DOCUMENT RESUME

ED 050 991 SE 011 352

TITLE	Council of Europe Information Bulletin 2/1970.
INSTITUTION	Documentation Centre for Education in Europe, Strasbourg (France).
PUB DATE	Jul 70
NOTE	77p.
EDRS PRICE	EDRS Price MF-$0.65 HC-$3.29
DESCRIPTORS	Audiovisual Programs, Elementary Education, Higher Education, Information Dissemination, *Inservice Teacher Education, *International Education, Secondary Education, *Teacher Education
IDENTIFIERS	Council of Europe

ABSTRACT

The first part of this document contains the text of two resolutions, on co-ordination of European university research and on the educational uses of radio and television, adopted by the Committee of Ministers in June 1970. Reports on two meetings concerned with High Education and Research, seven in the area of General and Technical Education, three on Out-of-school Education and Cultural Development, one on Educational Documentation and Research, and a list of meetings planned from June through October 1970 complete the first part. References to appropriate documents are included in the reports of the meetings. The second part contains extracts of reports and documents on basic and inservice training of teachers, and a series of documents on developments in educational documentation and information for teachers. Materials in these reports and documents describe conference recommendations and the existing organization in Belgium, Denmark, France, Germany, Italy, The Netherlands, Sweden, England and Wales, and Scotland. Two books, one listing and describing European photochemical research and the other an account of the work of the Conferences of European Ministers of Education, are briefly reviewed. (AL)

COUNCIL OF EUROPE

INFORMATION BULLETIN

documentation centre for education in europe

July 1970

Contents

The Information Bulletin *which is distributed free of charge three times a year in an English and a French edition, informs on the educational, cultural and scientific activities of the Council of Europe and reprints important policy documents of European interest in these fields.*

First Part

Committee of Ministers

At their 190th meeting, in June 1970, the Ministers' Deputies adopted Resolutions on the European co-ordination of university research and on the educational and cultural uses of radio and television. The full texts of these Resolutions are reproduced below.

RESOLUTION (70) 18

(adopted by the Ministers' Deputies on 5th June 1970)
on
the co-ordination of university research on a European level

The Committee of Ministers,

Having regard to Recommendation No. 42 on the co-ordination of university research on a European level adopted by the Council for Cultural Co-operation on the proposal of its Committee for Higher Education and Research ;

Considering

— that it is no longer possible for the European universities to do research work in all fields at the same time and with the same intensity, because it has become extremely expensive and there is a shortage in qualified staff ;
— that a certain specialisation and diversification of research going on inside and outside the universities is inevitable, if the limited European resources are to be used in the best and most rational way ;
— that there is a need to promote exchange and mobility of research workers in Europe ;

Appreciating

the various developments at national level aiming at the definition of research priorities and at the selection of research centres for increased support ("high activity centres", "centres d'excellence", "Schwerpunkte", "Sonderforschungsbereiche", etc.), while, at the same time, research in the subject concerned is abandoned at other places or is merely pursued in the manner required for the teaching of the students ;

Recommends to governments of member States / Parties to the European Cultural Convention :

• that all possibilities of dividing tasks among universities and other research institutions and of adopting a system of selecting growing points in the various fields of research be carefully examined at national level ;

- that member States — through their national delegations — inform the Secretariat of the Council of Europe on all important developments in the field of university research co-ordination. In countries where certain university centres of research are enjoying particluar support, or are — due to historical or geographical facts — offering special facilities, the names of such centres should be provided. Each list of centres of particular interest to other European countries should — if possible — also contain information on the size of the centre concerned (staff and equipment), and the major research projects and facilities offered for students and research workers from other countries ;
- that the Secretariat should collect and keep this information up to date and make it available to all member States so that interested research workers are informed at which places in Europe a particular subject is given priority or particular facilities are offered ;
- that centres of university research which are enjoying particular support or which offer particular facilities should also be provided — as far as possible — with appropriate working facilities enabling students and research workers from other member countries to come and study or work at these centres ;
- that all national authorities responsible for the co-ordination of university research — provided there are such authorities — should wherever possible take account of priorities adopted, or particular research facilities offered, in other European countries when defining their own research policy and examining the distribution of financial resources at the national level.

RESOLUTION (70) 19

(adopted by the Ministers' Deputies on 5th June 1970)

on

educational and cultural uses of radio and television in Europe and the relations in this respect between public authorities and broadcasting organisations

The Committee of Ministers,

Having regard to Recommendation No. 43 of the Council for Cultural Co-operation "on the educational and cultural uses of radio and television in Europe and the relations in this respect between public authorities and broadcasting organisations",

Invites governments of member States/Parties to the European Cultural Convention :

— to provide for collaboration between competent ministries and broadcasting organisations on matters of education and culture ;

— to do their utmost to ensure that schools are equipped with receivers and recording facilities ;

— to give favourable consideration to the working out of educational and cultural programmes by consultation between ministerial departments and broadcasting organisations.

Higher Education and Research

Istanbul *13th - 15th May 1970*

Twenty-first meeting of the Committee

The meeting held in Istanbul from 13th to 15th May marked the Committee's tenth anniversary. On behalf of the Turkish Government, Professor Dr. Orhan Oğuz, Minister of Education, congratulated the Council of Europe on the results of its work in European co-operation for higher education and research. The outgoing chairman of the Committee, Mr. L. Wilhelmsen, sketched the Committee's history, while the Deputy Secretary General of the Council of Europe, Mr. S. G. Sforza, pointed out the tasks ahead of the Committee.

At the first working session, the Committee's new chairman, Professor H. Fisek (Turkey), welcomed in particular the Finnish delegation for the first time as a full member. Dr. To. O'Raifeartaigh (Ireland) was unanimously elected vice-chairman. The meeting was attended by university and government representatives from twenty member States, together with observers from UNESCO, the Commission of European Communities, the Consultative Assembly, the International Association of Universities, the League of Yugoslav Universities, the Standing Conference of Rector and Vice-chancellors of European Universities, Ufficio di Studi (Roma), as well as consultant experts for the Committee's modern language and satellite programmes.

The participants discussed in particular :

- the role of the university in basic and continued education of teachers ;
- diversification of post-secondary education ;
- mass media and the university ;
- European co-operation of modern language centres in the universities.

The role of the university in basic and continued education of teachers

The Committee examined the conclusions of the meeting of experts on the role of the university in basic and continued education of teachers, held in Strasbourg from 3rd to 5th March 1970. (The conclusions adopted at the meeting are reproduced in Part II of the *Information Bulletin,* p. 19-21.) Agreement was reached on the following points :

— There is a general trend in Europe to associate teacher education more closely with the universities, either through incorporation or through affiliation.

— The education of all types of teachers should take place at higher education level. This raises the question firstly, as to whether the universities would be sufficiently equipped to cope with the vast numbers of teacher trainees and secondly, as to whether university teachers would also have to be trained.

— The conclusions of the March meeting of experts should not be interpreted as a recommendation for immediate action — for the present systems of primary and secondary education in the member States are as yet far from the situation envisaged by the document — but rather as a basis for reflection about the future teacher.

— Educating teachers at higher education level does not automatically imply full responsibility of the traditional universities. That would be too heavy a burden for universities in many countries.

— Higher education is becoming more and more accessible for those who had not undertaken a normal school career leading to university entrance. Teacher trainee candidates and candidates in other fields of higher education should be treated equally. Special steps should be taken to ensure that candidates with excellent teaching qualities ("born teachers") who miss one of the ordinary previous training prerequisites, could be accepted as teacher trainees.

— With regard to the difficulties which could arise between the university unit responsible for teacher training and those units which are responsible for training in particular subjects (mathematics, physics, etc.), the Committee held the opinion that the teacher training unit should generally carry the main *responsibility*, but share it with the other units.

— Developments and trends in the United States and in Eastern Europe should be studied carefully.

— The education of teachers for mentally handicapped children also deserves special attention.

— Basic education, probationary period and continued education of teachers should form a continuous process. The improvement of teacher education is closely linked to the improvement of adult education.

Diversification of post-secondary education

— Post-secondary education has to meet three different, often conflicting kinds of demand : the demands of industrial society for ever more highly trained manpower ; the demands of rapidly increasing numbers of students with personal preferences ; the demands of the State for cost-effectiveness (rentabilité).

— A well planned comprehensive system of post-secondary education (including recurrent adult education) seems the best solution to reconcile these demands.

— Planning should not be confined to conclusions drawn from analyses of the future labour market. It should take the motivations and wishes of younger people into account, including their desire for a rewarding qualification and for social esteem.

— Any comprehensive system should be flexible so as to allow for a large measure of *mobility* between the different sections and institutions. The present system of *guidance and counselling* to students needs to be improved in order to ensure that students are directed towards those courses which are most suitable for them.

— Within each comprehensive system the *role and function of the* traditional *universities* has *to be re-defined* in accordance with the needs of society. The *universities* could perhaps be defined as institutions where *teaching is necessarily linked with research and scholarship*, equal stress being laid on both. Research in other post-secondary institutions should, of course, also be encouraged, but the accent would fall on teaching. Consideration should also be given as to whether it was the university's responsibility to train the teaching staff for other post-secondary institutions.

— *The status of post-secondary institutions* outside the traditional university should be raised, in order to avoid the preoccupation for social prestige tending to influence a student's choice of institution for further study. They should be defined in a positive way ("College of... ") rather than in the negative way ("non-university").

Mass media and universities

In introducing the project of a feasibility study on the use of satellites in higher education, Mr. J. R. Jankovich, consulting engineer, stressed that the use of satellite communications might contribute to university development. In particular, it would facilitate the rapid

transmission and retrieval of all data, as well as enable participating universities to present teaching offered by great scholars.

The *advantages* of satellites use in higher education was summarised by the Committee as follows :

— Satellites might help to improve the quality of teaching ;

— the use of satellites would require common European programmes and would therefore contribute to European integration in higher education ;

— the use of television and satellites might help to overcome shortage of staff in higher education ;

— satellite communication would be extremely useful in certain fields of science, e. g. medicine, mathematics, physics and biology, where knowledge was rapidly expanding and where computerised data or documentation material would have to be made available to research workers as quickly as possible.

Certain *restrictions* were also recorded :

— The need to use satellite communications might vary from subject to subject and from one geographical area to the other. It had to be examined separately for each subject and area.

— Satellites were only a small part of the vast field of audio-visual aids like films, radio, regular television, closed-circuit television, videotapes, computers, learning machines, etc.

— Satellite communication had to be seen as a long term prospect. It would take considerable time to develop common European methods and programmes.

European co-operation of modern language centres in universities

Professor G. Nickel, the Committee's adviser on its modern language programme, informed the meeting on the developments of modern language centres at European universities. He enumerated the advantages of such centres offering linguistic facilities for the teaching of students from all faculties and carrying out research, e. g. research on multi-media language teaching, as well as contributing to basic and continued training of language teachers. Likewise, they have an important task in permanent education. The best results achieved so far, he reported, were with independent and interdisciplinary language centres. Furthermore, Professor Nickel informed the Committee about the present state of European co-operation in modern language teaching and research and, in particular, about plans for a modern language centre at the Ankara University.

Documents : CCC/ESR (70) 31; 43; 44; 47.

trasbourg *12th - 13th March 1970*

Modern languages—Meeting of the co-ordinating group

The meeting mainly discussed collaboration on problems of modern language teaching and research between all the three Committees of the CCC and AILA (Association Internationale de Linguistique Appliquée) in the implementation of the Intensified European Modern Language Programme. The meeting was attended by experts and linguists from eight member States.

The principal objective of the meeting was to define areas and subjects selected for study. Once the studies were completed, the possibilities of incorporating these activities into the Higher Education and Research Committee programme would be examined. Three main fields for such studies were examined :

— *Specific proposals for commissions and "task masters"* including the following : contrastive linguistics, lexicography; modern language teaching for adults; training of teachers in languages for special purposes; examinations, tests and certificates; quantitative linguistics, special linguistic problems.

— *Collaboration between the CCC and AILA :* topics of interest; independent studies commissioned by the CCC in addition to the studies being undertaken by the various AILA "task forces".

— *Subjects proposed for future study :* child language ; medical applied linguistics; writing problems, shorthand, etc.; applied phonetics ; the teaching of non-European languages.

It was finally agreed that the co-operation between AILA and the Council of Europe should be maintained and further developed.

Document : CCC/ESR (70) 42.

General and Technical Education

Strasbourg *3rd - 4th February 1970*

Films for the teaching of geography

(Study group)

Experts from six member States met :

- to examine the master plan of five synopses bearing on geographic areas exceeding national frontiers which currently lack audio-visual material in this field : e. g. irrigation in certain Mediterranean countries, Mediterranean islands, Rotterdam and its hinterland, the Luxembourg-Sarre-Lorraine Triangle, the Hercynian Mountains ;
- to propose a distribution in regard to the production of films.

The following conclusions were adopted :

— technical co-operation between various countries in the production of films is desirable ;

— audio-visual material (film strips, slides, tape recordings, etc.) should be produced in addition to films with a view to constituting an "educational kit".

Furthermore it was proposed that the production of films on geography should be distributed among the Federal Republic of Germany, France, the Netherlands and Italy.

Documents : DECS/EGT (70) 6; 20.

Strasbourg *10th - 11th March 1970*

The co-production of educational films

(Working Party)

The purpose of the meeting was to survey and assess various projects for the co-production of educational films included in the programme of the Committee for General and Technical Education as well as to work out a draft programme for the future in that field. Experts, directors and representatives engaged in the production of audio-visual material from seven member States together with co-ordinators of different projects of the General and Technical Education programme took part in the meeting.

The participants examined the different projects : use of closed-circuit television in education, viewing and selection of educational films; audio-visual aids for the teaching of modern languages; films for geography, biology, physics and new mathematics teaching; contribution of audio-visual aids to the training and continued training of teachers. In addition, the participants tried to redefine the tasks of the Group. As all the aspects of technological development constitute a whole, the Group requested the Committee for General and Technical Education to extend its terms of reference, so that it could deal with the whole range of audio-visual aids, and proposed that henceforth it be known as the "Advisory Group for the production and distribution of educational aids".

Documents : CCC/EGT (69) 20 ;
DECS/EGT (70) 22.

Strasbourg *12th - 13th March 1970*

Films for the teaching of biology

(Study Group)

Experts from six member States met to discuss

- the master-plan for the co-production of a series of films on the teaching of biology "The living body", following the first of the series "The living cell";
- the distribution of film productions among the different countries represented at the Study Group.

The following conclusions were adopted :

— the first master-plan of seventeen synopses should be completed by a series of six synopses ;

— additional material to the biology films should be produced simultaneously ;

— the member Governments not represented at the Study Group should be invited to participate in the co-production project in this field;

— it was proposed that the production of films on biology should be distributed among Belgium, France, the Federal Republic of Germany, the Netherlands and the United Kingdom.

Documents : CCC/EGT (69) 35 ;
DECS/EGT (70) 21.

Strasbourg *7th - 10th April 1970*

Economics — Evaluation of curricula and examinations
(Working Party)

Eighteen member States sent representatives to attend the meeting, the aim of which was to compare existing situations and developments in the teaching of economics in a number of specific areas, namely :

- the goals of the curriculum — long-term aims and short-term objectives ;
- curriculum content ;
- teaching methods ;
- evaluation ;
- future developments.

The following decisions were taken :

Publication of a study on the teaching of economics and commercial education

A comparative curriculum study in both subjects should be prepared by the Oxford University Department of Educational Studies, in co-operation with the Council of Europe. The study would be based on the material provided by member countries for the meeting of the study group and in addition the reports on the Interlaken, Oslo and Munich courses, dealing successively with the structures, methods and training of teachers in commercial education.

Furthermore, it was recommended to include the following activities in the programme of the Committee for General and Technical Education :

— The setting up of a study group to examine the possible establishment of a European Centre for documentation and information in the teaching of economics. A preliminary step would be the establishment of an inventory of existing national centres, with a brief description of their activities.

— The examination, by a study group, of possibilities for the formation of a European Association of Economics Teachers.

Documents : CCC/EGT (69) 18 Rev.;
DECS/EGT (69) 74; 75; 76; 77;
CCC/EGT (70) 11.

Strasbourg *27th - 28th April 1970*

Teacher training, technical and vocational education
(Study Group)

Representatives of fourteen member Governments discussed :

- the evaluation of the previous year's programme on activities in technical education ;
- the preparation of the work programme for technical education for the years 1971 and 1972 ;

- the study on "the training of teachers of technical and vocational education in Europe" by L. Geminard ;
- the study on "Teacher training" by J. Majault.

Technical education

The following points emerged from the discussion of the programme in technical education for the years 1971 and 1972 :

- the 1972 programme should include a provision for study groups on terminology in technical and vocational education ;
- greater emphasis should be given to *permanent education* within the school systems and in relation to teacher training in the future programme of the Committee for General and Technical Education ;
- the studies in preparation by V. La Morgia ("Comparative study of technical education in Europe") and K. Koweindl ("The integration of subjects in technical and vocational education") should be completed during the course of 1970.

Preparation of the work programme

The group also discussed in detail the programmes for courses in technical and vocational education to be held in Austria (October 1970), Norway (June 1971), Switzerland (August 1970), Italy (November 1970) and the Netherlands (1971).

Publications

As for the publications, the study group noted that L. Geminard had completed his study on "The training of teachers of technical and vocational education in Europe" and discussed some of the problems referred to by the author, particularly the rapid evolution of technical and vocational education, the ambiguous nature of technical and vocational education within the educational system and difficulties of comparison caused by differences in terminology. The study group agreed that in view of the problems confronting the publication of J. Majault's study on "Teacher training", there was at present no need for a revised version.

Documents : *CCC/EGT (70) 9 ;*
DECS/EGT (70) 29.

Strasbourg *12th - 13th May 1970*

Road safety education in schools

(Joint meeting)

This second meeting which had the aim of preparing the second ECMT/Council of Europe Joint Conference on Road Safety Education in Schools, selected the items to be placed on the agenda and discussed the proposed reports. The Conference, which will take place in June 1971 (provisional date) will review the two aspects of the problem :

— Road Safety Education for children

— Teacher training and continued education of teachers.

The subjects reprinted below will be presented to the Conference by rapporteurs from six member States :

Road Safety Education for children

- Children in traffic
- Road safety education in pre-primary, primary and secondary schools
- Children's behavioural problems in road safety and how to deal with them
- School crossing patrols
- Special road safety measures to be considered by public authorities and by other organisations for the protection of children

Teacher training and continued education of teachers

- Driver training and use of driving simulators in schools
- Training and continued training of teachers
- Audio-visual aids in road-safety teaching
- Co-operation between teachers, parents and others concerned with road safety
- Priorities for future research in road safety education and European co-operation in this field.

In addition, an expert from the U. S. A. will present a report on the "American evidence on driver training".

Documents : DECS/EGT (69) 55 ;
EC/Conference (70) 1-7.

Saint-Gall *(Switzerland)*

25th - 27th May 1970

Co-operation and educational documentation methods in a country with a federal structure

(Study Group)

This was the second meeting to study the question of how a country with a federal structure succeeds in harmonising its various educational systems and to examine the extent to which the experience acquired by such a country might be of value to the advancement of European co-operation.

The meeting, which was attended by participants from seventeen member States, revealed many similar developments between the twenty-five Cantons of Switzerland and the CCC's twenty-one member States, both in the creation of new institutions and in reforms made in education :

- Need to harmonise education systems (compulsory school age, school year, teachers' qualifications, etc.) in order to facilitate mobility of populations and to offer the same educational opportunities to all ;
- Need to co-ordinate educational research and experimentation in order to increase teaching efficiency ;
- Need to exchange relevant information on education to avoid duplication and to stimulate reform ;

- Need to maintain a power balance between the Cantons and the federal authorities as well as assignment of powers to a central authority ;
- Given the linguistic communities (language areas), the expediency of regional co-operation.

Documents : CCC/EGT (70) 5; 24; 25; 26; 28.

Out-of-school Education and Cultural Development

Zeist
(Netherlands)

5th - 6th March 1970

Low cost sport halls

(Study group)

The meeting took place mainly to prepare the Governmental course in Amsterdam, October 1970, on low cost sport halls. It was decided that the following topics should be defined in the Amsterdam meeting :

- the socio-cultural functions of sport halls ;
- the physical requirements which must be met by a sport hall in order to assume the above mentioned functions ;
- practical ways and means to reduce building and operation costs.

In this context, the Council of Europe's project Sport for All was summarised in a statement as follows :

Fundamentals

— The Council of Europe regards sport as an integral part of its socio-cultural policy.

— The concept of Sport for All, adopted as a long-term objective, expresses the socio-cultural functions that recreational sport is required to fulfil in the modern world for the benefit of the greatest possible number.

— One of these functions is to promote the physical well-being of man; but other functions of recreational sport in industrial society are to help man to satisfy his needs for participation (integration into environment, exercise of responsibility), communication (human relations) and self-expression (development of sensitivity and creativity).

Sport facilities

— The Council of Europe policy in sport facilities is an application of the above mentioned principles.

— Thus, the Council's work on *low cost* facilities is an endeavour to help create one of the basic conditions for Sport for All.

— A further consequence of the above mentioned principles is that sport facilities are to be regarded as *socio-cultural* facilities in the widest sense of the term.

— Those who are called upon to prepare for the Amsterdam Course should therefore constantly bear in mind that a sports hall should not only provide opportunities to practise as many sports as possible under the best possible conditions, but that it also has a socio-cultural function which goes beyond sport proper. A sports hall, indeed, may provide excellent opportunities for social contacts "after the game"; in many cases, it also may allow the pursuit of other recreational and socio-cultural activities.

— A sports hall, then, which would have socio-cultural functions extending beyond the field of sport proper, could be defined as a "multi-purpose" hall. The task of the Amsterdam Course will be to suggest practical ways and means to reduce construction and operation costs of multi-purpose sports halls as described above.

Document : EES (70) Stage 52,1; 2.

Frascati
(Italy)

16th - 25th April 1970

Ecology in adult education programmes

(Governmental course)

The aim of the Frascati Course was essentially educational. Adult educators and ecologists from twenty member States met to discuss primarily :

- the actual state of scientific and technical adult education, the ways and means generally employed in such education;
- guidance towards rational and institutional forms in adult education programmes in order to replace the amateur approaches by modern curricula developments ;
- how to make the effects of industrialisation and urbanisation, the dangers of air and water pollution and health education, a general concern of the institutionalised education of adults.

The participants discussed for which sections of the population formal adult education might be provided and they elaborated a diagram showing some of the important topics and some of the connections between them.

Discussion should be started in each country to discover :

- what types of courses would be useful and attractive to policy-makers and administrators at all levels ;
- how they might be encouraged to attend at least introductory courses in ecology.

It was *recommended* that :

— Standing Conferences — international, national — should be established to describe, evaluate and align environmental and educational problems in the context of adult education and to disseminate information.

— Biology of man and his environment should be given adequate attention in the curriculum considering that only limited progress can be made in the long-term planning unless this is done.

— National or international mechanisms of communication and exchange between those responsible for the use and development of the environment and the general

public schould be created. These mechanisms should include an advisory service which identifies suitable problems and subjects for presentation to the public in an appropriate form and gives guidance on action.

— Television and radio programmes in consultation with specialists, informed observers and professional educators should be planned.

— Suitable presentations of subjects should be made to the public by relating the community life and work of the citizen to short-term and long-term problems, as it is important to present environmental science as a subject which affects and concerns everyone.

The actions recommended above to the Council of Europe should be planned in terms of long-term needs. The following points should, therefore, be taken into consideration :

- co-ordination of all aspects of adult education in ecology (formal, informal, mass media, etc.) to secure maximum effect ;
- continuous co-ordination between developments in ecology and action in education at all levels including education of the young ;
- the probable development of multi-media formal education ;
- recognition that most systems (not merely ecological systems) are complex and have not been fairly treated in traditional education where rigidly divided "subjects" have dealt with simple systems of small numbers of elements.

Documents : EES (69) Stage 50, 2; 4;
EES (70) Stage 50, 5; 6; 7; 8; 9.

Munich *30th April - 5th May 1970*

The application of combined teaching systems

(Governmental course)

The meeting on the application of combined teaching systems and on methods of total or partial programmed instruction was the last in a series of four courses. It was attended by representatives of seventeen member States. Its objective was to summarise the results of the studies undertaken to strike the balance of activities in multi-media teaching techniques and to assess developments between 1965 and 1970.

The course split up into two groups one of which was concerned with project analysis. The other dealt with the systems approach following a first attempt made at the Stockholm Course in 1969. An *International Compendium,* containing eleven project descriptions of combined teaching systems, is available in three languages, English, French and German, on application to the *Internationales Zentralinstitut für das Jugend- und Bildungsfernsehen,* Munich.

