

Key Competences in Europe: interpretation, policy formulation and implementation

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Introduction

Traditionally, the notion of competence has applied to vocational education and training (VET) because of its direct link with the labour market and of the description of skills and attitudes required for some specific tasks or responsibilities. Since the 1990s, the term 'competence' has also become increasingly used for basic and general academic education at lower and upper secondary levels. In many countries, the curricula were more and more defined not only in terms of knowledge attainment in different academic subjects, but also of attitudes, skills, abilities, capacities, behaviours, values, competencies or competences. For example, a report published by OECD in 1994 advocating a redefinition of the curriculum to meet the challenges of the 21st century mentioned the requirement of a basic core curriculum that provided every student with a 'survival kit' in terms of knowledge, competences and values' (OCDE, 1994). A little later, the report 'Learning: the treasure within' by the International Commission on Education for the 21st Century, set up by UNESCO and chaired by Jacques Delors, proposed four pillars of education : learning to know, learning to do, learning to live together, and learning to be (Delors, 1996). In the following years, another important step in the reflection on competences was taken at the initiative of OECD with the 'DeSeCo' (Definition and Selection of Competencies) project (OECD, 2001; 2005) that started in 1997 and aimed at defining some 'key competencies useful for a successful life for individuals and a well-functioning society' (Rychen & Salganik, 2003). It classified key competencies in three broad categories: using tools interactively, interacting in heterogeneous groups and acting autonomously. The PISA project was launched at the same time. The first survey carried out in 2000 and the following rounds represented an important methodological change with respect to the previous international surveys on student achievement (IEA and ETS surveys) by assessing the ability to use knowledge acquired in and out of school in real-life situations, rather than knowledge *per se*. This more pragmatic view greatly influenced curricula worldwide, given the impact on public opinion of the international ranking of students' performance which was amplified by the newspapers despite the methodological warnings of OECD regarding an excessively superficial interpretation of the surveys' results.

At the same time, at the European level, the adoption of the Lisbon Agenda underlined the crucial importance of the acquisition of some key competences for the well-being of citizens, social cohesion, economic development and competitiveness in the process of globalisation. Many initiatives have been taken in the last ten years within the Open Method of Coordination¹ to design new transparency instruments to enhance student and worker mobility within and outside Europe (Laffan, & Shaw, 2005; Lange, & Nafsika, 2007; Gornitzka, 2006). All took account of knowledge, skills and competences at all levels of education, including adult education: the European Qualification Framework for Lifelong Learning, the

Common European Framework of Reference for Languages, the learning outcomes approach in higher education with the Bologna Process, the certificate supplements and the Europass C.V., and, of course, the 'European Reference Framework on Key Competences for Lifelong Learning' on which this article will focus (European Parliament and Council, 2006). We must also mention the work carried out by the Council of Europe on democratic and ethical issues and education to citizenship.

Why is there an Evolution towards a Competence-based Curriculum?

Before analysing the conceptual issues related to the interpretation of 'key competences' and the practical issues related to the various formulations of the curricula and the implementation strategies in European countries, one should briefly mention the main factors that explain the evolution towards what can be seen as a new paradigm of education in a lifelong perspective. It can help to clarify the political and ideological debates on the introduction of the concepts (or notions) of learning outcomes and key competences in the curriculum landscape. An important factor of resistance amongst some intellectuals and teachers against such an evolution is what they see as the increasing importance of economic considerations in the context of economic and financial globalisation. The more pragmatic translation of the aims of education is often perceived as evidence of a greater impact of the labour market and employers' expectations, as if education was 'selling its soul to the devil'. Admittedly, the growing importance of competitiveness in the global economy and the increasing role of human capital and education in the knowledge society are important factors in the emergence and development of the new education paradigm. But others also contribute to explain the new expectations towards education (Michel, 2001):

- Coping with the rapid pace of change and obsolescence of knowledge and skills, which imply lifelong learning for all and preparing mindsets from an early age to accept change and the continuous questioning of what was previously taken for granted as normal constraints of everyday life.
- Preparing students to question the consequences of change, rather than considering it as an end in itself, and in particular to analyse science findings and technology innovations in terms of their ethical and practical implications for the future. The French author Rabelais' warning in the 16th century has never been more apposite: 'knowledge without conscience is but the ruin of the soul'. Environment, sustainable development, bioethics and other crucial issues for the future of humanity require cross-subject approaches and active learning in teams.
- Preparing students to live in the digital era, using in a relevant way the rapidly changing ICT, while being aware of the new ethical challenges brought about by social networks, but also adapting teaching/learning practices to young people's digital culture.
- Making learners aware of the dangers of growing inequalities (and new forms of social exclusion) for social cohesion, peace and democracy among countries and within some countries, as well as of the resurgence of xenophobia, racism and intolerance.

Hence, the need to think the curriculum and learning outcomes in terms of competences, understood as a combination of knowledge, skills, attitudes and

values, should not be interpreted as resulting only from economic globalisation and liberalism. Many elements of what we now call ‘competence-based curriculum’ have been present in our pedagogical thinking for centuries.

