

CompAssess project - Assessment of student competences with emphasis on the development of competences

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Output 2 - Repository of European Key Resources

CONTENTS

- 1. Repository of European key resources**
- 2. Policy report and papers from the EC and other sources**
- 3. Cedefop: Reports and papers**
- 4. Other policy reports and papers**
- 5. Theoretical contributions on competence-based VET**
- 6. Theoretical contributions on transversal competences**
- 7. Assessment of competences**
- 8. Assessment of transversal competences**
- 9. Other material**
- 10. References**

1. REPOSITORY OF EUROPEAN KEY RESOURCES: Overview of the material

POLICY REPORTS AND PAPERS, EUROPEAN COMMISSION AND OTHER	CEDEFOP REPORTS AND PAPERS	THEORETICAL CONTRIBUTIONS ON COMPETENCE	THEORETICAL CONTRIBUTIONS ON TRANSVERSAL COMPETENCES	ASSESSMENT OF COMPETENCES	ASSESSMENT OF TRANSVERSAL COMPETENCES
<p>European Commission, 2012</p> <p>Rethinking education: investing in skills for better socio-economic outcomes.</p>	<p>Winterton, J., Delamare – Le Deist, F., Stringfellow, E. (2005).</p> <p>Typology of knowledge, skills and competences: clarification of the concept and prototype.</p>	<p>Network Reports, No. 87 - Jean Gordon et al., 2009</p> <p>KEY COMPETENCES IN EUROPE: OPENING DOORS FOR LIFELONG LEARNERS ACROSS THE SCHOOL CURRICULUM AND TEACHERS EDUCATION; CASE</p>	<p>Sicilia, M. A. (2009).</p> <p>How should transversal competence be introduced in computing education. Inroads – SIGSCE Bulletin, 41(4), 95-98.</p>	<p>David Pepper, 2011</p> <p>Assessing Key Competences across the Curriculum — and Europe; European Journal of Education, Vol. 46, No. 3,</p>	<p>Sánchez de la Rosa et al., 2009</p> <p>Evaluation of Transversal Competences of the Engineering Students and their Relation to the Enterprise Requirements; Enterprise Resource Planning Models for the Education Sector: Applications and Methodologies; IGI Global;</p>

<p>European Commission (2012).</p> <p>Developing Key Competences at School in Europe – Challenges and Opportunities for Policy – Eurodice Report.</p>	<p>Cedefop (2009).</p> <p>The shift to learning outcomes – Policies and practices in Europe.</p>	<p>Wesselink, R., Biemans, H.J.A., Mulder, M. & van den Elsen, E. R. (2007).</p> <p>Competence-based VET as seen by Dutch researchers. European Journal of Vocational Training, 40(1), 38-51.</p>	<p>Weber et al., 2009</p> <p>AN EXPLORATORY STUDY IDENTIFYING SOFT SKILL COMPETENCIES IN ENTRY-LEVEL MANAGERS</p>	<p>National Children’s Bureau; 2012.</p> <p>Measuring Employability Skills, A rapid review to inform development of tools for project evaluation; NCB -</p>	<p>Kostas Kechagias</p> <p>(Leonardo) MASS PROJECT - TEACHING AND ASSESSING SOFT SKILLS.</p>
<p>Leney, T. (2009).</p> <p>Achieving the Lisbon goal – the contribution of VET. Draft final report to the European Commission.</p>	<p>Cedefop (2009).</p> <p>European Guidelines for Validating Non-formal and informal learning.</p>	<p>Onstenk, J. (2001). Training for new jobs: contents and pilot projects. In Descy, P. & Tessaring, M. (Eds.). Training in Europe (pp. 319-356).</p> <p>Second report on vocational training research in Europe 2000: Background report.</p>	<p>Serrano, Romero, Jurado Bello and Diz Perez, 2011.</p> <p>STUDENT TRAINING IN TRANSVERSAL COMPETENCES AT THE UNIVERSITY OF CORDOBA</p>	<p>Descy, P.; Tessaring, M. (eds) Measurement and evaluation of competence- The foundations of evaluation and impact research; Third report on vocational training research in Europe: background report. European Communities.</p>	<p>Domenico Falcone et al., 2014</p> <p>Proposal of a Methodology For Non Formal Competences Certification; The Online Journal of new Horizons in Education, vol, 4, 3;</p>