The meeting issued *recommendations,* extracts of which are published below :

— The systems approach should be recognised as an effective method for the planning and organisation of multi-media systems.

— An attempt should be made towards preparing a *media taxonomy* (description of media in terms of their mode of function and in terms of semiological, psychological, social and economic considerations).

Intensive study should also be devoted both to the techniques of eliciting learner response via the media and to means of providing feedback to that response, so that more effective learning may become possible.

— There is an urgent need for a *glossary* which lists the terminology of educational technology and provides definitions in order to facilitate the exchange at international level of information and the results of research.

— The *Internationales Zentralinstitut* should be given responsibility by the Council of Europe for a documentation and information service in the field of educational technology within the framework of co-operation of relevant institutes in member States.

— Working Parties should be organised on a regional basis to try and test the systems approach by applying it in a number of concrete cases.

— The problem of more or less structured (active or passive) *motivations of adults* requires special attention. A systematic investigation should be made into the nature of the less structured section and into appropriate methods of recruitment.

— Existing information about the reasons for *drop-out* should be analysed in order to devise guide lines (applying systems approach) for production teams to help them anticipate drop-out problems.

— Expansion of multimedia systems will mean an increase in the use of *part-time tutors*. Investigation should therefore be undertaken into the content and patterns of training for such tutors.

— Similarly, the planning and implementation of training *programmes for educational technologists* is urgently called for.

— Television and radio have not yet been fully exploitet in direct teaching situations. Investigation is urged in e. g. curriculum needs, programme structure, production and receiving techniques.

— *Guidance* to individual students on the method of study most appropriate to them is seen as an integral part of every course. A study should be undertaken of the ways in which the media, individually or in combination, can be used to provide guidance on methods of study, at important stages in every multi-media project.

Documents : EES (69) Stage 46.5.

Educational Documentation and Research

Strasbourg *1st - 2nd June 1970*

Educational documentation and information
(Study group)

The meeting, which was attended by experts from fifteen member States and by observers from OECD and IBE/UNESCO discussed and unanimously agreed to state the following opinion, excerpts of which are published below :

— The EUDISED report is a valuable instrument of information on national and international developments in this field, on the technical problems involved and on the perspectives inherent in the present situation. Acknowledgment is due to the working party which, at the request of the Council for Cultural Co-operation (CCC) elaborated the report.

— The Study Group underlines the statement that educational documentation and information, which is a vital prerequisite for educational development and innovation in Europe, cannot at present adequately meet the needs of policy makers, researchers, administrators, teachers, and others concerned. On the other hand, technological developments have made it possible to overcome the physical problems attendant on any solution to this problem. The creation of a *decentralised and computer-based European documentation and information system for education* as proposed in the report, is considered by the Study Group to be both feasible and desirable. However, further studies and experiments are necessary before any recommendations could be addressed to member Governments to commit themselves to establish a definite system. The Study Group furthermore reserves its opinion on the question of what language should be used as the input/output code for computer-stored information within the system.

— The Study Group takes note of the advanced state of implementation or planning of national projects in some member States. It expresses its deep concern that these advances may lead to an increasing degree of incompatibility between national systems and may definitely impede any European co-operation in this field unless technical proposals can speedily be worked out and agreed upon to develop the relevant aspects of these national projects along convergent lines. These technical proposals should, in particular, aim at promoting compatibility between national systems and interchangeability of their output, without interfering with political decisions to be taken at the national level on the future shape of national centres or services of educational documentation and information.

— The Study Group notes with great satisfaction that the representatives of all member States in which such advanced projects are being considered or already in progress, declare their willingness to co-operate, in principle, at the international level in order to study the possibilities for the co-ordination of their projects, with a view to laying the foundations for a European system as a partner in a world-wide system.

— The Study Group therefore supports the proposal put forward in the report to create a EUDISED Steering Group and submits the following *recommendations* to the CCC :

The EUDISED Steering Group should have the mandate

- to gather and keep in evidence *information* on national and international projects for the establishment and modernisation of the educational documentation and information systems, in so far as this evidence relates to international co-operation ;
- to make *technical proposals* relating to the co-ordination of national and international activities and advise member Governments in this field if so requested ;
- to propose further *studies* and *surveys* to be commissioned and *experiments* to be carried out with a view to developing educational documentation and information in Europe.

— Member Governments should indicate those national projects or those aspects of them which in their opinion could become part of a European system and should therefore be studied by the Steering Group with a view to elaborating technical proposals for co-ordination and for compatibility. One of the first tasks of the Steering Group should be to draft such technical proposals and to prepare basic agreements on common standards.

— The Steering Group should elaborate, in greater detail than in the report, alternative proposals for the priorities, elements and structures of an educational documentation and information system for literature and data handling in Europe, taking into account the needs of the various groups of users in member States. Attention should

be given to compatibility of classification and indexing, with particular reference to the thesaurus problems involved. It should also be examined whether and how experimental runs might be arranged within existing systems such as ERIC and ISIS.

— Finally the Study Group underlines the urgency and importance of this matter. The situation calls for speedy and efficient action by whatever international organisation is prepared to undertake these tasks in co-operation with the national Governments concerned. If no action is launched or if it is delayed, some of the high-cost national investments in this field may later be found to have been, for lack of co-ordination, bad investments.

Meetings Planned

Munich — *3rd - 11th June 1970*
Teacher training and continued education of teachers
(Governmental course)

Strasbourg — *4th - 5th June 1970*
Research on youth
(Working party)

Paris — *5th - 6th June 1970*
Diversification
(Working party)

Strasbourg — *16th - 17th June 1970*
Educational research
(Study group)

Strasbourg — *17th June 1970*
Use of satellites for educational purposes
(Working party)

Strasbourg — *22nd - 23rd June 1970*
Meeting of mathematicians

Braunschweig — *29th - 30th June 1970*
Meeting of the editing committee of Historica Geographica Europaea

Berlin — *29th June - 4th July 1970*
Council of Europe seventh film week

Gandario *(Spain)* — *22nd - 26th July 1970*
"Europead 70"
(Meeting of holders of the European Athletics Diploma)

Stockholm — *25th - 28th August 1970*
Use of closed-circuit television
(Study group)

Strasbourg	*3rd - 4th September 1970* **Photochemistry** *(Study group)*
Strasbourg	*14th - 16th September 1970* **The co-ordination structures in the field of Sport for All** *(European Symposium)*
Munich	*15th - 17th September 1970* **Films for the teaching of physics** *(Study group)*
Bad Godesberg	*27th September 1970* **Reforms and developments in higher education** (27th September - 3rd October) *(Governmental course)*
Strasbourg	*28th - 29th September 1970* **Education - Leave** *(Working party)*
Rungsted *(Denmark)*	*28th September - 3rd October 1970* **Methods of guidance and social education for the 14-17 age group** *(Governmental course)*
Utrecht	*4th October 1970* **The audio-visual centre in modern university** *(Governmental course)*
Rotterdam	*5th - 9th October 1970* **Socio-cultural equipment**
Bad Hofgastein *(Austria)*	*5th - 10th October 1970* **Technical and vocational teacher tralning** *(Governmental course)*

Second Part

COUNCIL OF EUROPE DOCUMENTS
BASIC AND CONTINUED TRAINING OF TEACHERS

This part includes extracts of reports and documents on basic and continued training of teachers, emanating mainly from the activities of the Committees for Higher Education and Research and for General and Technical Education. It concludes with a series of documents on the new developments in educational documentation and information for school teachers.

THE ROLE OF THE UNIVERSITY IN BASIC AND CONTINUED EDUCATION OF TEACHERS

From 3 to 5 March 1970, a group of experts from various sectors (higher education, general and technical education, adult education, and the teaching profession) met in Strasbourg, under the Chairmanship of Mr. L. Wilhelmsen (Norway), to discuss the role of the university in basic and continued education of teachers. Summing up the main elements of its discussion, the group adopted the conclusions, which are reprinted below.

Responsibility of the universities

— Teacher training should take place at *university level*. University level implies :
- a systematic and theoretical foundation of professional education (not just a formalisation of practical experience) ;
- a critical and innovatory attitude ;
- research ;
- the award of an academic qualification.

— *The organisation and structure of teacher training at university level* will vary from country to country in accordance with national peculiarities. A diversified system of university education may offer one solution. Within this framework a units-credit scheme may be adopted. New forms of educational organisation and technology should be introduced. It seems necessary that the traditional universities, in so far as they accept responsibilities for teacher education :

- adapt their structures to this specific task ;
- revise subject matter curricula in the light of modern developments and educational needs ;

- include in their programme adequate offerings of education (pedagogics) and other relevant social sciences ;
- co-operate with the educational authorities in offering students opportunities for practical experience and professional insight.

— As far as this responsibility is accepted by the traditional universities, the training of teachers should be organised in faculties or departments of education or in equivalent university institutions.

— Whereas some universities may be organised with a special accent on teacher training and educational research, isolated educational universities are not recommended, because they would run the risk of becoming cut off from developments in other fields of scholarship, research and professional training.

Categories of teachers

It is assumed that, in future, the teaching profession will no longer be stratified according to the different categories of schools they teach in, but rather according to the different age groups taught and to the functions undertaken. Within the profession, every teacher should receive a certain amount of common basic training to be complemented by specialisation :

- for different age-groups (e.g. pre-school period, 6 - 10 years, 11 - 15 years, 16 - 19 years, adults) ;
- for different subjects (e.g. modern languages, physics, sports, music, etc.) ;
- for different functions (e.g. orientation and guidance, school administration, educational planning, educational research).

Specialisation may start sooner or later according to different needs.

As part of the rationalisation of the educational system, the staff employed in the schools of the future will consist of a variety of differently qualified personnel — as in the case of hospital staff, which is not only comprised of doctors.

Access

All teacher trainees should have university entrance qualifications. Teacher education should not only be open to those who decide to become teachers when leaving secondary school, but also to those who decide later. In principle these would have to undergo the same basic training as the others. Account should be taken of their experience.

Content of basic training

All basic teacher training should comprise the following elements :

— *common studies for all teachers without regard to their later function :*

- education, including for instance curriculum studies and educational technology ;
- relevant areas of psychology, including for instance social psychology and theory of learning ;
- relevant areas of sociology, including for instance the educational system and the social and political functions of the teaching profession.

— *specialised studies*

- study in depth of one or more particular subjects, traditional or new, including a critical analysis of the subject, its structure, its interrelation with other subjects, its educational and social importance ;
- special functions (e.g. pre-school or adult education, etc.).

— The basic education should also comprise a "clinical" phase where the trainee would have a first opportunity of combining theoretical studies with practical experience. The universities and the school authorities should co-operate in the provision of this practical training.

— The junior teachers will subsequently serve a probationary period (with full pay but only a part-time teaching load) in which evaluation and analysis of experience will be carried out through discussion.

Continued education

Every stage of teacher education should be seen as part of a continuum.

— *Content of continued education*

Continued education of teachers may serve the following purposes :

- up-dating in subject matter ;
- specialisation (acquisition of additional skills, e.g. qualification to teach at a higher stage, qualification for orientation and guidance, headmastership of a school) ;
- innovation (in the fields of curriculum, method, technology, etc.) ;
- analysis of current problems.

— *Responsibilities*

Continued education of teachers should be a joint undertaking and the shared obligation of the academic institutions, the educational authorities and the teaching profession.

— *Co-ordination of continued education*

Co-ordination of facilities and activities of continued education can be undertaken by one of the co-operating bodies or by a new institution created for this purpose. Use should be made of educational technology and of correspondence courses.
Apart from these conclusions, the following suggestions were made for the future activities of the CCC :

— All problems concerning teacher education should be tackled jointly by the CCC's three permanent committees, because it concerns general and technical education as well as higher education and adult education.

— It would be desirable if a working group could be set up to prepare proposals for a common European curriculum for the basic education of teachers. This working group might also try to define modules or study units which would facilitate mobility not only in the home country of the student but in other European countries.

— Harmonisation of the national concepts for the role of teachers for handicapped children at European level would be desirable.

— All activities in the field of teacher education should take into account the fact that, nowadays, it ought to be part of the tasks of all teachers to educate their pupils for international understanding.

— The problems of teaching at secondary and at post-secondary level should be approached jointly.

CONTINUED TRAINING OF TEACHERS IN GENERAL AND TECHNICAL EDUCATION

From the beginning of its activities in 1962, the Committee for General and Technical Education has given a prominent position to the continued training of teachers. It based its early deliberations on the report of an Inspectors' course on "In-service training of teachers" held under the auspices of the Council of Europe and the Western European Union, in the Federal Republic of Germany from 2nd to 14th October 1961 (PA/Cult (61) 83). The conclusions of this course were made available to the participants in the course at Strängnäs, Sweden, in 1966 on "Continued training of teachers" in a working document (EGT (66) Stage XXV 2).

The Governmental course at Strängnäs was followed by other meetings, principal among which were :

Frascati, *Italy, September 1967. A study group was convened to examine how the Strängnäs Recommendations could best be implemented in member States (DECS/EGT (68) 24).*

Glasgow, *United Kingdom, August 1969. At this course the assessment and the evaluation of the main forms of continued training and in particular the use of technological aids were discussed in detail (CCC/EGT (69) 29).*

Frascati, *December 1969. This latest course discussed the results of a survey to which all member Governments had contributed on the basis of a questionnaire on continued training of teachers. Recommendations concerning new forms of continued training and closer co-operation between member States were adopted.*

We reprint below excerpts of the report on the Strängnäs course and of the report on continued training of teachers by Mr. N. G. Emrich, Swedish Ministry of Education, distributed in 1969 as a guide-line for further work in this field.

The Strängnäs course on continued training of teachers

Organised by the Swedish Government
under the auspices of the Council of Europe, 12th - 19th August 1966.

The justification of continued training for teachers

The basic training of the teacher must clearly be aimed at enabling him to play his role in the school ably and competently. However, during this period it will come to be understood by him that his knowledge and skill will need to be continually improved and, indeed, it should be one of the major aims of basic training to inculcate in the mind of the student an understanding and appreciation of the constantly changing boundaries and content of the subjects he is likely to teach, besides the rapid development and change he will meet in the psycho-pedagogical and sociological field. Clearly neither basic training nor continued training could be regarded separately and on their own as a sufficient means of equipping the teacher to fulfil his task with competence and with satisfaction to himself. Each of the two elements plays

its part, and it would certainly be impossible to dispense with either in an efficient and appropriate education service. The two elements are, in fact, complementary to each other, and the relative importance of either is impossible to define since such a decision would depend on too many factors, amongst which are the sphere of activity of the teacher, the level at which he is called upon to work, the subjects with which he is concerned, the specific situation of his country and the nature of the particular education system. In some countries the quality and the length of the basic education period is perhaps not sufficient to satisfy their wishes and nothing said here is intended to influence their aspirations in this regard. However, if the view that basic and continued training go together to form one whole then it might well be that the emphasis on one part compared with that on the other might vary from country to country, or within a particular system might vary for different types of teachers.

The case for continued training would seem to be abundantly clear. Changes in the school systems alone and the consequent revision of curricula reflect one aspect of the dynamic developments which are constantly taking place and which make it essential that such changes and the implications of these changes should be brought to the knowledge of the teachers without unnecessary delay and in a form understandable to the teacher and applicable to his particular task in the school. Here it should be added that it is common for *teachers* themselves *to take the initiative for reforms* and, indeed the school system is the stronger where this is possible and widespread. Thus the continued training of teachers, whether this is effected through courses or documentation or any of the other ways mentioned later, is a direct concern of the teachers both as regards the conception and the practical implementation of the programme arising from these reforms.

The structures of teaching systems are subject to change due to the evolution of society itself. External causes play a more dominant part in the breakdown and the reconstruction of traditional structures than in the actual technical development in any specific subject. Teachers will quite naturally participate more readily in continued training programmes bearing on the subject matter of their own field of work than in those dealing with the wider issues of structural reform. Nevertheless, ample information on the conditions that have made structural reforms necessary should be given to the teachers, if only in order to win their whole-hearted acceptance of these reforms; and for the fullest support to be given it will be necessary to define and explain very clearly the aims of such changes. Teachers will expect to be brought up to date with the fundamental views on pedagogical methods and approaches, expressed for example by new ideas concerning the *relationship between teachers and pupils*. In order to achieve this, it will be necessary that the teachers between themselves get used to closer co-operation so as to break down the barriers between the different subjects and the levels which sometimes exist. One way of achieving this would be through "subject senior masters", as is done in some countries, as, coordinators in their particular fields. When such subject senior masters take part in conferences and other forms of continued training which give them information and other material and ideas it would be expected that they would act as disseminators of information about their subjects in the school.

There are many other pertinent reasons for the establishment of a comprehensive system for the continued training of teachers. Amongst them is clearly the constantly *increasing use of new teaching aids* which might be included in the term "educational technology". Projection apparatus, tape recorders, television (including closed circuit television), radio, libraries and language laboratories come immediately to mind and the provision of such aids makes it indispensable that they should be put to good use, and this in turn presupposes that teachers have some instruction in their use not only from a productive point of view but to enable the teachers to use them as an adjunct to the teaching, since these aids are available to help the teacher not to replace him. The use of such aids is often inspired by a new approach to teaching and sometimes themselves inspire new methods.

Much of what has been said about continued training can be summed up thus :

- Continued training is a natural and necessary *continuation* of basic training and the two elements of the constantly growing whole make up the teacher's power house.
- The rapid *expansion* of knowledge and the changing needs of society necessitate the regular introduction of new subject matter into the schools and, for some subjects, a complete revision of the curriculum.
- In this necessary process of change and development continued training is an *indispen-*

sable instrument due to its direct approach and wide range action. Indeed, if the aims of basic training to raise general standards and ensure progressive developments are to be achieved in a reasonable time, generous provisions of continued training would be required.

— The concept of a teacher's function in the school and what his relationship with pupils should be has changed and will probably continue to reflect continuing *change in social outlook.*

Contents of continued training

In any discussion concerning the nature and content of continued training, the question of the proportion of time spent on what might be called subject matter, on the one hand, and pedagogy or didactics and methods of teaching, on the other, constantly arises.

It has undoubtedly been the practice that continued training of teachers of younger pupils has largely concerned itself with pedagogy. Developments in subject fields and the introduction of new courses may well change this. Owing to the shortage of time secondary school teachers have probably devoted the greater part of it to subject matters and the method of teaching a specific subject, but even here it will often be essential, because of specific development, to emphasise more the general methods of teaching and didactics.

The teacher will find himself in need of contact with the results of research over the whole field of general education and in the relevant part of the subjects in which he is concerned. This in itself is some further justification for continued training. There is no doubt a clear need to establish or identify some existing places or centres from which the relevant results of research could be diffused. As research findings come to hand they need to be suitably adjusted to the school situation and the capacity of the teachers to understand them. This *central agency* would both receive and transmit the information received and play a coordinating and initiating role. Universities, teacher training institutions, bodies concerned with the continued training of teachers and teachers themselves should play a co-operative part in this venture. It is noted that certain forms of organisations of the kind are already in existence but there would still seem to be much to be done to meet the full needs of the teachers.

There seem to be two pressing reasons for seeking to bridge the gap which undoubtedly exists at present between educational research and continued training. One is obviously the valuable contribution which relevant educational research has to make to the practice of teaching ; if only the teacher can be made aware of the help available. At present he is not able as a rule to make use of this help, either because he does not know of its existence or because he cannot see its implications for his situation. Here is obviously the *need for an organisation to collect, digest, and convey the information* to him and perhaps also persuade him to use it. The second reason is the protection which research has to offer to the teacher who is coming increasingly under pressure of various kinds, including powerful commercial pressure, to regard change as always and necessarily the equivalent of progress. Without the safeguard of objective research to test and validate the proposals that are made to him, a teacher can be left to the whims of fashion and the exploitation of gimmickry. *Teachers* themselves might be encouraged to *form research groups* for the purpose of undertaking modest research of an operational kind under skilled guidance, but mainly to make them research-minded in outlook for the good of their teaching and there is a possible place for the conduct of research into the operation of continued training itself. The wastefulness of the present practice of conducting educational research without seeking necessarily to make use of its results or to apply them afterwards is deplored. Further consideration might be given to the possibility of pooling the results of research on a national, or regional international scale through the appropriate organisations and agencies.

It is clearly important and indeed imperative that teachers should be given and make use of opportunities to establish contact with life outside school. The importance of this is twofold. On the one hand, the teacher will have a closer understanding of his pupils and, on the other, he will be able to use his wider knowledge in more practical and realistic forms.

The administrative organisation of continued training

The discussion of this topic soon revealed the great variety of methods in the education systems existing in different countries throughout Europe ; ranging from countries which are completely centralised to a country where the central authority exercises its educational functions through the

agency of a voluntary body. Because of this diversity, it was pointless to recommend detailed suggestions.

However, no matter what the form of the national educational system happens to be, whether its functions are highly centralised or largely conducted by local authorities or whether schools are run by voluntary organisations, it must always have a defined steering authority to initiate and to carry the ultimate final responsibility for continued training. Whether this authority should be identical with the authority responsible for basic training or not was thoroughly discussed. Advantages or disadvantages of both systems were brought forward. The course agreed that, regardless of which two systems was adopted, a considerable vital part, if not the whole, of the responsibility must be located within the school-authority itself.

It was stressed that every effort should be made to seek the co-operation in the business of continued training of all agencies that should take an interest — the basic training authorities (if different), the universities and colleges, the local and central school authorities, scientific societies, the employers, and the parents. Co-operation also with industrial and commercial bodies in society outside school was regarded as essential for the planning and carrying out of continued training, not only for teachers in technical and vocational education but also for most other categories.

Forms and organisation of continued training for teachers

There was general agreement on the principle that the quantity and scope of different activities related to continued training of teachers should be increased both in and out of school-time. Continued training courses could be arranged by the responsible educational authorities as well as by (or in co-operation with) the teachers' organisations whose activities in the cultural and pedagogical fields should be encouraged by the competent authorities.

Opinions were divided on the question whether different forms of continued training during the school year should be compulsory or not. Two of the groups felt that teachers could not be expected to take such training, especially on matters of fundamental importance (such as the introduction of new teaching methods) as a part of their normal duties. The third group was of the opinion that different training schemes during school time should not be made compulsory but, at least for the time being, organised on a voluntary basis.

In terms of length, arrangements range from occasional days and afternoons set aside for continued training to courses of considerable length (up to two months). For general purposes the long course of 1 - 3 weeks seemed to provide the most satisfactory length.

The groups also discussed various *forms and types of training activity* now being used, including the traditional lecture course, the discussion type course, seminars, research groups, courses held abroad, and so forth. There is a growing tendency, it was noted, to move away from the lecture course towards types of training which allow more teacher participation. Study circles in various forms led by experienced teachers, headteachers, educational advisers, etc., were considered important both on the local and regional level. These study groups allow teachers to exchange views and discuss common problems. They may also be set up for the purpose of studying a specific problem. " Junglehrer-Arbeitsgemeinschaften " (work-shops for young teachers) could serve as an example worth following.

It was accepted that there would always be a place for continued training courses to be offered in the teachers' leisure or vacation time. *Holiday courses,* owing to their length and because of the possibilities they offer for international exchange, are particularly valuable. Many countries already run extremely successful holiday courses, and there seems to be room for an extension of these activities.

All the groups stressed the great *value of new media*, especially television, as a means of providing and improving continued training for teachers. The impact and the stimulating effects of television were generally acknowledged. Educational authorities should pay special attention to the development of these mass media in continued training and to the new techniques involved in their use. The possibility of combining radio and television with correspondence courses seems to be promising. It was pointed out that closed circuit television offers great opportunities for covering wide areas with many listening points and reaching directly to the individual teacher.

Considerable discussion took place in the groups concerning the development of *advisory services*

as a form of continued t. ning. This type of provision, in the form of the inspectorate, has existed for a long time in many countries. New types of advisory services are being developed which employ officials with an essentially pedagogical mission. The groups felt that advisers of this kind had a crucial part to play in continued training, particularly in getting the individual teacher involved and in stimulating progress in the field of pedagogy. The advisory service could be organised and its officials recruited in various ways. On this point, different solutions were presented in the course of the group discussions. The system of employing teachers on a part time basis as advisers in their special fields had already proved its value in a number of countries. Head teachers (staff tutors) could also be partly relieved of their normal teaching load in order to serve as pedagogical "stimulators" on the local level. It was also suggested that the qualified staff of univerties and establishments for basic training might be called upon to contribute to continued training. One of the groups favoured the creating of special school inspectors to serve in an essentially advisory capacity. In order to facilitate the contact between the adviser and the teacher, it might, however, be advisable to avoid the title of "inspector" as too closely linked with the idea of subordination.

