EUROPEAN MAPPING OF INITIATIVES ON THE DEVELOPMENT OF KEY COMPETENCES

http://keyconet.eun.org

COMMUNICATION IN THE MOTHER TONGUE
COMMUNICATION IN FOREIGN LANGUAGES
MATHEMATICAL COMPETENCE AND BASIC COMPETENCES IN SCIENCE AND TECHNOLOGY
DIGITAL COMPETENCE
LEARNING TO LEARN
SOCIAL AND CIVIC COMPETENCES
SENSE OF INITIATIVE AND ENTREPRENEURSHIP
CULTURAL AWARENESS AND EXPRESSION
KeyCoNet (2012 – 2014) is a European policy network focused on identifying and analyzing initiatives on the implementation of key competences in primary and secondary school education.

On the basis of the evidence collected through literature reviews, case studies, peer learning visits, country overviews, videos and exchanges between network members, the project’s final objective is to produce recommendations for policy and practice regarding the enablers and obstacles to a holistic implementation of key competence development.

Among KeyCoNet’s current 18 partners in 10 countries (Austria, Belgium, Estonia, Finland, France, Ireland, Norway, Portugal, Spain and Sweden), are Ministries of Education/related agencies, universities/research institutes, European organizations, and practice related partners. KeyCoNet also has a growing number of associate members from other countries and stakeholder groups, steadily increasing our network’s scope and influence.
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The initiatives related to key competence development described in this report differ in many ways, according to the nature of the key competences addressed, the implementation process used, the number of students and teachers directly concerned, the type of actors involved, and the duration and stage of development. Moreover, the initiatives described only represent those collected by KeyCoNet members in 2012 and 2013, and are not exhaustive or representative of all key competence developments in each partner or associate country. This being said, the overview of the 50 initiatives offered in this report informs us that:

- Policy efforts to implement key competence development in schools are mainly concentrated at secondary school level;
- The majority of the initiatives identified are at national level, and are in the first or second stages of implementation, while regional projects, pilot initiatives involving a network of schools and school level experiments have also been identified;
- One third of initiatives identified claimed that they were implemented in both formal and non-formal learning contexts, testifying to education systems’ growing awareness of the importance of building bridges between formal and non-formal learning to harness students’ motivation and maximize learning outcomes;
- In Spain, Poland and Austria, the initiatives identified directly complement these countries’ overarching national strategies on key competence development, in which recent curricular reform has played an important role;
- While all initiatives to some degree target the curriculum and the transformation of pedagogical practice so as to be more innovative, collaborative, cross-curricular, project-based, ICT-enhanced, motivational and student-centred; the majority of initiatives also involve investment in in-service teacher training, but rarely address initial teacher education also;
- The assessment of key competences remains a difficult and under-developed area, and changes to the curriculum have not always been accompanied by changes to assessment practices; where assessment has been changed in line with curriculum reform it focuses on assessment for learning strategies, comprises both summative and formative purposes, and a variety of methods including portfolio assessment, digital competence-based assessment tools, peer and self-assessment;
• Transforming the physical learning environment into flexible spaces enabling diversified, ICT-enhanced learning, as well as modifying the timetable, structure and organization of lessons can facilitate a key competence based approach in schools;

• Holistic, multi-competence and multi-dimensioned initiatives (covering an array of key competences and targeting three or more of the following dimensions: curriculum, assessment, teacher training, pedagogy, school organization, and learning resources) also exist in countries lacking a national dedicated strategy in this area (e.g. Belgium, Finland, Ireland, Malta, Sweden and Slovakia);

• Around half of all countries (Austria, Estonia, Poland, Portugal, Norway and Finland) analyzed have at least one initiative mainly focused on the development of students’ digital competence, often including training teachers to use ICT more effectively for teaching and learning; other initiatives focus on the use of ICT as a means through which to teach and learn other competences;

• Competences in foreign languages, cultural awareness and expression and social and civic competences are rarely addressed in the initiatives identified, reflecting the fact that less than half of all EU countries have national strategies in these areas;

• Entrepreneurship education is increasingly more present in schools and is beginning to be offered as a separate subject at secondary school level in Spain, Ireland and Estonia (and already exists as such in Poland); national initiatives dedicated to this competence exist in Sweden and Norway, where it has been prioritized in recent education reforms;

• Key competence development supports an inclusive approach to education, as the pedagogical approach favoured is well suited to targeting low achievers and young people at risk of dropping out of the education system;

• A participative approach involving all stakeholders (students, teachers, parents, community and business leaders) throughout the process is central to the development of key a competence approach in school education.
INTRODUCTION

The Lisbon agenda, launched by the European Council in 2000, underlined national education systems’ key role in fostering a dynamic and innovative European knowledge-based economy. To assist national education systems’ contribution to this objective, the 2006 Recommendation of the European Parliament and of the Council on Key Competences for Lifelong Learning was formulated. Since then, Europe’s focus on the digital agenda and the need to face the challenges posed by the current financial crisis have given renewed relevance to the importance of developing a key competence approach in education systems across Europe.

Most EU countries, including those represented within KeyCoNet, have introduced the concept of key competences and learning outcomes into their national curricula or official steering documents for compulsory education during the last decade (see Figure 1). In countries, including Finland and Sweden, where a competence-based approach has in fact been in place since the mid-1990s, recent or current education reform is re-emphasizing the centrality of key competences in the new curricula to be introduced in the near future. It is this series of recent curriculum reforms across EU countries which have often given rise to the initiatives described in the case notes collected by KeyCoNet partners in 2012 and 2013, focused on developing and strengthening the key competence development (KCD) approach adopted by each country.

One example of a very recent curricular reform which has had a consequence on how the French education system conceives and implements key competence learning, is the Law of orientation and programming for rebuilding the school of the Republic (Loi d’orientation et de programmation pour la refondation de l’école de la République). This new law has introduced ‘culture’ into the core curriculum (le socle commun) established in 2005, which up until now officially only comprised ‘knowledge’ and ‘competences’. A new official body, the “conseil supérieur des programmes” was launched in October 2013 and is responsible for translating the law into principles for the curriculum and into a detailed syllabus for each level of school education. Recent reforms impacting on key competence development at national level have also taken place in Belgium, Finland, Sweden, Portugal and Malta. For a full list of the national education reforms see table 1 below, and for further information, please consult the respective country overviews available at http://keyconet.eun.org/project-results.
**Figure 1: Recent curricular reforms integrating KCD**

<table>
<thead>
<tr>
<th>Country</th>
<th>Curricular reform featuring KCD</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>Knowledge Promotion Reform</td>
<td>2006</td>
</tr>
<tr>
<td>Ireland</td>
<td>Key Skills Framework</td>
<td>2006 (senior cycle)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2012 (junior cycle)</td>
</tr>
<tr>
<td>Estonia</td>
<td>General Education System Development Plan</td>
<td>2007-2013</td>
</tr>
<tr>
<td>Slovakia</td>
<td>State educational programmes</td>
<td>2008</td>
</tr>
<tr>
<td>Poland</td>
<td>New core curriculum</td>
<td>2008</td>
</tr>
<tr>
<td>Austria</td>
<td>Bildungsstandard</td>
<td>2008/2009</td>
</tr>
<tr>
<td></td>
<td>Revised educational standards</td>
<td></td>
</tr>
<tr>
<td>Belgium (NL)</td>
<td>Vakoverschrijdende eindtermen@2010 Cross-curricular final objectives@2010</td>
<td>2010</td>
</tr>
<tr>
<td>Finland</td>
<td>New national core curricula</td>
<td>2010-2016</td>
</tr>
<tr>
<td>Sweden</td>
<td>New Education Act - for knowledge, choice and security</td>
<td>2011</td>
</tr>
<tr>
<td>Portugal</td>
<td>Revised curriculum framework, curricular goals and basic education programmes</td>
<td>2011-2013</td>
</tr>
<tr>
<td>France</td>
<td>Loi d’orientation et de programmation pour la refondation de l’école de la République</td>
<td>2013</td>
</tr>
<tr>
<td></td>
<td>Law of orientation and programming for rebuilding the school of the Republic</td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>Ley Orgánica para la Mejora de la Calidad Educativa (LOMCE)</td>
<td>2013</td>
</tr>
<tr>
<td>Malta</td>
<td>Core Curriculum Programme</td>
<td>2013</td>
</tr>
</tbody>
</table>

