

“Initiatives at European level have clearly been important in pushing the issue forward in the minds of the public as well as politicians. The white paper on teaching and learning (European Commission, 1995) helped to define the issue in a clear way and thus supported the processes at national and sector level. The resulting programmes (mainly Leonardo da Vinci and Adapt) have initiated and financed unparalleled experimental activity.”

when the system of the ‘bilan de compétence’ was introduced. The aim of the bilan is to support the employer/employee in identifying and assessing professional competences; both to support career development and in order to support enterprise-internal utilisation of competences. The second important French initiative was the ‘opening up’ of the national vocational education and training system for competences acquired outside formal institutions. Since 1992, vocational certificates (Certificate d’aptitude professionnelle) can be achieved (to various degrees) on the basis of assessments of non-formal and prior learning. A new law, initiated by the Ministry of Labour and Solidarity, will be put into force from 2001. This law states the right of the individual to have his or her prior, non-formally acquired competences assessed and recognised. This law will broaden the French approach in this field and will make it possible to obtain entire certificates on the basis of non-formal learning. A third important initiative was taken by the French chambers of commerce and industry where the aim was to set up procedures and Standards for assessment independent of the formal education and training system (Colardyn, 1999). Using the European norm EN45013 on procedures for certifying personnel as a point of departure, important experiences have been gained. Parallel activities based on EN 45013 are going on in Belgium.

EU approaches

Initiatives at European level have clearly been important in pushing the issue forward in the minds of the public as well as politicians. The white paper on teaching and learning (European Commission, 1995) helped to define the issue in a clear way and thus supported the processes at national and sector level. The resulting Programmes (mainly Leonardo da Vinci and Adapt) have initiated and financed unparalleled experimental activity. While not interfering directly in the efforts to develop national systems in this area, the EU level has clearly strengthened attention towards the issue and also contributed in a practical sense by supporting methodological and institutional experi-

mentation. This does not mean that the particular strategy of the white paper, focusing on European Standards and a European personal skills card (PSC), has been implemented (European Commission, 2000). One important reason for this is the mixing of objectives in the original conception of the task. On the one hand the PSC was presented as a summative approach; introducing new and more flexible proof of qualifications and competences. On the other hand the need for new assessment methodologies was promoted on the basis of the need to identify and utilise a broader basis of competences; what we may term a formative objective basically addressing the support of learning processes. Looking into the Leonardo da Vinci experiment, the first objective has only been elaborated and followed up to a limited degree. Where a summative element can be detected, it is normally with a clear reference to existing national qualification systems or linked to a limited sector or profession. The formative aspect, however, has turned out to become a main concern. Not in the form of extensive supranational systems, but in the form of practical tools for single employers and/or employees. Opening up for initiatives from a wide variety of actors, questions and methodologies have been initiated at a ‘low’ institutional level where formative issues and concerns have dominated. Or, to put it in another way, the activity of the projects illustrates the priorities of enterprises and sectors, not the priorities of the National ministries.

What has triggered this wave of activity affecting most European countries almost simultaneously? Answering this requires focusing on political and institutional objectives, developments and challenges. Below, we will emphasise three aspects.

Reengineering education and training; the aspect of lifelong learning

To establish a system for learning throughout life requires a stronger focus on the link between different forms of learning in different learning domains at different stages of life. While the formal system is still very much focused on initial education and training, a lifelong learning system has to face the challenge of linking a variety of formal as well as non-formal

learning areas together. This is necessary to meet the individual's need for continuous and varied renewal of knowledge and the enterprise's need for a broad array of knowledge and competences - a sort of knowledge reservoir to face the unexpected. Also in this context, the question of identification, assessment and recognition of competences presents itself as crucial. Competences have to be made visible if they are to be fully integrated into such a broader strategy for knowledge reproduction and renewal.

