

What learning outcome based curricula imply for teachers and trainers¹?

Dr Irene Psifidou², Cedefop

Introduction

As the title reveals, the present paper aims to examine the evolution of curriculum development theories and the increasing emphasis given in Europe on the learning outcomes approach. It illustrates recent policy developments in different European countries that colour this shift from an input to an outcome based provision and discusses the impact that this may have on pedagogies and teachers' training. The paper gives special focus to vocational education and training (VET) while also incorporating evidence from the general education sector.

In recent decades, the term curriculum has become increasingly used to refer to the existing contract between society, the state and educational professionals shaping the educational experiences that learners should undergo during a certain phase in their lives. Just like the societies they reflect, curricula are not static, fixed entities but reflect a continuous process of renewal. Large scale curriculum reforms have been introduced since 1950 in most educational systems across the world. The first and most notable among them were the curriculum reforms of the fifties in the USA. Other education systems followed suit later and initiated educational reforms of a similar type.

Today, it is widely recognized that curriculum development and renewal is an important component of any educational reform for quality improvement. Curriculum relevance is a condition *sine qua non* not only for improving the potential of the human capital of education and training graduates but also for retaining learners in school. The irrelevance of school curriculum is actually one of the fundamental factors that causes a widening gap between school and youth culture; to the extent that school and VET institutions are not sufficiently attractive to youths and do not effectively address their needs. The endemic irrelevance of curriculum may be one of the greatest obstacles to successfully match education and training provision to labour market needs.

Adopting a learning outcomes approach when developing curricula, seems to be an effective way to avoid these potential mismatches.

¹ This paper has been published in Conference proceedings of the 7th International Conference on "Comparative Education and Teacher Training" organised by the Bulgarian Comparative Education Society, in 29 June -3 July 2009. Volume 7, p. 183-188. Bureau for Educational Services, Sofia, Bulgaria.

² Dr. Irene Psifidou has a PhD degree on Comparative Education Policy from the Universidad Autónoma de Barcelona in Spain and since 2004 she is working as education policy analyst at Cedefop, the European Centre for the Development of Vocational Education and Training, in Thessaloniki, Greece. www.cedefop.europa.eu

1. Curriculum theory

Since 1949, Ralph Tyler's theory of curriculum development as a product approach has been complemented by many other theories. In the *product approach*, the assumption was that student outcomes – at least those that matter – could and should be measured. The result was that in order to measure the behaviours, tasks were broken down into smaller and smaller parts, resulting in tasks that lost their authenticity or meaningfulness. However, the four corresponding principles in the development of any curriculum introduced by Tyler: *defining goals, establishing corresponding learning experiences, organizing learning experiences to have a cumulative effect, and evaluating outcomes*, remained valid for more than 30 years.

In 1974, Lawrence Stenhouse advocated principles for selecting content, developing teaching strategies, sequencing learning experiences, and assessing student strengths and weaknesses with an emphasis on empiricism. This was the so called *process approach*. Later on, the *praxis approach* added the element of commitment to curriculum development. This approach advocates a shared idea of the common good and the goal of informed and committed action to the model of curriculum development. Even more recently there has been an emphasis on the *context* of curriculum and the notion of curriculum as a social process in which personal interactions within the learning environment take on considerable significance (Howard, 2007).

In more recent approaches, the *learning outcomes approach* is increasingly seen by policy makers as a very useful way of bringing learning programmes closer to “real life” and the needs of the market. However, the way learning outcomes are perceived and applied in curriculum differs not only from country to country but also between educational levels and sectors.

1.1 Understanding learning outcomes

In the recent European initiative to develop and implement a common European meta-framework for referencing national qualifications, the so called European Qualifications Framework (EQF), learning outcomes are defined as *statements of what a learner knows, understands and is able to do on completion of a learning process* (European Parliament/Council, 2008). In this definition, the form of learning is not specified – it can take place either in formal or non-formal education arrangements, or informally through experience gained in the community or at the work place.