2 Please note that the above table only makes reference to the latest curricular reform in each country. For further details on the nature of each reform and its relation to KCD please refer to the annually updated KeyCoNet Country Overviews accessible here: [http://keyconet.eun.org/project-results](http://keyconet.eun.org/project-results)
1. THE NATURE OF THE KCD INITIATIVES DESCRIBED IN KEYCONET’S CASE NOTES

As part of its remit, the KeyCoNet network has identified and analyzed emerging key competence initiatives implemented in its partner and associate countries across Europe in 2012 and 2013. The description and basic analyses of these initiatives have been collected in a series of ‘case notes’. KeyCoNet’s partners and associates were responsible for identifying and contacting coordinators of KCD initiatives of interest at national level, and requesting those directly involved in the initiative to draft a case note or provide relevant information. The network has produced a total of 50 case notes since January 2012 until December 2013, on the basis of KCD initiatives identified in 14 countries. Additionally, six European initiatives have been identified involving countries also not currently represented within the network. The initiatives collected by partners and described in this report are not exhaustive and therefore do not fully represent all KCD developments in each country. The report provides a brief overview of the KCD initiatives in place across KeyCoNet partner and associate member countries, and offers some insights on emerging trends and priorities.

The initiatives described in this report differ in many ways, according to the nature of the key competences addressed, the implementation process used, the number of students and teachers directly concerned, the type of actors involved, and the duration and stage of development. It should be noted therefore that this report is modest in the comparisons and trends it refers to due to the diverse nature and scope of the initiatives identified, as well as the varying degree of information available. Although already rich in information, the case notes are intended to provide an initial overview of the initiative concerned. A more detailed and critical analysis of initiatives selected by the network have been developed into fuller case studies, based on a sound research methodology. They identify obstacles and enablers perceived during the initiative’s implementation, with the objective to fuel recommendations at school, local, regional and national levels to support key competence development.

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3 Austria, Belgium (NL), Estonia, Finland, France, Ireland, Malta, Norway, Poland, Portugal, Slovakia (which was a partner country at the time the Slovak case notes were produced, but as of 1 January 2013 is no longer part of the network), Spain, Sweden and the United Kingdom

4 KeyCoNet’s case studies can be accessed from the KeyCoNet website here: http://keyconet.eun.org/project-results/case-studies.
1.1 Policy efforts in KCD are clearly concentrated at secondary school level

*Figure 2: Level of education covered by the KCD initiatives identified*

Half of all the initiatives identified target secondary school students only, some specifying a focus on lower or upper secondary level. This need to target secondary education in particular is in line with literature findings in this area (European Commission, 2009; Riviou, K. and Sofoklis, S. 2013) which state that primary school pedagogy is often more participatory, learner-centred and multidisciplinary...
than methods used at secondary level. Teachers at secondary level, for the most part, have less expertise in these areas and opportunities to implement them in the secondary school context, due to a lack of preparation during their teacher training which is mostly centred around subject-specific knowledge and competences. This could explain in part various countries’ decision to implement training and other key competence related initiatives at secondary level, where the change is most needed. The remaining half of initiatives concentrate on the whole of compulsory education, covering both primary and secondary levels, except for one Finnish initiative (see case note FI2) which specifically targets primary level only. Other initiatives identified covering levels going beyond KeyCoNet’s scope of compulsory school education, include two Spanish initiatives which also cover nursery education (see case notes ES3 and ES4), and one European initiative (see case note EU3) which specifically targets adult education (see Figure 2). The European project, VINTAGE, which is currently developing an online tool for the self-evaluation of adults’ key competences, was nevertheless considered an interesting case to analyse as part of the network’s remit to contribute to a coherent lifelong learning strategy for the development of key competences.

1.2 Majority of initiatives identified at national level

The majority of the initiatives identified are at national level, and are in the first or second stages of implementation. A proportion of these initiatives have evaluation built into their programmes, and while the process has been launched, results are still not available (see for example case notes BE1, BE2, EE2, and IE1). Other national initiatives which have been in place for longer, such as the Cultural Rucksack programme (see case note NO4) and work carried out by the Norwegian Centre for ICT (see case note NO2) already have well established monitoring and assessment tools in place (e.g. the Norwegian Centre for ICT’s longitudinal Monitor study on ICT infrastructure and the use of ICT for learning, carried out at national level every two years since 2003). The Irish initiative Project Maths (see section 2.4 and case note IE5) is another example of an advanced initiative which has been in place for over 5 years, and has invested in an external evaluation of the impact of the project on student achievement, motivation and learning.

1.3 Regional initiatives

Key competence based initiatives have also been identified at regional level in France, Austria and Spain. In France, the Regional Education Authority of Bordeaux has been developing a software application since 2012 for monitoring competence-based learning (see case note FR6). The software will include a range of resources which can be adapted to the competence level of each pupil. This new tool will help identify students’ individual learning difficulties and allow teachers to customize intervention strategies. Pilot schools in the Bordeaux region will test the software in the 2014-2015 school year, and if it is successful the software will be offered to all lower secondary schools in the region, and in a further step possibly beyond. The Austrian regional initiative ACHTplus (see case note AT3) aims to enable students, parents and teachers to determine students’ competence levels in a collaborative approach at the crucial transition period, when they are aged between 14 and 15 years, to inform their career decisions. The project helps students develop their self-evaluation skills and their ability to identify their strengths and weaknesses, and opportunities for development. The project began as a pilot in 2011 with 11 initial schools, and currently includes the participation of 36 schools, including middle, secondary, technical and vocational schools. The aim is for all schools in the region of Vorarlberg to be involved in the project by the 2016/2017 school year.

The Spanish initiative, is also focused at the regional level, but is different to the French and Austrian cases, as rather than involving a pilot which is gradually being scaled up across the region, it in fact represents one of various regional implementations of the national initiative, the COMBAS/PIC project6 (see section 2.1). The PICBA programme7 (Programme for the integration of key competences in Andalusia - Programa de Integración de las Competencias Básicas en Andalucía), which ran initially from March 2011 until June 2012 and entered a new phase in 2013, is the largest regional sub-project of Spain’s national COMBAS/PIC project. The PICBA programme (see case note ES1) aimed to develop pilot training actions for teachers to assist them in the integration of key competences into the curriculum, and involved 82 public Andalusian primary and secondary schools. The PICBA programme was the focus of a peer learning visit8 KeyCoNet members participated to in Seville in October 2012, and will also be the focus of a case study in 2014. Spain has various key competence initiatives running at regional and local level.

