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ABSTRACT

During 1992, CEDEFOP (the European Centre for the Development of Vocational Training) commissioned two projects to investigate the current situation with regard to databases on vocational qualifications in Member States of the European Community (EC) and possibilities for networking such databases. Results of these two studies were presented and discussed at a seminar at the Third European Conference on Computers in Careers Guidance. At the seminar, it was stated that work for establishing comparability of vocational qualifications had already contributed significantly to worker mobility. The following results of a survey of databases of vocational qualifications and courses were reported: significant databases in Germany, France, and the United Kingdom; interest in extending existing databases or developing new databases; notable differences among existing databases; and need for an understanding of the vocational education and training system within the country. Findings of another study on the possibilities for an EC-wide networking of databases for vocational qualifications and accredited courses and for EC-level promotion of databases were described. Three possibilities for linking existing databases were proposed. Discussion at the seminar raised the need to define the purpose of networking databases and to identify potential users. A pilot project to link existing databases was proposed. (YLB)
Introduction

During 1992 CEDEFOP, in accordance with the European Commission's Task Force for Human Resources, commissioned two projects to investigate the current situation with regard to databases on vocational qualifications in Member States of the European Community and the possibilities for networking such databases. The results of these two studies were presented and discussed at a seminar organised by CEDEFOP at the Third European Conference on Computers in Careers Guidance at Nürnberg, organised by the Bundesanstalt für Arbeit with the support of the EC-Commission.

The two workshop sessions were attended by about 40 participants from nearly all Member States and other European countries. Some 20 participants have been especially invited by CEDEFOP on the basis of nominations put forward by competent bodies of the respective Member States.

The contents of a database on qualifications

The distinguishing feature of a database on vocational qualifications is that it focuses on the qualifications achieved at the end of a period of education and/or a period of occupational experience, training, with each record in the database relating to one qualification. Existing databases vary in the information which they hold but in most cases the information held about each qualification includes:

- Personal identification
- Qualification title
- Level of qualification
- Provider of qualification
- Date of achievement
- Duration of qualification
- Education and training programme
- Sector of activity
- Skills and competences
- Recognition and mobility of qualifications

These elements can be combined in various ways to meet the needs of different users, such as employers, jobseekers, educational institutions, and policymakers.
- the title of the qualification
- the awarding body which issues the certificate (for example a government ministry, a Chamber of Commerce or an independent organisation)
- the target group for whom the qualification is intended (for example the occupation or group of occupations to which it relates and whether it is intended for young people only, for adults or for both
- the subject content or skills covered (including technical studies, practical skills and any mathematical or communication skills required
- the normal type of course of education or training which leads to the qualification (for example, length of course, whether full time or part time, type of school or college)
- entry requirements for courses or education and training (both educational qualifications required and any special physical or health requirements)
- examination or assessment method used.

In order to enable users to search the database, it is normal for records to be classified by means of a subject or occupational classification and also, very often, to be given a qualification level.

In addition to the existing databases of qualifications, there are a number of databases of courses of vocational education and training in existence. These may contain some of the same information as databases of qualifications but the focus is on the individual training courses at an individual school or college. Such databases therefore include information about the name and address of the school or college, the length and type of course at the individual college, dates and times of classes, cost and so on. This information is important for the individual at local level but is likely to be less important for any potential networking of databases at EC level.

The aim of the workshop

In his introduction to the workshop, Burkart Sellin of CEDEFOP, said that the work for establishing comparability of vocational qualifications managed by CEDEFOP on behalf of the EC, had already made a significant contribution to the transparency of qualifications in the EC and hence to worker mobility across the Community. The programme had now covered 19

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sectors and 209 individual occupations at skilled worker level. This information was of interest to a range of different users including individuals, employers, educators and trainers and policy makers.

