education we have today will give way to one of permanent education in all its dimensions.

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Let us recall the definition given by the Council for Cultural Co-operation of the Council of Europe:

"The concept of permanent education as the organising principle of all education implies a comprehensive, coherent and integrated system designed to meet the educational and cultural aspirations of every person in accordance with his abilities. It is intended to enable everyone throughout his life, whether through his work or through his leisure activities, to develop his personality."

The field of permanent education thus covers a wider range both of beneficiaries and content than that with which the present report is concerned.

PART I

SOCIO-PROFESSIONAL ADVANCEMENT THROUGH INFORMAL EDUCATION

The three types of activity considered here (training, retraining and further training) are carried on by many organisations - all under the authority of the State - run by professional bodies, firms themselves, or by private enterprise.

Despite this variety, only a small minority of the working population actually receives the benefit of any informal vocational education.

In a report submitted to the National Assembly during the debate on the Law of 31 July 1959, Mr. Fanton described the situation as follows:

"Out of 4 million workers in the private industrial sector, barely 37% are skilled workers and only 6.3% have higher skills... The position in rural areas is still worse, for in 1955, 96% of the 2,200,000 managers stated that they had received no vocational training".

In the report of the National Assembly's Committee on Cultural Affairs on the Finance Bill of 1965, the necessity of promoting social advancement was strongly urged on the basis of the following finding:

"The number of adults benefiting from activities on behalf of social advancement has been estimated at about 400,000 or 2% of the working population".

THE UNDERLYING LAWS

There are three main laws underlying the organisation and control of educational activities to promote refresher and further training.

In 1919 the Astier Law put technical education on a new footing and developed the idea of "social advancement"; resources were created through the introduction of the "apprenticeship tax" (0.4% of total salaries).

The Law of 31st July 1959 laid down general guide lines and demonstrated a desire for co-ordination: it gave particular impetus to the scheme for the "further advancement of labour".

Lastly, the Law of 3rd December 1966 on vocational training lays down the principle that "vocational training constitutes a national obligation"; it extends the range of facilities available to workers for their training and advancement by raising the rate of the apprenticeship tax from 0.4% to 0.6%; it also sets up a "National Council for Vocational Training, Social Advancement and Employment".

The desire to increase informal education facilities is illustrated by the explanatory memorandum which emphasises social and technical requirements:

"Full employment and security of employment can only be ensured if young people receive a sufficiently broad basic education enabling them to attain the levels of qualification required by the economy and if adults can benefit from a system of institutions for their training and advancement, enabling them to adapt to the new needs of the economy. Already today there is a need for wide-scale retraining... Vocational retraining has thus become a major and, no doubt, lasting labour problem.

Moreover, and above all, there can be no true social progress unless every kind of facility for training and refresher training is available to all - men and women, young people and adults alike. Such facilities, which are sometimes referred to by the overall term of "permanent education" confer on man a most precious asset; by bringing about greater equality in professional life, they to a large degree govern social advancement."

The three laws mentioned above have led to numerous directives (decrees, orders, circulars) which it is impossible to enumerate here.

However the Ministry of National Education's circular of 16 May 1961 deserves a special mention, for this circular prescribed a mode of co-operation between the state and the professions for the purpose of developing training centres for apprentices, several of which are run on the lines of the German system of the BERUFSSCHULE.

In the following account, we shall therefore leave aside activities concerned with cultural leisure pursuits: they have their own structures and mainly apply to young people under the age of 30; they concern a larger proportion of the working population than the activities on behalf of socio-professional advancement.

It is to be hoped that in the future these two departments of permanent education may be more actively associated with one another. Today they are completely separate.

Under the pressure of growing demand, activities to promote socio-professional advancement are multiplying. They vary greatly in their status, scope and objectives and are classified here under three headings:

1. State activities (through appropriate bodies or through use of the educational system);
 2. Corporate activities;
 3. Independent professional activities.
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I - STATE ACTIVITIES

Here two main institutions should be noted: the "Conservatoire National des Arts et Métiers" and an institution set up by the Ministry of Labour for retraining and intensive training courses, called "Association pour la Formation Professionnelle des Adultes" (AFPA).

A. ACTIVITIES OF THE "CONSERVATOIRE NATIONAL DES ARTS ET METIERS"

The "Conservatoire National des Arts et Métiers" (CNAM) was founded by the Government of the National Convention in 1794 as a veritable university for professional advancement. Its function, as set out in its charter, was "to explain the construction and use of tools and machines employed in Arts and Crafts".

Since its creation the CNAM has widened its horizons and has helped to elevate technological instruction from the level of hereditary empiricism to that of science and research. Moreover, it has specialised in informal adult education.

CURRENT EXPANSION. When the main college reached saturation point, the CNAM branched out in other areas where there was sufficient demand to warrant the organisation of courses. This has been done by three means.

- (a) An independent television network transmits classes held in the Conservatoire itself to 12 receiving centres in the Paris area. These 12 centres had a total of 3,850 registered students for the year 1967-68. Courses on the following subjects are transmitted in this way:

- mathematics (several grades)
- physics
- radioelectricity,
- data processing

(b) Use of channel 2 of the national television network

Courses in elementary mathematics, radioelectricity and data processing are broadcast over the whole network.

A course in general mathematics is also broadcast over the Paris and Lille transmitters.

The first course was put out on national television in 1966-67: 164 viewers took the end-of-year examinations and 78 passed.

The effectiveness of this instruction is heightened by the existence of 14 group centres (known as TELE-CNAM groups) which organise group-viewing sessions and supervised class exercises.

(c) Associate centres. During the last few years 32 so-called "associate" centres have been set up in provincial towns (some of these centres themselves have branches in neighbouring districts). In addition, two associate centres have been opened in Paris itself (Paris-nord and Paris-ouest).

These 34 centres provide the same courses as the central college, the CNAM in Paris, and, on its authority, award the same certificates and diplomas.

CNAM RESULTS

The results of the academic year 1965-66 were as follows:

- Pass certificates at the annual examinations	9,168
- General certificates for the complete course	1,491
- Special certificates	8
- Diplomas for advanced economic studies (Paris: 30, associate centres: 7)	37
- Economics diplomas (Paris: 1, associate centres: 1)	2
- Diplomas in advanced technical studies (Paris: 307, associate centres: 233)	540
- Engineering diplomas (Paris: 151, associate centres: 68)	219

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Two successive stages are needed to qualify as a CNAM engineer:

- (1) a pass in the "general examination",
- (2) the submission of a thesis.

In 1966, 210 candidates passed the general examination but only 150 of them submitted a successful thesis in the following year.

The disparity between these two figures is surprising; it has widened increasingly over the last few years and reached unusual proportions in 1966.

It is unusual for a thesis to be rejected, so it must be assumed that large numbers of successful candidates at the "general examination" fail to submit a thesis. This is due far more to difficulties encountered in the professional sphere (unsuitability of the firm's facilities to the subject, change of employment, too demanding responsibility, discouraging attitude of employers) than to difficulties of a personal nature (family responsibilities, fatigue).