<p>Forsyth, J., Kadlec, M., Hanf, G., Papadiamanti, V., Simota, T., Murphy, A., Mernagh, E., De Francesco, G., Molina, J. L. G., Hobart, M. Sellin, B., Sakamoto, A, Coles, M., Werquin, P. (undated).</p> <p>The development and use of qualification frameworks as a means of reforming and managing qualifications systems. Report from Thematic group 1. Part of the OECD activity - the role of national qualifications systems in promoting lifelong learning</p>	<p>Cedefop (2009).</p> <p>The dynamics of qualifications: defining and renewing occupational and educational standards</p>	<p>Joke Voogt, Natalie Pareja Roblin, 2010</p> <p>21st Century Skills; KENNISNET NETHERLANDS, Discussion Paper.</p>	<p>AREA DELLE COMPETENZE TRASVERSALI</p>	<p>Mhairi McAlpine (2002).</p> <p>Principles of Assessment.</p>	
	<p>Cedefop (2013).</p> <p>Analysis and overview of NQF level descriptors in European Countries.</p>		<p>2012 ISFOL LE COMPETENZE TRASVERSALI NELLE ÉQUIPE DELLA SALUTE MENTALE</p>	<p>Graham Gibbs, Claire Simpson and Ranald Macdonald (2003).</p> <p>Improving student learning through changing assessment – a conceptual and practical framework</p>	

<p>Government of Western Australia, Department of Training and Workforce Development (2013). Guidelines for assessing competence in VET</p>	<p>Cedefop (2014). Analysis and overview of national qualifications framework developments in European countries</p>		<p>2012 ISFOL LE COMPETENZE TRASVERSALI NELLE ÉQUIPE DELLA SALUTE MENTALE</p>	<p>Achtenhagen, F & Winther, E. (2014). Workplace-based competence measurement: developing innovative assessment systems for tomorrow's VET programmes. <i>Journal of Vocational Education and Training</i>, 66(3), 281-295.</p>	
			<p>PROYECTO: ESTUDIO SOBRE COMPETENCIAS TRANSVERSALES EN EMPRESAS DEL PAIS VASCO</p>	<p>Fretwell, D. (2003). A framework for evaluating vocational education and training (VET). <i>European Journal of Education</i>, 38(2), 177-190.</p>	



				<p>Heckman, J. J. & Rubinstein, Y. (2015).</p> <p>The importance of noncognitive skills: Lessons from the GED testing programs. <i>The American Economic Review</i>, 91(2). 145-149.</p>	
				<p>LORRAINE STEFANI. 2004-2005.</p> <p>Assessment of Student Learning: promoting a scholarly approach. <i>Learning and Teaching in Higher Education</i>, Issue 1, 2004-05</p> <p>Gerald Straka, 2004</p> <p>MEASUREMENT and EVALUATION OF COMPETENCES</p>	

2. POLICY REPORTS AND PAPERS FROM THE EC AND OTHER SOURCES

European Commission (2012) Developing Key Competences at School in Europe – Challenges and Opportunities for Policy – Eurodice Report.

This cross-country report has been produced in support of the European Commission's Communication on Rethinking Education (European Commission 2012a). The main objective of the report is to present the findings on some of the challenges that European countries face in the implementation of the key competences approach, and to identify problem areas and common obstacles. Based on research evidence and national practices, the report will also outline a range of measures that have the potential to effectively address these challenges. The comparative analysis is organised in five chapters that address the following questions:

- Chapter 1: How do countries support the development of the key competences approach?
- Chapter 2: How do countries implement the new competence-based curricula?
- Chapter 3: How do countries assess the key competences?
- Chapter 4: How do countries tackle low achievement in schools?
- Chapter 5: How do countries encourage young people to pursue further study and careers in mathematics, science and technology?

Each chapter concludes with a section on policy challenges and possible responses. These concluding sections are, in turn, brought together in the Key findings section.

European Commission (2013) European Classification of Skills/Competences, Qualifications and Occupations (ESCO).

ESCO is the multilingual classification of European Skills, Competences, Qualifications and Occupations. It identifies and categorises skills, competences, qualifications and occupations relevant for the EU labour market and education and training, in 25 European languages. The system provides occupational profiles showing the relationships between occupations, skills, competences and qualifications. ESCO has been developed in an open IT format, is available for use free of charge by everyone and can be accessed through an online portal.

Leney, T. (2009) Achieving the Lisbon goal – the contribution of VET. Draft final report to the European Commission.