The group reports stress the extreme importance of *documentation* for continued training — from the top level right down to the individual teacher. A central service, functioning as a clearing-house, should be set up and provided with the appropriate facilities to collect, digest and distribute in suitable form and on a nation-wide basis the necessary *information* such as: documents of immediate practical interest (reports on study courses, on pedagogical experiments, etc.); didactic material for classroom use; information on scientific and technical research in an easily readable form. The distribution of book-reviews, summaries, etc., and the improvement of library facilities would also encourage teachers to keep in touch with new developments in their fields and thus promote their continued training.

It was widely agreed that different forms of continued training, aiming at making teachers more aware of what life meant for others, should be encouraged. Accounts were given of a number of schemes of this kind. They included exchange schemes for teachers with other countries, the secondment of technical teachers back to industry and commerce, the release of teachers to observe and work in other establishments of education as well as in different branches of civil and social service, and so forth. The participation in such programmes would afford an opportunity for many teachers to enlarge their experience beyond the classroom.

An account was also given of *experimental schemes* in some countries whereby teachers, not of technical but of other subjects, were seconded particularly from comprehensive schools to industry or commerce for a period of three weeks. The purpose of these schemes was to reveal to the teacher what their pupils were going to meet within a few years, thus enabling them to adapt their teaching more closely to the demands and conditions of life outside school. The encouraging reports on these schemes seem to indicate a method of introducing realism into continued training which would be used more widely.

The value of the "sabbatical leave", granted for one or two terms, as a form of continued training, was fully recognised, although opinions differed as to whether or not such leave should be granted as a matter of right. Schemes of this kind would essentially bear on the subject matter of the teacher's particular field, and allow him to carry out a specific plan of proposed study of relevance to current work (study programmes in industrial plants, laboratory work, lengthy periods of residence in foreign countries — indispensable for language teachers, etc.).

The frequency and regularity of continued training

This question was dealt with at length particularly in the report submitted by the participants of the "English speaking group". The group agreed on the following firm recommendations of principle and practice:

- That member States should make every effort to persuade teachers, as soon as possible after qualification, to accept the principle and follow the practice of attending a *short course* (of one day's or a weekend's duration) of further training at least once a year.
- That, similarly, teachers should be encouraged and expected to attend a *longer course* (of one to three weeks' duration) at least once in every five years.
- That the above proposals should be regarded by countries as representing minimal requirements and that the provision of continued training courses, both short and long, in each country should be made on the principle that

teachers were to be encouraged to attend courses as often as practicable.

- Furthermore, the arrangements for continued training courses in every country should, if possible, include the provision of *lengthy courses of study*, varying in length and extending, if necessary, to one year to which selected teachers might be seconded.

The two other groups arrived at much the same conclusion in recommending that teachers should participate, at regular intervals of four or five years, in continued training courses for at least a week (certain subjects, such as mathematics and chemistry, require longer courses), it being understood that these recommendations represent an absolute minimum. Teachers would be expected to attend short courses at much more frequent intervals.

The question of frequency and regularity of continued training is not only a matter of participation in organised courses. Attention should also be paid and encouragement given to other means of improving professional skill (lectures, radio and television programmes, work-shops, etc. — to say nothing of the individual teacher's initiative and desire to learn), means which add to regular courses and contribute towards making continued training a truly permanent process.

The financing of continued training

A full consideration of this topic produced a mass of detailed information from the various countries represented concerning their present arrangements for the financing of continued training. Although some time was spent in exploring the possibility, it was eventually decided that, on this issue, it would be impolitic to seek agreement in principle on how financial responsibility was to be divided between the teacher himself (or his organisation) and the State or community or voluntary organisation. A number of countries were already irrevocably committed in principle, and in any case, the issue was too firmly imbedded in the fiscal arrangements of many countries to be treated in isolation. It seemed wiser to leave this issue as a practical issue which each country would have to decide for itself on each occasion that the issue was raised within the country.

There was general agreement, however, that, in practice, all countries would strive, within the limits of the finance made available to them for continued training, to maintain as full a programme of continued training as possible, and would endeavour to ensure that teachers attending continued training courses suffered no financial hardship. It would be advisable for countries where continued training programmes were limited by financial considerations, to make some evaluation of the various forms of continued training offered, so as to make the best possible use of the money available. It was possible, for example, that correspondence courses, the taping of courses, etc., could provide suitable alternative forms of continued training, for this reason and also for educational reasons.

Financial (or other) benefits for attendance at continued training courses

The discussion of this topic began with some doubt being expressed as to how far it was relevant or appropriate in dealing with continued training courses, to discuss at all the question of arrangements for the granting of credits or extra pay to teachers for attending such courses. Doubts were expressed about the practical value of offering such inducements even in those countries where they were being offered. It was pointed out that the introduction of accreditation and bonus schemes could create great difficulties in countries where they produced a demand for courses which could not be met. Even if the general attitude to systems of accreditation or additional pay for attendance at short courses was that they were unnecessary and not to be encouraged, it was accepted as logical that a teacher, who took a long course and did effective work which could be tested by examination, could be rewarded financially or in another way.

RECOMMENDATIONS

General

— The participants in the course at Strängnäs particularly wish to stress the earlier Recommendation, adopted in 1961, that "the training of the teacher should not be considered finished at the end of the basic training period. Opportunities for continued training, both academic and professional, are essential, not only for the young teacher, but throughout his career".

— In order to give emphasis to this guiding principle, the participants would like to have

all training of teachers regarded as a continuous process consisting of a basic or initial part, and of a continued part. They therefore suggest that the term, "continued" training of teachers, is to be used for all forms of further and in-service training, whether organised under the supervision of the official authorities or undertaken by the teachers individually or in groups.

— Just as the basic training comprises — for the majority of teachers at least — the introduction into pedagogy and subject matter, the methods and the techniques of teaching, the continued training of teachers should aim at bringing up-to-date the teacher's knowledge of his subject, and of the theory of teaching in its widest sense, and at improving his professional skill.

— Finally, the participants in the course at Strängnäs would like to stress that existing national educational systems have to be taken into account in the application of the following recommendations. They are aware of the differences of the basic training of teachers, not only from country to country, but also from one group of teachers to the other, of primary and secondary school teachers as well as of teachers in general and technical and vocational subjects.

— The participants wish, however, to stress the need of and the right to continued training of every teacher, regardless of his age or of the subjects he teaches.

— The conditions under which the teacher practises his profession contribute an essential element to the success of the different forms of continued training. These conditions should stimulate the teacher to perfect himself so as to enable him to apply in class the experience thus gained.

— The participants would like to sum up the underlined principle of all their conclusions and recommendations as follows: While it is the Government's duty, in the interest of the best possible education of the future generations, to provide in closest co-operation with the teaching profession, the possibility of continued training to its teachers, the teachers themselves are under the obligation to avail themselves of these opportunities in order not only to become good teachers, but to remain so.

European co-operation

In order to further and improve continued training of teachers, it is strongly recommended that there should be active exploration of all the possibilities for co-operation between the countries in Europe. The following are some of these possibilities :

- An *inventory* should be made of centres and organisations engaged in continued training of teachers, of existing regularly arranged courses and of publications distributed or available. Forms of continued training now in use should also be listed for each country. This needs to be done as soon as possible to provide a basis for co-operation.
- Once such a list is available, arrangements should be made for the *systematic exchange of publications* and documentation as well as of information on courses open to foreign visitors.
- Consideration should be given to the *exchange of tutors* engaged in continued education of teachers between different European countries. Lists of possible visiting lecturers with details of subjects, etc., could be made available through the Council of Europe to whom specific inquiries on this matter could be addressed.
- Representatives of foreign countries, in particular *experts* in the field of continued training, should be invited to participate in national or regional training courses.
- It is recommended that the Council of Europe, as soon as possible, arranges an information course dealing only with the forms of continued training, and that, after the course, the Council of Europe should, if possible, make a *comparative study* of the costs of different forms of promoting continued training and of the efficiency of these different forms.
- The possibility should be examined of making up *teams of experts* from various countries in special subjects and of placing such teams at the disposal of the organisers of continued training in various countries. These teams might either serve on intensive courses or travel through the country to lecture. Modern languages, modern literature, civics, and contemporary affairs are amongst the subjects which could be appropriately and profitably treated in this way.

- The Council of Europe is asked to examine the arrangements and ways of overcoming the difficulties which appear to be involved in the *exchange of teachers* between the countries and to try to make such an exchange more widespread and effective.

The Emrich report on continued training of teachers

Organisation

A means of propagating continued training to teachers, who may not always be too convinced of its value, would be to create *a wide scope of facilities* with activities of high quality and very varying contents. These activities must also, in order to appear as attractive as possible, be arranged at different places, within convenient reach of the teachers concerned. New media should also be used in order to facilitate the participation of the teachers in the different activities arranged.

If one considers the types of activities possible to arrange to provide continued training for teachers, a long list can result. It may be somewhat problematic to draw it up with any exactitude as some of the types of activities may appear under more than one title, depending on from what aspects they are viewed. An attempt has been made to set up such a list with regard to the different activities proposed in the reports examined. The list does not pretend to be exhaustive ; still more subdivisions might be added.

Continued training for teachers can be arranged

By organising *courses and study circles :*

- — Shorter courses and study circles, generally during the school terms ; courses during school time ("study days"), often compulsory ; after school time, generally voluntary (afternoon, evening, weekend courses).
- — Longer courses, generally during the vacations ; courses in the teacher's own country ; courses abroad, summer schools abroad.

By organising *conferences and seminars :*

- — Conferences (and seminars) in the teacher's own country ; local conferences treating school questions within the teacher's own school or municipality ; regional conferences ; regional conferences with members representing the same or adjacent subjects, "research groups" ; regional conferences with members representing different subjects, e.g. for furthering integration.
- — Conferences and seminars abroad.

By creating facilities for *visits abroad :*

- — Organised studies abroad (university studies, etc., longer courses).
- — Study visits abroad of some length, regular or not.
- — International meetings, conferences or seminars.

By creating facilities for *exchanges and contacts :*

- — Exchanges of teachers (future teachers) or other school staff : exchanges/contacts with schools or other similar institutions in the teacher's own country, with schools of the same or similar type, with universities or other research centres, with "the world of work" (industrial, commercial and agricultural enterprises, etc. ; exchanges with schools or other similar institutions abroad ;
- — exchanges of experts (lecturers, advisors, etc.);
- — exchanges of documentation, teaching material, research reports, etc. ;
- — exchanges with institutions in the teacher's own country ; with institutions abroad.

By creating facilities for *"leave of absence" for teachers :*

- — longer periods ("sabbatical terms/years") : for theoretical studies, often academical, for temporary return to activities outside school ;
- — shorter periods (less than one term) : for theoretical studies, by means of courses, etc., for refresher work or studies in industry, business life, etc.

By organising *advisory activity*, by means of :

— special advisors ("consultants") ;
— special "advising inspectors" ;
— assistants, assistant teachers from the country whose language is being taught ;
— co-operation with specialists in certain fields ;
— special question : training and introduction of advisors of different kinds.

By distribution of *documentation*, specially suited for continued training :

— printed material ; textbooks, teachers' handbooks ; newspapers, magazines ; correspondence courses, etc. ;
— audio-visual means ; tape recordings ; filmed and photographed material.

By using mass communication for *distribution of information :*

— by means of printed material ; professional literature from central libraries ; specially written compendia in certain subjects ; lists of new publications, book reviews, etc. ;
— by means of exhibitions ;
— by means of radio and television (also closed circuit television) ;
— by means of correspondence.

Thus, there seem to exist a great number of various possibilities for the organisation of continued training. A couple of those mentioned above may need some further comment.

The main *difference between courses and study circles* would be that the latter demand active participation by its members in a different way from that which ordinary courses do, where the course leader or the lecturer engaged is responsible for the stream of information to the members of the course.

Many of the courses and study circles in existence are of *limited duration :* they can be held on occasional days or perhaps just afternoons, or during a series of evenings. In this context, it might be justified to mention the special form of organisation which allows teachers to devote a certain number of school days, "*study days*" to their own continued training, while their pupils are free. These study days can be used for participation in courses and conferences, for study visits, and sometimes also for individual studies.

The shorter type of courses seem to be *predominant*, as far as can be judged from the material available. But also a great number of longer courses are arranged, with a duration of up to two months. In the discussions during the course on Further Training in 1966, it was said that for general purposes, the long course of 1 - 3 weeks seemed to provide the most satisfactory length.

Alongside these ordinary courses, a considerably longer type of course — of up to a year — should be organised for teachers on full pay, in order to make more serious and continuous study possible. The Strängnäs course in 1966 also expressed its opinion that there would always be a place for continued training courses to be offered *in the teachers' leisure or vacation time.* Holiday courses, owing to their length and because of the possibilities they offer for international exchange, are particularly valuable. Many countries already run extremely successful holiday courses, and there seems to be room for an extension of those activities.

As to *the forms of work* of the courses, there is a tendency to avoid the classical lecture course and try newer methods, above all by seeking to engage the members actively. Thus, study circles — as mentioned above — which work in this direction, led by experienced teachers, educational advisors and other experts are considered important.

Residential courses are said to have clear advantages, as they can provide the possibility of useful personal contacts and exchanges.

It is stressed that participation in *international conferences* or seminars is desirable. These conferences could cover all the fields mentioned in the preceding chapter on the contents of continued training and could be attended by teachers singly or in groups, representing different subjects. The importance of making arrangements for teachers of different kinds to spend some time abroad, e.g. for language studies or in industrial, commercial or agricultural enterprises is also stressed.

The value of *visits abroad* need not be discussed. The UNESCO recommendation of 1966 says that "authorities should encourage and assist teachers to travel in their own country and abroad, either in groups or individually, with a view to their further education". The Inspectors' Course in 1961 mentions in its conclusions that it is highly desirable that every teacher should keep in touch with changes in educational institutions and in teaching methods, not only in his own but also in other countries.

Much of what has been said about visits abroad is also valid for *international exchanges*. As mentioned above, residential courses can play an important part for the development of personal contacts, which in their turn contribute to the widening of knowledge and the distribution of useful experience and information. Much is often gained when teachers of different academic backgrounds and from different schools join in the same activity.

An extensive system of exchange of teaching personnel might lead to the introduction of *a system of "leave of absence"* for study purposes. This facility, which is in existence in a number of countries, would offer teachers the opportunity of leaving school work for shorter or longer periods, the extreme being the *sabbatical year*.

An extension of the system of the *exchange of teachers between different countries* (not limited to modern language teachers) should be considered as an opportunity for teachers to enlarge their experience beyond the classroom and as a special form of further training. Sabbatical leave, at regular intervals, while valuable, should not be taken for granted as a right by teachers. However, a good case could be made in certain circumstances for granting sabbatical leave in order that the teacher might carry out a specific plan of proposed study, of relevance to current work.

It seems unnecessary to mention that if all the demands from school and its working staff are to be met, enormous efforts must be made nd very high costs arise if activities of the aforementioned nature are arranged exclusively.

Therefore, continued training for teachers must *make use of other ways and means* by which quick and good results can be reached, when personal participation from lecturers, advisors or other experts is not needed extensively. Other ways do stand open and two main groups, which — in some respects — may overlap each other, will be treated here : *the distribution of documentation*, specially suited for continued training, and *the use of mass media for information*. Combinations of these two ways are both possible and effective.

The UNESCO recommendation of 1966 mentions that "measures should be taken to make books and other material available to teachers to improve their general education and professional qualifications". The Inspectors' course in 1961 enumerates a number of activities, intended for continued training, among which "*the provision of special material*" is one. Such material should be made available for the use of teachers in national, regional and local centres, and on a modest scale, in individual establishments or groups of establishments. The material can take such forms as exhibitions (fixed or travelling) of educational apparatus ; bibliographies ; the loan of books and periodicals ; audio-visual aids ; collections of local study material classified by subject matter.

During group discussions at the course in 1966, the opinion of the delegates was conveyed that the basic training of teachers must initiate the process of encouraging the teachers to use the *libraries*. This process must be continued in their continued training. The implication is that libraries, equipped with special postal facilities should be provided for teachers who live at some distance from information centres.

Teachers must furthermore be encouraged to use libraries by all sorts of means such as the *regular distribution of lists of new publications* in different fields, book reviews and special pamphlets summarising research findings.

All the group reports from the course in 1966 stress the extreme importance of documentation for continued training — from the top level right down to the individual teacher. Again the thought of setting up a *central service*, a kind of "clearing house", is brought forward. This idea is one of the predominating ones in a great number of reports on different subjects.

Such documentation does not exclusively consist of books and material of a similar type : on the contrary, the list of other suggestions is rather long. A type of continued training material, which has been tested in many contexts, is *the correspondence courses*. These can be used either singly or in combination with other information, e.g. by radio and television.

The rapid development of audio-visual techniques has also caused a considerable increase in the supply of material to be used in such machines. These types of teaching and learning aids could also be looked upon as a special sort of documentation ; it does not seem wrong to consider *tape recordings or films* as valuable contributions to the documentation. Here, too, the thought of *creating a centre* for the collecting and distribution of these things is considered as something which could be of great value.

It would seem rather ill-considered if a report of this kind did not treat *the modern mass media* and

their role in the distribution of information. The groups at the course on Further Training in 1966 discussed problems in connection herewith, and they acknowledged the value of courses offered by new media, such as television and radio, particularly as an enrichment of the school programme and continued training. Television of the closed-circuit type was considered to offer great opportunities for covering wide areas with many listening points and reaching the individual teacher directly. The impact and the stimulus that television is proved to have were acknowledged.

Educational authorities should pay attention to the development of mass media in continued training and to the new techniques involved in their use. The above-mentioned possibility of combining television, radio and e.g. correspondence courses seems, according to the opinion of the course, to be promising.

Financing

It stands to reason that the arrangement of an extensive continued training activity must entail *heavy costs*. There are expenses for the salaries of the personnel in the *organising bodies*, as well as lecturer's fees, the purchase of books and other study material, technical apparatus and accessories to them, sometimes rents for lecture halls, etc. In some cases it can be necessary to engage specialists to write or compile specialised working material within a certain subject or part of a subject, where other literature is sparse or out of date. These are examples of costs for "the arranging side".

The participants in courses and conferences or rather the teachers to whom the stream of information is directed, may also get considerable economical problems to solve. There are, e.g. fares to pay, as well as costs for board and lodging at residential courses. If, moreover, continued training activities take place during school-time, regulations may demand the engagement of a substitute for the teachers involved in the training. All these costs, which together may arise to most considerable sums, must be met in one way or another.

There are a number of *possible solutions* to this problem. The money can be paid by the state, by the regional and local authorities, by the school itself, by the teachers' organisations or other bodies of the same kinds or, finally, by the teachers themselves.

It seems rather obvious that if *the teachers* — who undertake a sometimes heavy task when taking part in continued training activities — are responsible for the costs of the arrangements, their interest in their continued training may decline. The state of things, if the *teachers' organisations* should be forced to undertake too heavy burdens, would be of the same nature, as, after all, the organisations are in general financed by means of fees from their members, the teachers.

Thus, it would seem more natural and practical. if the costs in question could be paid by *the different authorities*. This opinion is shared by a number of conferences, and an account of this will be rendered below.

One of the basic principles of the Strängnäs course in 1966 was formulated as follows: "While it is *the government's duty*, in the interest of the best possible education of the future generations, to *provide* in closest co-operation with the teaching profession, *the possibility of continued training* to its teachers, the teachers themselves are under the obligation to avail themselves of these opportunities in order not only to become good teachers but to remain so". It seems highly probable that this duty of the government "to provide the possibility of continued training" must imply pure financial support, as well as other forms of assistance.

One of the working groups at the same course observed that in most countries continued training activities are *largely free of charge. This is a principle, which the group would like to see extended.* On the other hand, there may be cases where a contribution from the teacher is justified, for example holiday courses abroad.

By studying reports from a number of different member countries, it is possible to gather a rich variety of systems in use in regard to the financing of continued training activities. The above course decided that it would be impolitic to seek agreement in principle on how financial responsibility was to be divided between the teacher himself or his organisation and the state or community or voluntary organisation. A number of countries were already irrevocably committed in principle and in any case, the issue was too firmly imbedded in the fiscal arrangements of many countries to be treated in isolation. It seemed wiser to leave this issue as a practical issue, which each country would have to decide for itself on each occasion that the issue was raised within the country.

There was general agreement, however, that, in practice, all countries would strive, within the

limits of the finances made available for them for continued training, to maintain as full a programme of continued training as possible, and would endeavour to ensure that teachers attending continued training courses suffered no financial hardship. It would be advisable for countries where continued training programmes were limited by financial considerations, to make some evaluation of the various forms of continued training offered, so as to make the best possible use of the money available. It was possible, for example, that correspondence courses, etc., could provide suitable alternative forms of continued training, for this reason and also for educational reasons.

Suggestions for further action at European level

The final aim of continued training would be *a permanent effort to keep education at a high level,* not only in order to impart knowledge to the pupils as effectively as possible, but also, and it would seem with ever-increasing importance, to develop their personalities to try to give them a real picture of the world around them and the ability to make sound judgments. It would also seem important to educate them in school democracy in order to adapt them to their future life as citizens and to stimulate their interest in further studies.

The role of the teacher has always been manifold, but *the relative importance of the roles* is now changing rapidly; he is no longer mainly a man who supplies knowledge and trains proficiency — a task that is gradually taken over by teaching aids — he is more and more becoming the organiser of the work in the class and the supervisor of his pupils in their studies. Thus his attitude towards them must be different from what it was formerly, and it is essential to further the efforts to create a better understanding of the pupils and their problems — problems which are often more closely tied to a younger generation than that of the teachers. This in its turn might settle, at least to a certain extent, the opposition between the generations, which is becoming more and more noticeable. The growing democracy in schools, which seems to be having initial difficulties, could thus be realised in a successful way. If this aim is to be achieved, the teacher must be supplied with comprehensive help in the form of information of every kind by means of — among other things — continued training.

It is a fact that there are considerable differences between the school systems of the member countries, and finding a common denominator for the types of basic training for teachers would involve insurmountable difficulties. There are also different systems for continued training in the countries concerned, partly because of these differences in the basic training systems. Nevertheless, according to statements made at international conferences, there seems to be rather *vast areas for a common achievement* in the field of continued training.

In the report from the Strängnäs course on continued training in 1966 for example, a passage in the introduction reads, "While it might still be difficult to develop a programme of harmonising the actual basic training of teachers, there is nothing to prevent the conception of a European programme for the continued training of teachers. Such a programme would serve the need for all countries."

The need for *international co-operation* in all fields of education has been stressed many times. There is a general desire to try to create and develop *a European consciousness* and a feeling for European tradition and culture within the member countries. It has already been mentioned in many contexts how important it is that efforts should be made to build *bridges between existing school systems* and between the different levels within these school systems.

The important role of *the school-leaders as stimulators* in the development and furthering of modern ideas in their schools is also stressed. Their position as chiefs also implies a duty to forward continued training among their teachers. *Research has a very important part to play:* its results must be distributed from the universities and other centres to the schools and the teachers. Sometimes some degree of adaptation of the results may be needed to make them applicable for use in teacher training. *Close co-operation with authorities and organisations of many kinds is needed,* if the results are to be what is intended.

In short, "co-*ordination*" and "co-*operation*" are words which seem to be *key-words* for continued training as well as for many other activities. Co-ordination and co-operation can be carried out on different levels. Of course, there should be co-operation within the school establishment and within the community as well as within one and the same country, but this would not be enough. For a number of the activities suggested, a much wider co-operation is desirable and necessary. In this context an international organisation like *the Council of Europe with its Council for Cultural*

Co-operation seems to have a crucial part to play. Thus, as far as can be seen, *the creation of international bodies* is of the greatest importance for furthering and developing continued training. Even if the extremely important problems connected with international understanding and the creation of a European consciousness could not be completely solved at once — which would seem to be somewhat utopic — such bodies might contribute in an efficient way to the gradual solution of them by initiating and communicating ideas and methods. It might be necessary to *set up a permanent committee for continued training of teachers on a European level* with a secretariat to study and work out the suggestions for action which would flow into this central body.

INFORMATION FOR INNOVATION

Reports on new developments in educational documentation and information for teachers

Governmental Course organised by the Danish Government, under the auspices of the Council of Europe at Gamle Avernaes, 21st - 27th September 1969

The course concentrated mainly on new developments in continued training for teachers and in particular on new forms of educational information and teacher participation. Extracts from lectures given at the course are published below. An introductory text by Professor S. Roller (Switzerland) and the Netherlands' contribution, which was received after the course are also included, as is the statement of conclusions.