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7 [http://competenciasbasicascordoba.webnode.es/news/guia-y-orientaciones-de-la-junta-de-andalucia/](http://competenciasbasicascordoba.webnode.es/news/guia-y-orientaciones-de-la-junta-de-andalucia/)
8 Seville Peer Learning Report: [http://keyconet.eun.org/peer-learning-visits-reports](http://keyconet.eun.org/peer-learning-visits-reports)
For example, the Alzira Teacher Training Centre in Valencia (see case note ES2) has recently developed lesson plans for primary and secondary education, in cooperation with teachers from 30 schools in the region, to integrate competence based learning into the curriculum. Moreover, all teachers at compulsory education level as well as nursery level on the island of El Hierro have received training on the inclusion of key competences in curriculum practices (see case note ES3).

1.4 Pilot initiatives involving small networks of schools

In addition to initiatives which have already been mainstreamed, a group of six pilot initiatives were also identified. Three of these pilot initiatives involve a small network of 3 to 4 primary (see case note SK1) or secondary (see case notes SE2 and IE2) schools where all students and staff are involved in a whole school approach aimed at experimenting how best to embed competence-based learning within daily school practice. In the cases of Sweden and Ireland the choice to experiment using school pilots may be partially attributed to their decentralized approach to various dimensions of the education system. The Slovak 4-year pilot has come to an end, and has been the subject of a thorough evaluation conducted by the National Institute for Education, and was overall deemed successful. As a result the plan is to scale up the initiative to national level to ensure that all primary schools use the innovative methods developed by the project. A catalogue containing the proven innovative teaching methods and opportunities for accredited training will provide all Slovak teachers with free access to information and methodological documents intended to enhance a further systematic implementation of the programme.

1.5 School level initiatives

A group of eight initiatives were identified at school level, only involving one school (see case notes FI1, FI3, FR1, FR2, FR3, FR4, FR5, and PT2). Their scope and nature vary significantly however. In the Finnish school experiments for example university researchers have carried out detailed formative evaluations with scalability in mind, with the intention of creating a nation-wide school network as the result of the LEAP21 initiative for example. In France, where five school level initiatives were identified scaling up is envisaged to a much less ambitious extent,

9 International researchers working on innovative teaching and learning have developed the professional development programme LEAP21 with the aim of embedding the principles of 21st century learning into schools’ daily practice (http://www.itlresearch.com/itl-leap21).
by expanding the initiative only to other year groups within the school where the project has taken place.

### 1.6 Non-formal learning complements some of the formal education initiatives

The remit of KeyCoNet’s work is to analyze the development of key competences in formal education, and therefore the majority of initiatives identified clearly operate within the formal school framework only. Interestingly however, a significant one third of initiatives identified claimed that they were implemented in both formal and non-formal learning contexts (see Figure 3). This is evidence of the fact that education systems across Europe are becoming increasingly aware of the importance of building bridges between formal and non-formal learning to harness students’ motivation and maximize learning outcomes. In Finland for example, the new core curricula currently under development will specifically encourage links to be made between formal and non-formal learning.
Figure 3: Learning context in which the KCD initiatives identified are implemented
KCD INITIATIVES COMPLEMENTING OVERARCHING NATIONAL STRATEGIES TARGETING ALL OR MOST OF THE KEY COMPETENCES

Spain, Poland, and Austria are the only partner or associate KeyCoNet member countries which have national strategies focusing on all or most of the key competences to be developed in school education. The key competence development (KCD) initiatives identified in these countries, described in the network’s case notes, reflect this wide ranging approach. The information below regarding these countries’ national strategies derives from the network’s country overviews as well as the report Eurydice (2012) Developing Key Competences at School in Europe: Challenges and Opportunities for Policy, and is used to contextualize the initiatives identified by network partners in these countries.

2.1 Spain’s national strategy

Spain’s Organic Act on Education 2/2006 (Ley Orgánica de Educación - LOE) specifically mentions ‘basic competences’, together with objectives, contents, pedagogic methods and assessment criteria as the building blocks of the curriculum. Spain’s education policy fully supports the key competence approach through the 2006 Education Act which establishes a common core national curriculum for compulsory education including eight ‘basic competences’, describing how each area or subject should contribute to their development. Likewise, following the shift in national curricula from subject knowledge to a competence-based approach, Spain’s assessment system has adopted an explicit emphasis on competences. The last national standardised tests took place in 2008-2009 for primary, and 2009-2010 for lower secondary compulsory education, and assessed linguistic communication, mathematical competence, knowledge and interaction with the physical world, and social and civic competences. Spain has also put in place specific strategies for students’ development of mother tongue (reading), foreign languages, science, digital competence and a sense of initiative and entrepreneurship. As of 2013, the LOE law has been replaced by the new Organic Law for Improving Education Quality (Ley Orgánica para la Mejora de la Calidad Educativa - LOMCE), and has been widely contested at the political level, as well as by associations of education professionals, families and students. However, despite the controversial changes it proposes, the integration of competences is still to be fostered in the revised curriculum, and the dedicated curriculum development programme, COMBAS, will continue to be supported by the new government (see paragraph below). It is nevertheless possible
that under this new law the eight competence model and accompanying indicators for the improvement of learning could be replaced by a new model. KeyCoNet will monitor the situation closely and report on any developments in the 2014 version of the Spanish Country Overview.

This all-encompassing, concerted approach to KCD in Spain is furthermore reflected in the ongoing COMBAS project\(^\text{10}\) (Programme for consolidating Basic Competences as the essential element of the curriculum - Programa para la consolidación de las Competencias Básicas como elemento esencial del currículo) which has recently been renamed in its second phase, the PIC project (The Curricular Integration Project - Proyecto de Integración Curricular), established by the Spanish Ministry of Education, Culture and Sport, in collaboration with 15 Autonomous Communities in 2010. 12 of Spain’s 17 regional governments continue to participate in the PIC project. The project targets all members of the education community at all stages of compulsory education (students, teachers, management teams, families, etc.) and its holistic approach includes: supporting competence-based curriculum development so as to increase students’ level of competences, develop their creativity, and prevent and reduce school failure by promoting lifelong learning; improving and updating initial teacher training in primary and secondary education to include the teaching and learning of key competences; financially supporting the development of projects seeking to consolidate a key competence approach in the curriculum; and evaluating the implementation of the programme and its impact. In addition to this national key competence development framework, it should be noted that Atlántida and other innovation groups have also been active in the area (see case notes ES2, ES3, and ES4).

### 2.2 Poland’s national strategy

Poland’s Strategy for the Development of Education (2007-2013) envisages curriculum changes including more emphasis on the development of key competences to help the employability prospects of graduating students. As a result, the new core curriculum introduced in 2008 fully reflects this approach and is organised around key competences such as learning to learn, communication, mathematical thinking, etc. Moreover another recent Polish strategy, namely the Strategy for the Development of Social Capital (2011-2020), is currently subject to public consultation. The strategy refers directly to the provision of key competences, to basic and complex skills as well as to the development of students’ creativity within the framework of general education. It also aims to respond to the important challeng-

es related to the development of civic activity and social participation in public life. The strategy addresses all competences and particularly aims to support the development of digital competences, ensuring the wide use of ICT for learning purposes. The document entitled *Lifelong Learning Perspective*, annexed to the above-mentioned strategy, includes a direct reference to the development of key competences as essential for tailoring education and training to the needs of the economy and to changes in the labour market.