THE MAKE-UP OF THE CNAM STUDENT BODY

The present student body of the Conservatoire falls into three main sections:

- (a) a highly qualified section of engineers and trained personnel who take a particular course for one or two years in order to refresh their knowledge in a specific field (applied mathematics; data-processing; automation; electronics) or to acquire a knowledge of certain economic subjects (finance and management accounting; commercial law; social legislation and labour laws...) which they need in a position with new responsibilities. This section includes about a thousand members in Paris, or 5 to 6% of the total student body.
- (b) a large section (about 12,000 or two-thirds of the total student body) of persons with average qualifications: technicians, foremen, employees of commercial or financial companies, or public service undertakings, teachers, etc. who for all sorts of reasons connected with age, health, occupation, home and family, different responsibilities, place of residence and work, etc. are unable to devote their leisure-time to studies over a period of more than two or three years. Their aim is to obtain one or two certificates in subjects linked with their profession.

(c) a more "academic" section of students, who from the start of their studies at the CNAM or with their first examinations successfully behind them, are working for the engineering diploma. This section numbers just over a quarter of the total student body for the current year, or about 5,000 persons. Typical members of this section, which regards the CNAM as an evening school, are holders of a BTS (Brevet de Technicien Supérieur: Certificate of advanced technical studies).

1,800 of the current year's students are holders of the BTS; of these, 770 registered with the CNAM for the first time this year (1967-68).

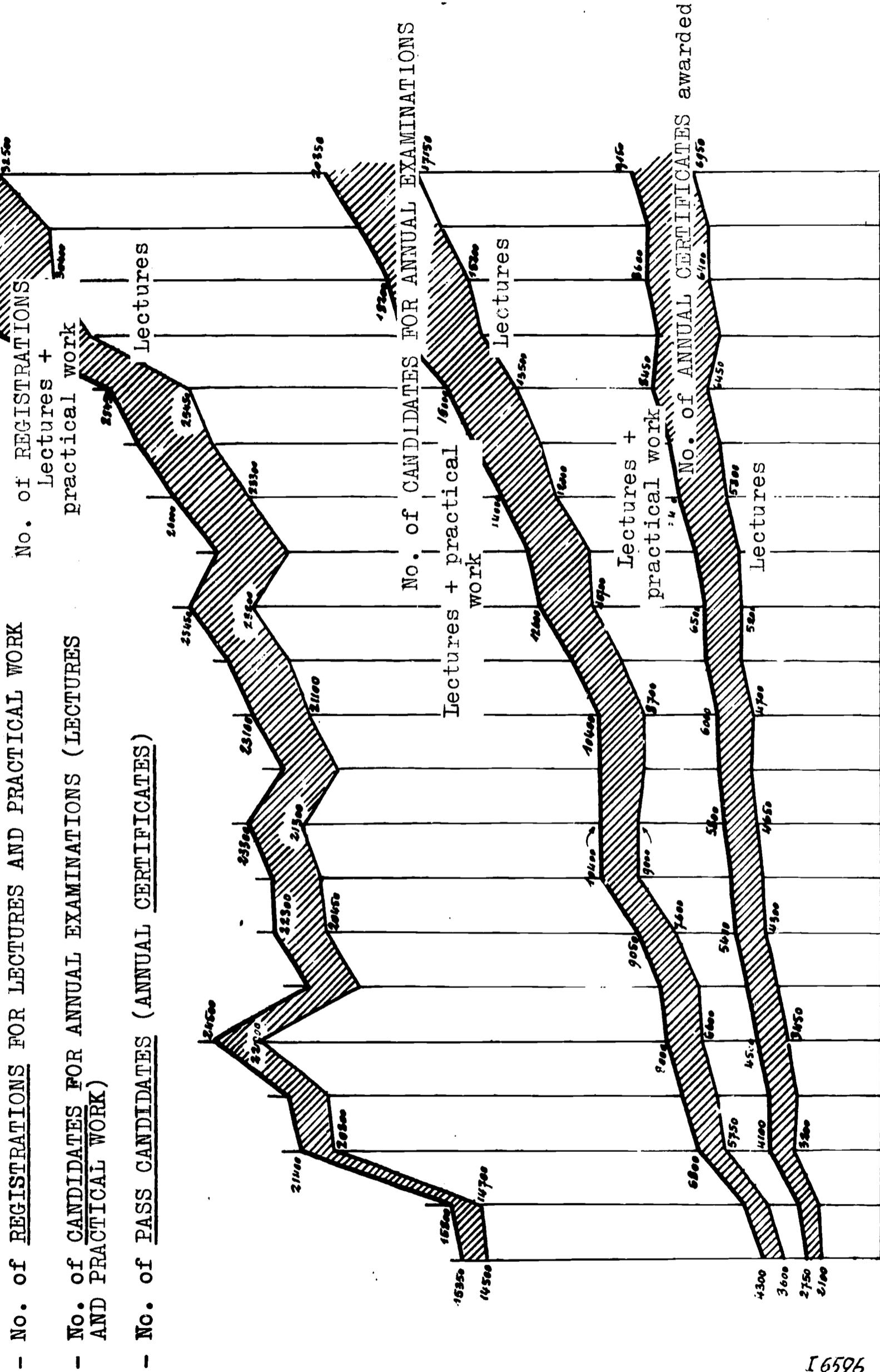
In general, 40% of students possess diplomas which are at least equivalent to the baccalauréat (university matriculation).

- in general studies (baccalauréat, CES [Certificat d'Etudes Supérieures]; licence) 23%
- in technical studies (ENP [Ecole Nationale Professionnelle] BT [Brevet de Technicien] BTS [Brevet de Technicien Supérieur]; Ingénieur) 17%

The tables on the following pages show the rise over the last few years, within the CNAM in Paris and the associate centres as a whole, in 3 totals: the number of student registrations, of examination candidates and of annual certificates awarded.