Key qualifications

Although normally treated as two separate issues, the question of how to define, identify and develop key qualifications (Kämäräinen, 1999) and the challenge of how to assess non-formal learning are closely related. We will argue that these two debates reflect different aspects of the same issue. In both cases we can observe increasing attention towards learning and knowledge requirements in a Society characterised by unprecedented organisational and technological Change. Methodologies and systems for identification, assessment and recognition of non-formal learning can be looked upon as practical tools for making key qualifications visible and stronger. The terms informal and non-formal learning are, however, not very helpful in this respect. Non-formal learning is a 'negative' concept in the sense that it is a negation of something else. It gives little positive indication of content, profile or quality. The concept is important, however, by drawing attention to the rich variety of learning areas and forms available outside formal education and training. A closer link to the key qualification issue might thus be useful and give the exercise more direction. The linking of formal and non-formal learning domains can be viewed as a way of realising and materialising the objectives expressed through key qualifications.

Solutions seeking Problems; a supply driven development?

Only in a few cases can the development of measurement and assessment methodologies be described as driven by demand or by a push from the bottom up. If we study the last half of the 1990s when this

tendency gained momentum and strength the existence of Programmes like Adapt and Leonardo da Vinci at European and sector level have contributed to the setting and changing of 'the assessment agenda.' The availability of 'fresh money,' linked to a limited set of specific priorities, inspired a high number of institutions to involve themselves in the development of instruments and tools. Although the results from these projects may be of varying quality, the long term impact on the agenda of the organisations and institutions involved should not be underestimated. The coming period will show whether this supply driven movement will find users, for example at sector and enterprise level, appreciating the effort put forth.

Answering the question of why attention to non-formal learning has been strengthened does not provide an answer to the question of how to support and strengthen the positive elements of these developments. Following the theoretical clarifications made in the first part of the report, the challenges ahead can be defined as both a methodological (how to measure) and a political/institutional one (how to secure acceptance and legitimacy).

Methodological requirements

Which functions are to be fulfilled by new methodologies (and institutional systems) for identification, assessment and recognition of non-formal learning? As indicated previously, it is necessary to build on the lessons learned from formal education and training. A direct transfer is not, however, possible. The increased diversity and complexity of the non-formal learning has to be appropriately reflected by the methodologies. DO we speak of a formative role where the instruments and tools are used to guide the learning processes of individuals and enterprises or do we speak of a more limited summative role where non-formal learning is tested for possible inclusion into the setting of formal education and training? The purpose of the assessments, in the non-formal as well as in the formal domain, is decisive for the methodological choices to be made and for the ultimate success of the exercise. Successful development of methodologies and systems implies that these functions are clearly understood and com-

"Although normally treated as two separate issues, the question of how to define, identify and develop key qualifications (...) and the challenge of how to assess non-formal learning are closely related. (...) these two debates reflect different aspects of the same issue."

"The diversity of learning processes and contexts makes it difficult to achieve the same kind of reliability as in standardised (for example multiple choice) tests. The question is how (and which specific kind of) reliability should be sought in this new domain. Reliability should be sought by seeking optimal transparency of the assessment process (standards, procedures etc.)."

The highly contextual and (partly) tacit Character of non-formal learning complicates the quest for validity. There is an acute danger of measuring something other than what is intended. The main thing is to avoid a distorted picture of the candidate and the domain and to strive for authenticity.

(...) "Some basic criteria must be fulfilled if proofs of non-formal learning are to be accepted along with proofs of formal education and training. (...) participants must be heard when setting up and operating Systems of this kind. (...) relevant information must be fed into the process. [and] the transparency of the structures and procedures are very important. It is possible to establish structures where the division of roles (setting of Standards, assessment, appeal, quality control) is clearly defined and presented. Transparency of procedures is 'a must' if acceptance and legitimacy are to be achieved."

bined and/or separated in a constructive and realistic way.

The diversity of learning processes and contexts makes it difficult to achieve the same kind of reliability as in standardised (for example multiple choice) tests. The question is how (and which specific kind of) reliability should be sought in this new domain. Reliability should be sought by seeking optimal transparency of the assessment process (Standards, procedures etc.). Reliability could also be supported through implementation of systematic and transparent quality assurance practices at all levels and in all functions.

The highly contextual and (partly) tacit Character of non-formal learning complicates the quest for validity. There is an acute danger of measuring something other than what is intended. The main thing is to avoid a distorted picture of the candidate and the domain and to strive for authenticity. Methodologies have to reflect the complexity of the task at hand; methodologies must be able to capture what is individually and contextually specific.