A large scale ongoing initiative, ‘Students’ Academy’ (2009-2014), coordinated by the Centre for Citizenship Education (see case note PL1), was designed to support the implementation of the new national core curriculum by developing and testing achievement standards for mathematical, scientific and digital competences in 300 secondary schools. In the classroom as well as during extra-curricular activities known as School Science Clubs, lower secondary school students perform experiments and carry out projects in mathematics and natural sciences. Although the initiative focuses mainly on improving teaching and learning in MST subjects, it also above all develops students’ learning to learn competence. It is one of only two initiatives identified by the network which focuses on this rather elusive competence, which is rarely treated explicitly. Through a specific module within the Academy programme on peer teaching, students are required to identify and analyze their own learning styles (often normally unnoticed by themselves or by their teachers) and to use this reflective exercise to inform their teaching to peers. More than 300 secondary schools from 5 Polish provinces have participated in the project, and 3,000 teachers have been provided with practical training (face-to-face, online and blended modes) on how to use the achievement standards during lessons and extra-curricular activities. Since the project’s launch more than 1,000 teachers have implemented over 3,000 of the Academy programme’s modules benefitting circa 23,000 students aged between 13 and 16 years old. The multi-faceted project targets the effective implementation of the new competence-based curriculum, renewing the approach to MST pedagogical methods, and providing teachers with support through in-service training and dedicated resources. Teachers who join the programme can benefit from e-learning courses that cover experiment preparation and implementation, project-based learning management, methods to increase student motivation and the role of feedback in the learning process.

11 The CoPE (Certificate of Personal Effectiveness) developed by ASDAN is a qualification which assesses students generic, cross-curricular ‘personal effectiveness skills’ including the learning to learn competence. The development of these skills is based on a methodology involving experiential learning by way of personal challenges which permit the incremental development and recognition of skills through formative assessment and on “learning to learn” through a process summarised as “PLAN>DO>REVIEW”. For more information see case note UK1: *Building a culture of achievement through the ASDAN Certificate of Personal Effectiveness*
2.3 Austria’s national strategy

Although Austria’s approach to KCD development is holistic and integrated in a similar way to Spain and Poland’s strategies, unlike these countries, it focuses mainly on a core group of competences, as opposed to all of them\textsuperscript{12}. With the amendment of the national School Education Act (Schulunterrichtsgesetz – SchUG), a legal basis for the implementation of educational standards (Bildungsstandard) in relation to the development of core competences in Austrian schools was established in 2008/09. This Act primarily determines the framework for quality standards in three main subjects (mother tongue, second foreign language and mathematics) for students in years 4 and 8. Regular evaluation of the standards allows for them to be adapted in order to ensure the quality of education, and teachers receive feedback on students’ learning results. An integrated programme for teacher training and professional development has also been developed accordingly, and has already been partly implemented. The aim is to improve education by moving towards more competence-based teaching, through a systematic and comprehensive approach that includes an analysis of assessment practices and quality assurance. Assessment has been designed around the principle of assessment for learning, as opposed to assessment of learning, and includes the learners’ own feedback and self-evaluation.

The Federal Institute for Educational Research, Innovation and Development of the Austrian School System (Bundesinstitut für Bildungsforschung, Innovation und Entwicklung des österreichischen Schulwesens – BIFIE) is responsible for the development of these standards as well as for the education and training of teachers, in close cooperation with the teacher training colleges (pädagogische Hochschulen - PH). PH are the bodies through which all educational and training measures in this area are carried out, and they also serve as the guidance and advisory board for teachers needing support in the implementation of key competences in their teaching. National standardised assessment of students’ learning and feedback to the teachers is an essential part of the quality assurance system set up by the Austrian implementation strategy. In 2012 the first assessment was implemented by BM:UKK and BIFIE in the key competences of maths (2013) and mother tongue (2014) in year 4, and in maths (2012), second foreign language (2013) and mother tongue (2014) in year 8. An essential step forward towards the full implementation of the key competences approach in the Austrian educational system is the new secondary school leaving exam, also forming a part of the amended Edu-

\textsuperscript{12} At regional level however, there is one Austrian initiative which focuses on all 8 key competences (see section 1.3. and case note AT3: ACHTplus).
cation Act. By the 2013/14 school year the new exam will be partially standardised and competence-based, in order to correspond with the competence development of the educational standards for school years 4 and 8.

Austria, like Spain, has a national KCD programme, but rather than targeting all competences, focuses on those taught as specific subject areas within the curriculum; namely, MST competences, digital competence and communication in the mother tongue. The national programme IMST (*Innovations Bring Schools to the Top*) aimed at improving teaching in mathematics, science, information technology, German language and related subjects was launched in 1998 and in 2013 was extended for a further three years. The programme is run by the Institute of Instructional and School Development (IUS) of the Klagenfurt University with support from the Austrian Educational Competence Centres (AECC) and the *Pädagogische Hochschulen* (university colleges of teacher education). The programme helps teachers to implement innovative pedagogical projects and to receive support in terms of content, organisation and funding. It involves around 7,000 teachers who participate in projects, attend conferences or cooperate in regional and thematic networks. Evaluation and research has been integrated at all levels of the IMST programme to ensure its impact is measured. Gender sensitivity and gender mainstreaming are important principles of the programme, and their implementation is supported by the Gender Network.

During 2011 and 2012 regional networks were supported under IMST’s network programme. By way of regional educational planning these networks can set their own priorities and support district networks, regional specialist didactics centres, specialist groups in schools and/or inter-school networks. This programme also permits the setting of contextual priorities by promoting small-scale projects, for example. As of 2010, IMST has started supporting five to ten theme programmes for classroom and school projects with a view to boosting specific priorities, including competences in mathematics and science. The network and theme programmes are monitored by programme teams, composed of academics at universities and colleges of teacher education as well as school staff, which work on approximately 20 classroom and school projects per theme and school year. Thanks to IMST’s support system, the way has been paved for further anchoring of specialist didactic knowledge so that educational policy projects can resort to reliable structures. The Austrian Educational Competence Centres for example, have turned out to be key agents in the introduction of educational standards and of a centralized secondary school leaving exam.
2.4 Targeted initiatives on specific competences in Austria, Spain, Poland and Ireland

In addition to their overarching national strategies on KCD, Spain, Austria and Poland also have targeted initiatives on specific competences. To improve students’ literacy all three countries have invested in reading initiatives: In Spain, the national ‘Plan for Promoting Reading’ (Plan de fomento de la lectura) (46), and the Act on Reading, Books and Libraries (47) (Ley de la lectura, del libro y de las bibliotecas) of 2007 aim to foster reading and further develop school libraries; In Austria the ongoing reading initiative Literacy Competence (see case note A2: Reading Initiative) focusing on improving reading and text comprehension was set up in 2004 to compensate for the shortcomings in reading skills revealed by PISA results; In Poland, the National Programme for the Development of Reading (2011-2020) is currently being prepared by the Ministry of Culture and National Heritage.

Austria has a range of national programmes, actions and centres, each dedicated to developing a specific competence or group of competences. For example, its national digital competence programme has recently completed a pilot phase which uses the EDUMOODLE platform to integrate ICT into the curriculum for the teaching and learning of various subjects (see case note A1: Digital Competences, Basic Education in ICT). Austria also has a specific national centre (ÖZEPS, www.oezeeps.at) for students’ personal development, encouraging the development of social and learning to learn competences, and another centre dedicated to citizenship education, which recently produced a publication including practical lessons and diagnostic exercises (Diagnoseaufgaben) to help teachers assess students’ ability to find solutions to problems independently, as well as assess their decision-making and conceptual thinking skills. Moreover, the Ministry of Education has set up the EESI centre (Entrepreneurship Education for School Innovation - http://www.eesi-impulszentrum.at/) which is responsible for all teaching materials, teacher training, competitions and workshops related to the development of entrepreneurial skills. Lastly, the Austrian government has also supported a number of arts projects with the explicit aim of fostering students’ creativity, innovation, cultural awareness and artistic expression. Since 2007 more than 20,000 new projects have been launched by schools, artists and cultural institutions, with the support of government funding13.