A plea for an educational information policy

by S. ROLLER,
Director of the Educational Research Department, Geneva

Why to inform ?

In the relatively stable situation in which popular education had its beginnings, there was very little justification for a constant supply of information on new developments. The text book was enough : it set forth clearly the "contemporary" state of knowledge in a way which everyone could understand. Examples are the "how things work" books designed to introduce pupils to the practical aspects of science at that time, such as gas lighting, blast furnaces and microbes. From the teacher's angle, too, there was an accepted, stable method of communicating knowledge : Herbart's "formal elements" solved any problem of how to teach.

Nowadays, neither knowledge nor teaching-methods remain fixed. Everything, in fact, is constantly changing. Knowledge soon becomes out of date. Educational technology is moving, too, and makes yesterday's innovation obsolete today.

Teachers must therefore have the means of "keeping in the swim". There is only one way of ensuring this : by providing them with adequate information. Information thus becomes the instrument of change, which will henceforth be perma-

nent, not just occasional. By informing teachers, one gives them an anchor and contributes to their permanent training.

Who should be informed ?

Information is designed for both teachers and pupils.

There are two kinds of teachers : those who spontaneously feel the need for information and those who do not. The latter do not know all that there is to know — who can claim this nowadays ? — but they are afraid of change. Nevertheless, everyone needs to be informed. Yet the means of information vary according to the need. Through their teachers, pupils have always had access to information supplied to the staff. But now that the emphasis in education is shifting away from teaching towards training, and the pupils themselves have increasingly to make direct use of information prepared for schools, the teachers are simply catalysts. They supervise the functioning of a cognitive metabolism by which documents external to the individual are assimilated into his own mind.

What should the information contain ?

Information for teachers can be cognitive, methodological or reflective.

Cognitive : There is knowledge to be communicated : the working of DNA, the functioning of a space rocket, or the four thousand basic words of the French language.

Methodological : Teachers have to be informed of new teaching methods, new processes and new techniques such as programmed instruction, language laboratories or cassette films.

Reflective : Teachers must be aware of the problems raised by information itself : its nature, its limits and how to evaluate it.

All this information is "external". It provides instruments for the teacher. But there is also a more "internal" type of information designed to provoke personal thought, to make the teacher take a new look at himself, ask himself what he is there for, indeed what is his true vocation. Let us consider the fundamental change which takes place when, in the use of programmed instruction, the teacher has to realise that the "instructor" he thought himself to be must give way to the "educator", thus being obliged to put more of himself into the job.

Lastly, information will soon become so large in volume that its presentation and distribution will require a *policy* to govern the definition of its aims, the classification of needs and the planning of work.

What can the nature of information be ?

The information received by teachers must be usable ; it must be explained, and situated ; it must be open-ended and productive.

Usable : It must be sufficiently well prepared for the teacher to be able to put it into practice almost immediately.

Explained : However, ready-prepared standardised information runs the risk of sharing the fate of other "cut-and-dried" methods and thus losing the "information" quality which it should always have. It is therefore inconceivable that information intended for teachers responsible for the intellectual development of young people should not be explained. In this context, the explanation will be theoretical. It should include an account of the underlying principles of the document in question, which will otherwise have no cultural value. Thus documentation on the conifers of the Jura, while describing the reproduction of gymnosperms, should also relate the process to reproduction processes in the plant world in general. Again, the movement of artificial satellites should be related to the general principles governing the movement of satellites of all kinds. It is, moreover, these theoretical considerations which can best contribute to the permanent training of the teacher. They help him to organise his knowledge and thus counteract the haphazard accumulation of unconnected bits of erudition.

Situated : This is a corollary of "explained". All information should be related to both what comes before it (a chronological relation) and what is close to it (a spatial relation). This operation is genuinely epistemological. It is relations and structures which make knowledge fruitful. Each time an item of knowledge is published it should be accompanied by its spatio-temporal co-ordinates.

Open-ended : This is another corollary of "explained". The relations established are not a closed world. They suggest other possible relations. They predispose the recipient to receive further information, and indeed create a need for it. What would be the use of knowledge if it did not maintain the desire for knowledge ?

Productive : Information for the teacher should not only be explained and situated and be open-ended. It must actively stimulate the teacher's mind, and make him, at least to some extent, a creator of knowledge. If he only communicates knowledge, he runs the risk of cutting himself off. The information with which he is supplied must stimulate him and make him ready to share, both personally and in his professional capacity, in the creative activity of those fulfilled men who produce knowledge, amongst which he should be able to include himself.

How is the information to be communicated ?

This will be done by the means offered by modern technology : the ordinary book, programmed books, audio-visual methods, television, etc.

But more important than these aids is the spirit in which the information is communicated. Two fundamental requirements are freedom and involvement.

Freedom : There is, as always, a risk here. Information cannot be imposed on teachers ; it can only be proposed. If imposed it will make them operators and teaching robots. If proposed it can contribute to "informing" them, i.e. it can help them to find gradually their own personal form of teaching and to become continually more themselves.

It has always been known, and it must continue to be known, that the teacher can only work really effectively through the medium of his own personality, and any information he receives must therefore, in the final analysis, strengthen his own character.

Involvement : Information provides teachers with instruments ; but they must know how to handle them and should be able to criticise them and help to devise them. For this, team work is essential, so that documents can be obtained, understood, criticised and adapted. Team work helps to make innovations bearable, and provides the necessary feed-back for the sources of information.

Collective receiving of information is, moreover, a necessary complement to freedom, which if left to the individual in isolation can lead to unproductive chaos. In community life freedom becomes a fruitful basis for healthy criticism and positive construction, whereby optimum use can be made of the information concerned.

What are the effects of information ?

An information policy requires that the effects of information should be measured. It is especially necessary to measure them qualitatively — which does not preclude scientific investigation — to see whether it helps in the short, and more particularly the long run to make pupils, and teachers as well, more knowledgeable, better cultivated and better able to tackle the problems of life healthily, intelligently and humanely.

Training for change

by Y. ROGER
Educational Inspector, Ministry of Education, Brussels

Why, it may be asked, have the Ministry of National Education and, more particularly, the Board for the Organisation of Studies in Belgium been led to take a special interest in the problem of *change* — change, not as it affects curricula and structures (which have been undergoing reform for more than 20 years), but as it affects the teachers themselves ?

Since the introduction of new school structures of the *"comprehensive" type,* which bring together children of varying educational levels and social milieux, academic failures have occurred which must be blamed more on the attitude of the teachers than on shortcomings in the pupils. Besides, it is the same attitude that gives rise, to a large extent, to failures in schools of the traditional kind.

The importance of the *schoolchild's attitude* for his own success or failure is, of course, indispensable ; but the child is very strongly influenced by those around him, in the family, in the school and out of school. His reactions have an emotional

origin — and this, as we now know beyond all doubt, can either stimulate the intelligence or paralyse it.

What factors condition the attitude of school-teachers? Their own basic education, the habits they adopted as pupils, their teacher's training, the rules of the school where they work, and a great many other less obvious factors — their personal character, with all that their emotional life involves in their family or in their relations with their colleagues and superiors; how they view their profession, both as a function in society and as a collection of technical skills; and their ideas about pupils and the sort of relationship they should have with them.

All these factors apply, irrespective of the type of school considered, and irrespective of the job the school is asked to do. It is necessary, however, to ensure that the attitude of the teachers is in harmony with the aims and objectives of education. There is no need to describe here how, over the past 25 years — and at an ever-increasing rate over the last few years — the objectives of the school have been modified under the pressures of a changing society, changes in techniques, new insight into psychology and so on. It is in the industrial and business worlds, which were the first to feel the need to *alter the attitudes* of their executives and staff, to these changes. Companies were very soon in a position to take stock of the shortcomings, bad habits and even the faults that their staff had picked up in the course of their schooling and training.

Information campaign

In order to convince teachers of the need for change we have for the past five years been conducting a sort of *information campaign*, the initiative for which came from the Belgian Board for Increased Productivity. Three-day residential courses have been organised with the assistance of the Board for the Organisation of Studies and the National Secretariat of Catholic Education. I shall try to sketch the broad outlines of the programme of such seminars.

At the opening session of one of the first courses its purpose was explained in the following words: "One of the phenomena brought about by the increasingly rapid changes taking place in the world about us, a phenomenon which especially concerns us, is the ever higher *standard of qualifications* demanded of the individual. We are leaving behind us a stable society, or at least one which thought it was, and endeavoured to be, stable, and moving towards one in which change is the order of the day. How are these two factors, social mobility and change, altering our conception of education? It is the purpose of seminars like this one to make us think about all these problems. It is no accident that *forward thinking* has become fashionable — living, nowadays, is preparing for the future."

A university professor of history, in a background survey entitled *"History of economic and social development"*, showed how progress of any kind threw up fresh problems, which more often than not affected the individual. The school had a duty to make pupils aware of this, and thereby enable them to bring their critical faculties to bear on economic progress, which by no means brought only advantages in its wake.

This speaker was followed by an economist, who spoke on *"Economic interrelations in modern society"* and gave an overall picture of economic relations and of the effects which economic affairs have on the standard of living and personal opportunities.

This first day of the course closed with a talk, entitled *"Man in an industrial society"*, by a psychologist, who is head of the staff training department of a large industrial concern. He showed how industry, with its increasing output and means of production, imposed on its workers an obligation to introduce, accept and then apply innovations. For this to succeed, industry had to see that key posts were filled by what the speaker called "men with drive", handpicked for their ability to "find out" and to use what they have discovered in order to help others to solve their problems. These, he said, were the people who propagated the innovations.

The second day was devoted to the topic: *"Young people and their future responsibility as adults in a rapidly-changing society"*. The platform was shared by the personnel manager of a large industrial company and myself. The former began by discussing the present-day features of society and of industrial and economic development, picking out those which he considered essential for the training of the young generation.

I then traced the broad outlines of the demographic conditions, the difficulties connected with regulations and the educational facts and findings which characterise and influence our teaching, adding a few suggestions and describing a number of expe-

riments likely to help schools in preparing their pupils better for their responsibilities in tomorrow's world.

After the talks the participants are asked to deal, in small working parties with *suggested topics*, and to describe what changes they feel should be introduced into the school. The changes proposed include the setting-aside of half a day in the timetable for *creative activities*, and of one half-day in four primarily for introductory lessons on world problems ; the fostering of *parent/pupil/teacher* contacts ; the promoting of *multidiscipline activities* among both teachers and pupils ; the suggestion that the schools inspector should act more as an adviser ; and recommendations for a change in the attitude of teachers.

Courses in applied psycho-sociology

Another and different kind of course with a psycho-sociological bias has been organised since February 1968. This type of seminar is designed for teachers, headmasters and school inspectors.

The staff running these courses consist of two discussion leaders (women), both graduates in psycho-sociology, a consulting psychologist and the Director of the Department for Psycho-Medico-Social Centres. I myself act as director of the course.

Here are a few extracts from the letter of invitation sent to participants :

"This seminar is intended to provide *refresher training* for headmasters and teachers, like that already provided in many public and private concerns. It has been specially adapted to meet the needs of secondary school teachers irrespective of the subjects they teach, who want to benefit from what psycho-sociology can contribute to the practical side of their work.

"The course, which lasts five days, will enable participants to discover *communication methods* which will make discussion and group work more effective, and to study relations between people (in conversation, in a group) and between groups. "It will comprise meetings of small groups, meetings between these groups and plenary meetings, so as to encourage discussion at all levels, based on the *individual experience* of participants in their relations with the authorities, with colleagues, pupils, parents and school inspectors ; on *common experience* gained in the various seminar discussion groups ; on set practice situations ; and on completely *unstructured situations.*

"Participants will, themselves, choose the working method which meets their needs best. In this way they will better be able to appreciate the link that exists between what they experience daily in their work situation and the phenomena of interrelations of which they become aware during the *unstructured sessions.*

"The aim of the seminar is to encourage and facilitate a *rethinking of problems*, while leaving each individual free to determine what course this will take for him.

"Reviews or comments (in the discussion groups) on the following subjects will help participants to form a *concept of their past experience* : the problem of authority, communication, awareness of others, status and role, attitudes and behaviour, non-directive guidance and the emotional life of groups.

"... This seminar can bring about a limited but important *change in the individual*, making his defences more flexible and strengthening his ego".

It is difficult to give an account of what really goes on during one of these courses, the main benefit being in the realm of experience. In the syllabus, which is issued to participants at the end of the seminars, it is stated that the seminar deals with the *theoretical approach to phenomena experienced during training seminars* — hence, something to be recognised rather than something to be learnt. Their fairly complete theoretical nature makes it possible to grasp the whole of what it is intended to put across ; but in that way all that is grasped is the non-emotional half, the very part least likely to lead to change.

All I can do therefore, in my turn, is to give a glimpse of what a course is like by describing what is discussed, and then go on to give some of the results obtained which will be more revealing and more enlightening.

One of the main objectives of these meetings is a *better understanding of others* and, as a consequence, a better *understanding of oneself*. One becomes gradually aware, as the discussion groups "mature", that one is really hedged in by stereotypes of all kinds. We look at others through a filter of prejudices and value judgments deriving from inveterate habits, which tend to place ourselves in the centre of the picture without any objective view of those around us.

Communication, and the enormous difficulties of achieving real comprehension, are to a large extent tied up with these habits. Further difficulties arise from the composition, encoding, transmission and reception of the message. The "field" of each person involved in the exchange will largely determine how much of the message he understands. The nearer one person's field coincides with that of the other, the greater chance there is of the message being interpreted correctly. Generally speaking, the areas of awareness, that is to say the sum total of experience, habits and taboos, are similar in people of the same age-group, the same country and the same culture. Which, when you look at it, is really quite restrictive. When it comes to talking to pupils from a very low socio-cultural stratum, there are inevitably failures in putting the message over. This is why *problems of communication* are so important at the beginning of secondary education. If a child — like any other human being — does not grasp what the teacher is telling him, the mounting tension and anxiety in his mind will prevent him from understanding even that part of the message which he could normally comprehend. If the monologue from the teacher continues with questions, his confusion becomes complete.

During the seminar we have the participants experience a situation of this kind, and this has a very salutary effect : one person dictates instructions on how to assemble a figure, and the participants have to piece it together by following the instructions. The first time, they are not allowed to ask questions ; the second time, they can put questions to the person doing the dictating ; the third time, they are also allowed to discuss between themselves.

The incoherence which *invariably* results makes them realise just how precarious a process oral teaching is when it is not constantly checked and adapted. Very often the school type of question is not enough — what is needed is a *genuine dialogue*, without the child being afraid of getting a poor mark if he makes a mistake. What matters is for the child to explain the train of his thoughts ; without this, the teacher is in danger of teaching him nothing because he does not know where the child is going wrong. The child at once sees the teacher as someone who, instead of helping him, threatens, constrains and judges him. And so the whole process degenerates dangerously into a negative emotional attitude.

It is important, therefore, that teachers should be able to "understand others" as fully as possible ; and to achieve this they must avoid any kind of attitude which will make their pupils see them in a false light.

It is for this reason that we draw the attention of those attending the seminar to the difference between *behaviour* and *attitude* ; behaviour is what one actually says and does, while attitude is what underlies the behaviour. If one's attitude differs from one's behaviour, the attitude is what is perceived, and it is to this that people react. A talk was given on this topic, based on Porter's classification.

It must be added that in the teacher/pupil relationship, as in any other, the situation is further modified by what may be called "*status*" and "*role*". These quickly become a very cramping stereotype, likely to falsify the relationship. If a person fulfils a certain function, he feels obliged to adopt a particular kind of behaviour; conversely, those he is speaking to, conscious of dealing with someone invested with these particular powers, immediately think of him as having a whole series of qualities (and faults) associated in their minds with his particular grade or function. And so their perception of him is distorted.

If we are to talk of a dialogue, and if we accept the importance of a real understanding of others, we need to revise our ideas of *authority*. The teacher can help himself in this by not regimenting his pupils. One must be very careful here, however, for "not regimenting" is not the same thing as "laisser-faire". The latter implies abdication, while the former means sharing others' problems (in this case, those of the pupils) — but without imposing a particular solution — and helping them to organise and pass through the successive stages of the formative process by themselves.

It is obviously pointless — and would even be disastrous — to make anyone work along these lines if he does not feel strongly inclined to do so, and if he does not have sufficient mastery of the subject to be tackled. But when these conditions are met, the *teacher/pupil relationship* becomes an exceptionally good one, and the pupils derive enormous benefit from it, as regards not only the knowledge they gain but also the maturity they acquire.

For this to happen, the teacher must step out of the limelight and adopt instead that new kind of authority which helps others to tackle and cope with change and, starting from an amorphous situation, build up a coherent whole — which one

will be clear-sighted enough never to regard as definitive, and which one will not even hesitate to criticise. To do this, one needs the calm strength of mind to *question one's own rightness*. This is perfectly feasible, and we have already seen many examples of it. By and large, we can say that all those who have taken part in these seminars have gone away changed by the *group experience* which makes them undergo what schoolchildren are generally subjected to in a classroom.

At the end two-and-a-half months, participants are invited back for a two-day "*follow-up*" *course* and, as a general rule, for another three months later. These two meetings are very important since they make it possible to gauge and, above all, intensify the changes that have taken place.

During these follow-up meetings, the participants start to deal with *group techniques* (such as conducting a meeting), interviewing techniques, possibly decision-making techniques, mental-training and problem-solving techniques.

The role of school centres

by P. E. JACOBSEN,
County School Advisory Officer,
Denmark

Technical developments force most people to take part in *supplementary education courses*, and the teachers have to participate actively in life-long integrated education.

This is nothing new for the teachers. In this country it is a long-standing tradition that the teachers attend courses during their holidays. Furthermore a great number of Danish teachers have studied for 1 or 2 years at the Royal College of Education at some time or other during their years of service.

It is also customary that the teachers attend courses arranged throughout the country by the Royal College of Education. As a rule these courses consist of 120 hours during the school-year, and they are mostly of a strictly professional nature.

The teacher must have the possibility to pick up new ideas, and it must be his duty to pass his experiences on to his colleagues. What can we, the authorities, do to help the teacher in his working-situation ?

In the following I shall try to describe the institution which we in Denmark call the *School Centre* and which has had a growing influence on the development of education.

At the end of the 1920's and the beginning of the 1930's, the State Pedagogical Library organised a number of lecture tours to groups of teachers all over the country and arranged displays of students' work, Danish and other Scandinavian books following the work study principle, etc. The *exchange of experiences* resulting from this activity, coupled with the general pedagogical unrest of the time, meant that the idea of starting small study-collections, school centres, with permanent displays of text-books and other materials, and changing displays of students' work was brought up in several places as being especially useful for teachers in the small village schools.

In the course of the following 10 - 15 years school centres were started in practically all countries. Almost everywhere these were very modest attempts to begin with. Neither the local nor the governmental authorities saw the need of granting any funds for this purpose. As a whole it could be said that it was only due to the *idealistic enthusiasm* of a few teachers, who provided their time and energy free of charge, and the fact that various text-book publishers provided free copies of all text-books and other teaching material, that these could operate as some sort of information centres. No actual studying was done at these school centres.

When World War II was well over, and when in the course of the next 10 - 15 years it was really felt that the technical development would not leave the school system alone ; and when furthermore Denmark, in 1958, took the first steps in the direction of a new school system, *the beginning of comprehensive schooling* by passing a new school

law, a vigorous course-activity started all over the country.

With the new law every student in the 6th grade was to be taught a foreign language, while a second foreign language was to be offered in the 7th grade. All students in the 7th grade should now be taught mathematics. Even an 8th grade was offered as something quite new at the time. This caused big problems, especially for the village schools where until then it had been the practice to send the more clever students to the "middle-schools", i. e. 6th to 9th grades, in town.

The Danish Teachers Association had for some time considered the possibility of improving the school centres through further financial grants, and by means of an expanded work programme.

In 1964 the Ministry of Education appointed a committee for the purpose *of analysing* how a school centre should be organised. From April 1967 the Government has paid about 50 per cent of the operating expenses of all school centres in Denmark, and practically every county now has such a centre.

In principle the State Pedagogical Library serves as a kind of *central organisation* for all the school centres, and has proved very helpful indeed, with regard to the organisation of the centres and their work programmes. There is still much to be wished for, however, mostly money, before everything can be said to be as effective as we would like it to be.

How is a school centre organised?

School centres, of course, differ one from the other in respect of facilities and equipment. At the beginning it was necessary to move into odd rooms. Fortunately great devolopments have taken place during the last five years. In principle a school centre contains the following :

- A pedagogical library,
- a text-book collection,
- technical teaching aids including audio-visual material,
- display rooms,
- study-circle rooms,
- a pedagogical workshop,
- an ideas archive,
- a tape-recording centre,
- a lecture room,
- a language laboratory.

How is a school centre staffed?

All the school centres employ a *pedagogical leader.* This is usually a qualified teacher who works half the time at the school centre, and teachers at a school the rest of the time. Furthermore, 4-5 pedagogical staff, also teachers, work at the centre from 6 to 12 hours per week. Finally the school centre usually employs a secretary.

The head of a centre is responsible for its day-to-day operation. A *pedagogical committee* consisting of teachers, principals and school advisory officers help him in the planning of the work which the school centre is to carry out. All school centres have a board of finance inasmuch as the County School Councils provide the necessary funds. Ultimately the budget must be approved by the Ministry of Education, which pays about 50 per cent of the expenses.

What goes on in the school centres?

The school centres are for the use of all teachers from all types of schools, principals, school committees and municipal councils within the county, as well as parents' associations. Others interested in schools are, of course, also welcome to make use of the centres and their facilities.

The work carried out in the school centres might be described as follows :

- The individual *teachers seek assistance in the choice of new teaching aids*, the solving of new tasks, the use of new technical aids.
- Groups of teachers seek assistance in the *preparation of new tasks*; or several groups of teachers in co-operation seek assistance in the use of radio or television programmes.
- The entire teaching staff of a school may work in the school centre on *changes in the school's curriculum.*
- The leader of a school, or its teaching staff, meets with the school committee or municipal board for a *demonstration of new teaching materials.* It it largely due to this activity that in the last few years the schools have been equipped with modern teaching material. It should also be remem-

bered in this connection that the Danish "folkeskole" is a municipal school, where all the teaching material is paid for by the municipality, without any contribution from the State.

— The pedagogical staff of the school centres invite groups of teachers for a *discussion of current pedagogical problems*, such as the preparation of reports about camp possibilities, visits by schools to industries, the preparation of new aids for various fields, and so forth.

— The pedagogical staff of the school centres visit schools and participate as *instructors* at pedagogical discussions, or as instructors in the use of particular teaching aids.

— *Recurrent displays* are arranged at the school centres. These may concern specific subjects, and may be lent from the school's pedagogical study-collection, or they may be displays from some firm which then provides an instructor. Obviously a school centre does not actually recommend specific firms, but on the other hand it is interested in having all new aids demonstrated. It is then up to the teachers and the authorities to evaluate the material which is available on the market.

— *Lectures* are arranged for those among the general public in the county who are interested in schools. It is of great importance that as many as possible be informed of what is happening in the schools. The more contact we have with the people in the area, the better working conditions will the teachers get. That at least is our experience.

— Finally, it should be mentioned that the above-mentioned *professional courses* which are arranged by the Royal College of Education also take place at the school centres. Extensive *adult education programmes* are organised throughout Denmark. Many of the teachers at these courses have had no proper teacher training. For these, the so-called "non-pedagogical teachers", courses in pedagogy, psychology and methodology are arranged.

It should finally be pointed out that instructors are called in from all parts of the country, which again means that it is possible in this way to get in contact with the best and most advanced pedagogical circles. On a number of occasions we have also had well-known educationalists from other countries — the United States, Germany, Switzerland, Sweden — give lectures at seminars arranged at our centres.

School centres and school policy

I do not think it is unreasonable to consider whether certain impulses might work back to the central authorities from these school centres.

It is my opinion that when officials from the central administration, or from the county administration, meet with the teachers at the school centre in order to give *information and orientation*, for instance about changes or reforms in the law, about new examination regulations, about new marking procedures, etc., then a useful discussion almost always ensues. It is quite possible that interested teachers with practical experience may influence decisions in the Ministry. There are many examples that such "*feed-back*" can have a stimulating influence on the central administration, its activities and decisions.

In Danish society today it is important that pedagogical centres be kept at the disposal of teachers, parents and authorities elected by the people in the counties. The fact is that the politicians and the pedagogical experts may well set up *ideal concepts* on school policy that the teachers and the general citizen cannot keep up with.