The question of reference points ('standards') is a major issue for assessment of formal as well as non-formal learning. While norm-referencing (using the performance of a group/population) has not been seriously discussed in the context of assessing non-formal learning (due to the diversity of competences involved), the issue of criterion or domain-referencing lies at the heart of the matter. The definition of boundaries of competence-domains (their size and content) and the ways in which competences can be expressed within this domain is of critical importance. The wider the area, the greater the challenge in designing authentic assessment approaches. This reverts, in many ways, to the question of functions to be fulfilled; do we want to improve learning processes or do we want to produce proofs (papers of value)? Both purposes are highly legitimate and useful. The setting up of reference points will, however, differ considerably according to the purposes selected.

Political and institutional requirements

As soon as the first methodological requirement has been met, by answering

the questions of methodological purpose and function (see above), institutional and political implementation could be supported along two main strategies; one focusing on 'institutional design' and the other on 'mutual learning.'

Institutional design: Some basic criteria must be fulfilled if proofs of non-formal learning are to be accepted along with proofs of formal education and training. First of all, participants must be heard when setting up and operating Systems of this kind. Since systems for recognition of non-formal learning will have a direct effect upon the setting of wages as well as on the distribution of jobs and positions in the labour market, this matter clearly incorporates the balancing of interests. Although not emphasised very much until now, the question of who to involve and who to listen to will be of decisive importance in the coming period. Secondly, relevant information must be fed into the process. On the question of representation, the definition and articulation of Standards and reference points (in particular) require sufficient and balanced information. Thirdly, the transparency of the structures and procedures are very important. It is possible to establish structures where the division of roles (setting of Standards, assessment, appeal, quality control) is clearly defined and presented. Transparency of procedures is 'a must' if acceptance and legitimacy are to be achieved. The attention of both researchers and policy makers must be drawn to all these issues in the near future.

Mutual learning should be sought and supported between projects, institutions and countries. A substantial amount of learning is already taking place at various levels. As concluded in other parts of this report, and especially in relation to activity at European level, the potential for mutual learning is much greater than the actual and factual achievements thus far. Establishing such learning mechanisms must reflect the various purposes and functions to be fulfilled. Finally, it is very necessary to increase Coordination and to support activities (at European and national level) in order to capitalise on the experiences gained through numerous existing projects, Programmes and institutional reforms.