However, the existence of additional information in database format had prompted the question of whether such information could be made more widely available and better used throughout the European Community and could eventually ease the application of the results of i) the comparability system as well as parallel activities on ii) recognition of diplomas, and on iii) EC' as well as Member States' activities in education and training linked to certificates and courses accredited. CEDEFOP had therefore commissioned two projects:

- a survey (by Guildford Educational Services) of the present situation with regard to databases of vocational qualifications and courses accredited and recent trends,
- a study (by Infoterm of Vienna) on methods and means necessary for EC networking or EC level of promotion of databases.

The seminar provided an opportunity to present the findings of these two studies and for national representatives to comment on the findings and to discuss the possibility of taking the work forward. The CEDEFOP project-coordinator expressed his sincere thanks to the Bundesanstalt für Arbeit for the opportunity to present these findings to a wider forum of experts in order to get their initial reactions.

Survey of existing databases and recent trends

Christine Ward presented the findings of the study by Guildford Educational Services.

The other significant databases are in Germany, France and the UK.

In Germany:

- the Kurs database maintained by the Bundesanstalt für Arbeit is a database of courses but has significant information about qualifications
- the GABI booklets, also held as a type of database, contain more detailed information about careers and

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qualifications but do not yet cover the full range of occupations.

- BIBB (Bundesinstitut für Berufsbildung) holds brief information about qualifications, not all of which are included in Kurs.

In France:

- Centre Infso, holds information about Titres et diplômes homologues (qualifications obtained subsequent to Education Nationale)

- AFPA, holds information about qualifications awarded by AFPA (Association Nationale pour la Formation Professionnelle des Adultes), some of which are titres homologues and therefore also included in Centre Infso

- ONISEP, holds information about vocational qualifications obtained by students within Education Nationale

- ENSUP, holds information about higher education qualifications

- CLAPET, holds information about discontinued qualifications and their relationship to existing qualifications, all within Education Nationale.

In the United Kingdom:

- NCVQ (the National Council for Vocational Qualifications) maintains a database of vocational qualifications with detailed information about all the newly established National Vocational Qualifications (NVQs) and slightly less detailed information about the older vocational qualifications offered by the major awarding bodies in England and Wales

- the SAMI database, which is less detailed than NCVQ, holds information about Scottish Vocational Qualifications and other qualifications awarded by SCOTVEC.

In other Member States of the EC (including Denmark, Ireland, Italy and the Netherlands), there are databases of courses or careers which include some information about vocational qualifications but these are much less detailed than the other databases mentioned.

The survey found, however, that in many of the Member No. 3/93 - February 1993
States of the EC there is considerable interest in extending the existing databases (e.g., of courses or careers) or in developing new databases to cover vocational qualifications. Interest was expressed by organisations in Denmark, Greece, Spain, Ireland, Luxembourg, the Netherlands, and Portugal. The existence of this level of interest suggests that there would be considerable benefits in bringing together interested parties to agree on a common format for the development of new databases; this would facilitate future sharing of information.

The survey had also shown, however, that there were notable differences between the databases which currently exist:

- the types of qualifications included in the databases differ, partly as a result of the different structure of education and training in the Member States; in the UK, in particular, not all categories of vocational qualifications are included in the existing databases

- the nature of the information held about each qualification differs between countries and also within each country; sharing of data would also be made more difficult by the fact that information is sometimes held in separate fields and sometimes as part of a longer descriptive field

- databases differ in the classification system which they use and in the system of levels used for qualifications.

A final important point to emerge from the survey of databases of vocational qualifications was that an understanding of the contents of the database requires an understanding of the vocational education and training system within the relevant country and of its procedures for certification and award of qualifications. In any sharing of information or networking of databases it would therefore be important for the user in another country to be provided with background information of this type. Information on the vocational education and training system in each country will be available in the CEDEFOP monographs, to be published early in 1993 and will be supplemented by a CEDEFOP project which intends to produce a description of the certification systems in Member States.
Possibilities for networking and EC promotion of databases

Gerhard Budin of Infoterm of Vienna described the findings of the Infoterm study on the possibilities for an EC-wide networking of databases for vocational qualifications and accredited courses and for EC level promotion of databases.

