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# Teaching and Assessing Soft Skills

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# Preface

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The Measuring and Assessing Soft Skills Project (MASS, <http://www.mass-project.org/> ) represents over two years of hard work from a team of dedicated professionals from across Europe. All of our partners have a commitment to improving the quality of vocational education and training experiences for their learners and all were willing to try something new in order to achieve this.

Most people recognise the acquisition and development of soft skills as important for progressing in life and work. Those of us who work with disadvantaged young people recognise that these skills are often under developed. Our project aimed to address that by piloting new learning materials that raised awareness of what soft skills are, helped learners to assess themselves, and identify where and how they could actively seek to improve these skills within the context of their learning programmes. By doing so we all wanted to make an impact on our learners' life chances.

We are very pleased with the results of our project and hope that teachers and learners have benefited from participating in this process. As we move towards a new strategy for Europe 2020 we need to start to address how we can continue to develop and refine our methods to further contribute to the experiences of young people across Europe as they strive to find employment and actively participate in society.

Our thanks go to Ecorys, the UK National Agency, for supporting this project.

Iverene Bromfield

Project Manager



# Executive Summary (EN)

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This book was written as part of “Measuring And Assessing Soft Skills” (MASS, <http://www.mass-project.org/>) project, which ran for the period 2009-2011 and partially funded under European Union’s Lifelong Learning Programme, Leonardo da Vinci, as a Transfer of Innovation. It is the final report of the MASS work package dealt with the Needs Analysis of the participants and Piloting of the Learning Materials.

The aim of the MASS was the transfer of the innovation developed at Angus College, Scotland, to the project partners’ institutions, located at Greece, Sweden, Romania and Netherlands.

The innovation developed at Angus College related to the teaching and development of Soft Skills to disadvantaged and disaffected from education young people, with the aim of facilitating their social inclusion and enhance their employment perspectives. The methodology resulted had shown very promising results, as both the dropout rate were minimal and the vast majority of the students proceeded with either further studies or employment.

The present book was written as a practical guide to the practitioners who want to get involved to teaching of soft skills to disadvantaged groups of young peoples. It is divided in three parts.

The aim of the first part is to give an overview of the MASS project and establish the need for Soft Skills development. It contains two papers. The first paper serves as an introduction to the MASS project, while the second one serves as an introduction to the area of Soft Skills, elaborating the socio political background, giving the necessary definitions and presenting several international frameworks.

The second part deals with the teaching and development of Soft Skills. It contains two papers. The first one is an extensive presentation of selected literature on the subject of teaching soft skills. The second one gives a detailed description and elaboration of the methodology of MASS project. It presents the historical background, the structure of the teaching materials, the characteristics of the target groups and the educational efforts undertaken by each partners’ institution.

The subject of the third part is Soft Skills assessment. It contains two papers, with the first one giving the background of Soft Skills assessment theory and proposed practices, while the second one elaborates on the methodology used and results obtained from the assessment efforts of the partners.

The appendices of the book contain the Learning Materials, translated in all partners’ languages, and their original reports.

K. Kechagias

# Executive Summary (GR)

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Το παρών βιβλίο είναι μέρος του σχεδίου δράσης «Μετρώντας και Αξιολογώντας Κοινωνικές Δεξιότητες» ( MASS), το οποίο υλοποιήθηκε κατά τη χρονική περίοδο 2009-2011 και χρηματοδοτήθηκε εν μέρει από την Ευρωπαϊκή Ένωση, πρόγραμμα Δια Βίου Μάθησης, Leonardo da Vinci, ως σχέδιο δράσης μεταφοράς καινοτομίας. Αποτελεί τη τελική έκθεση του πακέτου εργασίας που ασχολήθηκε με την ανάλυση αναγκών των συμμετεχόντων και τη πιλοτική εφαρμογή του διδακτικού υλικού.

Ο στόχος του MASS ήταν η μεταφορά τεχνογνωσίας που αναπτύχθηκε από το Angus College, Σκωτία, προς συμμετέχοντες από την Ελλάδα, Σουηδία, Ρουμανία και Ολλανδία.

Η καινοτομία, που αναπτύχθηκε στο Angus College, σχετίζεται με τη διδασκαλία και την ανάπτυξη κοινωνικών δεξιοτήτων σε μειονεκτούσες και απομακρυσμένες από την εκπαίδευση ομάδες νέων, με σκοπό την προώθηση της κοινωνικής τους ένταξης και την βελτίωση των επαγγελματικών τους προοπτικών. Η μεθοδολογία, που αναπτύχθηκε, έδωσε πολλά υποσχόμενα αποτελέσματα, αφού τόσο η σχολική διαρροή ήταν ελάχιστη, όσο και η μεγάλη πλειοψηφία των συμμετεχόντων συνέχισαν είτε με περαιτέρω σπουδές είτε με εργασία.