The European Framework of Key Competences

This framework was proposed in the Recommendation on Key Competences for Lifelong Learning adopted by the European Parliament and the Council in December 2006 after five years of work by experts and civil servants collaborating within the Open Method of Cooperation. It defines eight key competences:

- Communication in the mother tongue
- Communication in a foreign language
- Mathematical competence and basic competences in science and technology
- Digital competence
- Learning to learn
- Social and civic competence
- Sense of initiative and entrepreneurship
- Cultural awareness and expression.

It is stressed that: 1) all these competences should be regarded as equally important, since each can contribute to a successful life in the knowledge society; 2) to some extent, they overlap and interlock; 3) many themes should apply throughout this framework as they play a role in these key competences: critical thinking, creativity, initiative, problem solving, risk assessment, decision taking and constructive management of emotions. One should note that this set of key competences represents a consensus at a given moment in time and that many other basic qualities or attributes could also have been mentioned, for example, the ability to realise what is essential and what is unimportant, the capacity to set priorities, to respect time-schedules and deadlines, to be aware of one’s limits or ignorance, to have a sense of foresight, etc.

If all the eight key competences are equally important and are more or less interrelated, the first three are relatively easy to define and implement in a curriculum that is still predominantly structured around traditional subjects. The main difficulty is to suggest concrete links between subjects so that each school subject or activity can, for example, contribute efficiently to better communicate in one’s mother tongue. Yet not all teachers feel responsible about showing the possible bridges between subjects, for instance between the structure of language and mathematical logic. Yet, the first three competences do not lead to very different interpretations among Member States, unlike the five other key competences, which are transversal and have been perceived and interpreted in different ways in the European countries. That is why we will focus here on these cross-curricular competences.

Some Terminology Issues Concerning Key Competences

It is almost a truism to say that there is some vagueness in the terminology used in different contexts and by various stakeholders: notions such as competence, competency, skill, ability, know-how, capacity, capability and aptitude are used or associated with different meanings according to the context and are sometimes considered as more or less equivalent. Moreover, in many countries, it is difficult to make a clear distinction between skills and competences or competencies. Even the official European terminology maintains some ambiguity. For example, on the

IATE (Interactive Terminology in Europe) website ‘competence’ is translated into French as ‘*compétence*’, but ‘skill’ is also translated as ‘*compétence*’, which reflects the real world, since skills and competences in France are often used indiscriminately in the general education sphere.

However, it is a different story in the field of vocational education and training (VET) and professional qualifications where certain distinctions are more commonly accepted. Among the possible definitions of ‘competence’ one can quote CEDEFOP: competence is ‘the ability to apply learning outcomes adequately in a defined context (education, work, personal or professional development)’. It is completed by a comment: ‘competence is not limited to cognitive elements; it also encompasses functional aspects (involving technical skills) as well as interpersonal attributes (social or organisational skills) and ethical values’ (CEDEFOP, 2008). Hence, CEDEFOP defines ‘skill’ as the ability to perform tasks and solve problems, but defines ‘basic skills’ as the skills needed to live in our contemporary society (e.g.: listening, speaking, reading, writing and mathematics). There is no obvious difference with ‘basic competences’ and the French translation of basic skills in the CEDEFOP terminology is ‘*compétences de base*’. Another source of ambiguity is the fact that competences and competencies are often used indiscriminately in the literature and some official documents related to curricula. This was the case with the DeSeCo study (DeSeCo executive summary, 2005). But according to ILO standards, competency is a more specific ability that can be observed in performing an action in a given context and producing a set outcome.

So, with Rychen and Tiana, one should consider that competence is a broader concept or notion than skill (Rychen & Tiana, 2004) or even competency and that it encompasses knowledge, competencies, skills, abilities, capacities, attitudes, values, attributes and qualities. But, in any case, the flexibility in using the different notions related to competence and its close synonyms certainly contributed to the diversity among European countries in their way of integrating the European cross-curricular key competences when designing their new curricula. Another major factor is the fact that the perceptions and interpretations of key competences are closely related to the history and cultural context of each country or region, which is, of course, also the case for the overall curricula.

The Strategic Importance of Cross-curricular Key Competences

A first inescapable step is to present how the European Framework defines the five cross-curricular competences (Annex of the Recommendation of the European Parliament and of the Council, 18 December 2006):

- **Digital competence** involves the confident and critical use of Information Society Technology for work, leisure and communication. It is underpinned by basic skills in ICT: the use of computers to retrieve, assess, store, produce, present and exchange information and communicate and participate in collaborative networks via the Internet.
- **Learning to learn** is the ability to pursue and persist in learning, to organise one’s learning, including through effective management of time and information, both individually and in groups. This competence includes awareness of one’s learning process and needs, identifying available opportunities, and the ability to overcome obstacles in order to learn successfully. It means acquiring,

processing and assimilating new knowledge and skills, as well as seeking and making use of guidance. Learning to learn engages learners to build on prior learning and experience in order to use and apply knowledge and skills in a variety of contexts: at home, at work, in education and training. Motivation and confidence are crucial.