Existing databases have been designed for different types of user, some for use by professionals and others for non-experts. This affects the type of work needed to network existing databases. It should also be borne in mind that the expectations of database users have risen over recent years and there is now a demand for a high degree of user-friendliness in databases. The major problem linked to the networking of databases on a European level would be:

- coherent decision to be taken on the common format of data needed and their terminological treatment in order to overcome language barriers

- the identification of the type of users as well as the type of information necessary for the different purposes on the different levels (national, regional, local).

There are three possibilities for linking existing databases at EC level:

- provision of technical links with no attempt to change the structure or search mechanisms of the individual databases. This would have the disadvantage that the user would need to learn the enquiry language of each database linked into the network.

- Harmonising the structures and providing a common search procedure without making any change to the data content. This would require common user software which should be available on a multi-lingual basis. There are some existing examples of databases in which enquiries can be made in several languages but the data is available only in the language of origin.

- changing both the structure and the contents of the data to make them compatible. This is not considered to be financially viable. In particular, it would not be feasible to translate data into all EC languages.

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In parallel with the networking of existing databases, there is a need for a coordinated strategy to expand these databases so as to give comparable coverage of qualifications throughout the EC countries. There is also a need to establish new databases of qualifications in countries which do not already have them. The new databases should principally meet national needs as well as taking account of the European aspect and of the desire for networking of databases. They should be able to draw on the experience of existing database operators.

An EC wide networking of databases should provide help screens, giving assistance with terminology, especially the translation of technical terms, and background information about the country whose qualifications are being described. A network of databases should also work on the principle of re-using information sources wherever possible, so as to reduce costs. This would require careful management of the flow of data.

A possible scenario was described for linking databases of different types including full text bibliographic and documentary databases via a terminological database, which would include classifications and translation of terms. In practice this could involve linking existing and new national databases of qualifications and EC databases via a multi-lingual user interface which would comprise search software and a terminological database. Access could be at different levels to cater for the needs of different types of users and for different levels of detail. In parallel with an EC wide linking of databases, existing national databases would continue to be available to meet national needs.

Aims of database networking

Discussion at the seminar raised the need to define clearly the purpose of networking databases on vocational qualifications and to identify potential users. However, experience of some of the participants at the seminar showed that the need for information of this type had already been felt particularly in the context of mobility of labour. German representatives said that Germany had more than 6 million foreign workers as well as trainees from other countries who were interested in knowing how they could use their newly acquired qualifications in their home country. One organisation in Germany had handled 150,000 enquiries during 1991 from residents interested in knowing whether they could move to other countries to work, as well as 30,000 enquiries from
people outside Germany interested in moving in. For this type of enquiry there was a need to avoid information on such topics as the pattern of training and the identity of regulated occupations in other countries. It was important to make it clear that a network of databases would be providing information rather than forcing the pace in the mutual recognition of qualifications. The need for information of this type was all the greater because there had been difficulties in a number of Member States in the implementation of the EC general directive on mutual recognition of qualifications for higher education diplomas. It would be especially important to assist Member States in implementing the second general directive on regulated occupations lower than full higher occupations.

In addition to aims connected with the mobility of labour, it was suggested that the aims of networking databases might include the provision of information for trans-national programmes and assistance in promoting the transparency of qualifications across the EC.

It would be important to establish at an early stage who would use a networked database and what information they would particularly wish to find. It would also be important to consider how initiatives for linking databases would support the work on comparability of qualifications. It was suggested that provision of information to individuals might in practice be via a mixture of databases and human counsellors of the analogy of the NARICs and for EURES networks.

Proposed pilot scheme

Gerhard Budin outlined proposals for a pilot project to link existing databases of vocational qualifications. It is suggested that this should run for two years beginning in 1993, with a membership which includes existing operators of relevant databases. The activities of the project should include:

- selection of a sector of the world of industry or commerce where there is a clearly identified need for a sharing of information as the focus for the project
- setting out procedures for maintenance of data and attempting to harmonise procedures of database operators whilst still meeting national and regional needs

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agreeing a common format for core data to which individual databases could add other information if required

collection of new data and testing whether it is possible to coordinate data collection at international level

carrying out user tests with selected user groups

experimenting with different access media including CD-ROM and on-line access.