This report focuses on the contribution of vocational education and training (VET) to achieving the aims set out at the Lisbon Conference (referred to in this report as the 'Lisbon goal'). The consortium conducting the research has prepared the report specifically for the Maastricht conference, working between April and October 2004. The report aims to provide a basis for assessing VET systems in Europe in terms of contributing the achievement of the Lisbon goal and to stimulate policy debate at national and European level. The Lisbon strategy aims to create a drive towards a more dynamic and competitive economy in Europe that will deliver sustainable growth that will generate more and better jobs and create greater social cohesion. The drive should create an integrated approach to policy formation within and across countries to deliver the Lisbon goal.

3. CEDEFOP - Reports and papers

Winterton, J., Delamare – Le Deist, F., Stringfellow, E. (2005). Typology of knowledge, skills and competences: clarification of the concept and prototype. Research report elaborated on behalf of Cedefop/Thessaloniki.

This report is one in a series launched by the European Commission and Cedefop to support the work of the Copenhagen Process. Technical Working group (TWG) on Credit Transfer. Within the overall European Qualifications Framework (EQF) proposed by the Maastricht Communiqué, ECVET and ECTS should share a set of common reference levels for qualifications. These common reference levels should be described in terms of learning outcomes and expressed in competences providing a reading grid that makes it possible to compare different learning outcomes and the relationships between them. The first of the essential rules proposed by the credit transfer TWG for ECVET states: "The objectives of a learning pathway, a VET programme or elements of a qualification are expressed as learning outcomes in terms of knowledge, skills and competences to be acquired and mastered at a given reference level". (TWG, 2004: 2.3.1. i). The development of the vertical axis of the grid . the common reference levels – has been the subject of another study commissioned by Cedefop and undertaken by a team from the UK Qualifications and Curriculum Authority (Coles and Oates, 2004). An assessment of existing credit transfer systems in VET and their applicability to ECVET was the subject of the second study commissioned by Cedefop and undertaken by Kassel University (Le Mouillour, 2004). This report, the third commissioned by Cedefop, focuses on the horizontal dimension of the grid, a typology of learning outcomes in terms of knowledge, skills and competences.

Cedefop (2009) The shift to learning outcomes – Policies and practices in Europe.

This study addresses the shift towards learning outcomes currently taking place in European education and training policies and practices. At European level, launching the European qualifications framework (EQF) and the European credit system for vocational education and training (ECVET) has put learning outcomes firmly on the political agenda. At national level the rapid development of national qualifications frameworks (NQF) points in the same direction. These developments have been captured in detail in this comparative study analysing the developments in the 32 countries taking part in the Education and training 2010 process. The study covers all the different subsectors of education and training – general, vocational and higher education – and is the first attempt to provide a complete overview of developments in this field. This wide coverage shows that the shift to learning outcomes can be seen as an integrated part of European and national lifelong learning strategies, addressing the need to create bridges between different parts of the education and training system.

Cedefop (2009) European Guidelines for Validating Non-formal and informal learning.

This publication presents the conclusions of more than two years of intensive exchange of experiences - involving representatives from more than 20 European countries - in validating non-formal and informal learning. The main objective is to make the outcomes of this common learning process available to a wider audience to support further development of validation of non-formal and informal learning at European, national and local levels. These guidelines, while inspired by the common European principles on identifying and validating non-formal and informal learning adopted by the European Council in 2004, are not a policy framework approved by a law-making body: they are a practical tool, providing expert advice to be applied on a purely voluntary basis. Their impact relies exclusively on their relevance and ability to

add value at national or local levels.

Cedefop (2009) The dynamics of qualifications: defining and renewing occupational and educational standards.

The aim of this Cedefop report is to improve our understanding of how vocational qualifications are constructed and renewed. This is done by comparing how qualifications standards are defined and redefined in the 32 countries taking part in the Education and training 2010 programme. Qualifications standards are the norms and specifications regulating the award of a certificate or diploma. By focusing on qualifications standards we indirectly ask the fundamental question of how to increase the overall relevance and quality of qualifications. A common concern in most of the countries covered by the study is whether qualifications are able to respond to the needs of the individuals and the enterprises they are ultimately supposed to serve. Do qualifications provide the level of knowledge, skills and competence required by a service and technology intensive labour market? Are these qualifications being renewed at a rate and in such a way that they provide individuals with the specific skills and the transversal key competences they need to tackle rapid change? The study pays particular attention to the dialogue between different stakeholders in awarding qualifications, how this dialogue is organised and to what extent there is a balance or imbalance in the involvement and participation of different stakeholders. Dialogue and balanced participation are seen as prerequisites for the continuous renewal of qualifications and for the ability of qualifications systems to ensure the relevance of qualifications. An important finding of the report is the diversity of national approaches to setting standards. There is little evidence that we are moving towards a common European approach: the processes put in place very much reflect national structures and traditions. Despite this, two common trends can be observed:

- more countries are introducing outcome-based standards;
- more countries are institutionalising the participation of social partners in standard-setting procedures.