13 http://www.bmukk.gv.at/kultur/kulturvermittlung/kunstmachtschule.xml
Spain also has national programmes or strategies dedicated to specific competences. For example, the Comprehensive Programme for Learning Foreign Languages (2010-2020) implemented by the Spanish Ministry of Education, Culture and Sport in collaboration with the Autonomous Communities, focuses on the promotion of language learning from an early age; and the National Strategy for Science and Technology (2007-2015) underlines the need for the education system to promote interest in science and technology and particularly to develop students’ problem-solving and critical thinking skills.

Poland is currently further developing the Teaching Tools Database (see case note PL2) set up in the autumn of 2011, which supports the implementation of the new core curriculum introduced in schools in 2009. The database provides teachers with tasks that can be used for the learning and assessment of higher order thinking skills, such as critical thinking and problem solving, which the new curriculum focuses on. This is a much needed tool, as there are currently few resources available for teachers to help develop these specific competences in their students.

Ireland has recently implemented a national initiative devoted to improving students’ mathematical competence - Project Maths (see case note IE5). Following a review of post-primary mathematics education in 2007, the National Council for Curriculum and Assessment (NCCA) prepared for the phased implementation of syllabus change in mathematics over a four-year period from September 2008. This change involved the review of mathematics syllabuses at both junior cycle and senior cycle and a complete change in the approach to the teaching and assessment of mathematics, which is now focused on the contextualisation of content in concrete, real-life situations. The five key skills (communicating, working with others, critical and creative thinking and information processing and being personally effective) have been embedded into the new mathematics syllabuses. Teachers have been at the heart of this curriculum development process, and their feedback has informed refinements and revisions to the curriculum which was mainstreamed in all Irish schools in 2010.
3. HOW THE CURRICULUM, ASSESSMENT, PEDAGOGY, TEACHER TRAINING AND SCHOOL ORGANIZATION ARE ADDRESSED IN THE INITIATIVES IDENTIFIED

3.1. An emphasis on key competences is more visible in in-service teacher training as opposed to initial teacher education

All initiatives identified target the curriculum and pedagogy to some degree. Throughout the initiatives analyzed the teaching methods considered favourable to competence development are characterized as innovative, collaborative, cross-curricular, project-based and motivational, often supported by ICT, with a focus on student-centred, personalized learning. The majority of initiatives also involve some degree of teacher training which typically accompanies a pilot project in its first implementation phase. However, this teacher training is nearly always dedicated to serving teachers, with less than a third of initiatives also targeting initial teacher education. This reflects the CASE Report’s (2009) finding that an emphasis on key competences is more visible in in-service teacher training as opposed to initial teacher education. Even the three holistic curriculum reforms identified (Ireland’s Key Skills Framework, Spain’s Curricular Integration project COMBAS/PIC, and Malta’s Core Curriculum Programme; see case notes IE1, IE3, ES1, and MT1) have made provisions for continuous professional development opportunities to assist teachers with the new approach, but have not yet considered accompanying measures for initial teacher education. The only initiative identified which specifically targets initial teacher education is the introduction of a module focusing on the embedding of key skills in teaching and learning, as part of a third level undergraduate BSc Science and Maths Education Degree, at the National University of Ireland Maynooth (see case note IE4). Initiatives which are starting to look at teacher training holistically include Belgium’s cross-curricular final objectives initiative (see case notes BE1 and BE2) which emphasizes the need for more attention to be given to competence-based learning and assessment in both initial and in-service teacher education, in accordance with the curricular reform.

An example of a European initiative which is developing a teacher training framework for key competence based teaching, is the TRANSIt project (see case note EU6). TRANSIt’s ultimate aim is to have a positive impact on the development of students’ key competences through building teachers’ capacity in competence ori-
mented education. To achieve this, a pilot teacher training methodology is currently being developed with the aim of improving teachers’ awareness of key competences and equipping them with the professional skills needed for the didactics and e-assessment of transversal competences. The training framework will propose collaboration between teachers in cross-curricular subjects to promote a shared approach which will encourage them to engage in team planning and collaborative design of lessons and materials. Moreover, teachers will be given guidance concerning how to assess students’ transversal competences; a complex area which needs further investigation (see section 3.2 below).

3.2 Assessing key competences remains a difficult and under-developed area

Assessment greatly influences teaching and learning and therefore is an integral part of any curriculum development. However, the academic literature (see Key-CoNet literature reviews14) as well as the evidence presented by the initiatives analysed in this report illustrate that changes to the curriculum have not always been accompanied by changes to assessment practices. Assessment is mentioned by various initiatives, but rarely focused on or elaborated in detail. Several coordinators involved in these initiatives mention the difficulty in developing appropriate assessment tools for this new way of teaching and learning (especially regarding transversal competences), and pilot projects in their first implementation phase that do consider assessment as part of a holistic approach to key competences, count on dedicating attention to this in their project’s next phase of development.

However, the large scale curriculum reforms identified in Ireland, Spain and Malta have developed assessment practices in line with the changes to teaching and learning required by the new key competence based approach. Reflecting the evidence in this area, they have similar principles: key competences are specified in terms of learning outcomes, which consist of knowledge, skills and attitudes, and are not over-specified so as to allow teachers to adapt them to context; the emphasis is on assessment for learning as opposed to of learning, and serves both summative and formative purposes; and a variety of assessment methods (not just standardized and performance based tests, but also portfolio, peer and self-assessment etc.) are used to adequately capture the acquisition of learners’ key competences. Some examples of alternative assessment methods mentioned in the initiatives identified include: the use of paper and digital portfolios (see case notes UK1; FR3; MT1 and

14 http://keyconet.eun.org/literature-review
AT3) allowing different types of evidence of learners’ competence acquisition, both inside and outside of school, to be collected over time; self-assessment practices (increasingly being used as a way of making the learner an active agent, responsible for his/her own learning (e.g. see case notes MT1; AT3; and UK1), and digital competence-based assessment tools facilitating the monitoring of learning and the customization of teaching strategies (see case notes FR5 and FR6).

3.3 Adopting a KCD approach can impact the school’s physical learning environment, timetable and organization of lessons

Some initiatives interestingly tackle the issue of how a key competence approach might impact on school organization in terms of learning spaces or timetables; a very practical and real concern for the implementation of any education reform. The Finnish initiative (see case note FI3: Co-designing learning environments) is based on the principle that physical learning environments need to be updated in order to better support the teaching and learning of key competences necessary for the 21st century. It is a cross-curricular project (visual arts, physics, chemistry, mathematics, ICT, mother tongue and literature, English and Spanish) but is conducted mainly as part of the visual arts course. The main objective is to transform school areas into spaces enabling diversified learning, through a user-centred co-design development process involving all members of the school community in a whole school approach. Similarly, the Austrian initiative, Mobile Learning Tutors (see case note AT4) is also concerned by the need to change the physical teaching and learning environment. In accordance with Austria’s national ICT strategy, eFit21, the initiative promotes the use of mobile learning devices such as notebooks, netbooks, tablets or smartphones as ‘mobile learning tutors’ in schools in order to increase students’ digital skills and improve teachers’ teaching methods in a digital education process. The introduction of mobile learning devices at the heart of the teaching and learning process means that lessons need to be prepared in a different way from those using standard textbooks, and learning platforms and virtual learning environments need to be accessible from each mobile device. A different pedagogical approach is required for the use of mobile learning devices, including the need for project-based work in groups. Moreover, the learning environment itself must be flexible to allow for movement in the classroom as well as outside, to accommodate outdoor learning activities with the mobile devices.