CONSERVATOIRE NATIONAL DES ARTS & MÉTIERS

PARIS

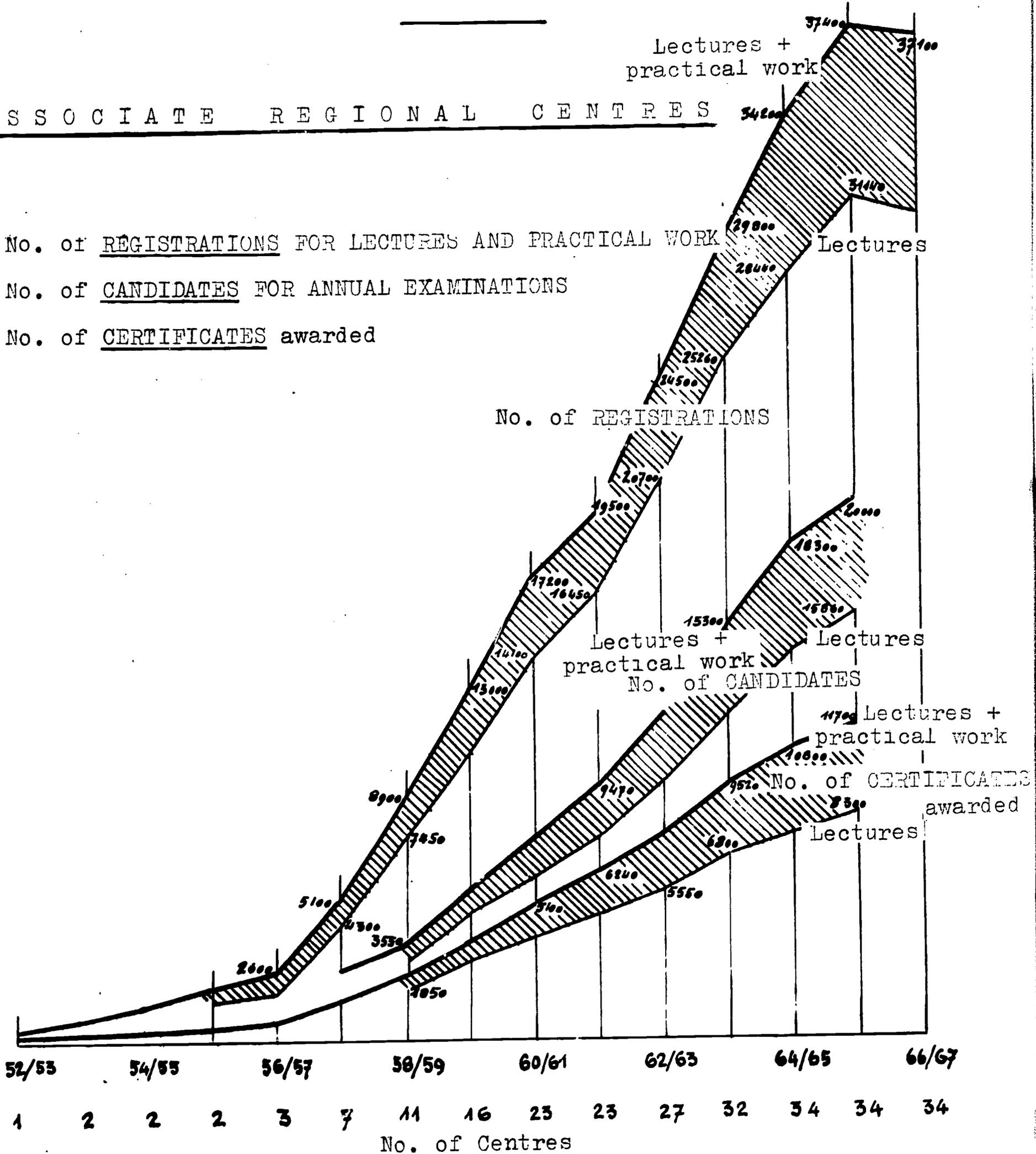


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CONSERVATOIRE NATIONAL DES ARTS & MÉTIERS

ASSOCIATE REGIONAL CENTRES

- No. of REGISTRATIONS FOR LECTURES AND PRACTICAL WORK
- No. of CANDIDATES FOR ANNUAL EXAMINATIONS
- No. of CERTIFICATES awarded



B. ACTIVITIES SPONSORED BY THE MINISTRY OF LABOUR

These activities comprise first the kind of training provided by public centres within the "Association pour la Formation Professionnelle des Adultes" (AFPA) / Association for Adult Vocational Training and, secondly, those provided by a number of private centres subsidised in accordance with the Law of 3 December 1966.

In 1967, 35,400 trainees qualified through the AFPA and 12,400 through subsidised centres: in all therefore, 47,800 persons obtained qualifications under the system of intensive vocational training.

As regards the level of qualification, 92% of these were skilled workers (grade 5 under the grading system) and 8% technical staff or even technicians (grades 4 and 3).

C. ACTIVITIES OF THE MINISTRY OF AGRICULTURE

The Ministry of Agriculture controls about a hundred "Centres for Social Advancement" which, in pursuance of the Law of 3 December 1966, are to be known as "Centres for Agricultural Vocational Training and Advancement" / Centres de Formation et de Promotion Professionnelles Agricoles (CFPPA) /. Further centres are to be set up.

The first stage in this training, for which an agricultural certificate is gained, is most urgently needed among young agricultural workers, for it concerns the greatest number; its main purpose is to give adult farmers, farm-helpers or paid farmworkers professional knowledge of both a general and specialised nature.

Such training will be provided either in public centres directly responsible to the Ministry or in private centres contracted under the Law of 3 December 1966.

D. ACTIVITIES RUN BY ACADEMIC INSTITUTIONS

Certain institutions which normally provide formal, full-time courses of training ranging from the level of a skilled worker to that of an engineer at university level, have introduced courses and, in some cases, even set up institutes to provide informal training and refresher courses.

- (a) Several technical colleges (for skilled worker grades) or technical Lycées (for technician grades) have arranged for informal vocational courses in the evenings or on Saturdays. In the Paris area for example, such courses are run by the Lycée Diderot and the Lycée technique at Puteaux.
- (b) Mention should be made of a particular type of all-round institution which caters both for students studying on their own - e.g. invalids - and for people working full-time, namely the "Centre National de Télé-Enseignement" (CNTE). The college is situated at VANVES in the suburbs of Paris and now has three regional centres at Lille, Lyon and Toulouse.

The vocational training and social advancement courses of the CNTE and its branches during 1966-67 were held at various levels; the student registration figures were as follows:

- grade V (skilled worker, employee)	26,840
- grade IV (technician)	21,106
- grade III (senior technician)	9,637
- grades II and I (university levels)	3,167

The special requirements of scientific and technical trainings have led to an improvement in correspondence courses, which is essentially the system employed by the CNTE, including group study days for isolated students which are held in technical colleges: these take place on one day every two or three weeks, making it possible to create a more friendly atmosphere, give useful guidance and supervise practical work.

A further improvement at present under consideration is to co-ordinate correspondence courses with those broadcast on radio and television.

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- (c) At university level, several faculties or schools of engineering have organised regular courses under the "further advancement of labour" scheme for adult workers who have already reached the grade of technician; some have also organised regular courses or seminars for engineers and other trained personnel on topical scientific or technical subjects. By the same token, law faculties have opened centres for management training.

The University of Genoble's "Centre de Promotion Supérieure du Travail" is particularly active.

At the instigation of its former students, the National Institute of Applied Sciences at Lyon has introduced a system of co-operation between industry and the university which takes the form of annual meetings lasting a number of days, each of which is devoted to the presentation of a new scientific and technical development. This has led to the creation of a body called the "Centre d'Actualisation Scientifique et Technique" (CAST).

Mention should be made of a body set up in 1954 under the co-operation of the University of Nancy and economic circles in Lorraine, namely the "Centre Universitaire de Coopération Economique et Sociale" (CUCES) which has the status of a university institute.

The training and advancement activities of the CUCES have expanded and increased in variety.

One section of these is taken up with students who have registered individually. The latter fall into two separate categories:

- (1) those who take a regular course normally culminating in a diploma under the "further advancement of labour" scheme;
- (2) those not seeking to obtain a diploma who select the type of training which interests them on the principle of an à la carte menu.

Another, more recent section is concerned with groups and takes the form of classes organised in firms or their immediate neighbourhood.

In 1967-68, the individual section showed the following turnover:

- The PST (Promotion supérieure de travail) course, which provides training for a professional qualification and is spread over two years, included 591 members divided up as follows:
 - 266 students admitted to the senior class
 - 66 students repeating the first-year course,
 - 259 new entrants.
- Further training courses included:
 - 242 trainees from 109 enterprises, at the foreman level;
 - 1,182 trainees selected from 1,268 applicants (86 were rejected);
 - special seminars for organisers of social centres.

Collective training courses have been conducted successfully in several large enterprises. It has been found that when a group of men work together and have settled into familiar habits, it is not always possible to alter their behaviour by simply training one or two members of the group and trusting that this will have a contagious effect. For on their return to the group the individual trainees sometimes meet with opposition, ragging and mockery among their fellows and, for the sake of peace, are virtually obliged to forget the training they have received and go back to their old ways.

E. RESEARCH ACTIVITIES

Experience has shown that the success of adult training depends on certain conditions which do not rely solely on the goodwill of the instructors and the students.