- **Social and civic competences** include personal, interpersonal and intercultural competences and cover all forms of behaviour that equip individuals to participate in an effective and constructive way in social and working life and particularly in increasingly diverse societies, and to solve conflicts where necessary. Civic competence equips individuals to fully participate in civic life, based on knowledge of social and political concepts and structures and a commitment to active and democratic participation.
- **Sense of initiative and entrepreneurship** refers to the ability to transform ideas into actions. It includes creativity, innovation and risk-taking, as well as the ability to plan and manage projects in order to achieve objectives (in everyday life and society, but also in the workplace) and to seize opportunities. It should also include awareness of ethical values.
- **Cultural awareness and expression** are an appreciation of the importance of the creative expression of ideas, experiences and emotions in a range of media, including music, performing arts, literature, and the visual arts.

Every individual needs these competences for personal fulfilment and development, active citizenship, social inclusion and employment. For each of these five competences the definition is completed by a list of related ‘essential knowledge, skills and attitudes’. If each of these competences seems to be relevant with respect to the main challenges of present day society, the definitions are heterogeneous in their formulation and leave a degree of liberty in the way to interpret them and adapt them to each national or regional context. One of the concerns expressed by many Member States has been the possibility to assess or measure the degree of attainment of these competences. This is a real issue, as experience has shown that what can be effectively assessed in a curriculum is taken more seriously by learners and teachers and is therefore more likely to be learned and taught. That is why DG EAC, through the Joint Research Centre (JRC) of the EU, decided to finance research projects in this field. The Centre for Research on Lifelong Learning (CRELL) was established in 2005 to develop expertise in building new instruments and indicators to measure attainment of transversal competences such as civic competence, learning to learn and creativity (Hoskins & Fredriksson, 2008; Hoskins & Deakin Crick, 2010; Villalba, 2008). In the same way, another research centre of the JRC — the Institute for Prospective Technological Studies (IPTS) —, established in 1994, has produced many research studies in the field of education and training on ICT, digital culture, creativity and innovation. Among the recent reports, it is worth mentioning the final report on the Study on Creativity and Innovation in Education in EU Member States that started in December 2008 (Cachia *et al.*, 2010), on new ways to learn new skills for future jobs (Redecker *et al.*, 2010) and another study about the place of creativity and innovation in school curricula in the EU 27 (Helmann & Korte, 2010).

Through its four strategic objectives, the Strategic Framework for European Cooperation for Education and Training (ET 2020) reinforces the crucial

importance of cross-curricular competences (European Council, 2009). This is true in particular of objective 1 concerning lifelong learning and mobility, objective 3 concerning social cohesion and active citizenship, and objective 4 concerning enhancing creativity, innovation and entrepreneurship. In the ongoing context of peer-learning, the European cluster on key competences is still very active, aiming at fostering cross-curricular competences and designing instruments to implement and assess these (www.kslll.net/PeerLearningClusters/clusterDetails.cfm?id=9).

Translating Cross-curricular Key Competences into Curriculum Policy Formulations in Europe

We will refer here to the report commissioned by the Directorate-General for Education and Culture of the European Commission in which both authors of this article participated (Gordon *et al.*, 2009). The focus is on cross-curricular competences because they require the most important innovations in teaching/learning practices, assessment procedures and school organisation. And it is the reason why they have been integrated to various degrees and in various ways in the curriculum reforms across Europe. Given the limits of an article, the focus will be on compulsory education and only a few examples will briefly describe some contrasted schemes of new curriculum design and the main convergences towards a competence-based approach. It will be also taken into account that the examples of Poland and Spain are developed in other articles of this issue.

Although all Member States do not refer explicitly to key or cross-curricular key competences, most have been introducing similar concepts such as basic competences, core skills, key skills or '*socle commun*'. For the countries which specifically use the term 'competences', it is agreed that it means application of knowledge and skills and also includes attitudes. Another feature is that the skills and attitudes must allow one to use knowledge in various situations, both familiar or unexpected (e.g. the 'essential competences' in Portugal). The notion of key competences in many countries (e.g. Austria, Bulgaria, Cyprus, Czech Republic, Denmark, Lithuania, Malta, the Netherlands, Romania, Slovakia and Slovenia) refers to subject-independent competences that are seen as providing a core or basic set (Spain) or a foundation (French-speaking Belgium, France and Luxembourg). The set of competences varies according to the education system. In Slovenia, they include learning to learn, social skills, ICT, planning and developing one's career, entrepreneurship, environmental responsibility and safety at work. In Germany, cross-curricular key competences are explicitly defined as subject-independent. They are not limited to cognitive abilities and represent complex operational competences required for and supported by various subjects that help to solve difficult tasks in real-life contexts and can be transferred to new situations.

Other countries use another terminology. In Austria, the term 'dynamic skills' (*Dynamische Fertigkeiten*) refers to interactive transversal competences, while in Estonia, there is a clear distinction between general and domain-specific competences, and cross-curricular themes. In Hungary, the original text of the European Recommendation was included with only minor changes to the text of the national core curriculum for the 6–18 age group, but it is completed here by specific horizontal 'development targets' which also define various competences and values (e.g. European identity, economic culture or preparation for adult roles).