In earlier times it has often taken a century for a pedagogical innovation to reach all the schools, even if it was of great importance. We can no longer afford to wait that long. Modern mass-media help to *create an understanding* among the population of the necessity of improved education. The risk is always there, however, that it remain only a superficial understanding. This is why discussions must be held in as many quarters as possible, and these can very usefully take place in a well-equipped school or pedagogical centre.

In Denmark, where ample room must be left for general debate, an endeavour must be made to activate as many as possible and to utilise all the knowledge available among the people. School centres may thus play a not inconsequential role in our attempts to rationalise and modernise the educational system.

The national educational institute and its network of research, documentation and information

by M. LEHERPEUX,
Director,
Regional Educational Documentation Centre,
Paris

Need for educational innovation

It has become a commonplace to say that scientific progress is so rapid that it would be madness to think that a teacher can make do throughout his career, that is to say over a period of about thirty-five years, simply with the knowledge he acquired when he was a student. We have reached a stage where nobody, whatever his occupation — and this is probably even truer of a teacher than of anyone else — can at any time in his life say that he has "*finished studying*". It is impressive to see with what enthusiasm, despite a total lack of resources, certain leaders in teachers' associations take it upon themselves to organise courses, lectures, meetings or visits. I have had many opportunities of seeing mathematicians, physicists or natural scientists trying to foster a fuller knowledge of the latest developments in their subjects, or "arts men" organising, for instance, seminars on linguistics. There is no doubt that what is called academic training cannot be acquired once and for all, and this must be borne in mind by those who have to ponder on the problems connected with *continued training* of teachers.

But nor can teacher training be provided once and for all, however long the basic training lasts, for throughout his career a teacher needs constantly to adjust himself to new audiences and may well have to pursue objectives which have greatly changed. Who would venture to maintain that in this last third of the 20th century the very idea of "*disinterested culture*", which underlies as it were the education given to people of my generation, can be regarded as the true goal of secondary education? Our ultimate objective — namely to enable our pupils to fit into society — requires us to alter, if necessary, whatever idea we may have formed of our role as teachers, for such rapid and profound changes are occurring in society itself. But pupils themselves are changing. Schoolchildren of today, who receive from all directions the messages which make up what has been called "parallel education", and who are no longer subject, or hardly so, to the family restraints which used to exist, are very different from those many of us remember having been in the days when grammar schools were surrounded by high walls within which no newspaper was allowed and where the most innocent of radio programmes was prohibited.

Furthermore, the instruments the teacher uses in his teaching are changing and progressing with unparalleled speed. The blackboard and the textbook are no longer the only "vehicles" of the knowledge it is his purpose to impart. And even if he personally had some prejudice against cinema, radio or television, he must know that his pupils constantly make use of these means of communication. He cannot, therefore, remain indifferent to the development of what is generally called *educational technology*. The time is at hand when he will need to be able to wield these useful tools which are already spreading. In the age of the computer, a teacher can no more persist in using only his book and his stick of chalk than can a traveller in crossing Europe on horseback rather than taking an aeroplane.

These then, in brief, are the three main sets of reasons — scientific progress, change in the goals of education and in schoolchildren, and the spread of new teaching media — which necessitate continuous educational innovation and hence a permanent continued training of teachers.

Educational documentation and research

Obviously, if teachers are to be able constantly to achieve the kind of "*renewal*" that is required of them, they cannot be left to their own devices or make do simply with the knowledge they acquired as students. Teachers, more than anyone else, ought to adopt that forward-looking attitude recommended by Gaston Berger who, when defining culture, said : "It is not the sterile evocation of things dead but the discovery of a creative impetus which is handed on from one generation to another and produces both warmth and light."

In this context, a point that is not without significance, is that twice in the course of its ninety-year existence the French National Education Institute

has changed its name. For decades it was called the "Educational Museum"; then it became the "National Educational Documentation Centre" (hence the name "Regional Educational Documentation Centre" which the centres in our educational districts still bear); and finally it became the "National Educational Institute".

These are much more than changes of label. The name "Educational Museum" seems to me to be perfectly suited to a period when the key to success, for every good teacher, was to be able to emulate the best examples. The thing to do was to go and cull a collection of models in time or space, that is to say from our national history or abroad, and simply copy them. A national centre of educational documentation is quite different from an educational museum, which is after all only documentary material or a collection of data which can serve for study. "Documentation centre" means a call to *private study* on the part of those who come to use it (or who are invited to come) which will enable them to progress further. A museum can be visited passively, in a spirit of contemplation. A documentation centre can be used only with a view to action, so to speak, because anyone who goes there does so in the hope of being able to take advantage of the instruction (docere) it is able to provide.

It was therefore an important step when the Educational Museum became the National Educational Documentation Centre. But it was surely an even more important one when it became the National Educational Institute. For then emphasis was given to the need for *continuous research* which would constantly add to the material available (including the collections of the Educational Museum) and would in any event make it possible to keep pace with or even go ahead of the essential effort of the educational innovation I mentioned, which will be conceivable and beneficial only if it is not dependent on the whims of a handful of foolhardy innovators.

The National Educational Institute is now primarily dedicated to research, in the same way as an institute of metallurgy or of telecommunications is. It is for the research it carries out that it warrants being considered as a kind of Ministry research department on a par with the research department of a large industrial firm. But it should be stressed here that this research is done not only *for* teachers; it is done *with* teachers, as I shall now try to show. This may well be its novel feature, but it is also without question the sine qua non of the success of educational innovation.

The documentary material to be supplied to teachers is no longer, nor could it possibly be, something rigid, something unalterably bound by rules or regulations. It is constantly undergoing transformation which derives its own impetus from continuous research.

The French National Educational Institute is responsible, amongst other things, for publishing the regulations issued by the Ministry and in that capacity it publishes, seminar after seminar, the *Bulletin Officiel de l'Education Nationale*. But there are two points which should be made in this regard. The first is that any attentive reader of the "Bulletin Officiel" will see that the regulations themselves are constantly changing. Even though the administrative style is such that the Ministry usually refers to "its" previous circular (which is often in fact a circular of a previous Minister), even though what are presented as "supplementary" instructions will often in fact demolish the previous instructions and enjoin teachers to alter tack, often quite considerably, this apparent continuity cannot conceal the constant questioning of the aims and methods of education. This questioning is a result of research carried on day in day out, mainly by the Institute itself, which is the apparent custodian of the rules — as publisher of the "Bulletin Officiel" — but is at the same time, with its responsibility for a multitude of educational research projects, the instigator of the constant revision to which those very rules are subjected. In other words, documentation of the most official kind is continuously being recast, under the impetus of ever-progressing studies.

The second point is that on the same day as the "Bulletin Officiel" is published there appears the weekly journal *L'Education* of which the Institute is only the publisher, editorial responsibility being in the hands of an independent association called "Comité Universitaire d'Information Pédagogique" (CUIP). But it is impossible not to regard these two publications, which reach the same readers at the same time, as being at it were complementary to each other. "L'Education", which has one section that is left in the hands of the Minister's private office and another which has no official character, provides a great deal of information about what is being done and, if I may use the expression, what is astir. For instance, it has a column headed "Crossroads of innovation" which reports specific examples of successes or experiments, often bold ones, which serve as a kind of stimulus to do better or in any event to get out of the rut from which many safety-minded teachers would never escape.

And so it can be seen that educational documentation and educational research are two activities which are inextricably linked — not only from the standpoint of teaching methods but also from that of teaching media.

For this reason it is important not only that the educational research department should constantly endeavour to improve methods but also that the educational media department should, with the help of the "ministerial committees for the study and approval of educational media", work both on actual educational "messages", such as films (16 or 8 mm), slides and recordings, and on devices for conveying these messages, such as projectors, gramophones and tape recorders. There is even an "experimental applications" division, which forms part of the educational research department but is closely linked both to the educational media department and to the schools radio and television department; with the help of tests conducted in experimental establishments or in conjunction with teams of volunteer teachers, the division is doing some very intensive work on what might be called *avant-garde technology* which includes—as regards techniques—closed-circuit television, teaching machines, questioning machines, etc., and—as regards the closely related aspect of methods—programmed instruction.

Thus educational documentation in this last third of the 20th century is far from being something inert. It is the result of continuous study carried out in conjunction with teachers without whose help no experimentation would have any real meaning. It is, as it were, the fruit of a constant effort of renewal conceived in the same way as that of the teachers themselves and pursued by the boldest or most courageous of them.

What is being done, therefore, is *applied research*, whilst the fundamental research on which applied research is inevitably based belongs and will continue to belong specifically to the university sector.

There can be no question of not taking the fullest advantage, as soon as possible, of the improvements which this applied research holds out for teaching and education. For, since research is being fed, as it were, by the teachers, who enable it to conduct its experiments, it has a duty to give them the benefit of the progress of which it has devised the means, thus ensuring a continuous circulation of educational thought and making *"semi-development"* and *"development" projects* part and parcel of research projects.

Educational information

The results of research carried out both by the educational research department (including research done by the experimental applications division) and by the educational media department, should be passed on to teachers in the most efficacious manner. This is where the work of information comes in, about which it remains for me to say a few words. The purpose of this work seems to me essentially to be to ensure that documentation, which I said a moment ago depends on the results of research, does not remain a dead letter but leads to *genuine innovation* in the educational world.

This work of information, it seems to me, can — to go into details — be carried on in three ways at once, namely through the printed word, through telecommunications (radio and television) and through direct contacts (which, when all is said and done, may well be the most effective of the three). Accordingly, the National Educational Institute is endeavouring, as far as its powers will allow, to make the fullest use of these three ways through its documentation and information department, its schools radio and television department and its courses department.

The same approach is adopted to the use of radio and television in education. Through these media, schoolchildren can listen to a real English conversation between real English people, a real German conversation between real Germans, or a real discussion between well-known philosophers; and they can then work on these after having been prepared for them by the companion material. But I shall not go here into this aspect of school broadcasting, important at it is, as I want to concentrate more on what is *being done for the teachers*. This is expanding year by year. One aim may be to provide them with fresh knowledge. But the main purpose is to influence teaching methods and practices. Thus, at this very moment, work is being done on several series of broadcasts (to be received, preferably, by teachers in groups, so that they can discuss them afterwards) dealing with the threefold division of the curriculum and the new look it is hoped to give to primary education as regards both the basic subjects (French and mathematics) and all those subjects that have hitherto been too departmentalised, such as history, geography, natural science and artistic subjects, which have now been grouped together under the single heading of "awakening" activities. It will be seen from this example that, research having led to the aims, organisation and methods of primary education being reconsidered,

steps need to be taken forthwith to "*win over*" teachers, to persuade them, whilst encouraging them to hold discussions (hence the idea of forming groups of teachers for receiving broadcasts) and that in consequence development work follows on from research work.

Furthermore, courses organised on a country-wide basis by the Ministry, usually with the help of the National Educational Institute, will make it possible to *train trainers* who will then go to the various educational districts (it will be recalled that France is divided into twenty-three such districts or "académies", and I may add incidentally that in each district the National Educational Institute has a branch known as the Regional Educational Documentation Centre). Work will then be carried on at "département" level, or in a small area, at the level of the school district or the primary education inspectorate area. It will have the support of a whole system of pilot establishments where experiments are in progress. These establishments will be the framework for discussions from which, incidentally, through a kind of feedback, the national educational research authorities will benefit.

This continuous to and fro movement, this genuine *circulation of thought*, which was once advocated by a great French educationist, Jean Guehenno, whilst he was pondering on the best way to educate people, seems to have become a vital need of the great organism which education constitutes. The network that is essential for this circulation is being established. Apart from the regional centres of educational districts, there are centres operating in a number of "départements" and their numbers are likely to increase. Already many secondary education establishments have documentation and information services (SDIs) which it may be supposed will one day serve the "school district", i. e. a personalised unit where, in a town or small area, teachers and educationists will be able to meet and talk together. Of course, such a network is still far from completion.

Now that the importance of continued training for teachers is unanimously recognised, the role and nature of educational documentation are better understood and appreciated. It is now a means and not an end; the end is in fact continued training.

Multi-media systems, home study courses and continued training

by G. DOHMEN,
Director of the German Institute for Academic Home Study,
Tübingen

The newly-founded "Deutsches Institut für Fernstudien" (German Institute for Academic Home Study) has, in the first instance, concentrated on developing home study courses for teachers, with a view to *updating and upgrading*. By this we want to gain the practical experience which would put us in the position — as soon as the German institutions of higher education are ready for it — to introduce home study also as a means of relief in the area of academic undergraduate work.

The Deutsches Institut für Fernstudien is a federal institute connected to the University of Tübingen. It is supported by a special foundation, bearing the name "Stiftung Deutsches Institut für Fernstudien", and financed mainly by grants from the Volkswagen Foundation.

At the present time home study materials are being developed and tested for courses of study for the retraining and upgrading of teachers in the following subjects: *English, Mathematics, Biology, Education, Social Sciences* (i. e. Politics, Sociology, Political Economics and Law), *Religious Instruction, Chemistry, Physics and Work Studies* (i.e. an introduction to the contemporary world of labour in the technological field). Each course consists of instructions and aids to study which will be

— sent to the individual's home for his own study, and

— used in the obligatory seminar courses and the voluntary local work groups made up by the home study participants.

The study material for individual study at home will consist primarily of study guides presented in the form of written material, pictures, radio or television broadcasts, sound and video tapes, etc. Over and above this the use of sound films and computer terminals for the seminar courses and work groups are under consideration.

The present situation of continued training of teachers and the possibilities for academic home study

The continued training of teachers in the Federal Republic is practised in the various Länder in different ways and with varying effect. However, both the organisers of this type of training and the participating teachers complain of a common *deficiency* in the various systems, namely: continued training remains sporadic and lacking in integration; participation is frequently dependent upon finding a substitute for the classroom teacher, and as a consequence such training is often incidental and above all, too short. The form of the continued training programmes is, in most Länder, determined by a succession of single lectures, followed by discussion, in week-end or five-day courses which are rarely integrated into a planned and logical study series.

What is needed today is a *carefully planned, logically structured course over a longer period of time, which would lead to continuous study on the part of the teacher and should help him to supervise his own progress.* The most desirable type of refresher course (Kontaktstudium), which would enable the teacher, at certain intervals after his basic training, to remain in contact with academic progress and the university, is simply not practicable within the framework of the present teacher training establishments. To realise this it would be necessary to change their structure and method so that the participants were better prepared by a previous home study course, prior to attending these "face-to-face" courses (Präsenzkurs). At the end of such a course participants could again be guided towards a further study course in their respective subjects, which will simultaneously prepare them for a subsequent, systematic "face-to-face" course at a higher level, based upon the preceding course.

It is a well-known fact that what today passes as continued training of teachers are sporadic courses where the course director and the guest lecturer are frequently left to their own devices to make the course worthwhile and meaningful. It is, therefore, not possible to lead participants along the necessary path whereby they can take up their own study, feel responsible for it and supervise it themselves. At the end of such a course the participant returns home with some stimulation and may be resolved to study further. But the daily grind of his profession, and the lack of a suitable follow-up procedure, prevent him as a rule from doing any really effective further study. This is where an independent academic home study course for teachers (Lehrer-Fernstudium) would have its role to play. The participants in the course would be sent monthly packages of carefully prepared, logically conceived study material with instructions, demanding also, from time to time, appropriate written work from them, which after evaluation would be returned. In this way, appropriate continued training programmes would become integrated into a well-planned sequential study series.

The setting-up of such a system of academic home studies for teachers would, in my opinion, correspond to the accelerated progress of scientific knowledge, especially in the natural sciences, social sciences, linguistics and the science of education.

There are also at present opportunities in many Länder for a gifted, aspiring teacher at a primary school to progress to the position of a teacher at a grammar school by means of successfully completed study of an additional subject (Zweitstudium) at a university. But as a rule this path is strewn with such great bureaucratic and financial difficulties that so far only a few have been successful in following it. Considering the present teacher shortage, and the overcrowding in universities, it is simply not possible in the foreseeable future to permit an increased number of teachers to enjoy paid study leave with a view to promotion. On the other hand, the opportunity to take part in an academic home study course which had been specially geared to and constructed for planned home study as an introduction to regular promotion, could become a practicable way for many teachers to advance in their careers. However, it would be necessary to guarantee those teachers who take such a home study course along with their professional work, certain relief as far as their classroom duties are concerned. This problem is still unresolved.

Such academic home study courses could bring about a mobility amongst the various categories of teachers provided they did not lead to the withdrawal of the more gifted and ambitious teachers from the primary schools into higher schools. To avoid this the classification of teachers ought to be dependent only on completed examinations and should not be determined by the type of school at

which they teach. If this were the case, it would facilitate greater inter-penetration between the various categories of teachers, which are still separated as a result of old class barriers in Germany. It would certainly be most favourable for the position of the teacher if, by means of academic home study, a more objective and less purely official evaluation procedure came into being as far as promotion, change of posts, etc., are concerned.

The decisive criterion of whether a teacher should rise to a higher position ought to be his willingness to submit voluntarily to more stringent demands than his average colleague would be willing to do, and his capability of fulfilling these higher demands. Naturally an important factor in all this continues to be the teacher's own ability as a teacher. The teacher who takes a home study course only as an excuse for neglecting his pupils and his teaching should not merit any form of promotion. But the teacher who, without in any way neglecting his professional duties, manages to spend daily one or two hours studying in order to become more competent both in his subject and in pedagogy in the best interest of his pupils, must be adequately upgraded for this increased effort without regard to his age or the number of years he has been in service.

Continued training of teachers by home study courses

In this context it is very important to see that our home study courses for teachers do not just deal with the traditional unversity subjects but that we always try to combine this information on new developments in the subjects concerned with didactic reflections and advice for the teaching practice, i. e. we endeavour to help the teachers in the difficult task of applying the new material in the classroom according to modern didactical possibilities.

The crucial point is to help teachers without manipulating them; which means not to impose prescriptions but to show different possibilities and make certain suggestions — and then ask the participating teachers to test these proposals in their classrooms ; submit critical reports on their experiences and — if possible — make better proposals to their colleages. These reports will be co-ordinated at the Institute into a sort of synopsis and sent back again to the participants.

To achieve this impact on the daily work in the classroom our planning committees and our teams of authors and editors are generally made up of three groups of people: university professors who deal with the school subjects; specialists in didactics, educational psychology, programmed learning, educational sociology, etc.; members of the group for which the course is organised.

The multi-media approach

Whenever a certain subject of instruction is being conveyed, or a learning process directed, it is done through a "medium". In this sense the personal speech of a teacher is as much a didactic medium through which knowledge is conveyed, as is a book or a film, or radio and television.

In the *multi-media approach* one of the crucial points, if not the crucial point, is the fact that one does not simply endeavour to achieve very different teaching accomplishments through one and the same medium. From the point of view of university didactics, for example, it must be considered as too one-sided that at our universities nearly all teaching functions and teaching matter are still conveyed without differentiation by means of the single medium of the personal spoken word of a lecturer.

But it would be equally primitive if, for example, we wanted to transmit very different teaching functions and subjects by means of the more modern but in another way equally one-sided medium of television. The planning group "Television University" of the German Television, Second Programme, with whom we are in close working contact, has also realised this; and so this university television programme is now being planned in co-operation with our Institute along the lines of the multi-media approach.

At all events, it is quite obvious that *not every medium is equally suitable for every teaching function*. One can, for example, make good use of a television film if one is mainly interested in visualisation of processes or the motivation of functions. But there are other equally essential teaching functions, for example :

- guidance towards individual adaptation of a subject matter and cross-associations; or also towards the application of methods and drill practices, etc.,
- or control and examination,
- or individual consultation and coaching,
- or group work and group discussion, and so forth.

For the function of study guidance and self-supervision a *home study letter* is much more suitable and rational than a television programme.

For the function of external supervision and performance evaluation the use of *a computer* is today available for appropriately standardised examination papers.

However, it must also be realised that certain functions which were formerly carried out by personal conversation or group discussion, cannot for the time being be replaced by any non-personal medium. This means that even with modern home studies we cannot do without the inclusion of *direct seminars* or *study groups*.

As every process of learning and study is, to a certain extent, differentiated, it is necessary to make use of different media in a multi-media approach. By this term we mean a complete combination of various media differentiated according to their specific functions. But in this field we are still at the very beginning of a process of "learning by doing", i. e. of something like action research or operational research.

This summer term already more than 15,000 registered teachers are taking part in the *Quadriga Radio Collegium "Pedagogics"*, which is an experiment to combine — with regard to the appropriate functions of each — radio programmes, written home study material and local study groups in a one-year pedagogical home study course. From this large-scale experiment we hope to gain valuable information for an effective multi-media approach within the framework of the rationalisation and reform of university study, and new collaboration between universities and adult education. In this Radio Collegium, the adult education centres are the organisers of the group work in local study groups. We then want to bring this experience into the planning of further multi-media approach systems including television.

Written material for home study

There is a fundamental difference between one of our home study lessons and a chapter of a textbook.

The lesson — which is sent to the home student usually weekly or monthly — has the character of a *study guide*. That is to say, the home student receives relevant instructions and guidance as to what he is to work on, which approach he should adopt, and what aids he should make use of.

It is generally necessary, in the first instance, to give the student an introduction, through the home study lessons, to the relevant subject and its specific problems; to inform him about the various schools and directions of research and its results; to outline the most important methods of the relevant subject disciplines; and to provide a well-founded review of the situation and problems of the subject on which the home student himself will then be working.

One could, for example, in the written material give home students something like the following kind of progressive set of instructions :

> "Going on from the problem just touched upon, please work through Chapter 3 in book A according to these question formulas :
>
> 1. .....
> 2. .....
> 3. .....
>
> Consider: What do you derive from this book by working through it from these viewpoints? Which answers do you arrive at from the question formulas?
>
> State briefly the results of your work.
>
> Then work through Chapter 5 in book B according to the same question formulas and state again the appropriate results.
>
> Now compare the two sets of results.
>
> How far do they agree?
>
> What are the decisive differences — in the interpretation of the problem, in the method, in the evaluation or meaning of the results? How are these differences to be explained, that is to say: to what extent can they be attributed to the special lay-out of the two books, to the assumptions, to the whole "school" of the respective authors?
>
> Which further questions or means of investigation do you consider important, assuming that one or another of the controversial issues is to be further clarified ?
>
> Please send us on the accompanying form a short report on the results of your work and any considerations about this problem."

The work reports requested need not necessarily be corrected individually — that would, among other things, make excessive demands on organisation and personnel. Most of the time a kind of

collective *review* of the most important work results connected with the exercise will suffice, and this is then sent, in the same form, to all participants for comparison with their own results to act as a standard by which they themselves can evaluate the things they have discovered and the conclusions they have reached.

Generally speaking, and as far as the home study material is concerned, it all boils down to finding a balanced proportion between :

— an "*orientation survey*", that is to say, a kind of statement of general points and categories, and
— a *detailed study of individual key points* which serve as examples in the study of the relevant subjects.

The problem of objectivising the course

The obligation of rendering the teaching and the work guides less subjective is particularly strong as far as home studies are concerned. The economic viability of home study stands or falls by the extent to which home study material can be used throughout the Federal Republic of Germany. This general application makes it impossible to let any particular school of thought dominate. As I mentioned earlier, we are compelled to employ a more objective, broader, franker approach if we intend to build a system of really independent studies. This is, I suppose, connected with the problem of adapting democratic methods to university teaching.

This can be achieved, above all, by provoking the students to discuss and express their own opinions, and last but not least, by encouraging them to give *critical reports*, derived from their *own experience*, relating to practical applications. We are trying to achieve this objectivity by teamwork, which, in the planning of an entire home study course, and in working out the home study material, should guarantee that representatives of different approaches within one subject area all have an equal say, so that something approaching a balance is attained throughout the whole course. This gives the students the chance of making a comparison of critical reflection, and of formulating their own opinions.

Direct courses and work groups

We consider it necessary to build *direct courses* into the home study course. The mentality of the teachers and students in the Federal Republic of Germany is not exactly favourable to the new attitudes towards teaching and learning, which home study courses entail. We must, therefore, at first make an attempt to lead the student into the new study methods of home study through learning methods with which he is already familiar.

The principal *aims* of direct courses within the framework of home study courses are as follows :

— introduction to the method of study;
— personal meetings between the student and the teachers and tutors who will later supervise their home studies;
— work with apparatus and equipment which the individual students do not have at their disposal at home;
— the completion of schemes which require the collaboration of several people. Here certain problems of communication and socialisation must be particularly taken into account;
— help with individual difficulties; also with motivation problems;
— testing — especially when we are concerned with a final examination as a basis for certificates and professional qualifications.