Cedefop (2013) Analysis and overview of NQF level descriptors in European Countries.

This working paper provides the first ever overview of European level descriptors. It is our hope that this material will stimulate further developments at national level as well as supporting the referencing of national qualifications frameworks to the EQF. It also provides input to evaluation of the EQF, to be concluded by a report of the European Commission to the European Parliament and Council later in 2013.

Cedefop (2014) Analysis and overview of national qualifications framework developments in European countries.

This synthesis report, the fifth since Cedefop started its regular monitoring of national qualifications frameworks (NQFs) development, looks into NQF developments and progress made in 38 countries (1) and 42 NQFs. It points to the impact of NQFs on systems of education and training and identifies challenges ahead. The report is based on evidence collected through NQF inventory consisting of 42 national chapters (2). The inventory works as an observatory of progress in NQF implementation and looks at the main policy objectives, stakeholder involvement, framework implementation, the focus on learning outcomes and the use of level descriptors, as well as the way that validation of non-formal and informal learning links to NQFs. The national chapters conclude with important lessons and future plans. Political commitment to the developing and implementing NQFs was strengthened in 2014. This is demonstrated not only by the fact

that more qualifications frameworks have been formally adopted but also that more frameworks have entered an operational stage and have been populated with qualifications. A sufficient formal basis, successful implementation of a learning outcomes approach, and support from broader groups of stakeholders, including social partners, seem to be the most critical factors. The inventory on which the analysis is based demonstrates how the extensive technical and conceptual work being carried out at national level has engaged important national stakeholders. This forms a solid basis for the qualifications frameworks to make a difference to European citizens, education and training providers, and social partners. Although evidence on the added value of NQFs to end-users (individual learners and employers) is most apparent in some of the earlier frameworks, like the Scottish one, the report demonstrates that the new comprehensive NQFs – covering all levels and types of qualifications – are having a positive impact in a number of areas across countries. Although still uneven across countries and sectors, NQFs have strengthened the implementation of learning outcomes approaches and have helped to bring together stakeholders from different sectors of education, training and employment that may have not talked to each other before. NQFs are widely recognised to be an important tool in supporting lifelong learning strategies, notably by opening up to qualifications awarded in non-formal learning contexts and by promoting validation of non-formal and informal learning. While important, these achievements cannot hide the fact that the new NQFs being developed across Europe are still vulnerable and their long-term impact is by no means guaranteed. First, their existence is still not well known to ordinary citizens. Second, the shift to learning outcomes promoted by the NQFs is viewed with scepticism by some groups, arguing that the focus on learning outcomes draws attention and resources away from pedagogies and learning contexts. Third, there is a challenge that frameworks might not be seen within a sufficiently long time horizon at national level but as a short-term and formal response to European initiatives.

4. OTHER POLICY REPORTS AND PAPERS

Forsyth, J., Kadlec, M., Hanf, G., Papadiamanti, V., Simota, T., Murphy, A., Mernagh, E., De Francesco, G., Molina, J. L. G., Hobart, M. Sellin, B., Sakamoto, A, Coles, M., Werquin, P. (undated). The development and use of qualification frameworks as a means of reforming and managing qualifications systems. Report from Thematic group 1. Part of the OECD activity - the role of national qualifications systems in promoting lifelong learning.

This report forms a contribution to the OECD activity on 'The Role of National Qualifications Systems in Promoting Lifelong Learning'. The activity, which was begun in 2001, is designed to investigate how different national qualifications systems influence the patterns and quality of lifelong learning within countries, and what actions within qualification systems countries can take to promote lifelong learning. It is examining countries' experiences in designing and managing qualification systems and will attempt to identify the impact of different approaches and innovations upon lifelong learning and outcomes.