A teacher cannot simply apply a lesson which gets good results with schoolchildren to adults; the adult is different in several respects:

- less facility in grasping ideas;
- generally stronger, but different, motivation;

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- sociological and professional starting-points;
- need for frequent reference to concrete reality through application of practical experience.

Material for use by adults - especially those whose education has not gone beyond the elementary level - needs to be specially devised.

Adult education is therefore both an art and a science which widen the sphere of pedagogy to one of "anthropagogy" covering the whole human field of permanent education.

It was in order to face up to these needs that a national research body, the "Institut National pour la Formation des Adultes" (INFA) was set up at Nancy under the direction of Mr. Bertrand SCHWARTZ.

Similar research has also been conducted at other university centres concerned with sociology and labour problems, for example, the University of Caen, the CNAM ...

F. "LES SECTIONS D'EDUCATION PROFESSIONNELLE" (SEP)
/Vocational Education Sections/

The recently created "vocational education sections" are intended for adolescents who have left school early but are still of compulsory school-age. Strictly speaking, SEP training scheme should fall within the formal educational system, but, despite the intention behind its creation, the predominant emphasis on its vocational aspect has led to its being classed in the informal system.

Under the ordinance of 6 January 1959, the period of compulsory education lasts 10 years, from the age of 6 to 16. However, this ruling does not fit in well with the different stages of schooling (5 years at the elementary stage, followed by 4 years at the intermediate stage) and the fact that the first choice of direction of a child's studies takes place at the end of the 9th year.

The directive of 6 January 1959 resolved the difficulty by providing that compulsory schooling might be "completed in firms", virtually at the end of the set curriculum observation period, that is to say, after only 7 years of real full-time education. It was apparent that such an

interpretation could be a retrograde step in relation to the law of 25 years earlier, guaranteeing full-time education up to the age of 14. For this reason decrees were enacted in 1962 and 1963 laying down that:

(1) compulsory education for all children must include completion of both the elementary and intermediate school stages (except in the case of those who, as a result of staying down in a lower class, reached the age of 16 before completing the intermediate stage).

(2) apprenticeship as such should be delayed until after the intermediate stage which, even during the practical section, should take the form of a general training, that is, one uninfluenced by any vocational specialisation. (With this idea in mind, the practical section, which covers the 8th and 9th years of schooling, has been qualified as pre-vocational).

However, when the government decided in 1959 that compulsory education up to the age of 16 should come into force by the beginning of the 1967 academic year, it had not made provision for the necessary numbers of intermediate schools to enable all the children entering their first year of compulsory education in October 1959 to receive a full-time education in their last year in the intermediate stage starting in October 1967.

When it proved impossible under the Vth Plan, which comes to an end in 1970, to meet the requirements of the intermediate schools' schedule, the government announced that its completion would be deferred until 1972.

Then in 1967 the Minister of National Education decided on a special, new scheme to enable the introduction of compulsory education on the lines originally laid down to be implemented by October 1967, namely the "vocational education sections". This meant departing from the 1962 and 1963 decrees and reverting to the option of completing the period of compulsory education in firms after the 8th school year, under agreements by which the employer of a child of 14 would release him 12 hours a week for further education provided by the schools system, 28 hours a week being allotted to the employer.

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The successor to the minister who introduced this speedy solution to the problem tried to present it to the National Assembly in an optimistic light:

"The instruction provided in the vocational education sections is in no way a vocational training or apprenticeship in the traditional sense of the word but a preliminary training preceding the choice of direction taken at the end of this period of schooling" (Sitting of 27 October 1967).

In fact enterprises were neither ready nor, for the most part, willing to assume this fresh responsibility and only a small proportion of the children who left school at the age of 14 in 1967 were able to benefit from the SEP educational scheme.

This scheme must be regarded as a short-term solution and can have no useful future unless it is applied as a sequel to the intermediate school stage for adolescents who finish their schooling at this level.

In the review "L'Education Nationale" of 7 March 1968, a director of a technical college who specialises in matters of apprenticeship, spoke out on behalf of people made particularly aware of the difficulties of the scheme through practical experience:

"How can the enterprises - with the exception of a few large firms - when they have obviously failed as regards vocational and technical education (as opposed to manual training alone) at apprenticeship level leading to a "certificate of professional competence", be expected to succeed in the infinitely more delicate task of pre-vocational training?...

... what sort of application, intellectual effort or community spirit can be expected from these part-time pupils, brought together in a school (where this is feasible, if at all) for a meagre twelve hours a week?"

These criticisms would doubtless be well-founded if the SEP scheme were to continue to deprive children from unfavourable social backgrounds of their proper share of general education and serve to encourage the use of cheap, juvenile labour; but this experiment, which gives a minimum training to children who would otherwise have nothing, is worthy of interest in view of its application, possibly in the near future, to a system of vocational education which would follow on completion of the full intermediate school stage, allowing co-operation between schools and enterprises, not by the mere juxtaposition but by the real, mutual integration of their separate contributions.

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II - CORPORATE ACTIVITIES

The principal objective of corporate bodies - municipalities, trade associations, chambers of commerce - is to enable young workers to gain a professional skill at apprenticeship level. Doubtless the colleges they have established (especially the commercial colleges set up by the chambers of commerce) serve to extend their activities beyond their ordinary students to others at various levels of proficiency.

The figures for adolescents on informal vocational courses organised by corporate bodies in 1967 were as follows:

95,425 on municipal courses,
132,502 on courses run by trade associations,
9,652 on courses run by chambers of commerce.

To these may be added 14,251 adolescents attending subsidised training centres for apprentices.

The municipal courses are held in large towns while the trade associations concern themselves more with smaller places. Both types of course are attended by apprentices from every trade or profession.

The relatively modest contribution of chambers of commerce in this sphere is due to the fact that they concentrate mainly on full-time courses.

These professional advancement courses are subsidised by the state: in 1967 state aid accounted for the following proportions of total costs:

- municipal courses:	29%
- courses run by trade associations:	38%
- courses run by chambers of commerce:	17%

The difference in these percentages is due to the fact that subsidies are calculated on the basis of funds available, payments received under the apprenticeship tax and grants by membership.

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III - INDEPENDENT PROFESSIONAL ACTIVITIES

Informal training, retraining, refresher training and research are provided by firms for adults at every level - either through their own facilities, if the firm is a large one, or through interprofessional organisations; to these should be added similar facilities offered by various privately-run bodies which are independent of any particular profession.

It is practically impossible to draw up a complete picture of the whole of this sphere which is extremely complex and governed by its objectives, methods and the extend of demand.

A. PROFESSIONAL ACTIVITIES

The "CENTRE DE RECHERCHE ET D'ETUDES DES CHEFS D'ENTREPRISE" (CRC) is a centre for meetings, studies and courses for heads of firms and was set up by the "Conseil National du Patronat Français" in 1953. It consists of general study sections and a training centre at JOUY-EN-JOSAS where regular courses are held on problems facing heads of firms. It issues a publication, the "Cahiers du C.R.C." which reports on its investigations and research.

The "UNION DES INDUSTRIES METALLURGIQUES ET MINIERES" (UIMM) has a system extending over several industrial areas to provide training and advancement starting at the skilled workers' level.

UIMM surveys and studies are recognised as authoritative.

The NATIONALISED INDUSTRIES, principally "l'Electricité de France" (EDF) and the "Société Nationale des Chemins de fer Français" (SNCF) have their own system of training, part of which is formal in the sense defined earlier, but the informal extension is important especially in regard to refresher and retraining courses.