The Infoterm report provided estimates of the cost of a pilot project which assume that there will be support from the European Commission and from national organisations. In addition to the costs of technical implementation, there would be costs involved in the overall negotiations and in the necessary programme of meetings.

Burkart Sellin elaborated CEDEFOP's proposals for the conduct of the pilot project which were, however, dependent upon the availability of the necessary finance and overall agreement of CEDEFOP's Management Board in respect of the work programme for 1993. It was proposed that the project should be supervised by a working group with core membership of the operators of existing databases and nominated observers from other countries. The functions of the working group would be to:

- define the approach to be followed and the framework for activity
- define the purpose of the pilot project and of a networked system
- monitor the operation of the pilot project
- work with the national coordinators for the comparability work.

The pilot project would be organised in conjunction with EUDAT (the European Association for the Development of Databases on Education and Training). It was proposed that the pilot scheme should work with existing databases and database records but should develop a user interface and terminological help in nine languages, with multi-lingual software which could run on an MS-DOS system from a CD-ROM.

The pilot project would explore the feasibility of networking, starting with a simple set of data and would rather pave the way for future work. Some initial results could be expected by the end of 1993 and on the basis of this work the EC would be able to agree on future actions.

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Response of national representatives

Comments were invited from each of the national representatives present at the seminar. There were no representatives from Spain, Greece, France, Ireland, Luxembourg or Netherlands.

Mr. Geuns of Belgium said that his country had only a few databases on schools training opportunities at present. They were in the process of translating the 'Choices' careers databases.

Mr. Blegvad of Denmark whose organisation is responsible for the EK database, said that a considerable amount of information was available through EK and he would be consulting colleagues as to whether his organisation wished to cooperate in the pilot project.

Herr Stothfang of The Bundesanstalt for Arbeit (Germany) said that in addition to EBB and GABI databases his organisation was setting up a new database whose format incorporated the selection of fields from EBB. Work was also in hand to make the contents of the GABI booklets available in electronic form. Germany was interested in collaborative work which could be to collect data using a similar structure to the new Bundesanstalt für Arbeit database or via the linking of existing database into a network or through the collection of information via an analysis sheet such as B/A had already drafted; this provides information on each occupation including tasks undertaken, the type of training undertaken and whether comparability with other countries has been established.

Signor Segneri of Italy said that although Italy did not have a database of qualifications as such, information was available via databases of courses since there exist direct links between the name of the courses and designation of the qualification.

Mr. Sousa of Portugal said that Portugal did not at present have any relevant databases but was taking the first steps in establishing databases.

Stuart Gordon of the UK, Department of Employment, said that the UK was happy to participate in a pilot project to explore ideas and suggested that the proposed working group should comment in detail on the pilot proposals. It was essential that participation in the pilot scheme should be voluntary. David Handley of NCVQ (also UK) said
that the information at present on the NCVQ database was included for a specific purpose and was mainly used by those planning programmes of education or training and by careers advisers. It would be possible, however, to add further information to the database; for example search codes could be added to indicate qualifications covered by the EC Second General Directive.

Other factors to be considered

Further discussion in the workshop identified a number of additional points to be considered in the work to investigate networking of databases:

- attention should be paid to the needs of the different types of users who could include both inexperienced database users and also companies
- in order to be useful the information must be reliable and up to date
- the databases should include information on whether access to employment in the occupation was open to all
- the eventual aim should be that the databases should include not only full qualifications but also certificates (more limited in scope), accredited courses and procedures for recognising skills gained through experience.

Conclusions

The overall view of participants at the workshop was that more work was needed to define the aims and objectives of the proposed networking of databases but that there was a general willingness to move forward to cooperative action. CEDEFOP expects to initiate activity as soon as funding for the pilot project is confirmed.