Of course, many of the aims of the direct courses can be realised even without the students having to travel periodically to a given place of study. In the USSR, for example, there are mobile *science laboratories*, housed in railway carriages. These are equipped with the necessary personnel and regularly travel about the country on a fixed itinerary, and are thus available to students in their home towns. At present we are considering whether something similar could be done in the Federal Republic of Germany.

In connection with the question of building direct courses into the home study courses I must underline the important part played by study groups made up of home students : in contrast with the direct courses which are planned as an integral part of the home study courses, the local work groups are voluntary organisations : i. e. students doing the same course and living in the same town who meet at certain times, in the adult education centre (Volkshochschule) or in the laboratory of a certain school or firm, for example, to discuss their problems, to conduct experiments together, and perhaps even to be able to view and discuss supplementary instructional films and slides. When the students are faced with special problems which they cannot cope with themselves, even by com-

bined effort, there is the possibility of inviting a special tutor, or of simply obtaining his advice by telephone.

Further rationalisation of the supervision of work groups by tutors should be possible with the *introduction of electro-writers* which make it possible for the material which the lecturer writes at his desk on a writing panel to be simultaneously transmitted to other machines at other places, and these visual transmissions could then be synchronised with talks over the telephone.

Advisory and control services

The student at home needs *advice and help* with his difficulties. He also needs an objective assessment and documentation of his *level of achievement.* Usually, the ordinary direct courses are insufficient in this respect.

There are several possible ways in which such advisory and control services can be built into the structure of the home study courses :

- *"Consultants", whether peripatetic or not,* who, either at a particular school or at a different place each time, have "consulting hours" for home students, and who, of course, will be present in an advisory function at the above-mentioned local study groups.
- A rationalised *Correspondence Advisory and Control Service* which, however, must be considerably simplified through additional pre-programmed material.
- In my opinion it would be ideal if these advisory services could be transmitted by radio — as in Australia — where students participating in a home study correspondence course can enter into direct radio contact with the tutor responsible for their studies.
- New possibilities for testing the students' achievements open up in the larger towns and regional centres when *data stations* are set up, connected to a central computer. Work groups, and later even individual students, can then test on the computer terminal the accuracy of the work they have performed and obtain assistance on how to correct their mistakes. For this purpose the exercises and the various solutions possible must, of course, be fed into the computer together with the relevant advice.

Prospects

The construction of academic home study courses for teachers which have been outlined here is, of course, still in its infancy. The future developments are not yet clear and we will undoubtedly make many mistakes, but from these mistakes, and from the analysis of our failures, we will have to learn. But we are convinced that further developments along these lines will lead in the right direction — which may perhaps be understood as being the direction towards an efficient introduction of the potential of our universities into the continued training of teachers — to the best of our children who will have to live in a world that is increasingly determined by modern science.

A new concept of continued training

by E. PETRINI,
Director,
National Centre for Educational Research
and Documentation,
Florence

Present situation

On 1st January 1967 there were 141,554 head-teachers and teachers in the new state "middle schools" (for pupils aged 11 to 14). Apart from periodical conferences and meetings where attendance is compulsory, it was not possible for the Ministry to arrange one to four week courses and seminars for all these teachers. At the same time, the Ministry had to deal with other kinds of teachers, to prepare the reform of upper secondary schools, etc. On the same date there were 120,936

teachers and head-teachers in upper secondary schools, and by adding the total primary school staff of 245,074, we can see the scale of the Ministry's responsibilities, extending to half a million persons serving a school population of some 8 million pupils. The problems could not be solved merely by administrative circulars, but by a widespread campaign for information, documentation and education.

In an OECD document (*Reviews of National Policies for Education*, Paris, 1969), the following information can be found on pp. 234-235 : "The Italian authorities' report gives but very general information on efforts to bring teachers up to date, which makes it difficult to put forward any specific views." It is observed that there is no overall coherent plan in Italy, and that policies for training and administration of teaching staff cannot be considered advanced. This document, however, although published in 1969, describes the bulge years from 1962-1965. A great deal has changed since then, as the result of a major insight and guideline followed by the Ministry and recognised in the OECD document, the clear realisation that the major problem is not the general education or specialised studies of teachers, but their pedagogical training.

This problem is difficult to solve in Italy for a number of reasons, but especially because of deep-rooted traditions in teachers' education and professional training, which have bred resistance and mistrust. Resistance stems from the remnants of the philosophical educational doctrines which, for almost the entire first half of this century, nurtured the confusion between knowing and knowing how to teach, denying that pedagogics was an independent discipline, and reducing any study of communication to a language of cultural expression. Mistrust is due to the fact that, in 1945, post-war school curricula were hastily adapted in the direction of democracy and new methods, under the supervision of Mr. Woshburne, and this adaptation was regarded as a foreign import. For most Italian teachers, the new teaching methods had a foreign ring, or were utterly meaningless. A long period of hard work was required before the reforms could actually get off the ground. The first task was to define objectives, then to discuss and carry out individual and group preparation of people who could continue the campaign from the *Centri Didattici Nazionali.*

These centres are an original Italian institution, stemming from the Italian Teaching Exhibition by Giovanni Calò in Florence in 1925. As a result of a number of events, this exhibition became first an Educational Museum, then in 1941 a Teaching Centre, and finally in 1943 a National Teaching Centre. At this time (1942), the setting up of ten National Teaching Centres had been authorised by a special Act; the centres were actually set up between 1950 and 1960. Present Centres are :

- National Teaching Centre for Nursery Schools (Brescia)
- National Teaching Centre for Primary Schools (Rome)
- National Teaching Centre for Middle Schools (Rome)
- National Teaching Centre for Technical and Vocational Education (Rome)
- National Teaching Centre for Upper Secondary Schools (Padua)
- National Teaching Centre for School-Family Links (Rome)
- National Teaching Centre for Physical Education and Sport (Rome)

To these we must add the European Centre for Education (Villa Falconieri, Frascati), the National Teaching Centre in Florence, which is known as the National Teaching Centre for Research and Documentation (Centro Didattico Nazionale di Studi e Documentazione), including the Educational Museum and Educational Library, as well as the National Centre for Audio-Visual Aids and the National Teaching Centre for Art Education.

The basic functions of the National Teaching Centres are as follows :

- *Studies and research* in the fields of pedagogics, biology, psychology, teaching and health;
- Organisation of *experimental schools and classes;*
- Development of all activities for furthering *basic and continued training* of teachers.

Altogether, the National Teaching Centres are a tool for research, enquiry and reform in the different sectors; they collaborate in providing information, documentation and refresher courses for teachers.

A new concept of continued training

One conclusion of principle may be drawn : continued training must become an ordinary, and above

all a compulsory part of a teacher's professional life. Such courses were seen as a form of *permanent education* in the conclusions adopted by the Seminar held at Villa Falconieri, Frascati, in July 1968, by the European Centre for Education, one of the ten centres mentioned above, in collaboration with the General Directorate for the "Middle Schools" and the Seminar of Educational Sociology of the "Opera Preparazione Professionale Insegnanti" (Milan - OPPI). These conclusions may be regarded as a synthesis of Italian work on this subject over the last twenty years (1).

These conclusions also stated that the competent public bodies would have to participate in a social approach to educational policy, with coherent overall planning. A policy for keeping teachers up to date must be based on the principle that courses, meetings, dialogues, seminars and study days must stimulate active, personal participation, and must be in accordance with well-tried patterns, using special techniques (group dynamics, working groups, discussion forum, etc.) and specialist staff, with the support of universities and research institutes; above all they must provide teachers with plenty of up-to-date information material.

The conclusions, having emphasised that the press and television are still far from ready for action to bring teachers up to date; having pointed out the Ministry of Education's responsibility for promoting and encouraging work in this field; and having declared that continued training of teachers is not merely an experiment, go on to conclude that the most effective strategy for keeping teachers up to date, meeting promptly the vast requirements of a large and steadily increasing number of teachers, is, above all, to use both the normal institutional groupings of teaching staff (teachers' associations, class councils) and other methods and procedures (programmes and curricula, techniques and methods of school work, individual participation and teamwork, group relationships, self-teaching).

"Secondly, it would seem advisable to open the school to *critical participation*, both from the outside (relations with families and associations) and from within (relations with youth clubs, school magazines, etc., and pupils' associations).

"In particular, pupils must be *associated in planning*, and their spirit of initiative and co-operation must be encouraged, since action for training and bringing teachers up to date can be stimulated in this way.

"Finally, it appears advisable to use a number of *incentives* (premature salary increases, promotion on merit, study trips, sabbatical periods, holiday research) to stimulate among teachers a greater interest in innovation and participation in their special field of responsibility."

It is also pointed out that the university must carry out thorough-going *reforms*, because teacher training in the universities is closely linked with action in continued training of teachers. There must be continuous collaboration between the "permanent, open university" and teachers in schools of different levels who receive their training in this university.

The aim of continued training is not only to encourage participation, but also to avoid the frustrations that may arise when teachers *submit* to reforms, as being changes imposed by force and from outside.

This aim can be achieved by the introduction of new techniques and new subjects, by seeing that modern teaching materials are widely available, and by new methods of information.

The Seminar further developed and defined certain points that had been the theme of a study on teachers conducted by the team of the European Centre for Education, Frascati, on the initiative of the National Research Council, under the direction of G. Gozzer. The report sees continued training as having three aspects, namely :

- *Cultural data :* either general knowledge, or advance in a specific branch of knowledge and scientific progress in the various subject groups;
- *Educational data* in the overall field of "pedagogics" which covers social concepts on the aims of education, manner of young people's participation in the learning process, learning methods and processes, research on psychology and behaviour, techniques and methods of communication, general and specific teaching methods, examinations and assessment of academic progress, new audio-visual aids, extension of education, etc. The field of pedagogics is so wide that in a certain sense it requires a specific and exclusive

(1) *Formazione e lavoro*, No. 33, Rome, sett./ott. 1968.

share in any action for bringing teachers up to date. It requires studies in so many specialised fields that it is easy to grasp the restrictive nature of the terminology used (pedagogical aspects) ;

- *Sociological data :* this aspect of continued training is generally neglected in comparison with the two preceding ones because it appears to have only indirect bearing on the process of education.

"In fact the social aspect is concerned with ways in which educational systems, and teaching staff in particular, receive and interpret the demands of society as a whole, and of the various social groups and individuals; such demands are often left unformulated and are not fully understood even by those directly concerned (family - pupils), and have hitherto been transmitted to the educational system indirectly through the complex and drastically limited mediation of parliamentary and administrative structures ; hence these demands are an expression if not of explicit social demands, then at least of probable trends in social expectations regarding the overall structure of society in all its forms and in all fields : moral, cultural, economic, productive, organisational, etc."

It should also be borne in mind that various professional associations and a number of trade unions have adopted a co-ordinated stand on continued training policy, and contribute to such training by arranging courses, distributing information, reports, and printed or duplicated documentation from the various associations.

Conclusions

Let me conclude this report with a few suggestions. We have noted the value of teachers' collaboration in the process of information and documentation. If the teacher participates and becomes one of the links in the chain, if he is not merely invited to listen and read, but to work as part of the team, if he feels a sense of commitment to the task, he will gain in psychological satisfaction, and find it easier to rise above routine work. The main point is to stimulate and encourage individual and group work, and to make use of such work once it has begun.

We are convinced, on the basis of wide experience, that educational documentation and information must be not only appropriate, but drawn up and adapted to fit the actual school situation by means of a twin process : on the one hand, we must have research teams, and compilation of material at national and international level, and, on the other, there must be teams to run the machines needed to store, process and distribute documentation and information, with a circulation running to several thousand. Training for this work takes time, and where there are no teachers trained to make use of information and documentation, delays will mount up, and we will be in danger of creating an *information gap*, a dangerous kind of gap that must be taken into account in common with the other "gaps".

One thing is certain : we cannot go on working on the basis of pedagogical technology at library level; joint international action — at least among groups of countries — is an urgent necessity.

Infrastructure for research, development and innovation of education

by H. VELDKAMP,
Head of Department,
Ministry of Education and Sciences,
The Hague.

In the Netherlands a number of institutes, institutions and groups exist, which are mainly or partly dealing with the dissemination of innovations in education.

A certain bi-partition may be noted between these groups, which has been maintained for some years now in a more or less general manner. Notably, a distinction is considered to exist between :

- the innovation of educational methods (didactics)
- the innovation of educational contents (curriculum)

The didactical innovation of non-university education in the Netherlands is the responsibility of pedagogical centres which have been working as dissemination institutes for 20 years already. The innovation of the contents is today still carried out for the greater part through teachers' unions and training institutes for teachers, in co-operation with the universities or independently.

These two categories will be successively dealt with in the following sections.

The pedagogical centres

The pedagogical centres of the various denominations were founded after the second world war, on the strength of the thought that there should be special institutes for the innovation of education. Their activities have developed from a mainly extensive guidance of teachers into a combination of extensive and intensive guidance of individiual teachers and of complete school staffs.

A start was made with the organisation of conferences and correspondence courses. This mainly theoretical approach appeared to lack effect, and for that reason practical courses were organised, which, however, appeared not to be sufficienly effective to be really capable of influencing education. The next step then was to organise the system of contact schools, and to devise a new type of course with demonstration lessons. The latter forms of introduction and guidance are still also lacking impact on schools. As a counter-measure the A.P.C. (General Pedagogical Centre) has designed courses which are intended as permanent additional training for teachers.

The governmental regulation of 1966 for subsidising pedagogical centres *defines* a pedagogical centre as "an institution aiming at promoting the improvement and innovation of education in co-operation with educational organisations and schools".

The same regulation defines the *task* of these centres as "promoting the improvement and innovation of the education with respect to pedagogy, didactics, and methodology". This task is then subdivided into task aspects :

- the elaboration of pedagogic and didactic principles for the benefit of education;
- co-operating in, or organising, courses for teachers engaged in public education, financed from public funds;
- contributing to the development of educational forms within the legal arrangements through guidance and advice;
- advising the minister, either on his request, or on one's own initiative.

The *Pedagogical Centres for Primary Education* are distinguishing between extensive and intensive guidance. *Extensive* guidance aims at arousing the interest of large groups through publications, conferences, workshops, introductory courses. *Intensive* guidance tries to reach schools as a whole via intensive and lasting contacts, and it furthermore makes an attempt at dissemination by having the schools convey the new ideas to other schools. This is the contact school system. Through this *contact school system* the centres have tried to get through to the real concrete situation. The system implies that specific schools are being intensively "treated" by the staff of the centre, after which the school directors or the school personnel, in turn, will supervise other schools. The condition is that all school personnel participate.

A more far-reaching system has been developed by the General Pedagogical Centre (A.P.C.). Since this is the more elaborate system, its structure will be described briefly : the course is meant to be "informative, instructive, introductory and stimulating", and it aims at providing a post-training for teachers, adapted to modern views. The system includes lessons by practical and theoretical teachers, as well as study material in the form of ten monographs per annum. The duration of the course is approximately 5 years. The course includes two working groups :

- a *local* working group, consisting of five schools, one of which is appointed as A-school every other year (see below); the remaining four are B-schools during that year;
- a *regional* working group, consisting of the A-schools from five local working groups.

Regional meetings are led by A.P.C. staff members. Meetings are held every fortnight, 15 times a year, in A-school classes, schools taking turns. All A-school personnel participate. The organisation is the responsibility of a regional secretary (who is not on the A.P.C staff). Regional meetings consist for the greater part of an introduction and discussion, and partly of demonstration lessons in classes of the recipient school.

Local meetings are, for a part, led by the A-school director, assisted by the other staff of his school. A number of meetings, furthermore, is led by an A.P.C. staff member. Each year ten meetings are held, attended by all personnel.

A-schools are conveying to B-schools what new educational methods have been discussed at the regional meetings, but *only after these methods have been put to a practical test.* The organisation of local meetings is the responsibility of the courses committee, acting in consultation with the regional secretary.

In this structure apparently an attractive combination of information and "natural" demonstration is accomplished. Whether, with this system, the information remains sufficiently intact, and whether it is sufficiently intensive in other respects, can at present not yet be determined.

The *Pedagogical Centres for general secondary education* are operating mainly via study groups of subject masters studying new didactic methods, after which the results are brought to the attention of colleagues via publications, courses and lesson letters. However, they are also organising conferences for directors and junior teachers.

The *Pedagogical Centres for Vocational Education* have at first dealt with research and reporting, often via teachers committees by subject. A substantial part of the work of these centres is carried out in co-ordination committees. The research subjects are related to curricula, didactic methods, and specific school life problems. The results were published as directives, to be followed, or ignored, by the schools.

Systematic information has originated only gradually, first through conferences, working groups, application courses, but later also by pedagogic-didactic staff members visiting schools. Recently, *regional information centres* have been added. Especially in the beginning the work was thoroughly oriented on directors and assistant-directors. The application courses, for an important part, have been delegated to other institutes.

The pedagogical centres have, to a certain extent, been successful in their innovation activities. Interest has been aroused in broad circles, information has been disseminated, various forms of experiments and "try-outs" have been promoted, and, in general, continuous attention to innovation activities has been provided.

However, much is still left to be desired. Due to their limited funds and lack of manpower (especially until recently) the centres have not been able to accomplish an important breakthrough :

— *The staff is too small.* Together, the pedagogical centres, on 1st January, 1968, had a staff (scientific and/or pedagogic didactic workers) of about 35. Of these, 10 were concerned with basic education, 9 with the general secondary education, and 17 with vocational education. To these should be added a number of practical workers, in most cases directors of contact schools. It goes without saying that this manpower figure did not allow for an intensive contact with over 18,000 schools with more than 125,000 teachers.

— *The staff lacks a social-psychologic and social-pedagogic element.* Most staff members have had pedagogic-didactic training. Here, emphasis is put on the didactic aspect, and the pedagogical centres, therefore, are actually "Didactical Centres". Because of the lack of the social-psychological and social-pedagogical background, the methodical aspect of the innovation conveyance has been given too little attention. The centres have, of course, gone to a lot of trouble to develop an optimum conveyance technique, but they have lacked the specialist knowledge to do so.

— *The scientific element in staff is not sufficient.* Most pedagogical centres employ only one scientific staff member. Most of them are pedagogues. The social-scientific element is missing, which affects the fulfilment of the linking function between research and practice.

— *The number of schools reached is too small.* Owing to the small staff, activities have remained marginal. In specific inspectorates 90 % of the teachers appeared to have had no contact at all, in 1963, with the work of the centres. In 1964, 190 primary schools were involved in the contact schools activities; i. e. approx. 2.5 % of the total number of schools.

— *The contact schools system is not compensating for the few direct contacts.* The basic idea of the contact schools system is that information and innovations are disseminated, via these schools, to other schools, and that the work which has started at the

limited number of contact schools will thus spread "of its own accord" over the whole school network. It is believed that contact schools are not becoming independent enough to proceed on their own with sufficient speed and effect. Even if this were possible, a process of watering down inevitably occurs with the passing on of the message. The system the A.P.C. has now designed tries to solve these problems.

— *The centres are too far away from the practical situations.* Many teachers feel the centres' viewpoints are too theoretical, that they are not sufficiently familiar with practice, and that they do not adequately link theory with practice.

— *The highly central character of the centres distances them from practical reality.* In combination with the small staff this means a loss of contact with the field, and small accessibility for the field.

— *There is too little continuation and consolidation of the activities.* Due to a number of the factors mentioned, the conveyance lacks longer term follow-up of initiated changes, and guidance of practical workers. Enthusiastic participants sometimes feel isolated and more or less lost.

— *The pedagogical centres for general secondary education have little grip on the pedagogic-didactic structure* since secondary school teachers are not very open to this. There, special attention for the techniques of conveyance is required.

In view of the above there is a reason for reconsidering the position and the function of the pedagogical centres in educational innovation as a whole. This will be discussed in more detail at the end of this paper.

Other institutions

Next to the pedagogical centres which are mainly dealing with the innovation of didactic methods in education in the Netherlands, some institutions can be mentioned which deal rather with the innovation of the educational contents (the curriculum).

The contents of education for the various school types have been recorded, in a global way, in the educational laws. Further details for the majority of the educational branches are mentioned in the examination requirements. Contrary to pedagogics and didactics, government finally has an important say in this respect.

For most forms of secondary education in the Netherlands final examinations are taken centrally, or are school examinations with centrally devised questions. This implies that the school programmes are corresponding very much in practice. Until a few years ago, in case a change was considered to be necessary in specific sections of the curriculum, often an ad hoc committee was established, advising the Minister of Education on changes to be introduced.

In the past few years the government has established for various subjects in general secondary education, *committees for the purpose of updating the curriculum* for the subject in question (mathematics, physics, chemistry, biology, foreign languages, classic languages). These committees, which for the time being are regarded as permanent committees, have already given their advice on changes to be introduced. Some of the committees have devised, with the approval of the Ministry of Education, a *course programme*, in order to familiarise teachers with the new elements. A topic of discussion at the Ministry is the determination of a general structure for such conveyance. This will be discussed in the last part of this paper.

Next to the committees for the updating of curricula there are some other institutes dealing with the innovation of educational contents. They may roughly be divided into two categories: the universities, and the organisations of subject teachers and of schoolboards. The various university institutes are able, through new results of scientific work, to pass on information to the university graduates, among whom are the teachers at the various forms of secondary education. Gradually, an increasingly large network of *post-graduate courses* is growing, interest for which is also growing, although the system may not yet be looked upon as a balanced, fully operational one. University circles are devoting more and more attention to this matter. Such courses are sometimes devised independently by universities, and sometimes on request by or in co-operation with the second category of institutions.

The organisations of *subject teachers* study their discipline in all kinds of study groups and edit their own professional journals. Often they are developing initiatives, leading to additional training courses as organised by the universities. Also here a rapidly expanding system of additional training is develop-

ing, which is not yet completely balanced. The cost of this work is generally subsidised for the greater part or completely by the Ministry of Education. In order to provide a better picture of the development as it is expected for the next few years, the Ministry has requested the institutions working in this field to draw up a planning, over a number of years, of activities to be carried out.

An infrastructure for research, development and innovation

In spite of recent developments, there is still much to be done and many problems to be solved. There is, as yet, no question of an optimum contribution from research and development to education in the Netherlands. However, broader circles are becoming aware of how much is still lacking in education. Quite rapidly one has switched, from a situation of relatively great self-complacency with the educational system and its operation, to a situation where complacency is dominated by general criticism. Also because of the augmentation of the average training level of the population and the increasing standard of living, the importance of good education for society, is more and more recognised, both from a viewpoint of the wish for optimum development of each individual and the viewpoint of the part which education may play with respect to improving the social structure, which large population groups are considering to be still very imperfect.

In view of all this the tools should be found to guarantee, as much as possible, a *continuous optimum operation* of the education in a rapidly changing society.

The general direction which education in the Netherlands should start to follow, as well as its quantitative and budgetary consequences, should be indicated by way of a properly structured educational planning. Public opinion is in favour of more educational planning, and the institution of an *Educational Planning Council* is being mooted. In our country educational planning is not easily considered a matter which only concerns the Government. It is, therefore, obvious to consider a planning discussion body, where interested groups from society and government are determining, in a continuous dialogue, the main planning lines of an educational policy. Since education is not to be regarded as an isolated part of society such a discussion body should have a link with bodies dealing with the planning of other social sectors, whereas all bodies should properly communicate with those who are dealing with the future of society as a whole.

In the Netherlands a committee is working on the preparation of an advice to government on what should be regarded as organisationally desirable for the creation of such an institute, to be charged with the initiation studies in futurology or forecasting. This problem must be solved if, on the one hand, the long-range aims of educational planning are gradually to become more clear and if, on the other hand, efficiently operating tools for the realisation of these aims, are to be created in time.

Within the framework of educational planning the continuous innovation of the quality of education should be regarded as an instrumental activity. In order to accomplish, for that purpose, an optimally operating procedure, a proper structure should be developed, within which the various processes may be performed.

In the *innovation process* as such many problems occur. In particular, innovation activities have often foundered on a defective attunement to the reality of educational practice in pedagogic-didactic, social-psychologic, and administrative-managerial respect.

The innovation process may be sub-divided into three, inter-related stages, each stage calling for specific capabilities :

invention : the stage in which new ideas are "invented", and further developed ;

development : the stage in which new approaches are tested for exactness (evaluation) and efficiency in practice;

dissemination : the stage in which innovations are distributed in education, on a large scale.

Problems occur in all three stages.

Problems in the invention stage can be related to the little invention of innovations in education itself, or to the defective flow of innovations, to the defective interaction between theory and practice, to the problems of integration of educational research in the practical innovation thinking, and to the little developed fundamental educational research.

The main problem in the development stage is the almost complete lack of evaluation. Evaluation, however, is necessary, since otherwise the acceptance of new ideas is based on intuition, limited and inexpert experiments and pedagogical philosophies.