Bibliography

- Airasian, P.W.**, Classroom assessment, McGraw Hill, 1991, New York
- Bloom, B.S., Engelhardt, M.D., Furst, E.J., Hill, W.J. and Kratwohl, D.R.**, Taxonomy of educational objectives, Handbook 1: Cognitive domain, David McCay, 1956, New York
- Bjørnåvold, J.**, Assessment of non-formal learning: the quality and limitations of methodologies, in Vocational training; European Journal, no.12, September-December 1997, volume 111, EUR-OP, Luxembourg
- Bjørnåvold, J.**, A question of faith? Methodologies and systems for assessing non-formal learning require a legitimate basis, in Vocational training; European Journal, no.12, September-December 1997, volume III, EUR-OP, Luxembourg
- Bjørnåvold, J.**, Validation and recognition of non-formal learning: the question of validity, reliability and legitimacy, in European centre for the development of vocational training (Cedefop), Vocational education and training - the European research field, background report 11, pp.216-232, EUR-OP, 1998, Luxembourg,
- Black, P.**, *Testing: Friend or foe? Theory and practice of assessment and testing*, Falmer Press, 1998, London
- Broekhoven, S. and Herwijnen, A.**, *EVK versus EVC? Assessment of non-formal learning in the Dutch private sector*, Thesis Educational Sciences, University of Nijmegen, 1999, Nijmegen
- Carneiro, R. and Conceicao, P.**, *Learning by doing and formalized learning: a case study of contrasting industrial development patterns in the Portuguese industry*, unpublished draft, Lisbon and Austin, Texas
- Colardyn, D.**, *Steps towards reliable measurement and recognition of skills and competences of workers*, Conference paper, French assembly of chambers of commerce and industry, 1999, Paris
- Cullen, J., and Jones**, *State of the art on approaches in the United States of accreditation of competences through automated cards*, The Tavistock Institute, 1997, London
- Dehnbostel, P., Markert, W., Novak H.**, (editors), *Erfahrungslernen in der beruflichen Bildung - Beiträge zu einem kontroversen Konzept*, Kieser Verlag 1999, Neusäss
- Department for education and employment (DfEE)**, *A study to improve the Operation of accreditation of prior learning (APL) in the NVQ/SVQ system*, internal working document, 1997, Sheffield
- Drexel, I.**, Die bilans de competences - ein neues Instrument der Arbeits- und Bildungspolitik in Frankreich, in *Kompetenzentwicklung '97*, Waxmann, 1997, Berlin
- Engeström, Y.**, *Learning by expanding*, Orienta-Konsultit OY, Helsinki, 1987
- Engeström, Y.**, Developmental studies of work as a testbench of activity theory: The case of primary care medical practise, in Chaiklin. S. and Lave, J., *Understanding practise, perspectives on activity and context*, Cambridge University Press, 1993, Cambridge
- Engeström, Y.**, *Training for Change: New approach to institution and learning in working life*, International labour office, 1994, Geneva
- Eraut, M.**, *The assessment NVQs*, University of Sussex, 1996, Sussex
- Eriksen, E.O.**, *Deliberativ politikk. Demokrati i teori og praksis*. Tano, Bergen, 1995
- Eriksen, E.O., and Weigard, J.**, *Kommunikativ handling og deliberativt demokrati*. Fagbokforlaget, Bergen, 1999
- European Accreditation of Certification (EAC)**, *Guidelines on the application of European Norm 45013*, EAC Secretariat, 1995, Borås, Sweden
- European centre for the development of vocational training (Cedefop), Perker, H., and Ward, C.**, *Identification and accreditation of skills and knowledge acquired through life and work experience*, EUR-OP, 1994, Luxembourg
- European centre for the development of vocational training (Cedefop), Collingro, P., Heitmann, G., and Schild, H.**, *Identifizierung, bewertung und anerkennung von früher und informell erworbenen Kenntnissen - Deutschland*, EUR-OP, 1997, Luxembourg
- European centre for the development of vocational training (Cedefop), Feutrie, M.**, *Identification, Validation et accréditation de l'apprentissage antérieur et informel, France*, EUR-OP, 1998, Luxembourg
- European centre for the development of vocational training (Cedefop), Lambkin, A. and Kerr, D.**, *Accreditation of prior learning - Ireland*, EUR-OP, 1998, Luxembourg
- European centre for the development of vocational training (Cedefop), Bjørnåvold, J.**, *Identification and Validation of prior and non-formal learning*, EUR-OP, 1998, Luxembourg
- European centre for the development of vocational training (Cedefop), Di Francesco, G.**, *Identification, assessment and recognition of non-formal learning - Italy*, unpublished working document, 1999, Thessaloniki
- European centre for the development of vocational training (Cedefop), Nielsen, S.P.**, *Identification, assessment and recognition of non-formal learning - The case of Denmark*, unpublished working document, 1999, Thessaloniki
- European centre for the development of vocational training (Cedefop), Vanheerswynghels, A.**, *Identification, assessment and recognition of non-formal learning. The case of Belgium*, unpublished working document, 1999, Thessaloniki
- European centre for the development of vocational training (Cedefop), Mayer, K., Jerome, G. and Lassnigg, L.**, *Identifizierung, bewertung und anerkennung von früher und informell erworbenen Kenntnissen und nicht formellen Lernprozesse- Austria*, unpublished working document, Thessaloniki, 1999

European centre for the development of vocational training (Cedefop), Forssen, L. and Petersson, B., *Identification, assessment and recognition of non-formal learning – The case of Sweden*, unpublished working document, 1999, Thessaloniki

European centre for the development of vocational training (Cedefop), *Identification, assessment and recognition of non-formal learning – Portugal*, unpublished working document, 1999, Thessaloniki

European centre for the development of vocational training (Cedefop), Pape, A., *Section 20: Crafts examination on the basis of documented non-formal qualifications. Experiences from Norway*, unpublished working document, 1999, Thessaloniki

European centre for the development of vocational training (Cedefop), Turner, C., *Identification, assessment and recognition of non-formal learning – Greece*, EUR-OP, 2000, Luxembourg