In spite of the apparent simplicity of this definition, previous research unravelled a huge diversity of possible use and understandings of learning outcomes (Cedefop, 2009a). Learning outcomes are defined at different levels:

- at the systemic level (e.g. in qualification frameworks);
- at the level of qualifications (e.g. qualification standards);
- at the level of curricula and learning programmes.

Furthermore, according to the level on which they are defined, they may fulfil different functions: “recognition of prior learning, award of credit, quality, learning

plans, key competences for life, credibility for employers as well as modernising the governance of education and training as systems are reformed to encompass lifelong learning” (Cedefop, 2009a). Finally, learning outcomes are formulated on the basis of different concepts of competence. These concepts influence the form of learning outcome specifications and can be expected to have also an impact on the relationship between learning outcomes and curricula and learning programmes (Cedefop forthcoming).

With regard to the lack of a consensual and unified definition of learning outcomes across countries, the above-mentioned definition of the EQF will be used as the conceptual basis for this paper.

1.2 Origins of learning outcomes approach

From the brief overview of different theories for curriculum development provided earlier, one may think that a learning outcomes approach is a new way of designing and developing learning programmes. Such an assumption would be misleading, given the long and multiple origins learning outcomes reveal in varied literature.

Learning outcomes can, on one hand, be traced back to behaviouristic authors like IV Pavlov (1849-1936), and the psychologists J. B. Watson (1858-1958) and B. F. Skinner (1904-1990), who built on their experiences with dogs to develop an approach explaining human behaviour in terms of responses to external stimuli. Skinner’s work on programmed instructions and underlying principles like small instruction sequences, participation of the students, reinforcement and the determination of the pace of learning through the students, led to productive research on the improvement of teaching, learning and training methods in United States.

The behaviouristic approach points out the clear identification and measurement of learning and the necessity to produce observable and measurable outcomes (Adam, 2004, p. 4). In the 1980s this concept reappeared with the competence-based approach in VET-systems in the US and the United Kingdom. The aim was the identification and use of elements of competence to define occupations, work roles, training and qualifications according to labour market needs. In all these developments, the learning process was largely ignored and the focus set on the product of learning defined as competence (ETF, 2006, p. 19).

However, referring only to behaviouristic theories does not allow us to fully understand the concept and ongoing discussions on learning outcomes. The shift from teaching to learning, which is considered as an essential element of learning outcomes approaches, refers to constructivistic theories that reject the behaviourist model of stimuli-response. Learning is considered to be a process of constructing knowledge and meanings on the basis of the student’s own experience. Shared principles of different constructivist theories conclude that learning should be active, self-conducted, situated (in a context) and social. In this perspective, the function of teachers and trainers are closer to guidance and coaching than to instruction (Backes-Haase, 2001, p. 226, 230). Some examples for didactic approaches adapted from constructivist theories include situated learning, problem-based learning, experimental learning and action learning.

While the origin of learning outcomes may be traced back to previous centuries, their increasing use in vocational education and training policy to design qualifications and job profiles, to set standards and develop curricula is indeed an innovation and an increasingly universal approach.

2. Curriculum practice

The different approaches and definitions we refer to are theoretical and give us food for thought – and perhaps basis for research. What we need, in addition, are practical examples of curriculum development based on learning outcomes in the EU to illustrate how these respond to the need for lifelong and lifewide active and autonomous learning of students and apprentices.

Recent national developments in Member States confirm a growing priority in policy agendas to increase the flexibility and permeability of qualifications systems and the shift to learning outcomes is acknowledged as a prominent tool in this respect (Cedefop, 2009b). Introducing competence-based curricula and modularising VET programmes for some countries happened already in the mid-1980s. This was the case for instance in France with the systematic definition of competence-based qualification standards (*référentiels de compétence*) which shifted its whole education system to an outcome-oriented approach.