In the four countries of the UK and in Ireland, the terms that are used are skills, core skills or key skills. In Ireland, the skills are different for primary and lower secondary education. For primary education, they are the abilities to question, analyse, investigate, think critically and solve problems; in lower secondary, effective interaction, communication and literacy, numeracy, manipulative skills, information technology, thinking and learning, problem solving, and social skills. In Scotland, core skills are the broad transferable skills that are needed to be full, active and responsible members of society: communication, numeracy, problem solving, using information technology and working with others. The Scottish case deserves particular attention as it is perhaps the most characteristic in Europe of a new curriculum paradigm. The 'curriculum for excellence', designed over the period 2005–2008 and which will be implemented from 2009 to 2014, is deemed to enable all young people to become successful learners, confident individuals, effective contributors and responsible citizens. Each of these 'capacities' is described through attributes and skills. All learning should be directed towards the achievement of these four capacities. Moreover, the whole content of the curriculum is designed as a 'set of experiences and outcomes': experiences to develop attitudes and capabilities, and achieve active engagement, motivation and depth of learning; and outcomes to represent what is to be achieved (www.ltscotland.org.uk/curriculumforexcellence/experiencesandoutcomes/index.asp).

In England, the curriculum states that, if young people are to be prepared for the future, they must develop essential skills and qualities for learning, life and employment. These include skills that are related to learning in subjects, as well as more generic transferable skills: there are functional skills and personal learning and thinking skills (PLTS). Functional skills are the core elements of English, mathematics and ICT; PLTS encompass independent enquirers, creative thinkers, reflective learners, team workers, self-managers and effective participants. This curriculum framework is accompanied by a set of outcome statements that are indicative of the skills, behaviours and personal qualities associated with each group. The groups are interconnected and learners are likely to encounter skills from several groups within any one experience. Some cross-curricular dimensions are also stated: identity and cultural diversity, healthy lifestyles, community participation, enterprise, global dimension and sustainable development, technology and the media, creativity and critical thinking (<http://curriculum.qcda.gov.uk>). Among the interesting innovations in the UK to develop motivation and learn to learn, it is worth mentioning the 'Opening Minds' project which started in 2006 at the initiative of the Royal Society for the Encouragement of Arts, Manufactures and Commerce (RSA) and aimed to enhance basic skills such as application of literacy and numeracy, application of ICT, problem-solving, self-management, team work, business awareness and customer care, and five groups of key skills, i.e. citizenship, learning to learn, managing information, relating to people and managing situations. In 2011, about 200 English schools are using this approach (www.rsaopeningminds.org).

Another group of countries defines goals and objectives rather than competences or skills *stricto sensu*. This is the case in Sweden where two types of goals are detailed in the curriculum documents: 'goals to strive towards' and 'goals to attain in the compulsory school'.² Both are listed in the following boxes.

Goals to strive towards specify that schools ensure that all pupils should:

- Develop the ability to form and express ethical viewpoints based on knowledge and personal experiences.
- Respect the intrinsic value of other people.
- Reject the oppression and abusive treatment of other people and assist in supporting them.
- Can empathise with and understand the situations of other people.
- Show respect for the environment.
- Develop a sense of curiosity and the desire to learn.
- Develop their own way of learning.
- Develop self-confidence.
- Feel a sense of security and learn to show respect in their dealings with others.
- Learn to carry out research and to learn and work independently and with others.
- Learn to communicate in foreign languages.
- Learn to listen, discuss, reason and use their knowledge as a tool to formulate and test assumptions as well as to solve problems.
- Reflect on their experiences and critically examine and value statements and relationships.
- Acquire sufficient knowledge and experience to be able to make well considered choices for further education and vocational orientation.
- Take personal responsibility for their studies and working environment.
- Gradually exercise increasingly greater influence over their education.
- Have an understanding of democratic principles and develop their ability to work democratically.
- Acquire sufficient knowledge and experience to be able to examine different options and make decisions concerning their future.
- Develop the ability to assess their results themselves.

'Goals to attain' in compulsory school are to:

- Have mastered Swedish and be able to listen and read as well as to express ideas and thoughts in the spoken and written language.
 - Have mastered basic mathematical principles and be able to use these in everyday life.
 - Know and understand basic concepts and contexts within the natural sciences as well as within technical, social and human areas of knowledge.
 - Have developed the ability to express themselves creatively and be interested in participating in the range of cultural activities that society has to offer.
 - Be familiar with central parts of the Swedish, Nordic and Western cultural heritages.
 - Be aware of the culture, language, religions and history of national minorities.
 - Have developed their understanding of other cultures.
 - Be able to communicate in speech and writing in English.
 - Know the basis of society's laws and norms as well as their own rights and obligations in school and society.
 - Have a basic knowledge of the requirements to maintain good health and to understand the importance of lifestyle for health and the environment.
 - Have some knowledge of the media and of their role in relation to the media.
 - Be able to use information technology as a tool in their search for knowledge.
- (www.skolverket.se)

Some countries have introduced key competences in the curriculum through legislation (Belgium, France, Greece, Lithuania, Luxembourg, Italy, Portugal, Slovakia and Spain), while others did it by a revision or lower level legal acts (Austria, Bulgaria, Cyprus, the Czech Republic, Estonia, Finland, German Länder, Hungary, Ireland, Malta, the Netherlands and the UK).