Government of Western Australia, Department of Training and Workforce Development (2013). Guidelines for assessing competence in VET

This publication provides practitioners and other stakeholders in the vocational education and training (VET) sector in Western Australia (WA) with information on the policies and processes involved in assessment. This information has not been referenced to specific regulatory standards; however, it is based on current standards (the Australian Quality Training Framework [AQTF] and the Standards for National VET Regulator (NVR) Registered Training Organisations [SNRs]) and reflects good practice. While the regulatory standards do not specify any particular documentation for assessment, the documents suggested in this guide reflect good practice that an RTO can consider and adopt as required. This information applies to training package qualifications and accredited courses with a vocational outcome.

COMPETENZE: IL MODELLO ISFOL - tratto da: Newsletter n.9, Ministero del Lavoro e delle Politiche Sociali)

5. THEORETICAL CONTRIBUTIONS ON COMPETENCE-BASED VET

Jean Gordon et al. (2009) Key competences in Europe: opening doors for lifelong learners across the school curriculum and teachers education.

The book draws a comprehensive, comparative summary of EU27 policies in the realm of development/implementation of key competences within the Member states' respective educational systems. The research focuses in particular on assessing the implementation degree of the 8 key competences of which the European Reference Framework consists. The study devotes special attention to the 5 cross-curricular key competences (digital competence; learning to learn; social and civic competences; sense of initiative and entrepreneurship; cultural awareness and expression). The book includes a wide literature review, six country case studies (Finland, France, Hungary, Poland, Spain, the United Kingdom), as well as 27 country fiches attesting the state of implementation of key competence policies across the EU. The book defines a typology to guide the assessment of cross-curricular competences - structured around 4 ideal-types of approach to evaluation: 1) 'explicit assessment' of key competences across the curriculum; 2) assessment methods focusing on subjects/areas across the curriculum, also called 'implicit assessment'; 3) 'within subject' competence assessment; 4) 'within-subject' knowledge (as opposed to 'competence) assessment.

Wesselink, R., Biemans, H.J.A., Mulder, M. & van den Elsen, E. R. (2007). Competence-based VET as seen by Dutch researchers. *European Journal of Vocational Training*, 40(1), 38-51.

The concept of competence is increasingly the basis for (re)designing VET. In competence-based VET academic disciplines are no longer starting points for curriculum development. Competence needed for working in practice, however, is. Competence-based learning is a dominant trend in VET in several countries because of fewer expected problems in the transition from school to work. In this study, by means of a focus group session and a Delphi study, a model for competence-based VET is developed. It has been constructed by Dutch researchers and can help VET institutions develop competence-based learning.

Onstenk, J. (2001) Training for new jobs: contents and pilot projects. In Descy, P. & Tessaring, M. (Eds.). *Training in Europe* (pp. 319-356). *Second report on vocational training research in Europe 2000: Background report.*

The paper discusses the need for and the prospects of curricular redesign of vocational education and training as an answer to changes of job profiles and skill requirements. The first part deals with new skills needs, developments in the labour market and the responsiveness of the vocational education system. Two main strands could be distinguished: a general or core skills approach (including emphasis on learning skills) and a broad occupational competence or key competences approach. The second part deals with new curriculum designs. It discusses whether and how these new requirements are met by redesigning initial training and by developing new forms of continuing training and learning at the workplace, in schools or in combination. Two main focal points are distinguished: first, innovations which accentuate (learning to) learn and study and the development of the self-directed student. Second, innovations which focus on learning how to solve occupationally relevant problems and how to work effectively in changing organisations: the development of the self-directed professional.

Voogt, J. & Roblin, N. P. (2010) 21st Century Skills. Discussion paper. University of Twente.

The main goal of this discussion paper concerns an analysis of what current theoretical frameworks say

about 21st century skills, particularly with regard to its definition, implementation and assessment. In addition, the initiatives taken by different countries and international organizations are identified. To accomplish this, a literature review was conducted on the available information about 21st century skills across five theoretical frameworks, namely: Partnership for 21st century skills (P21), En Gauge, Assessment and Teaching of 21st Century Skills (ATCS), National Educational Technology Standards (NETS/ISTE), and the National Assessment of Educational Progress (NAEP). This review was complemented with an additional search for international studies and recommendations from the European Union, OECD and UNESCO related to the need for and the implementation of 21st century skills.