European centre for the development of vocational training (Cedefop), Scottish Qualifications Authority (SQA), *Identification, assessment and recognition of non-formal learning – United Kingdom*, EUR-OP, 1998, Luxembourg

European centre for the development of vocational training (Cedefop), Castillo, J.J., Pumarino, A., Santos, M., *Identification, assessment and recognition of non-formal learning – Spain*, EUR-OP, 2000, Luxembourg

European centre for the development of vocational training (Cedefop), Haltia, P., Puustelli, P., *Identification, assessment and recognition of non-formal learning – Finland*, (to be published 2000), EUR-OP, Luxembourg

European centre for the development of vocational training (Cedefop), Klarus, R. and Nieskens, M., *Concepts of reliability and validity related to accreditation of informal and non-formal learning*, EUR-OP, 2000, Luxembourg

European Commission, *White paper, Teaching and learning*. Towards the learning Society, 1995, Brussels

European Commission, *A European skills accreditation system*, internal information memorandum, 1996, Brussels

European Commission, *Mise en œuvre du Livre blanc 'Enseigner et apprendre: vers la société cognitive*, report to the Commission, 10.1.2000, Brussels

Guildford Educational Services Ltd., *Evaluation of objective onepilot projects*, report to the European Commission, 1999, Guildford

Haltia, P. and Hämäläinen, V., *Näyttötutkinnoissa vaadittavien pätevyksien määrittely ja tuottamaisen yhteydet*, University of Turku, 1999, Turku

ISFOL, Angeli, F., *Unità capitalizzabili e crediti formativi. Metodologie e strumenti di lavoro*, 1998, Milan

Kämäräinen, P., *Key Qualifications and new learning concepts; a paradigm shift in the curriculum development for vocational education and training*, IVETA '99 Conference, 1999, Sydney

Klarus, R., *Competenties erkennen*, CINOP, 1998, 's-Hertogenosch

Lave, J., and Wenger, E., *Situated learning; Legitimate peripheral participation*, Cambridge University Press, 1991, Cambridge

Mebaut, P., *Le diplôme, une norme multivalent, in Möbus, M. and Verdier, E., Les diplômes professionnels en France et en Allemagne*, L'Harmattan, 1997, Paris

Merle, V., *The evolution of Systems of validation and certification. What are the possible models and what are the issues for France?* in *Vocational Training; European Journal* No.12, September – December 1997, volume 111, EUR-OP, Luxembourg

Mertens, D., *Überlegungen zur Frage der Identifizierung und Vermittlung von Schlüsselqualifikationen im Erst- und Weiterbildungssystem*, study for Council of Europe, 1972, Erlangen

Molander, B., *Kunskap i handling*, Daidalos, Göteborg, 1993

OECD, *Reviews of national policies for education*, Austria, Paris, 1995

Official Journal of the European Communities, *Council Decision of 6 December 1994 establishing an action Programme for the implementation of a European Community vocational training policy (Leonardo da Vinci)*, 94/819/EC

Official Journal of the European Communities, *Call for interest, Leonardo da Vinci Programme 1996*, OJ no.60/61, 29.2.1996

Polanyi, M., *The tacit dimension*, New York, 1967

Polanyi, M., *Personal Knowledge. Towards a post-critical philosophy*. Routledge, London, 1958/1998.

Popham, W.J., *Educational evaluation*, Allyn and Bacon, 1993, Boston

Simon, H., *The structure of ill structured Problems, in Artificial Intelligence* no. 4, 1973, pp. 181-201, New-Holland Publishing Company

Skule, S., and Reichborn, A.N., *Laerende Arbeid. En kartlegging av laerevilkar i norsk arbeidsliv*. FAFO, Oslo, 2000

Tjänstmannens centralorganisation (TCO), *Värderat vetande, validering av kompetens – att bedöma poeh erkenna kunmande*, 1999, Stockholm

Undervisningsministeriet, *Adult learning in Denmark*, 1997, København

Utbildningsdepartementet, *Validering av utländsk yrkeskompetens*, Statens offentliga utredningar 1998:165, Stockholm

Wolf, A., *Competence-based assessment*, Open University Press, 1995, London