These examples show the diversity among EU Member States in the identification and formulation of cross-curricular key competences in their education systems while responding to similar concerns to give young people the basic capacities to address present and future challenges. There is also considerable diversity in how the changes have been introduced through legislation at systemic level or through local experimentations.

In France, an Act of March 2005 established a common base (*socle commun*) of knowledge and competences for all pupils in primary and lower secondary education. Every student must attain specified minimum standards at the end of compulsory education in seven major competences, each being a combination of knowledge, skills and attitudes and requiring the contribution of several subjects, while each subject must contribute to the acquisition of several skills. The 'socle' includes 5 competences which correspond to 5 competences of the European Reference Framework: command of the mother tongue, command of at least one foreign language, basic competences in mathematics, science and technology, digital competence, and social and civic competences. Two others are close to two recommended key competences. However, they are expressed in a way which reflects traditions that are deeply rooted in the French education system : 1) a 'humanist culture' instead of 'cultural awareness and expression'; 2) 'autonomy and sense of initiative' instead of 'sense of initiative and entrepreneurship'. Finally, one should note that the 'learning to learn' competence was not included because it was not clear how to assess it.

For further descriptions of countries' approaches to introducing cross-curricular competences in the school curriculum one can consult the CASE's report commissioned by The Directorate General for Education and Culture of the European Commission (Gordon *et al.*, 2009). Here, we would just like to underline that, beyond the diversity of approaches and of the relative importance of cross-curricular competences in the curriculum of compulsory education, the European Recommendation had an impact in all Member States, even if other factors like PISA surveys, or the reform of national qualifications systems also played an important role. It is also true that the relative importance given to each of the transversal competences can differ from one country to another or even within each country. Finally, although it is not easy to establish a typology of the policy formulations regarding key competences, it is possible to propose a rough classification by taking the dominant approach in each country as a criterion.

Functional approaches: Mostly skills or competence-based	Cyprus, Germany, Ireland, Lithuania, Poland, Slovenia, and United Kingdom.
Mostly subject-based	Bulgaria, Italy, Malta and Portugal
Thematic approaches	
Mostly through major issues of society	Denmark and Slovakia
Mostly through developing personal qualities	Austria (primary school), the Czech Republic, Greece, Hungary and Luxembourg
Goals and principles based	Finland, Latvia, the Netherlands and Sweden
Mixed approach (functional and thematic)	Belgium, Estonia and France.

But another crucial issue is to understand the strategies adopted by the EU Member States in order to implement a competence-based curriculum and the obstacles that they had to face.

Implementation Strategies

Since the adoption of the Recommendation on European Key Competences, almost every Member State has adopted the development of key competences as a major national education policy goal and many have also made significant progress in its implementation. The challenges they have faced, however, are tremendous. The inclusion in national curricular documents of the relevant goals and normative requirements which could be reached in some countries only through difficult and complex political processes is already a major achievement, but this is probably the easier part of the task. What seems to be much more difficult is the practical *implementation* which should make thousands of teachers change their professional behaviour, alter the deeply-rooted assessment and evaluation practices at both system and classroom level and ensure the management of all those classroom level innovations that are necessary for substantial changes to occur in thousands of schools. As the 2010 Joint Progress Report of the Council and the Commission on the implementation of the 'Education & Training 2010' work programme stated, while 'good progress has been made in adapting school curricula (. . .) there is still much to be done to support teachers' competence development, to update assessment methods, and to introduce new ways of organising learning in an innovative school environment' (Council of the European Union, 2010).

It is important to stress that some Member States started devising and implementing education policies that were oriented towards competence development long before the adoption of the European Recommendation. This happened, typically, first in the field of *vocational education and training*, where the competences to be developed could be defined on the basis of occupational analyses with the active involvement of employers or those in the relevant professions (Stanton & Bailey, 2004; Raffe, 2007). In several countries, some schools, sometimes operating in special circumstances, started devising and applying competence development approaches long before this became part of a formally adopted national policy. Given this diversity, the conditions and chances of successfully implementing the European Recommendation have varied significantly in the different Member States.

Although the word *curriculum* does not appear in the Recommendation, the shift towards competence development in general, and the development of the specific competences defined in the Recommendation in particular can be described as a *curriculum reform*. This was made very clear in the original proposal of the European Commission which interpreted the mandate received from the Lisbon European Council in 2000, stressing that 'this work was to focus on identifying the basic skills and how, together with traditional skills, they can be better integrated in the curricula' (European Commission, 2005). In the impact assessment statement of this document the Commission stressed that the Recommendation 'will facilitate curricular reforms'.