The phenomenon of rapidly successive theories and innovations results, with many teachers, in scepticism and apathy. Reproaches to teachers in this respect are rightly made only when teachers are rejecting innovation proposals, on irrational grounds, which proposals have clearly gained a certificate of dependability and applicability, during a development procedure of which evaluation is an important component part in which teachers can have faith.

The *dissemination process* too is full of pitfalls. It has appeared that the dissemination of innovations through articles, lectures, courses, etc., is not sufficient, in particular if insufficient attention is paid to socio-psychological aspects. The result often is that innovations are not conveyed permanently, but only seemingly.

Educational innovation, to the teacher, often means an important switch, which may be accompanied by tension and uncertainty. With the preparation and guidance of innovation this social-psychological aspect should be taken into account, more than hitherto. Furthermore, innovation is sometimes hampered because the innovators are arousing resistance and mistrust, as the result of which a credibility gap occurs. It will, therefore, be sensible for the dissemination of innovation to be based primarily on guidance, on their own experience, and on reports by trusted colleagues.

The basic problem in educational innovation is its lack of attunement to the reality of the educational practice. This problem occurs in all stages and activities. From this, a *general rule* for educational innovation may be derived: *Educational innovation should be tuned to the reality of educational practice in pedagogic-didactic, social-psychologic and administrative-managerial respect.*

The application of this rule to the practical structuring of the innovation process results in five *basic conditions* for educational innovation, which may be considered to be compelling conditions for each innovation structure. These basic conditions are:

— *Preliminary study stage:* in principle, each innovation which is introduced in education should first of all have passed through a stage of consideration and testing.

— *Delimitation:* in general, it is desirable that a personal or, possibly, institutional delimitation exists between the persons and/or bodies involved in the various stages of the innovation process.

— *Participation:* it is desirable that all participating partners in the innovation process are engaged in the preparation and execution of innovations as soon as possible.

— *Co-ordination:* it is necessary that there is proper co-ordination between the individual and the institutional partners in the innovation process.

— *Flexibility:* an innovation structure should incorporate guarantees against the innovation apparatus and the innovation process growing rigid.

From these basic conditions a general *model* may be derived, in which the requirements are described which should be made, within the infrastructure, from the innovating bodies as far as their task, organisational form, staff, participants, managers, procedure and communication with others involved, are concerned. The main elements of a desirable structure would then be the following:

- The *invention stage* includes invention centres and educational institutes. Invention centres are institutions, groups, persons who present views on educational innovation, but who are unable to further develop or study these views themselves. Educational institutes are institutions with a multi-disciplinary staff, where innovation ideas can be elaborated and studied on a large scale.
- In the *development stage* the educational institutes are evaluating the results obtained in the first stage, in which national pedagogical centres assist, if necessary. These centres, moreover, are taking care of making the evaluated results suited for the school.
- In the *dissemination stage* national, regional and local pedagogical centres are working. The *national pedagogical centres* are taking care of the co-ordination, the supervision and the foundation of the dissemination, and they are themselves actually involved in disseminating the innovations among the teachers at the continued training courses for teaching personnel. The regional and local pedagogical centres take care of the actual dissemination at the schools. For the general secondary education and the vocational education probably no local centres will be needed in the Netherlands, in view of the lesser spreading of these schools. This task is performed here by the national centres.

In the dissemination stage much attention will have to be devoted to influencing the *innovation mentality* of teachers, since the dissemination of contents will be useful only if the teachers are open to the necessity, the possibility and the significance of innovation. Effecting this change of attitude is probably the core *problem* of educational innovation.

The characteristics of the structure will have to be: ample opportunity for *participation* by all involved, a proper co-*ordination,* and *flexibility* in boards, committees, councils and in the innovation apparatus.

Continued training and educational reform

by C. A. AXELSSON,
Head of Division,
National Board of Education,
Stockholm

The term *continued training* is taken for the purpose of this report to cover all forms of compulsory and voluntary instruction over and above the basic teacher training, conducted at central, regional or local level and designed to make the various school officers better qualified to perform their duties. As regards teachers this refers both to their pedagogical skill and mastery of the subject with which they are concerned.

Forms of continued teacher training

Five study days of continued teacher training per year are compulsory for all teachers. They may be used for providing a week long course for teachers or they might be distributed over the whole school year. They might even be split up in halves. Lessons are cancelled for the pupils. The decision to cancel the teaching, thus enabling the teachers to take part in a study day, lies with the local school board.

Studies during the study day mostly proceed in the form of study circles or discussion groups on the basis of special study material, carefully prepared for that purpose. There may or may not be outside experts present. Study days may be used for educational visits and for attending demonstration lessons.

Direct courses aim at satisfying certain needs of continued training.

Study leader courses prepare senior teachers and others who will later be local leaders of continued teacher training.

Pilot courses are a part of continued training projects, they also contribute to the production of certain study material for local studies.

Most of the above mentioned courses are arranged during the vacations. In addition to vacation courses there are a fairly large number of courses being arranged during the school term in the late afternoons or evenings.

Special courses are being arranged for *headmasters* and *directors of study,* the rule being that every appointed headmaster, during the first year after his appointment, takes part in a basic training course. In addition continuation courses are being arranged every second or third year.

Teachers at *vocational schools* can undergo vocational practice for a certain period, generally about a month, without loss of salary and with travel and subsistence allowances.

Travel grants are applied for individually, primarily for purposes of foreign travel. Most grants are awarded to *language teachers.*

Special sets of literature are being composed to cover various needs of continued training often in combination with correspondence studies.

Organisation

Each County Board of Education — there are altogether 24 in Sweden — employs *consultants* for the continued training of teachers. The consultants work part-time as teachers and part-time as con-

sultants. They participate in the planning of continued training projects and the production of study material. Furthermore they carry out advisory contact work in the schools during study days and various conferences.

The consultants are being trained basically in two-week courses and later continuously by means of regular information conferences three times every year. These information conferences usually last for a couple of days.

There are at present 210 consultants for the comprehensive schools and 50 for the gymnasia.

For the purpose of continued teacher training, Sweden is divided into six *regions*, each region covering a number of counties. In each region there is a university with an Institute of Education (teacher training university) which also comprises a department for continued training.

The counties within a given region collaborate in the exchange of consultants and in the planning of study days, thus making use of the same expert team for a succession of study days within the region. The continued training department helps to further this co-operation.

Apart from contributing to the regional co-operation, it is the task of the *continued training departments* to provide for the basic and further training of the consultants employed for the continued training of teachers. The departments are responsible for the production of study material required for study days and other documentation needed in continued teacher training. It is also the task of the departments to make suggestions for summer courses and to plan and conduct such courses, and certain term-time courses. The documentation mentioned above is used both in courses and during study days organised by county boards or local boards. Courses (pilot courses) may be organised so that they result in certain documentation which can, in its turn, be user in a wider sphere of continued training.

It has been found necessary to rationalise activities from the very beginning by giving the different continued training departments separate spheres of responsibility. Thus, one department shoulders the main responsibility for the basic and continued training of consultants to a number of specific teacher categories, as well as the planning and the production of study material and the planning of holiday courses for these categories of teachers.

Basic training and continued training

The idea that teacher training consists of a period of basic training before qualification and continued further study thereafter, is more or less universally accepted nowadays. This, however, does not imply a mere connecting-up of further training in terms of content to the final stages of basic training, since practising teachers have had very different basic training at different periods, and have besides acquired a wide variety of pedagogical experience. Nonetheless it has proved fruitful to co-ordinate the planning activities of the staff dealing with basic training, and the staff engaged in continued training.

Thus the regular conferences of continued teacher training consultants are also attended by lecturers and teachers normally dealing with the basic training.

A considerable and increasing portion of the material produced in the course of continued training of teachers is also made use of in the basic training.

The planning of continued teacher training

In order to satisfy as efficiently as possible, the various and often urgent needs of continued training that exist among all the categories of teachers and other school officers, very careful planning is necessary. For the last few years a system of certain routines has been adopted for this planning. It works as follows :

- *Needs* of continued training are continuously reported to the National Board of Education by various authorities and individuals. The Board draws up an inventory of such needs.
- The needs of training thus reported are sorted according to various *categories* of personnel and thereafter forwarded to the departments of continued training at the Institutes of Education of the universities.
- The departments of continued training arrange conferences for consultants and others who make a first analysis of the reported needs. All needs known for a personnel category are thus listed according to *priority*. For each single need the target group is more closely defined, and the question of whether it should be handled during a vacation course or during a series of study days

is also considered, whether certain study materials are needed, etc.

— With the result of the above mentioned analysis at its disposal, the Board publishes a *catalogue* containing all needs of continued training which are known, including the result of the analysis.

— With the catalogue at its disposal the Board can now decide what courses should be arranged and what study material should be produced. The arranging of the courses is entrusted to the *departments of continued training*. This is usually done at the end of November or the beginning of December. The departments then organise independently the courses for the following summer vacation. As to the production of study material the departments of continued training are being asked more closely to analyse the needs of continued training and plan the production. The result of this closer analysis is reported back to the National Board.

— The Board studies the reported results of this analysis whereupon it decides on the *production*.

— Semi-annually the Board issues a *list of study material available and forthcoming* thus making it possible for local school boards to plan study days and other local activities well in advance. All study material is published by a publishing firm where material can be ordered and bought by the local school authorities.

School reforms and continued teacher training

In a time when school reforms take place so frequently and rapidly, how is it possible to make all teachers in all schools carry out these reforms?

I think one has to make a distinction between two sorts of reforms. In a way I believe that reforms concerned basically with organisation are more easily carried out. What you need to make them succeed is mainly money. But as soon as the school reform goes deeper down into the real educational process within the school, a much harder task has to be solved, even if all teachers are willing and capable of taking an active part in the reform work. On the whole I think that man is rather conservative, and the teacher is no exception. He may even be more conservative than other people.

The reforms that have taken place during the last ten years in Sweden are, to a certain extent, concerned with organisation, but deep at the bottom of them are vital changes in the whole pedagogical outlook. It is essential to make *all teachers* active in the implementation of these reforms.

What possibilities do we have in Sweden to achieve this? Courses taking place during the vacation or in the afternoons or the evening hours are *not compulsory*. I think that is the rule in most countries. Most teachers are very keen on participating, but if we are honest about it, I think we have got a lot of teachers who do not care, and these are the ones who should be brought into continued training. More than any others they need to be brought into the very heart of it. We have got one enormous advantage in this respect in my country. The study days I mentioned before, are *compulsory for all teachers*. Teaching is cancelled for the pupils, but the teachers are supposed to remain in the school, or travel elsewhere to take part in the training which is being organised for them. The most important and widely spread needs of continued training can and should be taken care of during these study days, because if we do this we know that everybody is involved.

Let me give some examples for this orientation of continued training of teachers towards the school reforms. In 1962 we had an extensive reform of the *comprehensive school*. We already knew then that it had to be followed up by another reform programme. A new curriculum has been worked out and developed and is going to be put into use in 1970. Now, with our centralised system this means that in every single school every single teacher is supposed to work according to that curriculum.

We are making use of a number of study days to offer continued training to all of the 55,000 teachers in the comprehensive schools. This year we are starting with three study days. In the course of next year we will use another three or four study days in a row for this work. During this school year a preparatory programme is being carried out. The teachers are not supposed to use the new curriculum, but we are going to prepare them to make use of it from 1970 on. In close co-operation with those who have prepared this curriculum reform we have worked out a plan for the continued training of teachers. We called on three groups of experts who have spent a year and a half working out study material on a central basis, study material which is going to be used during the coming school year.

We take it for granted that the issue of a new curriculum in printed form is not enough to make it known and accepted by the teachers. They must have in their hands some sort of *study material* to lead them into it. We must make them discuss the new things. We must make them discuss how the new ideas can be applied or should be applied in their actual local situation. We expect the teachers to work during the study days, organised in small study circles, on the basis of this study material.

The material prepared includes four films, and six tape recordings lasting about 20 or 40 minutes each. Three of these tape recordings are accompanied by film strips. In August 1969 we ran courses of one week's duration for 960 senior teachers to train them in the use of this material. Furthermore, in October 1969 we trained 240 head teachers in one week courses to make use of a particular part of the material prepared for them. In November 1969 study conferences, lasting four days, were also held for all head teachers. These study conferences were arranged on a regional basis. About 3,000 head teachers and assistant head teachers took part in these conferences, each one of which lasted four days.

In spring 1970 the real study work will be taking place in each individual school, where the teachers will spend three of their five study days on this project. This way we will be starting a discussion which will spread all over the country. The year following this school year there will be another round of study days built up in the same way with the same sort of material tackling in some cases the same problems, but in many other cases additional problems.

Some years ago another reform took place in Sweden—it has now been more or less completed. This was the *gymnasium reform*. A lot of teaching was needed for the teachers. We asked ourselves: How are these teachers going to be trained? The training they needed was on an academic level. We looked to the universities and soon realised that we could not send the teachers there as they were too crowded already. The geography of Sweden, with only five universities, was a further reason which made this impossible. And the teachers were needed in the schools at the same time. They could therefore only study "part-time". Now we sat down with representatives of the teachers and with professors from the universities representing all the subjects involved, and worked out a system of *correspondence courses connected with regular courses* lasting for one, two or three weeks, which the teachers attended in the universities. This whole scheme was planned and carried through by the central school authority in close co-operation with the universities which enabled us to focus on the very things that were needed at the time.

Until now 9,600 teachers have participated. Of these 5,600 have taken part in courses including correspondence courses, but most of those who participated in correspondence courses, have also attended other courses. Out of these 5,600 some 3,000 have already completed their studies. I happened to ask a man from one of our universities some time ago if he could compare one of these courses with the university training within the same subject. His opinion was that in his specific subject the course designed for the teachers could well be compared to at least one term of ordinary study at the university. I mention this because I think it is a way of giving continued training to teachers by means of documentation without actually taking the teachers back into the universities again.

The Schools Council - Participation of teachers in educational innovation

by G. A. ROGERS,
Joint Secretary,
The Schools Council for the Curriculum and Examinations,
London

Although I am speaking as a United Kingdom delegate to this Conference, I should make plain at the outset that the Schools Council, about whose work I am primarily concerned today, operates only with respect to England and Wales. Scotland and Northern Ireland, although they send observers to

attend Council meetings, conduct their educational affairs independently from England and Wales, and participate in Schools Council projects only on request and through special arrangements. I am sure that my colleague Mr. Graham from Scotland, will be able adequately to portray arrangements for the documentation and dissemination of information for teachers as they exist in his country.

To understand the present role of the Schools Council and the developing situation in England and Wales relative to curriculum development and accompanying documentation and re-training, one has to look at the 20th Century relationship between the teacher, his local education authority and the central or national authority, now known as the Department of Education and Science, formerly the Ministry of Education.

In the early days of state intervention in education in the latter part of the 19th Century, the central authority had a clear idea of what the content of elementary education should be and, working through an inadequately trained body of teachers, it defined and controlled what was taught in the state schools. Since then, however, *the teaching profession has matured along with the social system.* Responsibility for the schools themselves has been delegated by the central, national authority to the local education authorities and they in turn have delegated responsibility for what is taught in the schools to the headmaster or headmistress and his staff. Oversight of the curriculum is exercised by the governing or managing bodies of individual schools, but the basic responsibility lies with the head.

Although there are various pressures on him, not least that from public examinations leading to entry to higher education and the professions, the teacher still has considerable freedom in deciding what shall be taught and this freedom is a cherished possession. There is a central body of inspectors attached to the Department of Education and Science, part of whose role is to ensure adequate standards in the schools, and many local education authorities also have their own inspectors and advisers, but none of these individuals can actually dictate to a head teacher what shall be done in his school. They can *recommend and advise,* but the teacher is free to accept or reject such advice. Similarly, the Department of Education and Science itself can only recommend. The final decision is in the hands of the teachers.

This system has many advantages and is not likely to be relinquished. It also, however, has some disadvantages. One of its greatest advantages is that it encourages the ablest and most progressive teachers to experiment with new modes of learning; the freedom to experiment, to try out new ideas is invigorating and makes the work of the teacher much more lively and interesting. Another is, of course, that the educational system cannot be used by governments to present particular political philosophies or to persuade the young into acceptance of a sectional point of view. On the other hand, of course, the fact that there is no power of central direction means that the process of change in education can sometimes be painfully slow. The best have the freedom to advance rapidly; the worst have the freedom to stay where they are and can only be brought to accept and participate in change through what may be a slow process of cajolery, example, demonstration, social pressure and so on.

The problem had to be faced then, in my country, of how to *increase the rate of change in the school curriculum to match the rate of change in the world outside, without central direction.* Freedom to make curriculum decisions had to remain with the teachers, but ways had to be found to support them in this decision making and spur them on so that the curriculum could be examined thoroughly, right decisions be made and change be brought about more rapidly.

Early in the sixties, the Nuffield Foundation, a charitable trust, had set aside money to support development work in certain vital areas of the curriculum—mathematics, science, languages. The idea was to build on the practice of successful, progressive teachers, enabling them to be relieved of their duties in their own schools. They would then have the chance to develop their ideas and try them out in a large number of schools in order to detect weaknesses, refine and strengthen them and at last put on the market new materials which could be available to all who wanted to follow the same path.

At the same time the Ministry of Education set up a Curriculum Study Group to offer a service of advice and information to the schools and technical services to the Secondary Schools Examinations Council, a representative body that maintained oversight of the national examinations system. The establishment of this Curriculum Study Group, however, composed as it was of members of the Ministry and of Her Majesty's Inspectorate, aroused fears in the teaching profession that the Ministry might be trying to centralise control of the curriculum. Its work was therefore viewed with suspicion. Nevertheless, its establishment did hasten the

wide recognition of the need for some co-operative machinery to stimulate, organise and co-ordinate fundamental curriculum changes.

In view of this historical situation and the resistance of teachers to any idea of central control, it was obvious that the Curriculum Study Group was no answer to the problem of change. In 1963, therefore, the then Minister of Education presided at a meeting of representatives of the various educational interests. A Working Party was appointed to consider whether co-operative machinery was needed and, if it was, how it should be provided. Its members concluded that there was such a need and recommended the establishment of a Schools Council for the Curricula and Examinations, on which teachers should sit in a majority, but which should be representative of all other educational interests — the universities, departments and institutes of education, the colleges of education, the local education authorities and their education officers, the Department of Education and Science, the religious dominations who had educational interests, the National Foundation for Educational Research, the Confederation of British Industry and the Trades Union Congress.

Schools Council for curriculum and examinations

In *October 1964*, therefore, the Schools Council for Curriculum and Examinations, covering England and Wales, came into existence. It was provided with funds in more or less equal shares from the national exchequer and the local authorities, but it was to have complete independence in the way in which money was spent on research and development work. The role given to the Schools Council was *to promote and encourage curriculum study and development without diminishing the existing responsibilities of any of its members and to sponsor research and enquiry where this was needed to help solve immediate and practical problems.* Thus one of its main objects is "to uphold and interpret the principle that each school should have the fullest measure of responsibility for its own work, with its own curriculum and teaching methods based on the needs of its own curriculum and evolved by its own staff". The Schools Council also assumed the responsibility for *co-ordinating secondary school examinations,* the work previously done by the Secondary School Examinations Council.

Thus work undertaken by the Schools Council falls into three main categories :

Research — not fundamental educational research, which is regarded as the province of the universities, but such research as has a direct and immediate bearing on the problems facing teachers in classroom.

Examinations work — which is concerned with the approval of syllabuses, the establishment of comparability between different examining boards, research into methods of examining, the effects of examining and so on.

Curriculum development work — general review of the curriculum and the setting up of projects designed to develop new ideas for content and teaching method and the appropriate teacher or pupil materials to support them

It is with each of those areas in turn that I wish to deal. Not in order to detail the work that has been undertaken, but to look at the implications of that work in terms of documentation and information.

Research

Although the Schools Council has its own research team, and a small amount of research is conducted centrally, the research team's function is primarily to advise on research already done or that needs to be done and to assess the merits of proposals submitted to us. Most of the research initiated and paid for by the Council is in fact commissioned from outside agencies, usually university departments, Institutes of Education or the National Foundation for Educational Research. When the research is completed, if the Council is satisfied that the report contains material of value to the teacher, publication is undertaken by the Council. If the Council, on the other hand, is not satisfied with the quality of the work done or feels that it will not be of value to the teacher, then the Council declines publication and relinquishes its rights in the report, leaving the institution concerned free to publish under its own name if it so wishes. A frequent problem in this area is one which has kept research and the average teacher apart for many years. Research reports often contain findings of considerable value to teachers, but they are couched in language, verbal and statistical, that makes them intelligible only to other researchers and creates a barrier between them and many teachers.

We have not as yet found the complete answer to this problem. Sometimes we arrange for a report to be published in *two versions*: the first, *a simpler*

version for general consumption, and the second, the *complete version* with full statistical and methodological details of the research. But not all reports are capable of being dealt with in this way, and not all researchers have the ability to make themselves intelligible to the layman. Our own research teams are very conscious of these difficulties in communication and they are consulted at the drafting stage of any material. But if we are to try on the one hand to educate the researcher in the language of communication in order to bridge the gap between theory and practice in education, we must also, I think, either through basic or continued training give teachers some *understanding of the language and techniques of research*, so that the two sides can grow together more easily. This latter step is one that we have only begun to think about; any action remains with the future.

Examinations work

Research in the field of examinations has had interesting results, and, in one area especially, results of considerable interest and concern to teachers. Until 1965, the external examination picture in the secondary schools of England and Wales was a somewhat complex one. The route to higher education and the professions lay for the ablest students through the General Certificate of Education, Ordinary level at age 16+ and Advanced level two years later. This was the examination designed to suit the grammar school and university entrance. But for years there had been pressure from other kinds of secondary schools for a leaving certificate examination for pupils at lower ability levels. As a result, a *variety of examinations* set by different local or national bodies was in use. Most of these, however, were based on syllabuses that were out of the control of the schools and which frequently were not suitable and led to narrow and unimaginative teaching.

A committee was appointed by the Minister of Education to survey the scene and a new national examination was recommended for the upper middle ranges of ability, an examination to be organised through regional boards in the control of the teaching profession. In this way it was hoped that examination syllabuses would be geared to the kind of teaching and content that teachers thought right for their students and that the examination system would become the servant rather than the master of the schools. Individual experiment was encouraged by arrangements for examining under three modes: Mode I, where the syllabus and examination were set by the board and papers were marked externally; Mode II, where the school provided its own syllabus, but papers were set by the board and marked externally; and Mode III, where the school provided its own syllabuses, and set and marked its own papers, subject only to external moderation by the board.

An examination of this kind gave great scope to the creative element in the teaching profession, and new modes of assessment were tried, such as taking course work into account, examining special project folders compiled over a long period, and so on.

Such an examination, however, exciting though it was for both teachers and students, had to establish its acceptability with the "users", especially employers and establishments of higher and further education. Its relationship to the other national examination, the General Certificate of Education, also needed to be established. The teachers needed here the help of those with special expertise in the field of research into examinations. Under the direction first of the Curriculum Study Group and then of the Schools Council, monitoring or comparability exercises were undertaken by the National Foundation for Educational Research, and individuals and working groups were asked to contribute their thinking also to various problems and aspects of the examination. The results of these researches and individual contributions are published in a series of *Examinations Bulletins*, each dealing with a particular aspect. To date, four bulletins have been produced dealing with general aspects of examining and a further fifteen dealing with particular subject areas.

The field of examinations is dealt with through special committees of the Council, who discuss general policy with regard to examinations, and any significant decisions on their part are also published in pamphlet form with the reasoning and argument leading up to them.

Curriculum development work

But the main emphasis of the Council is on development work connected with the curriculum of the schools. There is, of course, no hard and fast line to be drawn between research and development work, and most curriculum development projects have a research element. To date, close on a *hundred projects* of all kinds have been set in train.

The lesson that had been learned from elsewhere before the Council began its operations was that *curriculum development must begin with the*

teachers in the schools and involve them all along if its products or outcomes were to be acceptable to the profession at the end. A typical Schools Council project begins therefore with careful study, drawing on all available sources, of practice and aims in a particular curriculum area, including a survey of the objectives which teachers set for themselves. The result of this survey may then be published by the Council as a Working Paper, to set teachers thinking about what they are doing and perhaps to point the lines of possible development work. The second stage is the commissioning of a *team of teachers who are released for a period of three or four years* from their teaching duties, and who, with help from professional researchers, designers, film makers, and so on, devise and develop teacher and student materials of the kind that appear to be needed. The team, with the help of the Council and local education authorities, then chooses *schools in which the new materials can be tried experimentally.* The teachers using the materials feed back their criticisms and observations and the materials are adapted and refined accordingly. Further trials take place until the materials are regarded as satisfactory and they are then handed over for publication.