A decade later, at the end of 1990s, a shift to learning outcomes approaches in curriculum development takes place in Finland, with the introduction of large scale curriculum reforms, and in Ireland, through the adoption of the Qualifications (Education and Training) Act 1999 and the launch of the National Framework of Qualifications (NFQ) based on learning outcomes defined standards. The different institutions involved in curriculum development in VET, for their part, are dedicated to making the Irish system more learner-centred, for instance through developing and testing “flexible learning profiles”³ at upper-secondary level.

With the reform law *Ley Orgánica de las Cualificaciones y de la Formación Profesional* (LOCFP, 2002), Spain started an ongoing modernisation of the whole VET-System demonstrating how reforms of the qualification system and changes affecting curricula and teaching practices are related to each other. Qualifications standards are defined as a group of competences (knowledge and capabilities) for a given occupation on the labour market. Competence comprises the whole range of personal, professional or academic knowledge and capabilities. Educational standards are set by learning modules (*módulos formativos*), which are coherent training blocks related to each of the competence units forming a professional qualification.

Moreover in UK, the VET system in Scotland provides paradigmatic examples of steering VET systems through learning outcomes. VET is essentially outcome-based with qualification standards expressed so as to grant a large autonomy to VET providers. In Germany, the dual system, combining apprenticeship and school-based

³ Flexible learning profile aim at placing the students’ aptitudes and interests at the centre of all planning for curriculum provision. For more information see: <http://www.ncca.ie/eng/index.asp?docID=262>

learning, defines tasks, activities, skills and knowledge areas as the content of training⁴.

In Eastern Europe, and especially in Czech Republic, Estonia, Lithuania, Malta, Poland, Slovakia and Slovenia, comprehensive reforms have been undertaken during a short period of time to renew qualification standards and curricula, introducing learning outcomes alongside input-oriented specifications. The strong external influence from EU institutions, bilateral assistance and international organisations on these developments makes this group of countries an interesting case to study.

Within this group of countries, Slovenia is one of the most successful in modernising the VET system and delivers best practise examples in defining qualification profiles and assessment methods. With the National Vocational Qualifications Act (adopted in 2000, amended in 2006) a system for the accreditation of national vocational qualifications (*nacionalne poklicne kvalifikacije*, NVQ) was introduced. Vocational qualifications are based on learning outcomes, irrespective of how knowledge, skills and capacities were obtained. The objective is to combine training for employability and education for personal development and participation in society. In order to enable recognition of informally and non-formally acquired knowledge, competences and skills, the Act determines the procedure for developing and monitoring national occupational standards and assessment standards.

This panorama of recent developments in European countries shows that certain member states are making a lot of progress; others however are still at an early stage of implementation. A key challenge is to move from general political statements to practical reforms influencing qualifications standards, teaching methods and assessment forms (Cedefop, 2009c). Many countries and institutions still lack practical experience in use of learning outcomes for defining standards, describing curricula and organising assessments. In some cases, we also observe inherent scepticism towards the approach, fearing it will weaken attention to the quality of teaching and learning input.

Another important challenge for the near future is whether the shift to learning outcomes, increasingly promoted at European and national levels, will result in more open and active learning or not. This seems to be a new field of analytical work that gains interest. A recent Cedefop study on “*The relationship between learning outcomes and VET curricula and learning programmes*” examines the impact that curricula based on learning outcomes may have to learner centre approaches (Cedefop, forthcoming).

⁴ This is shortly described in the *Berufsbild* (professional profile) and further detailed in the *Ausbildungsrahmenplan*, a corpus of skills and knowledge which are to be transmitted in the work-based part of training. The framework curriculum (*Rahmenlehrplan*) defines the learning objectives and the content of courses for the school-based part of training, providing also some information on teaching methods.

Concluding remarks

Current approaches in the way curriculum knowledge is selected, organized, and sequenced led to considerable debates about teaching practices, learning arrangements and assessment methods. This is because the learning outcomes approach to curriculum design has implications in the way the content is taught, the teaching methods are applied, the material is used and the teachers' training is arranged.