Since the 1980s, when 'researchers came to recognize the extreme complexity of the implementation process' (Thomas, 1994), the question of implementation has been strongly emphasised in curriculum theories and research about

curriculum reform. It is an unquestioned and shared conviction among researchers in curriculum theory or curriculum policy that ‘successful curriculum development requires better use of *change knowledge*’ and ‘failure is often a result of neglecting it’ (Sahlberg, 2006). The systematic analyses of curriculum reforms and developmental interventions aiming at changing teachers’ classroom behaviour have led to curriculum implementation being seen increasingly as a process of ‘mutual adaptation’ (McLaughlin, 1990). Even the notion of curriculum has changed as a result of this shift of emphasis: today, we see curriculum increasingly not as a ‘product’ but as a ‘process’, i.e. a process of change and learning (Pinar *et al.*, 1995).

If the Recommendation on Key Competences is to be taken seriously by the Member States, most of them, especially those that have not yet made significant progress in this direction, will have to introduce curricular reforms or changes. Conceiving and implementing them are naturally internal affairs of the Member States: the jurisdiction of the community in this area is very limited. The European Parliament and the Council made this very clear when they stressed that the document they adopted ‘leaves the implementation of this Recommendation to Member States’ (The European Parliament, 2006). This means that there are two parallel reasons why the exploration of this issue is extremely important, and there are also two different perspectives that we must follow when analysing this. On the one hand, we must look at the more general question of how policies are implemented in the European Union, especially in areas such as education where the use of direct instruments (such as binding legal actions) is not possible. On the other, we must look at the more specific question of how curriculum reforms are implemented, taking into account the extreme complexity of this process.

When entering the field of curriculum, with its Recommendation on Key Competences, the European Union found itself confronted with a double challenge: it must gain the support of the key actors in the domestic education policy arena in the Member States and, at the same time, it must tackle their uneven implementation capacities. The implementation of the Recommendation will, therefore, be uneven. As the conditions of successful implementation depend on at least two parallel factors (political commitment and implementation capacities¹), at least four different outcomes or scenarios are possible (see Figure 1).

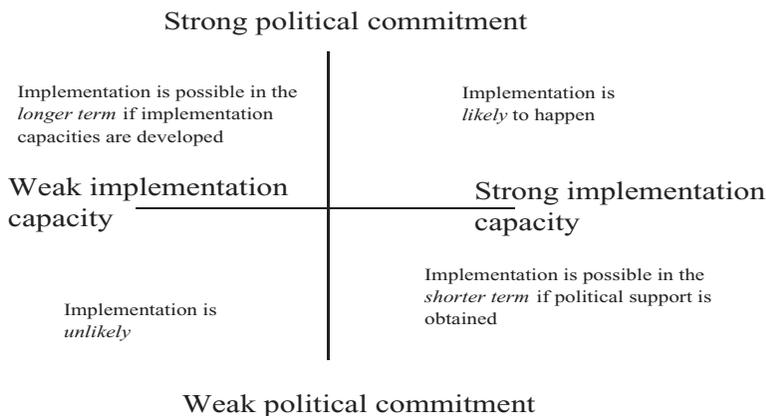


FIGURE 1. Conditions and chances of implementation

It is likely that the European Recommendation will be successfully implemented in those countries where strong political commitment (i.e. the support of key education policy actors) is associated with strong implementation capacities (i.e. a good understanding of the logic of curriculum changes and a competent use of appropriate policy tools). In the three other cases, this is less likely or unlikely. In countries where strong political commitment is not linked with high level implementation capacities (i.e. the key policy actors, although committed, lack the understanding of the complexities of curricular changes and do not possess the appropriate implementation instruments) successful implementation is possible but unlikely, at least in the short term. The effective implementation of the Recommendation is possible in these countries only in the longer term in function of the — necessarily timely — development of implementation capacities. In those countries which have greater implementation capacities (e.g. they have accumulated knowledge from the failures of past reforms or have learnt from the experiences of other countries) but the commitment of key education policy actors is lacking, implementation is possible, even in the short term. However, this will only happen if the attitude of the key education policy actors changes and they support the idea of altering the curriculum so that it could better serve the development of European key competences. Finally, in those countries where both the political support and the implementation capacities are lacking, successful implementation is unlikely, even in the longer term.

It is very difficult to estimate the number of Member States that belong to the four cases of Figure 1. Assessing the level of political commitment is perhaps easier, although, as stressed earlier, this factor may change quite quickly, depending on domestic political changes, and its sustainability or fragility may also vary. Policy actors who are strongly committed to the idea of key competences and to enhance classroom practices, serving effectively their development, may gain a dominant position in the education policy arena but it may remain fragile. In a decentralised system, they may gain a dominant position in the national arena, while the local control of schools may remain in the hands of others who are more reluctant to apply the new model of competence development.