During the course of the project, the team may produce a periodical news sheet which is sent to local authorities, participating schools, to teachers' centres, colleges of education and so on to inform them of progress. Similarly, the project may produce occasional papers, printed documents which are again available to all concerned in the project and anyone else interested.

Obviously, teachers in trial schools cannot just be handed trial materials and then be left to get on with it. They need to be introduced to the philosophy and methodology of the project, and if new areas of knowledge or integration of established disciplines are involved, they must have the opportunity to learn what they don't know. The project team therefore organise *conferences and courses for these teachers,* provide them with written materials and keep closely in touch with them during the project's life. In special circumstances these courses may be arranged with the help of Her Majesty's Inspectors. For instance, in the Primary School French project, where it was necessary to improve primary teachers' facility with the French language, courses in France were arranged by inspectors who were seconded full-time to work with our modern languages projects. But normally the induction work at this stage is done by the project team. In most projects it is regarded as vital that the teachers in the trial schools should meet frequently in local area groups to discuss their work. This is done where possible at local teachers centres, about which I will say more later.

Documentation and information

A project, then, involves a *widening circle of teacher participation with its associated documentation, information and training.* But the project looks forward to the time when it ends its work and the materials it produces are on the market available to all. It must plan then for the same kind of help to be available to any teacher who wishes to buy and use the materials. Obviously, the project team, with perhaps four to eight members only, cannot undertake the task of conducting courses and conferences for the whole country. What they do is attempt to provide a cadre of people among those bodies normally responsible for in-service training whom they will initiate into the mysteries of their project and its materials and who in turn will conduct courses for teachers wishing to use them. The project team, therefore, before the project finishes its work, begin a series of courses for members of the national inspectorate, College and Institute of Education staffs, local authority advisers and so on. It is also policy for some members of the project team to remain in operation for a year or so after the project has completed its work and handed materials over for publication. These members then act in an advisory capacity regarding the use of the materials and perhaps also spend part of their energies in an attempt to evaluate the changes effected by their work.

In conducting courses for teachers in the methodology of the project, a most useful aid is of course closed-circuit television and the video tape recorder. By using closed-circuit television, teachers can see into the classroom without being there, and the methods to be used can be shown in action. Ciné films, colour transparencies, and audio tape recordings are also used to record the work of the project and help to provide a visual and aural impression of what happens in the classroom when the new materials and new teaching approaches are being used.

The *materials* themselves vary considerably in form from project to project. In some cases they are books or folders of instructions and suggestions for the teacher, or they may be visual and verbal records of experimental work. On the other hand, or in addition, they may be materials for the use of the pupil. A kit of materials coming from our

project called "English for non-English-speaking Immigrants" consists of a teachers' guide, various apparatus and equipment for children's learning activities, and a sequence of children's reading books. A kit of materials from our Humanities Curriculum project on the other hand will consist of teachers' guides, folders of documentary materials, photographs and pictures, gramophone and audio-tape recordings. It will also contain a programme of appropriate film extracts and arrangements for hiring them, if not the extracts themselves. Maps, charts, slides, tapes, films, photographs — all these may be part of the product of a project. All these materials will be available for purchase by the schools.

A number of our projects, particularly those concerned with the humanities and general studies, which are producing packs of materials for pupil use, envisage *each school developing its own resources centre* in which these materials can be easily stored for ready access and where there will be room for adding to them as the need arises. We are also thinking about the possible provision of *national resource banks or centres* for this area of the curriculum from which schools can draw materials, documents, tapes, films, etc., to support courses as and when they want them.

There are, however, some projects that work in a different way from that I have described, without a full-time central team, and which rely on the creative work being done by a network of groups of teachers throughout the country. One such project is concerned with the role of literature in the education of children of all ages. The organisation conducting the project for the Council is a professional subject association — the National Association for the Teaching of English. Three project organisers, members of this Association, work in their spare time to co-ordinate the activities of groups of teachers of English who meet regularly to discuss various aspects of the subject, devise fresh approaches and experiment with them in their schools, afterwards coming together again to compare notes and to report. The groups meet together in national conferences on occasion and the end product it is hoped will be a detailed and self-critical report of all the work done, which should be of great value to all teachers of English.

One other aspect of the Council's activities involving documentation and information is the setting-up of *working parties* of experts, including teachers, to study particular problems and report their findings. A working party on compensatory education at the secondary stage has just reported; other working parties at present are studying the transition from school to work, the role of museums in education, the education of the gifted child, education for children with special handicaps, health education and pupils' records. When reports are produced, if approved by the policy committees of the Council, they are then published. National conferences on educational topics associated with curriculum development are also called by the Council and the reports of these, too, are published, as are also papers produced by the committees, by individual members of the Council or individuals commissioned by the Council, if it is thought that these need a wider distribution as a basis for discussion by the teaching profession.

Publications

Thus the range of publications by the Schools Council is wide, quite apart from the research reports that I mentioned earlier. So far there have been *19 Examinations Bulletins, 2 Curriculum Bulletins* (dealing with primary mathematics and with a school approach to technology), and *24 Working Papers*, dealing with a variety of subjects and intended basically as discussion papers, and *6 Field Reports* from projects. These are the main series, but there is an assortment of other publications, including a number from the Welsh Committee of the Council, which do not fit into these categories, but all of vital concern to the teacher. Until recently, all these documents were printed by Her Majesty's Stationery Office, the organisation responsible for government publications, and were obtainable from that body. A certain number of most publications was sent free of charge to each local education authority for distribution to its schools, additional copies being obtainable at a fairly low price. The Council has now, however, established its own publications company and we publish through commercial publishers who we hope will give us a service better geared to our aims and wider channels of distribution and advertisement.

Two recent developments in our publications are of considerable importance. In spite of the volume of work being done by the Council, evidence continued to accumulate that many teachers remained unaware of the nature of that work and even of the Council's existence. And although publications at frequent intervals arrived on the headmaster's desk, it was obvious that often they got no further and that too many teachers never saw them or

heard of them. How, then, to get basic information across to the teacher and tempt or cajole him into buying the Council's publications and reading them? One answer was a newsletter, *Dialogue*, published once each term, containing information in a colourful and informal way about the Council's work and its projects. The title "Dialogue" was chosen to emphasise that the Council does not exist to tell teachers what to do but to enter into partnership and discussion with them. Copies are sent free to every school, institute and college of education in the country on a generous basis, and we feel that in the first year of its existence "Dialogue" has amply repaid the money invested in it.

The second publication innovation is a series of deliberately short-lived *pamphlets produced by our Field Officer Team.* This team is a group of seven teachers (mostly head teachers) each of whom is seconded for a two- or three-year period to the Council. Each member covers an area of the country, visiting schools and helping to identify and spread information about curriculum innovation. The pamphlets they write are accounts, very much down-to-earth, of what they have observed. These accounts are cheaply produced and distributed free to local authorities and teachers' centres and are not reprinted after one year since the information they contain is likely to become quickly out of date. Copies can also be obtained on request from the Council and they are, of course, advertised along with other publications in "Dialogue".

The Council relies greatly on the co-operation of the local education authorities in encouraging its teachers to read Schools Council publications and in making copies readily available. Since the local authorities contribute half to working costs of the Council, it is obviously in their interest to follow up their investment with active propaganda. As in so much else, however, the response appears to vary from one area to another.

However, the programme of work that I have described, and the documentation, information, and publications policy that have accompanied it, were by no means regarded as sufficient in themselves. If teachers were to be stimulated to think about the new ideas and materials and try them out, and, more important still, to undertake experiments in the classroom themselves, then there must be opportunity for them to come together, to discuss, to argue, to plan, to evaluate — to work together, breaking down their traditional isolation and stimulating one another into an active interest in curriculum reform.

In its second Working Paper, published in 1965, and concerned with the problems of the raising of the school-leaving age, the Council recommended the establishment of local development centres where teachers could come together in groups to discuss these problems and initiate locally-based development work. In the next Working Paper, concerned specifically with English, a further suggestion was made for the establishment of local English centres to promote development work in English. Two years later, in 1967, the Council published its tenth Working Paper, entitled *Curriculum Development: Teacher's Groups and Centres* In this paper, attention was given to the facilities which could best support curriculum development on a local basis across the whole curriculum, and not just in connection with two programmes dealing with two specific needs.

Teachers' groups and centres

The centres were envisaged as having a threefold function. Firstly, they would be a ready local sounding board for the ideas and experience of teachers and schools in the area. Secondly, they would be the natural organising base for schools involved in national projects, feeding back to the projects the experience and results of the experiments. Thirdly, they would be places for the dissemination of new ideas, and training centres in the use of the new materials and approaches developed by the projects. One result of this would be, it was hoped, the creation of a steadily expanding number of teacher leaders, trained to introduce colleagues to new methods and materials.

Modest suggestions were made for the kind of accommodation necessary for a centre as also for the staffing of it, but it was stressed that the core of a centre was the local group or groups of teachers meeting regularly together, and that it was the consolidation and development of their work that should determine where and when the centres were set up and whether a full-time centre leader and ancillary staff should be appointed.

Already, of course, groups of teachers involved with early curriculum development work in mathematics and science had been meeting regularly, often in special accommodation reserved for them. But now teachers' centres on a much wider scale were envisaged, with groups covering the whole curriculum. Accommodation, which might be within a school building, in a college of education or further education, or in a purpose built centre,

would depend on the demands of the locality and the resources of the local authority. Comfortable conditions for meetings of various sizes, and some kind of workshop and display space with facilities for storing, making, preparing and reproducing materials, were regarded as essential, as well as facilities for providing light refreshment. The administration of each centre, it was suggested, should be in the hands of a small steering committee with a full representation on it of local teacher opinion. Allied educational interests, e. g. universities, Institutes and Colleges of Education, might also be represented.

Earlier this year, the Schools Council organised a series of conferences for representatives of local education authorities in order to take stock of the situation with regard to the development of these teachers' centres. The latest count revealed the existence of *428 centres*, but, as one might have expected in my country, the concept of the centre and the extent and method of its operation varies considerably from area to area. Some of the centres have active programmes of experimental curriculum development work in which teachers eagerly participate. Others arrange merely a programme of courses for teachers such as they have always held. But in most there would seem to be a *combination of development work, discussion groups (based frequently on Schools Council publications or projects) and continued training.* This last is frequently associated with new curriculum contents and methods, and this combination of development work with continued training is the most natural and desirable.

Almost invariably, where a centre is active and successful, its work is organised by a committee composed mainly of teachers, along with a representative of the local education authority and/or its advisers. Yet in other areas, the local authorities complain that the teachers will not play an active role and that it is left to the officials of the authority or to the advisers to initiate activities and provide the stimulus for either development or continued training work.

Many of the centres have a full-time or part-time leader or warden in charge. He will be a seconded teacher who after a given period will go back into the schools. He generally has secretarial and technical assistance of some kind. But the role of the leader or warden again varies considerably from area to area, as does his relationship to the steering committee of the centre. In some centres the warden plays an active part in organising groups and courses, he maintains an information service for the schools about the activities of his centre, visits the schools to establish contact with teachers, and so on. In other centres the warden appears to be little more than a caretaker.

Some centres have been purpose built, others are perhaps one or two classrooms in a school that happens to have a little spare accommodation. Some are concerned with just one area of the curriculum, such as maths or science or English; others with the whole curriculum, primary and secondary. Some may be linked to a regional centre in a planned programme of work. Others grope in isolation, as yet without contacts outside the schools of the immediate neighbourhood.

But, in spite of all the differences, the picture is a promising one. Our conferences indicated a confusion of ideas and multiplicity of practice, but these are the result of rapid progress in a short space of time with a new concept of self-help for teachers. There is evidently a principle of natural organic growth which must be respected. This growth is faster and stronger in some areas than in others, but we all have still much to learn.

Perhaps the greatest single problem shared by all teachers' centres is the question of *finding the time for teachers to engage in the centre's activities.* Teachers carry a heavy burden of preparation, teaching and marking as well as, in my country, a tradition of extra-mural activities for pupils at the end of the school day, at week-ends and in holidays. To expect them to find more time for regular attendance at teachers' centres and for the planning and preparation of materials that go with development work, is to expect too much. Some authorities release teachers from their normal duties to attend centres, but this cannot be done on any scale. Various suggestions have been made from the provision of extra teachers to a shortening of the teaching week, but until we can find an answer to this problem we shall not reach some teachers at all, and many we shall not reach often or regularly enough to promote effective change.

We at the Schools Council certainly believe that the *teachers' centres are likely to be the decisive factor in promoting rapid and large-scale and continued curriculum development.* If the products of Schools Council projects gain unthinking and uncritical acceptance in the schools we shall simply have exchanged one stereotype for another. This is the dilemma and the paradox of our work. By involving the best teachers and conducting school trials we hope we shall produce courses for the schools better than those they have. We hope and

expect therefore that these courses may be widely used. But if they are used uncritically, without understanding of the principles and philosophy involved, and without reference to the local situation of school, then the children may be worse off than before. We have to try to produce *a teaching profession which embraces as part of its professional ethic the responsibility of constantly rethinking its practices and developing them in association with others* in accordance with changes in our knowledge and understanding of the world and the child and the pace of development outside the school. Change is not something we have to bring about now, and can then forget. Change is and must be a continuing process, not for its own sake, but simply to ensure that the education we provide is relevant to the lives and world of each generation of children.

It is our belief that teachers will only come to accept this responsibility if they themselves are involved in making the decisions about necessary change. The teachers' centre is for us a key instrument, the place run by the teachers for the teachers where the curriculum is discussed and planned, the need for the help of experts from the universities or colleges is seen and supplied, and where the re-training that must follow can take place along lines that they think wisest. By encouraging and fostering local curriculum development, the centre should ensure that its teachers are better equipped to use and advise on national curriculum development work carried out by the Schools Council.

Already, the Council is actively helping and supporting the work of teachers' centres, mainly through the Field Officer Team I spoke of earlier. They visit the centres, give information about the Council, advise on local work and help to spread good ideas. Recently they commissioned an audio-visual recording of two different pieces of local development work, and these recordings, with appropriate documentation, will soon be available on loan to any centre. Our projects already use appropriate centres for conferences with participating schools and for regular meetings of small groups of participating teachers. The Council's own Information Section is also developing mobile exhibitions that can be borrowed by centres who have the necessary display space.

All this is new and exciting and there is much more to be done. The Schools Council is already feeling the need to extend its activities by providing a central information centre and library of curriculum development with a reference service for teachers' centres. The value of video tape recordings has also convinced us that we should think about establishing our own mobile unit. At present, when our projects wish to have video-tapes made for record or training purposes, they have to make individual arrangements with the nearest college or university that has a mobile television recording unit. Some of us feel that with our own unit to work with our projects we should be able to provide them and teachers with a far better service than is at present possible. If, in the future, each teachers' centre is equipped with its own video-tape recorder, we shall be able to use *closed-circuit television* fully as a powerful aid in continued training in support of curriculum development. Already, some local education authorities, such as that from which I am seconded to the Schools Council, the Inner London Education Authority, have established their own closed-circuit television systems and are using these for continued training purposes. Much experience has been gained, and at the diffusion stage of our projects, when the materials become generally available, closed-circuit television, as well as the national television networks will certainly play a part. Already our projects have made their own contacts with the B.B.C. and with I.T.V., both of whom periodically put out programmes to introduce teachers to new ideas in pedagogy.

To sum up, the present situation in England and Wales is that curriculum development on a national scale is being undertaken very much under the control of teachers with a steady stream of publications and publicity designed to bring it home as widely as possible to the profession. At the same time, local curriculum development is being fostered and linked with the national scene through the establishment of teachers' centres and the organisation of a network of teachers' groups throughout the country. A promising start, but only a start. We have much to learn and many problems still to face before we have both the kind of teaching profession and the school curriculum suited to the year we live in. *Communication, or as this seminar calls it, "educational documentation and information", is the crucial issue in our success.* Providing the documentation and the information is relatively simple; the real problem is ensuring its assimilation by a profession that wants to know and is prepared to be active in applying what it learns. The methods we are choosing in England and Wales I have outlined to you. It remains to be seen how far they are successful.

Comments on the situation in Scotland

by D. G. GRAHAM,
Assistant Director of Education,
Paisley

These brief remarks are intended to supplement the comments of Mr. Rogers, with reference to the school situation in England and against a historical background which is fairly similar.

The increasing rate of educational change in the 1960's persuaded the Secretary of State for Scotland that some central direction of curriculum development was desirable and in October 1965 he set up the *Consultative Committee on the Curriculum* to advise him on the development of the curriculum of primary and secondary schools. The Committee's terms of reference require it to maintain a general oversight over the school curriculum, both primary and secondary; to draw the attention of the Secretary of State to any aspect of the curriculum, whether general or particular, which seems to call for consideration by specialist bodies; and to comment on the recommendations made by any working party appointed by the Secretary of State on its advice. The aim is to keep the school curriculum under continuous review.

The Committee consists of twenty-four members appointed as individuals for their personal knowledge and experience. They include teachers, members of the staffs of Universities and Colleges of Education, Administrators, Her Majesty's Inspectors and representatives of industry. The Committee does not itself examine detailed problems but identifies aspects of the curriculum which it considers should be further investigated. These enquiries are normally carried out if educational research or examination policy is involved by the Scottish Council for Research in Education or the Scottish Certificate of Education Examination Board; more commonly, areas of curriculum development are investigated by ad hoc working parties. Examples of those in existence at the moment are :

Art in the secondary school
Classics
Computers and the schools
Decimal currency
Modern studies for school leavers
Science.

Each of these working parties contains representatives of all interested parties including a number of practising teachers.

Perhaps the most interesting working group is the Central Committee on English which met for the first time in June 1966. It has set up Local Development Committees of which there are now 17. They undertake the examination of specific topics in English teaching. Their work is co-ordinated by a centre for information on the teaching of English whose magazine is available to all concerned and interested as are copies of the Curriculum Papers produced by some of the working groups.

It is possible in a country the size of Scotland to co-ordinate curriculum development research effectively by these means and to involve teachers to a great extent in the preparation of curriculum papers and in the conducting of pilot schemes. In addition a number of *teachers' centres* have been set up in various parts of Scotland of which the two in my own County, Renfrewshire, are fair examples. These centres provide in-service courses on a local basis, facilities for the training of teachers in the use of visual aids and a centre for the meeting of local development groups. A teachers' centre therefore provides a useful point of communication between those involved in research and those at the front line in the classroom. The premises used for these teachers' centres vary according to individual circumstance but correspond broadly to those provided for the school centre at Maribo.

While the agencies I have outlined provide an abundance of material on curriculum development, their application to the school curriculum is the responsibility of education authorities acting with the advice of the heads of their schools and their teachers, and it is for them to decide whether or not to accept any advice which is offered to them. The majority of teachers are therefore free to devise their own courses and develop them as they wish according to the particular needs of pupils in their schools. It is very desirable that teachers should continue as many have done, to take the initiative in preparing new materials and devising

new methods. This freedom to experiment and to accept or reject advice from the Consultative Committee on the Curriculum has its disadvantages and tends to slow down the introduction of new methods, but it is highly prized and will not be surrendered lightly.

Delegates to the Seminar, representing sixteen member Governments, after listening to and discussing detailed accounts from member States of new ventures in the fields of documentation and information for teachers, were in agreement on the following points :

Statement of conclusions

Basic principles concerning the planning, preparation and distribution of educational documentation and information

Information of all kinds must be readily available to enable the teachers to keep abreast of new developments in knowledge and pedagogical techniques. In the presentation of this information, full use should be made of modern media and communication processes. Opportunity should also be made for teachers to learn through being involved in the practical application of new knowledge and methods in the class-room situation.

The bodies responsible for the planning, preparation and distribution of educational documentation and information with a view to bringing about *innovation*, should be given a certain degree of autonomy and extensive initiative. While acting in association with their education authorities, these bodies should be allowed to remain flexible in their activities. Their task should be to draw up a *permanent inventory* of actual requirements in the fields of teaching and education, so that these needs may be fulfilled, in this constantly changing world. Means must be provided for teachers to make known their needs and to co-operate in or be consulted about such provision as is made to meet those needs. Having regard to the inventory of these requirements, steps should be taken, so that the emphasis be always placed on the basic needs, in particular those corresponding to the *long-term aspects* of education.

These bodies would be more efficient if they operated through a *network of institutions* at national, regional or local levels, working in close association with colleges and institutes for the basic training of teachers.

Means of application

In order to promote educational innovation and to ensure that documentation and information is of the highest quality and that it is in a form intelligible to and usable by teachers, in some member States *educational development agencies* have been established. These agencies are situated at a point of intersection of fundamental and applied research, thus enabling them to draw on specialist help in the application of genuine scientific methods and so play a more efficient role in educational innovation. Information about the work and organisation of these agencies should be available for study by other member States.

In some countries, local or regional *centres for teachers* have been established. The operation of such centres is worthy of study. Their precise role differs according to individual conditions, but it would seem that in this way or through some other pattern of organisation it is necessary to ensure :

— that facilities, including residential accommodation, are provided for teachers to meet and discuss new ideas, methods and materials, and develop together their powers of discrimination and judgment ;

— that communication with researchers, scholars and authorities outside the schools shall be a two-way process and that there is profitable co-operation between all bodies concerned with the improvement of the educational process ;

— that teachers themselves can play an active part in curriculum development through the formation of study and working groups ;

— that help in learning to use new techniques, apparatus, material, etc., can be of a practical and immediately accessible nature.

International information, co-ordination and co-operation

Where such bodies, agencies and centres or alternative forms of organisation are established within member States, some kind of *national service* should be developed to co-ordinate their work. If possible, information on the activities of such services should be made available at the European level, to promote co-ordination and co-operation between member States concerning the growing points of educational innovation.

Publications

The two series of educational works "Education in Europe" and "Companion Volumes", published in English and in French by the Council of Europe, record the results of studies of experts and intergovernmental surveys carried out within the framework of the programme of the Council for Cultural Co-operation. We here present the latest publications obtainable from the Council of Europe sales agents as well as other books concerning the work of the Council for Cultural Co-operation.

Companion volumes

RESEARCH IN EUROPE — PHOTOCHEMISTRY

by M. Fischer

Strasbourg 1969, 166 pages, 6 FF, 10 s.

This is a further volume in the general series "Research in Europe". Earlier volumes were devoted to assyriology, radiochemistry, geography and radio-astronomy.

This study is based on the amended text of a document discussed at Strasbourg in 1969 by a group of experts on photochemistry. It surveys the state of research into photochemistry in the member States (in July 1969).

The book lists the European photochemistry groups, their equipment, their research activities as well as photochemistry research institutions in the following countries: Austria, Belgium, Denmark, Federal Republic of Germany, France, Greece, Ireland, Italy, the Netherlands, Sweden, Switzerland, United Kingdom.

Information is also given on the financing and equipment of each research institute and on the kind of tasks it performs.

Other publications

A MINISTRY OF EDUCATION FOR EUROPE

by Anthony Haigh

Published by George G. Harrap & Co., Ltd., London, 1970, 191 pages, £1.50/30s.

This book is an account of the interaction between the non-institutionalised Conference of European Ministers of Education and the very much institutionalised Council for Cultural Co-operation of the Council of Europe.

The author tries to show how twenty European governments have quite inadvertently created the nucleus of a Ministry of Education for Europe, consisting partly of an organisation controlled by Ministers for Foreign Affairs and partly of a non-organisation in the hands of Ministers of Education, without any formal link between the two.

As Head of the Foreign Office's Cultural Relations Department from 1952-1962, Anthony Haigh was closely concerned with the processes, which at first ran parallel in the Brussels Treaty Organisation (later expanded into Western European Union) and in the Council of Europe, and then culminated in the creation of the Council for Cultural Co-operation. The first meeting of this new body was held in January 1962 and the author attended as leader of the United Kingdom delegation. In the same year he was appointed Director of Education and of Cultural and Scientific Affairs of the Council of Europe, a post from which he retired in 1968, by which time he had taken part in five of the seven Conferences of European Ministers of Education.

He suggests in this book, which consists of three parts, that the score of European governments which are linked by the European Cultural Convention, should openly recognise what they have inadvertently created, and make an effective job of what is at present an unfinished experiment.

The Appendix contains all the resolutions of the Conferences of European Ministers of Education, collected for the first time in a single publication.

To be published:

Low cost sports facilities: swimming pools

Catalogue of audio-visual documents for teacher training

How to visit a museum

School systems — A Guide

Editor : The Director of Education and of Cultural and Scientific Affairs
Strasbourg