The article draws an overview of the theoretical frameworks most commonly employed, today, to frame the concept of 21st Century skills - Partnership for 21st Century skills (P21), En Gauge, Assessment and Teaching of 21st Century Skills(ATCS), National Educational Technology Standards (NETS/ISTE, and the National Assessment of Educational Progress (NAEP) - , focusing in particular on what concerns their identification/definition, implementation, and assessment. The authors additionally aim at summarily presenting some among the main initiatives undertaken by countries/IOs in this field. The article finds that the frameworks adopted in different countries/contexts to identify 21st century skills seem to be converging towards a common conceptual definition (collaboration, communication, ICT literacy, social and/or cultural competencies (citizenship) + creativity, critical thinking and problem solving). ICT is recognised both as a 21st century skill AND as an effective tool to assess/attest the acquisition of a wider set of said competences. The paper finds that only a handful of national/international frameworks contain detailed guidelines dealing with more practical issues than identification, namely implementation and assessment. Major obstacles to the integration of implementation/ assessment of 21st century skills within the educational field are considered to be: their complex positioning within the standard curriculum, the need for ad hoc training schemes aimed at the professional development of the school personnel responsible for up taking their implementation/assessment; the need to involve stakeholders from a variety of sectors (public, private, educational) as a key step towards their implementation.

6. THEORETICAL CONTRIBUTIONS ON TRANSVERSAL COMPETENCES

Sicilia, M. A. (2009) How should transversal competence be introduced in computing education. Inroads – SIGSCE Bulletin, 41(4), 95-98.

Abstract: The development of transversal or transferable competences is currently considered a key ingredient of the outcomes of Higher Education. However, course and curricula design accounting for such competences remains a challenge for which little practical guidance is available. This paper sketches a systematic procedure for introducing such competencies in courses related to engineering software by analyzing the connection of transversal abilities to specific competencies that have been recognized as important. This emphasizes the contextualization of generic skills within realistic practical activity, and avoids, at least to some extent, both overemphasis on activities oriented to developing the transversal aspects and also disconnection of these aspects with real-world performances.

Weber et al. (2009) An exploratory study identifying soft skill competencies in entry-level managers.

The article illustrates an exploratory investigation in the hospitality sector aimed at identifying the most prized/valued soft skills for entry-level managerial personnel. The work provides a brief, although rather detailed and useful, overview of the methodology employed by the researchers to i) define a comprehensive list of soft skills relevant to hospitality management positions, and subsequently ii) rank such competences according to their relevance.

Serrano, Romero, Jurado Bello and Diz Perez (2011) Student Training in Transversal Competences at the University of Cordoba

The article describes the implementation/outcomes of self-assessment survey study undertaken by a group of researchers at the University of Cordoba, aimed at ascertain the degree to which tertiary students' at the university in question would consider themselves in possession of a pre-defined set of core transversal competences. The study focuses on assessing to which extent the participating student population felt familiar with said competences, as well as to what degree such perceptions corresponded to/ were in line with the students' actual capacity to employ the competences in question (in the context of a tailored exercise).

AREA DELLE COMPETENZE TRASVERSALI

2012 ISFOL LE COMPETENZE TRASVERSALI NELLE ÉQUIPE DELLA SALUTE MENTALE

2014. LE COMPETENZE EFFETTIVE DI CARATTERE GENERALISTA DEI LAUREATI ITALIANI

PROYECTO: ESTUDIO SOBRE COMPETENCIAS TRANSVERSALES EN EMPRESAS DEL PAIS VASCO

7. ASSESSMENT OF COMPETENCES

Pepper, D. (2011) Assessing key competences across the curriculum - and Europe.

Drawing on the above-mentioned pioneering comparative research conducted by Gordon (2009), the article focuses on the current state of development of cross-curricular skills assessment throughout Europe. Two major assessment challenges are specified: 'i) 'unpacking' key competences and 'mapping' them to contexts, and, ii) accessing information about learners' development of key competences through existing and new assessment methods'. The article concludes that, although the challenges related to crossdisciplinary key competences evaluation should not be underestimated, the policies of EU27 MS are apparently converging around promoting assessment methods more clearly in line with evaluation types 1 and 2, according to Gordon's (2009) typology.

Blades, R. Fauth, B. & Gibb, J. (2012) Measuring Employability Skills - A rapid review to inform development of tools for project evaluation.

Stemming out of growing concern for the condition of NEETs in the UK context, the NCB's report draws a concise, although poignant and detailed overview of the relevant literature on hard/soft employability skills, aiming to assess the viability of developing an evaluation tool for vocational projects looking at improving NEETs' chances to access the labour market. The report first considers the increased relevance of employability skills as a rationale for their assessment/measurement/evaluation. It follows by defining the key conceptual aspects of 'employability' competences, and by pointing out the principal challenges inherent to their measurement. The report concludes by presenting in some detail seven recently undertaken "employability skills" assessment exercises.