It seems more difficult to assess the implementation capacities of the Member States, although the international or supra-national agencies (including the European Commission) that regularly monitor national policy processes and outcomes have accumulated significant knowledge in this area. We probably cannot use *general* criteria to assess implementation capacities, as these vary according to the characteristics of national systems of governance. Probably the most interesting question here is whether a preference for the *top-down* or the *bottom-up* models can be justified, or whether these must be seen as being of equal value. In fact, one of the implications of the development of our knowledge about curriculum reforms in the last decade is that changing the curriculum — i.e. changing the behaviour and professional beliefs of thousands of teachers so that their daily interactions with pupils are significantly modified — is an extremely complex, open-ended, non-linear process, i.e. it is a partially controllable innovation process which cannot be effectively directed top-down and may even imply that ‘it is conceptually unsound, socially unacceptable, and empirically impossible to solve the implementation problem by programming the persons concerned with putting the innovation into reality through detailed elaborations of the desired practice and step by step specifications for the process of implementation’ (Altrichter, 2005).

The vertical axis of our Figure, i.e. the level of commitment of key education policy actors to competence development in general or to the development of the eight 'European competences' in particular is beyond the scope of this article. The only thing we stress here is that it is very uneven and may fluctuate according to domestic political changes. The data collected in the survey that constitutes the basis of this article (Gordon *et al.*, 2009) show that, in some countries, the dominant education policy actors immediately welcomed the Recommendation and quickly started using it in their domestic action, while in others they did not seem particularly enthusiastic and may even have attempted to neutralise it. This is in accordance with the dynamics of European policy making which deliberately 'seek to change incentive structures of the involved actors in order to stimulate and modify the domestic policy context in favour of effective compliance' (Knill & Lenschow, 2003). Like other European policy interventions, the most important 'hidden goal' of the Recommendation on Key Competences was to 'provide domestic actors with new opportunities for achieving domestic reforms' in the field of curriculum modernisation as it could 'challenge domestic institutions, policies, and processes inducing processes of social learning or empowering domestic reform coalitions' (Börzel, 2003). Those domestic actors who were less happy with the policy line expressed in the Recommendation may have been forced to seek excuses for non-action.²

The main focus of this article is on the *implementation capacities* and *concrete implementation actions* of the Member States. The proposal of the Commission left this responsibility entirely to Member States, and the text adopted by the Council and the Parliament did not contain any reference to implementation. There was no mention, for instance, of changing curricular standards, of adapting assessment approaches to them, of developing new teacher competences or of enhancing pedagogical innovations in schools or classrooms. In the light of what we know about curriculum reforms there is no doubt, however, that if none of these elements are changed, it will be impossible to shift towards effective competence development.

For education and training systems to develop effectively, the 'learning to learn' capacity or the 'sense of initiative and entrepreneurship' make it necessary to emphasise these goals in national standards; the regular evaluation of the performance of pupils and schools also includes the assessment of these competences; teachers possess the appropriate repertoire of pedagogical tools to develop them; and learning environments become favourable for their development. For example, 'learning to learn' can only be developed in open and complex problem situations which make the learners not only apply what they have already learnt, but also engage in new learning. This only happens when they are forced to reflect on their specific contextual learning needs and cannot succeed without new learning. Such situations can be created through 'real life projects', work-based learning or learning-oriented social work. Creating such learning situations in schools and making them effective require specific teacher competences (and therefore, new and more effective forms of developing these competences both in initial teacher education and continuous professional development) and innovative learning environments (and therefore school organisations and school leadership that encourages innovation and pedagogical experimentation). Although the Recommendation on European Key Competences did not make any reference to teacher behaviour and to learning environments it has long been clear that the

development of competences for lifelong learning is not possible without modifying these factors. As it was stressed more than 15 years ago when, in the US there was an attempt to define '21st century skills': 'today's students to be prepared for tomorrow's workplace (. . .) need learning environments that allow them to explore real-life situations' (de Corte, 2010).

In the simplified policy model that was used in the survey behind this article (Gordon *et al.*, 2009) a distinction was made between *policy inputs* and the *practice of policy implementation*. The first included two equally important factors: the level of political commitment and the implementation capacities specifically related to curriculum reform (Figure 1). The four key elements mentioned above (standards, assessment, teachers, innovation) were included in the latter category. The analysis of country level data confirmed that the policy inputs and the practice of implementing curriculum reforms *together* determined the *policy outcomes*, i.e. how effectively the Recommendation on European Key Competences has been implemented in the Member States (see Figure 2).