The French lower secondary Collège André Bauchant has implemented a new type
of internal organisation which is innovative in both structural and pedagogical terms (see case note FR4: New pedagogical organization). The curriculum is partially taught through interdisciplinary workshops which has modified the timetables of some subjects and therefore required an exemption from local education authorities, due to its affect on compulsory education. This particular school’s initiative has achieved a key competence approach through the reorganisation of lessons, divided between subject lessons, team-taught interdisciplinary lessons, modular competence groups and personalised support.

3.4 Multi-competence and multi-dimensioned initiatives

Despite the absence of a national strategy dedicated to key competences, some countries (e.g. BE (nl), FI, IE, MT, SE, and SK) have initiatives which cover all or most of the key competences and target various dimensions of the education system to ensure their successful implementation. A particularly comprehensive example is the curriculum development work on the Key Skills Framework in Ireland. Key competences have been embedded into learning outcomes for the assessment of the formal curriculum at primary and the lower and upper levels of post-primary education (see case notes IE1: Key skills for junior cycle and IE3: Key skills for senior cycle). The development of the Key Skills Framework in the senior cycle was tested in four secondary schools, in a whole school approach experiment. In order to successfully embed the key skills into teaching and learning several actions were taken: a network was established and schools participating in this network received support, training and funding from the NCCA; a Key Skills toolkit15 was developed for schools; whole staff training sessions were held with each school and in addition ‘champion’ key skills teachers were identified in each school to lead and support the process. This combination of targeted work on curriculum development, assessment methods, pedagogy, and the provision of teacher training and resources ensured the schools were given all the support and tools needed to integrate the key skills approach into every day teaching and learning across subjects. Similarly, Rektorsakadamen in Sweden also recently embarked on a pilot project involving three schools with the aim of integrating ‘future competences’ into the traditional syllabi and curriculum (see case note SE2: Future competences). The programme offers training, a handbook on how to implement and integrate the work on competences into the curriculum and process support in change management. Schools were asked to form an Advisory Committee including representatives from busi-

15 http://www.juniorcycle.ie/Curriculum/Key-Skills-(i)
nesses as well as teachers and students, to ensure a link is made with the demands of working life. The role of the Advisory Committee is to support and advise the school management team in their work on future competences. Following the successful pilot the programme was launched at national level in January 2013 for all interested secondary schools willing to pay the participation fee.

Key competence development in Belgium has included the implementation of the cross-curricular final objectives (see case note BE1: Cross-curricular objectives @2010) which were first introduced by the Ministry of Education and Training in 2001, shifting the emphasis from a subject-oriented logic to a more competence based education. These objectives were reviewed and updated in 2010, and are structured under 7 learning contexts, namely: physical health and safety, mental health/wellbeing, socio-relational development, the environment for sustainable development, political-juridical society, socio-economic society, socio-cultural society, learning to learn and ICT. Since 1 September 2010, every Flemish secondary school is required to implement them. The final objectives describe a basic package of competences related to specific themes that each school is accountable for implementing over the six years of secondary education. Schools are free to determine how to implement the cross-curricular themes within different subjects, projects, and activities, and while schools are not under obligation to achieve the final objectives, they are obliged to make clear efforts in this regard and to show evidence on inspection. One of the biggest changes in the updated cross-curricular final objectives is the inclusion of the topic Sustainable Development. The Flemish Government therefore provided specific training for teachers on how to teach sustainable development education as part of their in-service training initiative for the 2011-2012 school year. The content is covered in an integrated way, including social, economic and environmental aspects, and is intended to promote cooperation between teachers from different disciplines. Although the Belgian case represents a multi-competence and multi-faceted initiative, the case study concludes that more needs to be done in the area of in-service training. School teachers and coordinators interviewed for the Belgian case study suggested that because cross-curricular learning through projects is a new challenge for them, it would be useful to introduce teacher professional development refresher courses, concentrating particularly on the integration of the cross-curricular objectives into project based learning.

The Slovak ITI initiative (see case note SK2: Integrated Thematic Instruction – ITI) is another good example of an initiative which targets all key competences

16 http://keyconet.eun.org/project-results/case-studies
through a holistic programme. The initiative was implemented as a pilot project over a period of 9 years, and was subject to pedagogical research which concluded that the pilot had been very successful. As a result the programme is ongoing and is now officially recognized. The programme develops innovative teaching methods to ensure students’ effective learning of the key competences. The programme is accompanied by teaching materials and accredited training is provided by the Slovak National Institute for Education, the Methodology and Pedagogy Centre, ASK: Education for the 21st Century in Slovakia and the Children of Slovakia Foundation. Formative assessment is also an element of the ITI programme and while this is recognized as very important for the proper integration of the key competence approach, it is challenging and needs further development. There are also examples of initiatives focusing on one or a group of specific competences, where the approach used is holistic, targeting the various necessary dimensions, as in the cases described above (see for example case notes NO1, NO2, PL1, UK1 & UK2).
4. KCD INITIATIVES TARGETING SPECIFIC COMPETENCES

Figure 4: Specific competences targeted by the KCD initiatives identified

- Countries with at least one initiative focused mainly on the development of students’ digital competence

- Communication in foreign languages
- Cultural awareness and expression
- Social and civic competences
- A sense of initiative and entrepreneurship
- Mathematical competence
4.1 Initiatives focusing on training teachers to use ICT more effectively for teaching and learning

Around half of all KeyCoNet partner and associate country members surveyed have at least one initiative mainly focused on the development of students’ digital competence. In Estonia, Finland and Norway, where more than one initiative focused fully or in part on developing students’ digital skills was identified, recent curricular reforms have placed emphasis on the development of digital literacy as a cross-curricular competence. In Estonia, ICT is considered a compulsory cross-curricular theme and is a focus of the General Education System Development Plan for 2007-2013, together with Maths, Science and Technology (MST) competences more generally. This focus is reflected in the large pilot project coordinated by the Tiger Leap Foundation (see case note EE1: *ICT management and assessment model for schools*) which aims to train teaching and administrative staff in the effective use of ICT for teaching and learning in all curriculum areas, as well as for management purposes.