The "CENTRE INTERENTREPRISES DE FORMATION" (CIF), directed by Mr. VATIER at Boulogne-Billancourt, originated in the RENAULT factories; it became a "clearing-house" for the automobile industry: its principal object is to train promising young men from member firms, who already possess good technical qualifications, for higher levels of responsibility. Its success has led to the establishment of provincial branches, notably at Lyon.

"SESSIONS D'INFORMATION ET DE PERFECTIONNEMENT DES CADRES" (SIPCA)

This association was founded by "Air-France" in 1955; several other companies have since become associate members: the "Société Nationale des Chemins de fer" (SNCF), "l'Electricité de France" (EDF), the "Société Lorraine-Escout", the "Société Air Liquide", the Belgian air company SABENA, the KODAK-PATHE, St-GOBAIN, SNECMA companies, etc.

The courses are held at the "Château des Clos" at BONNELLES near Paris and include the following features:

- a programme based on management and long-range planning methods in social and economic affairs at company level as well as at the national and even international levels;
- teaching methods suited to well-educated adults, making wide use of discussion.

Their purpose is to give executives further training and instruction in modern, up-to-date methods.

Over the year 1966-67, 275 trainees attended the SIPCA at Bonnelles for a total of 220 working days, each spending an average of 15 days at the Château. In addition, over 75 study days involving 330 trainees were held there by associate companies.

The "COMITE CENTRAL DE COORDINATION DE L'APPRENTISSAGE DU BATIMENT ET DES TRAVAUX PUBLICS" (CCCA) trains apprentices for the building industry.

In 1966 the CCCA had a staff of 5,000 instructors and took in 53,820 apprentices. The training comprises three sorts of college-workshops:

- those run entirely by the building industry,
- those run by the "Chambres de Métiers" (trade associations),

- those run in collaboration with the Ministry of National Education within technical colleges.

The CCCA has taken advantage of the opportunities for co-operation with the Ministry of National Education set out in the circular of 16 May 1961; the growth of its "college-workshops" and "training centres for apprentices" has been facilitated by a "national agreement on co-operation".

PROVINCIAL CENTRES - The institutions we have mentioned so far are either national or Parisian ones, but regional or local bodies have also developed in the main industrial areas.

The "CENTRES D'ETUDES ET DE FORMATION DU SUD-EST" (CEFSE) in the region of GRENOBLE concentrates on three fields.

- vocational retraining and advancement,
- organisation and management,
- industrial psycho-sociology.

The "CENTRE DE PERFECTIONNEMENT DES CADRES" (CPC) at ROUBAIX is concerned with training senior personnel in the northern region.

It is primarily humanistic in outlook and has a dual aim:

- to promote the advancement and further training of all levels of executive staff in their different spheres (excluding the techno-professional sphere);
- to develop methods of communication to improve labour relations within firms.

The CPC includes a "psycho-technical department", an "inter-firm training and retraining department" and a "firms' training guidance department".

Over the period 1946-66, 12,000 executives, foremen and technicians from 210 firms attended the CPC courses.

The "GROUPEMENT INTERPROFESSIONNEL DE FORMATION ET DE PERFECTIONNEMENT" (GIFP) at FOURMIES is directed by Mr. CAMUSAT: its purpose is to train qualified personnel for industries in the FOURMIES and CAMBRESIS regions. It has made use of psycho-gestural training with very rewarding results among young men regarded as unpromising from the normal academic standpoint. It is also concerned with further training for adults.

The "ASSOCIATION INTERPROFESSIONNELLE POUR L'ORGANISATION, LA FORMATION ET LE PERFECTIONNEMENT" is an association set up by firms in the region of DUNKIRK with the main object of initiating the higher personnel grades in the problems of general accountancy and management accounting.

The ENGINEERS ASSOCIATIONS are actively concerned with the problem of further and refresher training for qualified personnel. The following are a few examples:

The "Union des Ingénieurs" at Lyon conducted a poll among its engineers which showed a preference for courses lasting a week. On its initiative, two bodies, the "Comité Régional de Productivité de LYON" (CRPL) and the "Centre Interentreprises de Formation" (CIF) at CALUIRE organised a series of "forums" for engineers and trained personnel with 4 or 5 years' industrial experience, each of which was attended by over 75 representatives of the different industrial sectors in the South-East.

According to the findings of the "Union des Ingénieurs", "a critical period in the life of the young engineer or executive occurs after 4 or 5 years in the profession. He has then found his feet professionally and may adopt one of two very different attitudes - either taking interest in the firm's progress, its economic and financial aspects and human relations and assuming a forward-looking approach ... or becoming a creature of routine, isolating himself in his own specialised field".

Another finding was that most engineers "find it difficult to work as a team ... as if their 4 or 5 years' professional experience had not 'matured'".

The association of former students of the "Institut National des Sciences Appliquées" at LYON also conducted a survey among engineers attending a week's course on modern scientific and technical methods in 1967. The following were some of the findings:

- average age of participants: 32

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- attendance at the course: 46% on their management's initiative
54% on their own initiative;
- field of responsibility: 67% studies and research
10% manufacture;
- motivation ... 56% to further their general training
10% to prepare for retraining
2% to improve their chances of promotion.

B. INDEPENDENT ACTIVITIES

The bodies described under this heading are of private nature and do not fall within any professional groups (it is not possible to mention them all).

- The "Commission Générale d'Organisation Scientifique", better known by the name CEGOS, is a high-level body concerned with research and practical application in the field of organisation and management.

The CEGOS also holds study sessions for engineers and research workers on the following subjects in particular: general electronics, semi-conductors, magnetic amplifiers, binary notation, logical functions and data processing.

Every year about 6,000 senior personnel, as well as 2,000 foreigners, take its 5-day courses. Its growth rate is considerable for 1967 showed an 18% increase in intake over 1966.

- The work of SEMA (Société d'Economie et de Mathématiques Appliquées) borders on that of the CEGOS. Its two further training and advancement departments organise very high-level seminars and study sessions at the request of companies.
- EUREQUIP is an organisation also concerned with training and further training, employing programmed instruction methods.

- The "Centre National des Moyens d'Enseignement pour la Promotion Sociale" (CEMEPS) is a new organisation concerned with the preparation of teaching methods and material suited to the needs of social advancement.
- The "Collège des Sciences Sociales et Economiques" (CSSE) may be described as a body which concentrates mainly on refresher courses for trained personnel.

It provides continuous instruction in the form of theory courses (social and economic grounding, general economics) and technical courses (labour relations, administration and management, international trade, public relations, modern languages).

It also organises further training course (for the retraining of redundant army officers and for foreign personnel).

It has established an advanced training centre for middle management in commerce and industry as an independent unit.

The "INSTITUT DES SCIENCES ET TECHNIQUES HUMAINES" (ISTH), founded by Henri HARTUNG in Paris in 1953, provides a normal student training in human sciences but in addition - which is what interests us here - it has, from the start, organised courses and study sessions for the training and refresher training of personnel.

Following up the ideas of André SIEGFRIED, to whom Henri HARTUNG likes to refer, the ISTH aims at technical competence through the improvement of general training.

The psycho-sociological training of personnel includes the use of synergometrics or simulation methods together with instruction in real-life situations.

Nearly 12,000 trained personnel have taken ISTH courses.

In addition to its educational work, the Institute acts as consultant to firms which seek its "diagnosis".