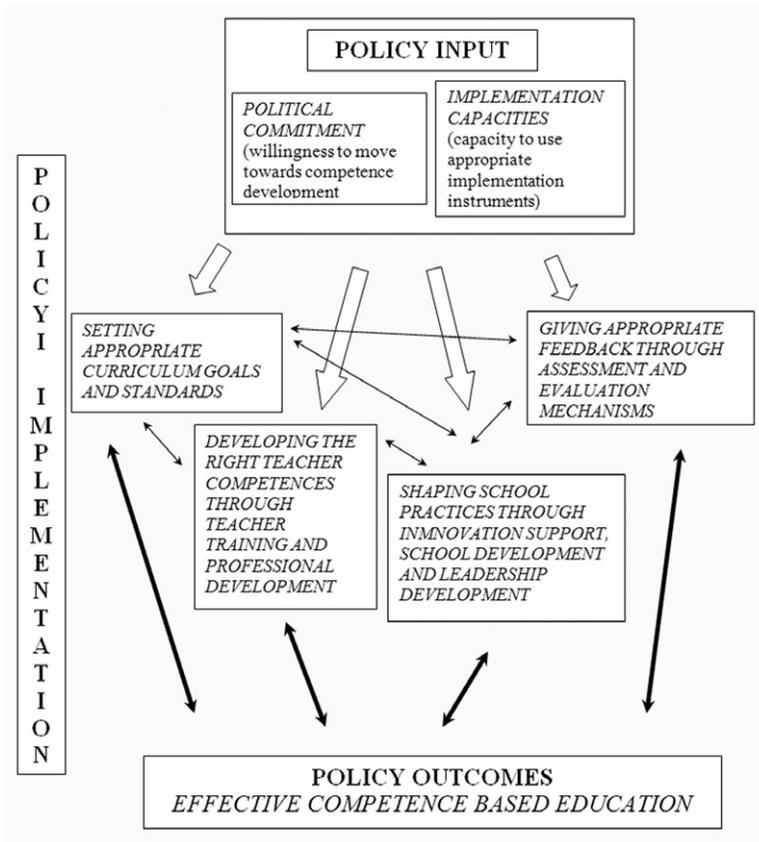


FIGURE 2. The model for the implementation of the European Recommendation on key competences for lifelong learning

The analysis of country data showed that the easiest element of implementation was changing the curriculum goals and standards. This was quickly achieved in countries where there was a clear and strong political commitment. Adapting the

feedback mechanisms to the new goals and standards, i.e. developing new assessment instruments or introducing new evaluation approaches has been more difficult, but this could also have been done relatively easily if the political will was present, and especially if this had been conceived as a technical task. Redefining teacher competences and adapting the programmes of teacher education and continuous professional development to the new competence demands have been much more difficult, partly because this is an area that operates in many countries out of the direct control of national authorities responsible for primary and secondary education, and partly because this is something that requires significant behavioural and cultural changes (e.g. among academics in teacher training universities). Changing the learning environments, at least in a critical number of schools, is certainly the most difficult implementation challenge and is the area where only a very limited number of countries could report significant progress. This has happened in most countries, typically in a limited number of schools participating on a voluntary basis in nationally-supported pilot programmes.

The country cases analysed in the framework of the study behind this article show that implementation has had the best chances of being successful in those countries where the national *education accountability system* supports not only the alignment of assessment approaches with the goal of competence development, but also local and school level innovations, where curriculum reforms are accompanied by massive investment in *capacity development* among teachers, and where the *national educational innovation system* is relatively well developed. The quality of local and school level leadership also seems to be a good predictor of successful implementation.

The country cases also show that in those countries where the overall goal of competence development and the definition of standards in terms of learning outcomes are supported in all subsystems of education (primary and secondary, vocational, higher and continuing education) the chances of successful implementation is higher than in those where this support is unequal in the various subsystems. The advantage of these countries is that they could benefit from the synergies between the various subsystems and hence mobilise more energy and knowledge for successful implementation.

Conclusion

Following the adoption of the Recommendation on European Key Competences in 2006 almost all Member States of the EU amended their national curricula to make teaching and learning more oriented towards competence development. In several countries, this process started years before the adoption of the Recommendation, and in some it is still only beginning. There are significant differences between countries in their way of interpreting the notion of competence and of translating it according to their national contexts. The other aspects of the implementation of the Recommendation also show great diversity. Countries differ not only in the strength of the commitment of key policy actors to the idea of competence-based education, but also in their capacities to implement complex curriculum reforms aimed at altering school level pedagogical approaches.

Successful implementation can be expected only in those countries where there is coordinated action in the following four areas: (1) the definition of competence development-related goals and standards in national curriculum documents, (2)

the alignment of national and school level assessment and evaluation approaches with these goals and standards, (3) intensive capacity building among teachers so that they become capable of adapting their classroom level practices to the new goals and standards and, particularly, (4) massive support for school level pedagogical innovations that enhance the renewal of learning environments. This also requires investing in the development of school leadership and national educational innovation systems. National assessment and evaluation systems must also be developed so that they better support school level innovations.

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NOTES

1. The Open Method of Coordination (OMC) is a relatively new intergovernmental means of governance used in the EU, based on the voluntary cooperation of its Member States. It involves developing guidelines, indicators, benchmarking, peer learning and sharing best practice. (http://ec.europa.eu/education/lifelong-learning-policy/doc28_en.htm)
2. In Sweden, a parliamentary commission was set up to examine the applicability of the Recommendation. The country's biannual national report to the European Commission in 2009 referred to its report which said that 'the concept of competence is (. . .) difficult to interpret and Swedish policy documents and the EU key competences treat it a bit differently . . .' (see: Joint Council/Commission progress reports on education and training. Sweden, 2009 — http://ec.europa.eu/education/lifelong-learning-policy/doc1532_en.htm).

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