The shift from an input based to an outcome oriented education and training provision - in other words to a competence and career oriented education and training - defines new learning objectives that may be only met through new forms of learning. Among these new forms of learning, the guided learning, the experiential learning and the action learning aim to help students and apprentices to develop integrated competences, i.e. to acquire a combination of vocational, generic and learning competences useful both for work and life. Obviously, these ways of learning require dynamic learning environments where students and apprentices should be seen and treated as active learners, as well as appropriately trained teachers and trainers.

Teachers and trainers are changing roles from the more traditional one of instruction to the more complex one of facilitating learning for learners with diverse learning needs and styles. The question is whether they are supported adequately to perform their new roles. Initial education cannot provide teachers and trainers with the knowledge and skills necessary for a life-time; professional development is necessary and should be a continuous exercise. However as evident from policy review, in-service training is often left to the initiative of individual teachers and trainers, and is not always adapted to their needs, while incentives and opportunities to carry on updating their skills throughout their professional lives are usually limited (Psifidou, 2007). The training and professional development of teachers and trainers is an area that clearly requires increased political attention and strategic action. As stated in the Communication "New skills for new jobs" (2008), upgrading skills is not just a luxury for the highly qualified in high-tech jobs: it is essential for all of us.

This paper raised a question that remains open for researchers to provide evidence and policy makers to give answers. This brief overview of curriculum developments shows that changing paradigms in teaching and training are actually happening in many European countries with the shift to the learning outcomes approach. While aiming for more learner-centre approaches, the implications of this shift may be negative, increasing teachers and trainers' skill mismatches, if teachers and trainers are not kept abreast of these innovations.

Bibliographical sources

- Adam, Stephan. 2004. "Using learning outcomes. A consideration of the nature, role, application and implications for European education of employing learning outcomes at the local, national and international levels". Paper presented at the UK Bologna Conference on July 1-2, 2004. Heriot-Watt University. Edinburgh.
- Backes-Haase, Alfons. 2001. Konstruktivismus als didaktischer Aspekt der Berufsbildung. In: Bonz, Bernhard (Hg.): *Didaktik der beruflichen Bildung*. Baltmannsweiler: Schneider Hohensgehren, p. 220–238.
- Cedefop, 2009a. *The shift to learning outcomes: policies and practices in Europe*. Cedefop reference series. Luxembourg: Office for Official Publications of the European Communities. Available at: http://www.cedefop.europa.eu/etv/Upload/Information_resources/Bookshop/525/3054_en.pdf
- Cedefop, 2009b. *Continuity, consolidation and change: Towards a European era of vocational education and training*. Luxembourg: Office for Official Publications of the European Communities.
- Cedefop, 2009c: *The dynamics of qualifications - the definition and renewal of occupational and educational standards*. Cedefop Panorama Series.
- Cedefop, forthcoming. *The relationship between learning outcomes and VET curricula and learning programmes*. Cedefop forthcoming.
- ETF. 2006. *A Review of International and National Developments in the Use of Qualification Frameworks*. Working paper. Series: Knowledge Sharing. Available at: [http://www.etf.europa.eu/pubmgmt.nsf/\(getAttachment\)/4B4A9080175821D1C12571540054B4AF/\\$File/SCAO6NYL38.pdf](http://www.etf.europa.eu/pubmgmt.nsf/(getAttachment)/4B4A9080175821D1C12571540054B4AF/$File/SCAO6NYL38.pdf)
- European Commission. 2008. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: *Anticipating and matching labour market and skills needs*. COM(2008) 868 final. Available at: http://ec.europa.eu/education/lifelong-learning-policy/doc/com868_en.pdf
- European Parliament/Council. 2008. Recommendation of the European Parliament and of the Council 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning. In *Official Journal of the European Union, C 111, 6.5.2008, p. 1-7*. Available at: http://ec.europa.eu/education/policies/educ/eqf/eqf08_en.pdf
- Howard, J. 2007. *Curriculum development*. Centre for the Advancement of Teaching and Learning: Elon University.
- Psifidou, I. 2007. *International trends and implementation challenges in secondary education curriculum policy: The case of Bulgaria*. Doctoral Thesis, Universidad Autónoma de Barcelona, Spain.