PART II

FUTURE PROSPECTS

I. THE NEED FOR SYNTHESIS

LESSONS TO BE DRAWN FROM THE FACTS

The attitude towards the need for education differs profoundly as between pupils in the field of formal education and those in informal education. In the case of the former, they are absorbed and propelled forwards by an educational system which functions without sufficiently fostering the incentive of motivation which would make education something to be desired rather than undergone; in the case of the latter, they are often actuated by very strong motives, having had direct experience of the demands and difficulties of a responsible life, but find scanty opportunities of obtaining the education which their motivation would render effective.

Moreover, not all attain this state of grace, and for those who do, there is no continuity in the transition: for many individuals, a more or less lengthy gap occurs immediately after the period of formal education, as though they needed to recover from a long bout of indigestion in order to regain their appetite of curiosity which had been stifled or blunted by the educational system. In this way precious time is lost before they realise that they need to supplement or refresh their knowledge and that their qualifications are out-dated: in some cases the time lapse before this awareness and resurgence of incentive occurs is too great - they feel that it would require too much effort to bring themselves up to date and prefer to resign themselves to mediocrity awaiting a retirement which, with those who have given up hope, prematurely becomes the central objective of their existence.

These findings show that to develop a system of informal education separated from the ordinary educational system by a sort of "no man's land" is not good enough and that what is needed is a unified system combining both the formal and informal aspects of permanent education.

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If this is done, the school system will change its terminal character into an initiating function and therefore calls for thorough reform. School will no longer consist in lading pupils with the greatest possible amount of knowledge as though, after leaving school, this heavy stock must see them through their whole life's journey; its aim will be to produce "athletes" capable of tackling obstacles and difficulties in a way which requires more "know-how" than knowledge.

In all circles, both teaching and economic, awareness of this trend grows more acute every day; this is evident in discussions, publications and the facilities being created - although the latter remain unco-ordinated.

This is not the whole picture but it does indicate that there is an irreversible trend towards the construction of permanent education; the impetus and pressures from widely differing sources which are leading to the organisation of retraining and advancement courses already represent a strong force. However certain weak points must not be disguised: the lack of co-ordination of informal educational activities, the relatively small numbers who benefit from them and the lack of understanding displayed in many quarters either among heads of firms or people who could benefit from socio-professional advancement.

In a report entitled "Vers un droit de perfectionnement" (in the review "Professions", April 1965), Mr. GRZYBOWSKI describes the difficulties impeding retraining for trained personnel: "the majority of firms refuse to take trainees"; "the lukewarm or even hostile attitude towards the man who wants refresher or further training", or again "more clear-cut difficulties ... when it is a matter of management training. The reason for this is that here knowledge is equated with insight, that is to say, emancipation and defensive, suspicious and autocratic reactions are encountered ..."

Furthermore, potential beneficiaries themselves are not always appreciative: "a number of top executives have referred bitterly to the unforthcoming attitude of many trained personnel when they urgently need retraining and, sometimes, even de-specialisation, especially in the case of technical staff". And Mr. VATIER, Director of the "Centre Interprofessionnel de Formation" has declared: "there is more intellectual curiosity to be found among lawyers than among engineers".

Such difficulties show how much ground still has to be covered before the idea of permanent education can be turned into reality:

- at the research level, first, to analyse the demand among those who are immediately concerned (development of the economy) and those who are not, at least not directly (development of the individual), and to outline the features of a synthesis;
- at the level of public authorities, in order to create facilities equal to the demand;
- at the level of heads of firms, in order that the necessarily "co-operative" movement of permanent education may have the support of wide-scale approval in which a sense of the general interest prevails over the short-term view of immediate advantage;
- at the level of public opinion, in order that every man and woman may feel that they themselves are concerned.

Of these problems we shall now consider those directly concerned with education itself.

OBLIGATORY RETRAINING

To reach a certain standard of education is a citizen's right and duty.

Under the law the exercise of this right is compulsory from the age of 6 to 16; in due course, progress and the demands of society will lead to its extension up to the age of majority, with the onus of providing the widely differing and essential means to this end resting with the public authorities and leaders in economic circles.

Then there is the question of informal training for adults. It should be noted that, in their case, strictly from the professional angle, a gradual trend towards compulsory regular refresher training is emerging. It is already included in a number of collective agreements and will eventually appear in civil service regulations. Participants in the symposium at CAEN in November 1966 advocated the inclusion of compulsory regular refresher training for teachers in the actual rules and regulations of the civil service. For some years now the "Institut National des Techniques Nucléaires" at SACLAY only awards its diplomas subject to an undertaking by students to take subsequent further training courses. In addition to the date of issue, the diploma contains spaces for entries certifying completion of subsequent courses.

However any move in the direction of compulsory adult refresher training should be conducted with circumspection and, in principle, such training should remain optional. In the words of Mr. Bertrand SCHWARTZ: "It is up to the adult to choose and decide himself what he wants to do: any training for which the need is not personally felt is superficial, useless and sometimes harmful".

It must however be admitted that although refresher training, perhaps with a view to promotion, should remain optional, the practice of such training in every branch of the professions will become more generalised and systematic and, possibly, more contractual. Certainly, when people experience a direct need for retraining if they are not to fall behind rapidly in their particular line of work, they will naturally be inclined to solicit it of their own volition.

It is not too early to envisage that senior grades in firms should spend an hour a day on refresher training and that middle management and qualified personnel should have a certain proportion of their working week set aside for this purpose.

Teachers are no exception to this rule: this was expressly brought out in the following recommendation made at a symposium in AMIENS in March 1968:

"That a system of continuous teachers' training be introduced which would have an institutional structure to meet the needs of teachers as spontaneously expressed within their associations.

It would operate in schools and colleges with teachers working in groups and by means of periodical courses in district and regional training centres. Its object would be to bring their scientific and cultural knowledge up-to-date and to intensify its application in the teaching process"

In the case of the staff of firms (trained personnel, technicians, workers) who work a 40-hour week, refresher training can only reasonably be envisaged within working hours.

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In the case of teachers - except those who also work in laboratories - they are, by tradition and under the employment conditions offered by schools, only expected to be present during their teaching hours and at staff meetings. The difference between their weekly working hours in the schools and those of, say, an engineer in a factory is justified precisely by the requirement of their profession - not only the everyday preparation of class exercises and the correction of homework, but the necessity of constant efforts towards a modern, up-to-date approach. There may be a need for shorter hours of work in certain categories. At all events, proper organisation will facilitate the fulfilment of a need of which professionally conscious teachers have long been aware but lacked the necessary facilities which were left too much to chance or to the improvisation of individuals.

Thus, gradually the idea in our society of the diploma spelling security will be rectified. Even the civil service is beginning to react against the traditional practice of virtually defining a civil servant's career on the basis of the diploma with which he began his career. Men will be judged more on the quality of their work than on the prestige value of a qualification they obtained 20 or 30 years before! For this to happen, the diploma will have to be shorn of its definitive character, which does lend a false sense of security, and become a certificate of aptitude to tackle a given position without serving as a guarantee of being maintained in such a position in spite of mediocre performance.

A more dynamic scale of values, a system of promotion based longer on open competition, and a more acute awareness of responsibility will result from reforms in which, on the basis of the type of man to be trained, the schools system will be reconstructed and the entire educational system integrated into effective structures.

II. TOWARDS THE CONSTRUCTION OF A SYSTEM OF PERMANENT EDUCATION

LOOKING AHEAD

The practical implementation of a coherent system of continuous education pre-supposes not only a close liaison with current economic reality but also a proper perspective in relation to the socio-economic developments, that is to say, medium and long-term planning with an eye also to the very long-term outlook.