In Norway digital competence is similarly considered as a ‘basic skill’ which is to be integrated in all subject teaching. The Norwegian Centre for ICT in Education (see case note NO2: *Norwegian Centre for ICT in Education*) set up in 2010 has been instrumental in ensuring ICT is embedded in all teaching and learning processes, as required by the Knowledge Promotion Reform of the national curriculum in 2006. The centre contributes to this goal through policy initiatives, research and development projects, collaboration with schools and professional development courses for teachers. The centre has also developed several tools for monitoring, supporting and assessing schools, teachers and students in their engagement with digital technologies for learning. In Portugal, the ongoing EduScratch initiative (see case note PT3: *EduScratch*) is directly linked to the curriculum reforms introduced in August 2012, which stipulated the need for ICT to be taught as a separate subject in grades 7 and 8 (students aged 12 and 13 years old). The initiative, which promotes the educational use of the programming tool Scratch, including dedicated in-service teacher training, is intended to support the implementation of the new curriculum target devoted to the exploration of computational environments.
4.2 Initiatives using ICT as a means through which to teach and learn other competences

Various other KCD initiatives collected, if not specifically targeting digital competence, nevertheless addressed this competence in one way or another, especially those focused on MST competences (see case notes FR1, NO3, PL1, SE3, and SK1). The prominence of digital competence in the KCD initiatives identified across Europe is partially due to the fact that digital competence is often seen not only as a subject-related competence (i.e. associated to ICT and technology related disciplines), but also as a means through which to teach and learn the other competences. An example can be seen in the Finnish case note describing a primary school’s involvement in the LEAP21 project, on fostering 21st century skills (see case note FI1: LEAP21: Towards 21st century learning – innovative teaching and learning in Raumankari comprehensive school). The project is based on the principle that the effective use of ICT in education can support the development of innovative teaching practices at schools in relation to any of the key competences. Another example is the French case note (see case note FR5: Competences and self-esteem) describing a lower secondary school’s project in which the school’s pedagogical team developed an IT tool to assess subject-related and cross-curricular competences, permitting the follow-up of students’ progress.

4.3 Competences in foreign languages, cultural awareness and expression and social and civic competences are rarely addressed in the initiatives identified

Only one initiative amongst the case notes collected specifically targets foreign language learning (see case note PT1: Portuguese as a second language), and only two mainly focus on, in each case, cultural awareness and expression (see case notes NO4: The cultural rucksack and PT2: European Club), and social and civic competences (see case notes FI2: Children’s site and UK2: National curriculum citizenship). This is not surprising considering that less than half of all EU countries currently have national strategies in these areas (Eurydice 2012a, pp. 16-17). It is interesting to note however, that the new curriculum framework in Portugal states that citizenship education is a cross-curricular area which will now be taught in all subjects.
4.4 Entrepreneurship initiatives feature in countries where this competence has been prioritized in recent education reforms

Strategies to develop a sense of initiative and entrepreneurship are slightly more common across Europe (Eurydice 2012a, pp. 17). Interestingly, the only two Key-CoNet countries where initiatives specifically dedicated to the development of entrepreneurial skills in the curriculum were identified are Norway and Sweden, whose recent education reforms have explicitly brought entrepreneurship education to the forefront. In Norway, the Action Plan Entrepreneurship in Education and Training – from compulsory school to higher education (2009-2014) was launched in September 2009. The main objective of the action plan is to strengthen the quality and the scope of entrepreneurship education and training at all levels and in all areas of the education system. A key aim is to bring students into close contact with the world of work and business life, and to connect learning with real life working situations. To contribute to this objective JA-YE Norway (see case note No1: Junior Achievement Young Enterprise Norway) runs more than twenty different programmes from the earliest stage of primary education through until higher education, focused on cultivating a culture of entrepreneurship in schools in partnership with industry, rooted in the Government’s 2006 Knowledge Promotion curriculum reform.

Sweden has also recently prioritized entrepreneurship as one of the key areas for students’ competence development. This is reflected in the ongoing entrepreneurship initiative (see case note SE1: Entrepreneurial approach) run by Skolverket (National Agency for Education), which aims to encourage entrepreneurship in schools by providing in-service training for teachers, counsellors and head teachers to equip them with the basic attitudes and skills necessary to work on entrepreneurial activities in schools. The initiative also promotes schools’ cooperation with employers, facilitates the exchange of experience between schools and allocates development funds.

Another initiative concerned with providing professional development for teachers in the area of entrepreneurship education is The Entrepreneurial School (TES) project (see case note EU5). This is a European initiative which aims to produce a virtual guide to entrepreneurial learning, and to train around 4,000 teachers across 18 countries on how to effectively use it in the teaching of any subject and for any age group. The guide will include around 100 entrepreneurial tools for teaching and learning and will be organised in 35 teacher-friendly packages. The
materials will be for primary, secondary, upper secondary and vocational schools, and schools will have access to a quality framework and assessment tool that helps educators set milestones and assess progress. Moreover, JA-YE Europe also manages other related large initiatives (see case notes EU1: Global Enterprise Project; EU2: Company programme; EU4: Company Programme Self-Assessment Tool) involving all the current KeyCoNet partner and associate member countries, in addition to other European countries, with the goal of equipping students with entrepreneurial skills.

Compared to the other transversal competences, teaching entrepreneurship as a separate subject is less common in Europe (Eurydice, 2012a, pp. 24), particularly at primary level, where it is in fact only taught as such in Slovakia (Eurydice, 2012a, pp. 22). However, a new trend in this direction can be identified amongst some of the KeyCoNet partner and associate member countries. Poland is one of the few countries where entrepreneurship is already taught as a compulsory separate subject at secondary school level. In Spain since 2011/12 education authorities in the Autonomous Communities have been free to implement a separate subject, but as of 2014/15 it will be obligatory for schools to offer a new elective subject on ‘professional guidance and entrepreneurial initiative’ in the 4th grade of lower secondary schools. In Ireland, NCCA has developed a senior cycle short course on enterprise which is currently being discussed with education stakeholders before implementation, and in Estonia, from September 2013 ‘Economic and business studies’ will be offered as an optional separate subject in all secondary schools.

Another example of the increasing importance given to entrepreneurship in education in Europe is ASDAN’s recognition of entrepreneurial skills as one of the cross-curricular “effectiveness skills” it assesses in students working towards the CoPE (Certificate of Personal Effectiveness; see case note UK1).
5. FRAMING KCD IN INCLUSIVE AND PARTICIPATIVE APPROACHES

5.1 Targeting low achievers and drop-outs

Two initiatives in Malta and Sweden have interestingly used a key competence approach for the specific purpose of fostering social inclusion in education. As these initiatives demonstrate, the type of teaching and learning associated to key competence based education is particularly suited to addressing young learners who are low achievers and/or at risk of dropping out of the education system. The Maltese Core Curriculum Programme (see case note MT1) targets the educational development of low achievers through a key competence curriculum reform which includes the training of teachers and mentors, as well as the provision of accompanying learning resources and guidance. The curriculum programme targets low ability learners at risk of failure, during the last three years of secondary education, between the ages of 13 and 16. The programme which targets the needs of lower-level learners is characterised by a constructivist approach which favours inquiry-based learning and assessment for learning strategies. Learners following the Core Curriculum Programme will be given a core entitlement covering subject specific key competences as well as carry out cross-curricular projects that enhance their ‘soft skills’. Evidence through different methods of assessment will be collected in a portfolio, which will be used to instil learning to learn skills. The key competence approach inherent to the pedagogy and assessment principles within the programme is especially conducive to the holistic development of each learner, allowing for his/her unique potential to be fulfilled. This Maltese initiative will be the subject of a more in-depth case study in 2014.

The Swedish Oneeighty ongoing initiative (see case note SE4) which started in 2007 is an online educational option for young people who do not, for various reasons, participate in the official school system. Every year, 1200 young people leave secondary school in Sweden without any qualifications and many more have a number of significant problems with their schooling. For these students there is often a lack of contact with the school and in many cases this is the beginning of a long-term social exclusion which causes a huge expense to society, while for those concerned, the human and emotional costs are immeasurable. The purpose of Oneeighty is to reduce the risk of young peoples’ long-term exclusion, and to strengthen their self-esteem and their confidence in their own ability to continue lifelong learning. The programme is not intended to be a permanent solution, but rather aims to be a
temporary stepping stone with the ultimate goal of helping young people get back into the formal education system and become more integrated into society. While the programme follows the national curriculum, it focuses particularly on a key competence approach to effectively engage learners. As Oneeighty is a web-based platform where young people, teachers and families come together, the development of digital competences is particularly central to the project. As priority is given to methods and topics which resonate well with these otherwise disengaged youth, digital interests in playing online games or watching films for example are used as windows through which to develop learners’ competences in all other areas also. The key competence pedagogy at the heart of the Oneeighty initiative, which embraces the development of knowledge, skills and attitudes on the basis of authentic, meaningful social contexts and recognizes informal as well as formal learning, has proved to be particularly successful. Since the programme began, 50% of the young people involved have returned to school and play a more active role in society.