Mhairi McAlpine (2002) Principles of Assessment.

The report describes the variety of issues that must be taken into consideration when planning an assessment strategy within higher education. This communication can be to a variety of sources, to the students (feedback on their learning), to the lecturer (feedback on their teaching), to the curriculum designer (feedback on the curriculum), to administrators (feedback on the use of resources) and to employers (quality of job applicants). It considers five main points when designing any assessment to ensure that the communication is meaningful, useful and honest as possible.

1. The purpose of assessment and whether the task fulfills that purpose
2. The validity and reliability of the assessment that you are constructing
3. The referencing of the assessment
4. The construction quality of assessment items
5. The grading of the assessment

Graham Gibbs, Claire Simpson and Ranald Macdonald (2003) Improving student learning through changing assessment – a conceptual and practical framework

A three year research study at two universities in the UK has been examining the way the design of assessment on a wide range of science courses affects the ways students go about their studying. Its starting point has been a set eleven 'conditions under which assessment best supports learning', based on theory and on empirical evidence from studies of strategic changes in assessment (Gibbs,1999; Gibbs,

2002; Gibbs and Simpson, in press). These conditions concern how assessment captures students time and effort and distributes it across a course, how assessment generates productive learning activity, how assessment provides sufficient prompt feedback, the quality of feedback, and how students respond to feedback and use it to inform subsequent learning. The way these characteristics of assessment systems operate in practice has been explored through interviews with students on a series of science courses at the Open University. The 'Assessment Experience Questionnaire' (AEQ), which measures the extent to which the 11 conditions are met on courses, will be described. The AEQ has been administered to students on 15 Physics, Chemistry, Astronomy and Bioscience courses, each with different patterns of assessment. Assessment issues have been identified concerning the volume and distribution of student effort and in the use students make of feedback. The project will go on to implement principled changes to assessment design on these courses and to study the impact of these changes on students' responses and study patterns using the AEQ and other evaluation evidence.

Achtenhagen, F & Winther, E. (2014) Workplace-based competence measurement: developing innovative assessment systems for tomorrow's VET programmes. Journal of Vocational Education and Training, 66(3), 281-295.

As a consequence of the large-scale assessment studies (TIMMS; PISA) in compulsory schooling, attention is now being given to the modelling and measurement of competencies in initial vocational education and training. This new output-led perspective of teaching/training and learning/working processes demands new approaches to research. Using the concept of the curriculum–instruction–assessment triad this paper argues that competencies in the fields of business and commerce education can be determined and compared internationally via a large-scale assessment. Empirical results are presented that demonstrate the possibilities of running such an international study in VET.

Fretwell, D. (2003) A framework for evaluating vocational education and training (VET). European Journal of Education, 38(2), 177-190.

The primary goal of this article is to present a framework of basic evaluation concepts that can be used to: (a) determine the extent to which a Vocational Education and Training (VET) system in a particular setting has a comprehensive evaluation system for its policies and programmes, (b) provide a guide for collection of data from existing evaluations, and (c) assist in making recommendations to strengthen the existing evaluation system. No attempt has been made to try to introduce country, region, or organisation specific performance indicators, as countries are heterogeneous in their structure and circumstances and the notion of a best practice benchmark may be of only limited usefulness (OECD, 1996, p. 236). Finally, this article is not intended as a 'textbook' of evaluation theory and practice. There are numerous texts on the topic. Several are referenced in the bibliography, should more background theory be desired. In short, this article is intended as a practical framework, or checklist, to launch external or internal reviews of VET evaluation systems.

Heckman, J. J. & Rubinstein, Y. (2015) The importance of noncognitive skills: Lessons from the GED testing programs. *The American Economic Review*, 91(2) 145-149.