Apart from the "Commissariat Général au Plan", the government, a few years ago, set up a group completely independent of the decision-makers to draw up an inventory of the probably requirements of society in 1985.

This group known as "group 85" has been working on a system of forecasts which presents a series of very useful landmarks and objectives for planning purposes. This idea deserves to receive more official blessing and to lead to the setting up of a permanent rather than temporary working party. This might be called "group 25" and consist of men from different backgrounds - economists, sociologists, writers, artists, technicians - working independently of executive authorities with up-to-date forecasts of society a quarter of a century in advance.

Their vision, more poetic than scientific, would guide those responsible for future social conditions and especially educationists on the type of man that is needed for the society of tomorrow. For without the lead of a comprehensive picture of this type of man, the educational system will continue to be fragmented in a mosaic of self-contained activities, each an end in itself.

A better appreciation of the qualities required in the citizen of tomorrow will make it possible to reform the formal educational system, to organise the informal system and to integrate the whole, with the aid of suitable organs of co-ordination within society.

THE TYPE OF MAN TO BE TRAINED

The desire and capacity to renew his abilities are the qualities to be looked for in a man of the era of permanent education; for him, to be well-educated in the traditional sense will not be enough. He will have to be well-balanced and open-minded.

Well-balanced, that is to say, he must know how to complement intellectual activities with physical activities, reason with sensitivity, knowledge with imagination, power with a sense of responsibility, individualism with sociability.

Open-minded, that is to say, he must be willing to bring himself up-to-date or refresh his knowledge in three fields:

- professional skills
- human relations,
- personal culture.

This last assumes a certain taste for the gratuitous, for the non-profit making and for selflessness: this type of man will not necessarily be austere; he will be readily amenable to the arts and leisure pursuits.

Let us now consider the professional field: the sum of knowledge continually increases, leading to more and more specialisation; but at the same time fields of specialisation evolve so that the specialist has to be adaptable. This seems to be a contradiction.

Another thing: while knowledge is cumulative, education is selective and there is a growing gap between the sum of knowledge available and the knowledge taught. In such circumstances, how is our well-balanced and open-minded man to be trained?

These simple questions show that it is impossible to construct an effective system of informal education unless the formal system is extensively reorganised in order to serve as an introduction to it.

A NEW APPROACH TO FORMAL EDUCATION

If one had to outline the direction which formal education should take, some of the following points might be relevant:

- (1) that a sense of responsibility in the pupil should as far as possible be substituted for an outside control which to him is merely synonymous, as far as morality is concerned, with "fear of the police";
- (2) that education should concentrate less exclusively on the inculcation of ideas and seek also to foster imagination and sensitivity;
- (3) that education should be more active than passive, particularly with regard to the experimental sciences considered as a source of action and creativity;
- (4) that education should be less exclusively individualistic and allow room for group activities;
- (5) that, as regards methods of assimilating knowledge, the emphasis should be shifted from the notion of scholarship to methods of access to documents and the way to select and use them. School libraries, instead of a dull replica of reference shelves for adult scholars, should be laboratories for compiling and consulting card-indexes and documents.

"Know-how", even humanised by "know how to be", is no longer enough in a changing society: as was said at the AMIENS symposium, it is the ability to "know how to become" that has to be developed.

The ultimate purpose of schooling, principally during the phase preceding university entrance, should be more geared to life ahead. For all pupils the prime assets are the ability to master relations, using the term in a very wide and vital sense to include, in particular, means of expression (languages, mathematics, artistic expression) and the methodology of the sciences and sociology.

Subjects of an instrumental nature (whether a part of general education like mathematics, or of practical training, like technology) and the teachings of culture and civilisation (which communicate the sense of values on which individual morality and a sense of social commitment are based) will have to be reviewed from the point of view of their mutual adjustment for the training of responsible and open-minded citizens.

The subjects traditionally upheld in secondary education as the best means of instilling knowledge into pupils as well as increasing their abilities still retain, in the way such knowledge is compartmentalised, the image of the disciplines in which the teachers specialised when they were doing their advanced studies. They bear the stamp of a time when scholarship was the hallmark of a gentleman.

However, the good pupil of tomorrow will not be regarded as a "scholar in miniature": his most important assets will be his powers of initiative and creative ability if his curiosity is to be sustained throughout the period of formal education and to carry him over, once his studies are "complete" and without a time lag, into the phase of informal education.

This is not the place to discuss the way in which secondary-school subjects might be revised both from the point of view of reshaping their content and of their pedagogic usage in teaching and examinations. However it is worth mentioning, as an example of a line of research which needs exploring, a proposal put forward by some distinguished members of the American teaching profession in a report to the "NATIONAL SCIENCE FOUNDATION" in March 1964. This advocated the substitution for the three separate subjects of physics, chemistry and biology at the secondary level, of a methodological training which would prepare pupils for subsequent specialisation in these three subjects; they went so far as to state: "the division of science at the secondary level into biology, chemistry and physics is contrary to both reason and efficiency".

PROBLEMS OF REGULATION

As long as the opportunities for informal educational advancement are too limited or too little known, the population at large naturally tends to think that young people's futures can only be assured through the channels of formal education; as long as diplomas retain a definitive value, pupils will be tempted systematically to pursue what are regarded as the highest diplomas. This situation creates an almost linear scale of educational objectives and, as a result, encourages the pursuit of the highest ambitions (on the principle that if one aims high one is bound to get somewhere). This causes the pupil or student to settle in the channels of formal education and remain as long as possible in general training in order to elude or postpone, where

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possible, the moment of decision on a choice of career. In consequence there are many, some more active than others, who make a sort of profession out of being a student when they should long ago have embarked on a concrete economic occupation.

Alongside the organisation of facilities for informal educational advancement, as the necessary complement to the selection processes which are bound to mark the phases in any system of educational progression, greater scope must be allowed for information and guidance for pupils and their families. The great majority of teachers are not well-informed concerning the nature of employment and the opportunities for promotion offered by various existing professions: they are inclined to interpret the democratisation of education as meaning the generalised availability of the most theoretical and protracted studies. This attitude of mind, which is shared by the majority of socially "ambitious" families, has the effect of consolidating the deplorable system of orientation through failure to pass examinations. This system runs counter to the rational exploitation of preferences and motivation and paves the way for distortion which is liable to generate social crises at a time when the shortage of skilled labour has been overcome.

The work of teachers must therefore be supplemented by that of advisers, with direct information on professional activities from the point of view not only of their requirements but of quantitative forecasts of their openings insofar as these can be established by the Planning and Statistics Department.

The fact that the hitherto separate services of information on careers and vocational guidance have been merged into a single department reflects the importance attached by the public authorities to organising a proper system of regulating the different streams in the educational system with a view to relating ambition and aptitude to employment openings on the basis of informed co-operation between teachers, advisers and parents, principally over the choices to be made at the following two crossroads: the first at the end of intermediate school studies and the second at the end of general secondary studies.

ORGANISATION OF THE SYSTEM OF INFORMAL EDUCATION

The number of schemes springing up in different quarters and the acceptance of the idea of permanent education by a very wide public show that the time has come to establish structures in order to provide, on a realistic scale, further education for adolescents and for adults up to the age of forty.