5.2. Involving families and the wider community

An issue arising as key in some of the initiatives identified is the need for a participative approach, associating the main stakeholders (teachers, students, parents, community and business leaders) from the beginning and throughout the whole process. Such stakeholders can be involved at various stages of the process; e.g. in an initial consultation concerning the definition of key competences and related attainment targets, or later on when feedback on materials or processes is needed. The Spanish project Competences for life: school, family and community (see case note ES3) targets such stakeholder involvement head-on, in the development of a key competence approach in schools in El Hierro. All schools on the island were involved in the development of a global curriculum encompassing all key competences needed in life, with the active participation of the family sector (represented by parents associations) and the community sector (represented by political officials). Family groups were also central to another Spanish initiative (see case note ES4: Families and Schools: Educating together based on key competences), where regular meetings with them ensured consensus was built around the key competence model used to build a common educational vision in a network of 22 diverse schools. The Austrian initiative ACHTplus (see case note AT3) also involves the active participation of parents. Students’ competence levels are determined in collaborative ‘status discussions’, in which students have the opportunity to discuss with
their parents, teachers and career councillors about their learning achievements, strengths and weaknesses and needs for improvement. Parents are also an integral part of the programme’s evaluation and are requested to complete feedback questionnaires concerning the status discussions. Moreover, the initiative sought to involve families and get them on board from the outset by ensuring that all schools implementing ACHTplus received targeted information for parents.
REFERENCES


KeyCoNet 2013 Country Overviews. Accessible here: http://keyconet.eun.org/project-results


KeyCoNet 2013 Case Studies. Accessible here: http://keyconet.eun.org/project-results/case-studies


ANNEX: LIST OF KEY COMPETENCE INITIATIVES REPORTED IN KEYCONET’S CASE NOTES

1. Austria [1] - Digital competences, basic education in ICT
2. Austria [2] - Reading initiative- Reading fit
3. Austria [3] - ACHTplus
5. Belgium [1] - Cross-curricular final objectives@2010
10. Finland [2] - Children’s Site
12. France [1] - Giving meaning to cross-disciplinary scientific competences in the Lycée
18. Ireland [1] - Key Skills for Junior Cycle Education
26. **Norway [3]** - *Science for the future*

27. **Norway [4]** - *The Cultural Rucksack*

28. **Poland [1]** - *Students Academy*

29. **Poland [2]** - *Teaching Tools Database*

30. **Portugal [1]** - *Portuguese as a second language [PSL]*

31. **Portugal [2]** - *European Club*

32. **Portugal [3]** - *Eduscratch*

33. **Slovakia [1]** - *Hands- on Project- project methods*

34. **Slovakia [2]** - *Integrated thematic instruction - ITI*

35. **Spain [1]** - *PICBA*

36. **Spain [2]** - *Teacher Training Centre Alzira*

37. **Spain [3]** - *El Hierro. Competences for life school, family and community*

38. **Spain [4]** - *Families and Schools: Educating together based on key competences*

39. **Sweden [1]** - *Entrepreneurial approach*

40. **Sweden [2]** - *Future Competencies*

41. **Sweden [3]** - *Science and Engineering for All*

42. **Sweden [4]** - *Oneeighty*

43. **United Kingdom [1]** - *Building a culture of achievement through the AS-DAN Certificate of Personal Effectiveness*

44. **United Kingdom [2]** - *National Curriculum Citizenship*

45. **Europe [1]** - *Global Enterprise Project [GEP]*

46. **Europe [2]** - *Company Programme*

47. **Europe [3]** - *VINTAGE*

48. **Europe [4]** - *JA-YE’s Company Programme Self-Assessment Tool*

49. **Europe [5]** - *JA-YE’s Entrepreneurial School*

50. **Europe [6]** - *Transversal key competences for Lifelong Learning: Training teachers in competence based in education (TRANSIt)*
KEYCONET PARTNERS

MINISTRIES OF EDUCATION / NATIONAL AGENCIES

bm:uk Bundesministerium für Unterricht, Kunst und Kultur
http://www.bmukk.gv.at

AKOV Agentschap voor Onderwijs voor Erwenschap en Vorming
http://www.ond.vlaanderen.be/wegwijs/akov

http://www.juntadeandalucia.es/

MINISTÉRIO DA EDUCAÇÃO E DA CULTURA
http://www.minedu.gob.pt

NCCA
http://www.ncca.ie

HITSA Information Technology
http://www.eitsa.ee/en/

UNIVERSITIES AND RESEARCH INSTITUTES

Ifé INSTITUT FRANÇAIS DE L’ÉDUCATION
http://ife.ens-lyon.fr/ife

EIESP
http://www.eiesp.org

UiO Department of Educational Research
University of Oslo
http://www.uv.uio.no/pfi/english/

Universidade do Minho
Instituto de Educação
http://www.ie.uminho.pt/

IE Instituto de Educação
http://www.ie.ul.pt

University of Jyväskylä
https://www.jyu.fi/en/

CICERO LEARNING
http://www.cicero.fi

UNED
http://www.uned.es

Proyecto Atlántida
http://www.proyectoatlantida.net/

PRACTICE-RELATED PARTNERS

Junior Achievement Young Enterprise
http://www.ja-ye.eu

REKTORSAKADEMIEN
http://www.rektorsakademien.se
KEYCONET ASSOCIATE MEMBERS*

Asdan
http://www.asdan.org.uk/

Maltese MoE
https://www.education.gov.mt/

National Centre for Excellence in Mathematics and Science Teaching and Learning
http://www.nce-mstl.ie/

National University of Ireland, Maynooth
http://www.nuim.ie/

Educational Research Institute

Ellinogermaniki Agogi
http://www.ea.gr

BIFIE - Bundesinstitut für Bildungsforschung, Innovation und Entwicklung
http://www.bifie.at

Centre for Citizenship Education (CCE)
http://www.ceo.org.pl/

Learning Communities
http://www.learningcom.it/

The Norwegian Centre for ICT in Education
http://www.iktsenteret.no

* The logos represented here are of associate members featured in this report. For a full list of KeyCoNet associate members please refer to http://keyconet.eun.org/partners/associates
European Schoolnet is the coordinator of the KeyCoNet Project.

European Schoolnet is the network of 30 European Ministries of Education, based in Brussels. As a not-for-profit organisation, we aim to bring innovation in teaching and learning to our key stakeholders: Ministries of Education, schools, teachers, researchers, and industry partners.

Since its founding in 1997, European Schoolnet has used its links with education ministries to help schools make effective use of educational technologies, equipping both teachers and pupils with the skills to achieve in the knowledge society.

In particular, European Schoolnet pledges to:

- Support schools in achieving effective use of ICT in teaching and learning
- Improve and raise the quality of education in Europe
- Promote the European dimension in education

About European Schoolnet

http://keyconet.eun.org

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