LORRAINE STEFANI 2004-2005: Assessment of Student Learning: promoting a scholarly approach. *Learning and Teaching in Higher Education*, Issue 1, 2004-05

Gerald Straka (2004) MEASUREMENT and EVALUATION OF COMPETENCES

The article discusses the origins of the competence-based approach to measurement and evaluation in the education field, describing it as rooted in four intertwined factors (a) the shift from an input to an output-centred view of education; (b) in both mainstream and vocational education, a move away from subject-oriented schooling in the direction of a literacy orientation; (c) the emergence of a cognitive-constructivist paradigm as a basis for qualitative assessment methodologies; (d) the increasingly wider recognition enjoyed by skills acquired in non-formal and informal settings during the individual's life-time - leading to the request for new forms of competence certification. The article thus introduces a general diagnostic framework revolving around the 'knowledge, skills and motives of the individual', a model that differentiates between three dimensions of individual competence: 'internal (e.g. knowledge, skills, motives) and external conditions (e.g. situation, task, product) both bridged with the actual individual operations (e.g. behaviour, action).' The article further discusses a number of practiced assessment procedures being implemented across the EU, namely: the bilan de compétences (France), the NVQ (England and Wales), different dimensions of action competence in the German dual system, assessing competences at work (the Netherlands), realkompetanse (Norway), the assessment of recreational activities (Finland), and valuing competences in the continuing IT-training (Germany). The article analyses these assessment models against the background of its general diagnostic framework.

8. ASSESSMENT OF TRANSVERSAL COMPETENCES

EVALUATION OF TRANSVERSAL COMPETENCES OF THE ENGINEERING STUDENTS AND THEIR RELATION TO THE ENTERPRISE REQUIREMENTS - Sanchez de la Rosa, Miranda and Gonzalez, 2013

The chapter stems from an appreciation of the relevance of transversal competences in tertiary-level engineering studies, particularly in light of the fact that enterprises in the sector seem to demonstrate an increasing consideration towards said core of soft skills throughout their recruitment process. The authors propose a methodology for students' transversal competences evaluation (to be ideally implemented during the final year of the degree). Substantiating its proposal/initiative, the article defines in some detail i) an ad hoc methodological framework apt to uncover those transversal competences that are likely to be considered most relevant for enterprises in the engineering sector; ii) a more operational evaluation model useful to assess transversal competences throughout the final year of degree study; iii) a practical proposal for reorganisation the final year 's statutory assessment criteria in light of the need to integrate transversal competencies evaluation into the traditional framework for engineering students' assessment.

(Leonardo) MASS PROJECT - TEACHING AND ASSESSING SOFT SKILLS - Kostas Kechagias.

The paper/book counts as conclusive report of the "Measuring and Assessing Soft Skills " project (2009-2011), funded under the EU' LLL Leonardo Da Vinci Programme. The project revolved around the transfer of Angus College's innovative model for teaching/transmission of soft skills to disadvantaged youth, to 5 project partnering VET institutes across Europe. The book is divided into three parts, each of which containing two relevant papers. Part I deals with the issue of soft skills development from a broader theoretical perspective, it introduces the MASS project and clarifies its background and relevance. Part II focuses more specifically on the teaching and implementation of Soft skills: it provides a literature review on the topic and develops an in-detail account of the MASS methodology. Part III elaborates on the topic of Soft Skills Assessment: focusing in particular on: a) soft skills assessment theory and practices, and b) an appraisal of the results achieved by MASS partners in their assessment endeavours within the project. In this latter section of Part III the assessment practices of the 7 participating VET institutes are presented and explained in some detail through the employment of workflow tables and conceptual grids.

Falcone, D., Silvestri, A., Cerbaso, C., Forcina, A., Di Bona. G. (undated) Proposal of a methodology for Non-formal Competences Certification.

The work aims to present a methodology for certifying the competences acquired in non-formal contexts. Given the absence of a framework to respect, but following the criteria established by the "Council Recommendation of 20th December 2012 on the validation of non formal and informal learning" (2012/C 398/01), a model, called "ABC – Competence: Analysis, Balance and Certification of Competences", has been developed. After the professional profile identification (i.e.: ESCO European Skills/Competences, qualifications and Occupations classification), the model allows certifying the competence level acquired by the learner as a result of participation in a training course.

In the model it is significant

- The identification of the trainer figure; he becomes the guarantor of contents and training methodologies choice and evaluates the actual acquisition of competences by the learner;
- The classification of competences (knowledge/ability, soft/hard).

- The identification of competence level, according to the European Qualifications Framework for Lifelong Learning.

9. OTHER MATERIAL

- American College of Healthcare Executives. Competencies Assessment tool 2015.
- NO AUTHOR, NO DATE: APPROACHES TO TEACHING, LEARNING AND ASSESSMENT IN COMPETENCE BASED DEGREE PROGRAMMES
- NO AUTHOR, NO DATE: Assessment Primer
- NO AUTHOR, NO DATE: Miller's Pyramid of Assessment
- The European Qualifications Framework for Lifelong Learning.

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