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Insufficient emphasis has been laid on the need to give priority to adolescents who have left school and are still too often left to fend for themselves, at least in towns. Often they are unemployed even if they possess a vocational skill, because would-be employers prefer not to take them on until they have done their military service. Moreover, whether or not they have a job, their general education is not sustained and this means that some of them virtually fall back into a state of illiteracy as is shown by army statistics on the educational level of recruits. Thus modern society, after putting an end to chronic illiteracy through the introduction of compulsory primary schooling at the end of the last century, is allowing an artificial and, in a sense, acquired illiteracy to creep in through neglect!

This poses the problem of finding ways and means of keeping an educational check on all teenage school-leavers up to the age of majority. Should the idea of compulsory social service for all young people - both boys and girls - aged between 19 and 20, one day take the place of the present system of military service, society's care for the training of all its young should extend to and include the period of social service.

While the principal needs of teenage school-leavers are to acquire a vocational training and to further their general education, those of adults include, in addition, that of vocational retraining.

It is important to recognise that, of the educational activities intended for people who have completed their formal education, as described in Part I of this survey, refresher and further training only concern a small minority.

At the symposium in CAEN (November 1966) the "Conseil National des Ingénieurs Français" referred to the importance of "four general fields, one of retraining and the other three of further training" and described them in these terms.

"(1) Retraining in up-to-date basic scientific and technical knowledge on a level with the most recent teaching programmes of the college of origin.

(2) Specialised technical training to enable engineers to keep abreast of new developments in their own specialised fields.

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(3) General technical culture, which may be defined as equivalent for the engineer in his own line of work to what culture, in the broadest sense, is to any man.

(4) Training in economic and human sciences, for which there is an evident need, but which does not always find room for sufficient development within college curricula."

The last point emphasizes the fact that a prerequisite for the motivation and maturity necessary for the assimilation of certain subject-matters is preliminary participation in professional life in its material and sociological context.

It is also clear from this that all forms of instruction do not necessarily fall within the province of professional teachers, for the latter, at least in the present situation of inadequate contact between universities and the economic world, are sometimes too remote from firms and their problems. In a paper recently published by the CEGOS on "Participative management by objectives", Mr. O. GELIMER criticises the gaps as regards management training in universities:

"The way in which universities are organised in France prevents them from playing more than a modest role in management training ... Just as a well-run firm trains men by its style of management, so the university is sometimes in danger of stamping them with the bureaucratic image with which it is imbued ... Its instruction sometimes reflects a false, purely mechanical image of firms which is plainly a negation of variable management."

When we add to such considerations the sheer number of teaching staff that will be required, particularly in adult education, we very soon come to the conclusion that it is neither desirable nor materially possible to leave the responsibility for the whole of permanent education in the hands of the teaching profession alone; in the society which is growing up, the majority of executives and senior personnel will be liable to be called upon to make their contribution to teaching; many will find themselves alternately teachers and pupils.

Therefore in order to make provision for such a situation pedagogic training must not be confined to professional teachers; by means of full-time courses or regular classes, a system of training designed to impart the art of communication should be introduced for all those who will be in charge of other men.

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Another condition for the growth of informal education, in addition to co-operation between professional and non-professional teachers, is that very judicious use must be made of pools of material resources, some of which perhaps still have to be devised.

The potential facilities in schools leave a wide margin for use, without affecting their normal running, at least during weekends or holiday periods. Secondly, the use of educational broadcasts and the teaching aids which modern technology can put at the service of teachers and pupils is only in its infancy. Radio and television are powerful communication media but relatively poor use is still made of them in education; moreover, correspondence courses have had the advantage not only of providing permanent material but of enabling, through the assessment of the individual "feed-back" of every student, in the form of exercises to be corrected, for example, the most important function of teaching to be accomplished; lastly, schemes of programmed instruction, mechanical teaching devices, facilities for recording, evaluation and self-marking techniques are all means which should enable workers studying on their own to supplement their training without having to rely solely on the long and wearing assistance of evening classes ...

An intelligent co-ordination of all these factors combined with a system of regular group meetings of TV students in order to receive direct information or carry out practical work, should make it possible to eliminate the element of heroism still too often prevalent in "parallel advancement" and offer normal opportunities for training and self-betterment to those who have chosen to leave the educational system before attaining the summit of their ambitions.

Of course it is not to be expected that, with one accord, all workers should feel a need or desire for further training. It was Henry FORD who wrote that "most workers, I regret to say, look for jobs which do not demand great muscular effort, but, above all, they look for ones which do not oblige them to think".

However this verdict dates from a long time ago and the professions' demand for thinking ability has increased: this, together with the general rise in living standards and opportunities for cultural leisure pursuits, is an inducement to workers as a whole to improve their level of education.

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OTHER MEASURES

The mushrooming of separate schemes and the growing awareness of the profound identity of all educational activities and of their investment value are bound, in the natural course of events, to lead to general measures which win the official blessing of public authorities.

Proposals for co-ordination have already been put forward by the "Conseil National des Ingénieurs Français" at the time of the Caen symposium - and these read as follows:

- " - that a standing committee be set up to conduct 3 surveys:
 - (1) among engineers, in order to define their needs at different age-levels and degrees of specialisation and responsibility;
 - (2) among firms, in order to establish their needs, details of participation by their members as students and lecturers and of their individual training schemes;
 - (3) among all bodies which run informal educational courses to establish details of their programmes.
- that an inventory of available facilities be kept up to date and published at regular intervals.
- that an 'advisory council for the guidance of engineers and firms' be set up under the authority of the standing committee.

A scheme on the lines of the close-knit and effective system which has been established in the space of a few years for the 'further advancement of labour' should be devised to ensure similar coverage of the engineering sphere by organisations concerned with their permanent training."

Of course, the co-ordination envisaged by the engineers in their own field must be expanded to take in the whole of the working population at every level of qualification and in every sphere.

It is symptomatic of the progress made in this direction that a distinguished parliamentarian, Mr. PISANI, a former cabinet minister, devoted the March 1968 issue of his review "HOMMES ET CITOYENS" to proposals for a "national plan for permanent education".

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After deploring the way in which the university system is virtually organised with a view to elimination since it is more noted for the number of rejected, rather than successful candidates, he puts forward the following principle:

"Any departure at a given point along the road through school and university should be regarded as provisional and anyone should have the opportunity to resume the course and continue his education."

He then goes on to make the following specific proposals:

- (1) participation of local bodies, firms and organisations in the nation-wide task of permanent education "within the framework of contracts concluded in the name of the state" with educational establishments;
- (2) the creation of a higher council for permanent education and the appointment of a commissioner general responsible to the prime minister;
- (3) the creation, at national level, of a national institute of methodological research and planning in the field of permanent education and, in every region, of a regional institute of permanent education.

It is gratifying to find the problem of permanent education presented to the public authorities in this realistic way and in its full amplitude.

One comment is called for however: the structures proposed by Mr. PISANI seem to assume the system of permanent education to be complementary to the formal educational system, which would mean merely juxtaposing formal and informal education instead of integrating them in an interdependent whole.

We may venture to suppose that the official dawning of the era of permanent education, affording an opportunity for the recognition of the major importance of education to the nation, should facilitate the solution of the problems of co-ordination it poses and lead to the establishment of the Ministry of Education as a Ministry of State. Too many departments already share, or claim, responsibility for administering informal education: to cite but a few - apart from the Ministry of National Education - the Ministry of Culture, the Ministry of Labour, the Ministry of Youth and Sports, the Ministry of Agriculture, etc.

Let us conclude by saying that, while there is still an immense amount to be done, we are on the right path and - to quote Mr. PISANI again - "permanent education is the utopia of 1965-1970, like free, compulsory schooling in the years 1880-1885."