Το παρών βιβλίο γράφηκε ως πρακτικός οδηγός για τους διδάσκοντες που επιθυμούν να ασχοληθούν με τη διδασκαλία κοινωνικών δεξιοτήτων σε μειονεκτούσες ομάδες νέων. Αποτελείται από τρία μέρη.

Ο στόχος του πρώτου μέρους είναι να δώσει μια γενική επισκόπηση του σχεδίου δράσης MASS και να τεκμηριώσει την ανάγκη ανάπτυξης κοινωνικών δεξιοτήτων. Περιλαμβάνει δύο άρθρα. Το πρώτο είναι εισαγωγή στο πρόγραμμα MASS, ενώ το δεύτερο εισαγωγή στον τομέα των κοινωνικών δεξιοτήτων, με ανάλυση του κοινωνικού πολιτικού υπόβαθρου, διατύπωση σχετικών ορισμών και παρουσίαση πολλών διεθνών πλαισίων.

Το δεύτερο μέρος ασχολείται με τη διδασκαλία και την ανάπτυξη των κοινωνικών δεξιοτήτων. Περιλαμβάνει δύο άρθρα. Το πρώτο είναι μια εκτενής παρουσίαση επιλεγμένης βιβλιογραφίας, στον τομέα της διδασκαλίας κοινωνικών δεξιοτήτων. Το δεύτερο περιγράφει αναλυτικά τη μεθοδολογία του προγράμματος MASS. Παρουσιάζει το ιστορικό υπόβαθρο, τη δομή του εκπαιδευτικού υλικού και τις εκπαιδευτικές προσεγγίσεις που υιοθετήθηκαν από τον οργανισμό του κάθε εταίρου.

Το θέμα του τρίτου μέρους είναι η αξιολόγηση των κοινωνικών δεξιοτήτων. Περιλαμβάνει δύο άρθρα, με το πρώτο να ασχολείται με τη θεωρία και τις προτεινόμενες πρακτικές στην αξιολόγηση των κοινωνικών δεξιοτήτων, ενώ το δεύτερο παρουσιάζει τη μεθοδολογία που και τα αποτελέσματα του προγράμματος MASS.

Τα παραρτήματα του βιβλίου περιλαμβάνουν το Εκπαιδευτικό Υλικό, μεταφρασμένο στις γλώσσες όλων των εταίρων, καθώς και τις εκθέσεις αποτελεσμάτων τους.

Κ. Κεχαγιάς



# Executive Summary (SW)

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Denna bok är skriven som en del av projektet MASS (Measuring and Assessing Soft Skills) som handlar om att mäta och bedöma sociala färdigheter (social kompetens). MASS-projektet, som har pågått under perioden 2009-2011, har delfinansierats av EU: s program för det livslånga lärandet, Leonardo da Vinci. Denna del av Leonardoprogrammet handlar om överföring av nyskapande metoder till andra EU-länder. Boken är slutrapporten gällande den del av projektet som handlade om deltagarnas behovsanalys och testning av de olika läromedel/lärmetoder som använts.

Syftet med MASS-projektet var att överföra de innovativa metoder som utvecklats på Angus College i Skottland, till projektets partnerinstitutioner, i Grekland, Sverige, Rumänien och Nederländerna.

Den innovativa metod som utvecklats på Angus College handlar om undervisning och utveckling av sociala färdigheter, för (långt motiverade) ungdomar som har svårigheter att gå vidare till arbete eller studier, i syfte att underlätta deras sociala integration och förbättra deras sysselsättningsmöjligheter. Den metodik som har använts i Skottland har visat mycket lovande resultat, eftersom både andelen avhopp var minimalt och de allra flesta av eleverna gick vidare, antingen till fortsatta studier, eller till arbete.

Den här boken är skriven som en praktisk vägledning för utövare som vill engagera sig i undervisning/träning av sociala färdigheter för ovan nämnda grupper av unga människor. Boken är indelad i tre delar.

Syftet med den första delen är att ge en översikt av MASS-projektet och att definiera behovet av utveckling av sociala färdigheter. Den innehåller två artiklar. Den första fungerar som en introduktion till MASS-projektet, medan den andra ger en introduktion till området Soft Skills (Sociala Färdigheter, social kompetens). Den senare artikeln behandlar deltagarnas socioekonomiska bakgrund, vilket ger läsaren ett antal nödvändiga definitioner samt presenterar ett antal olika internationella referenser inom ämnesområdet.

Den andra delen handlar om undervisning och utveckling av sociala färdigheter. Den innehåller två artiklar. Den första är en utförlig presentation av utvald litteratur i ämnet att undervisa om/i sociala färdigheter. Den andra ger en detaljerad beskrivning av, och fördjupning i, metodiken i MASS-projektet. Den presenterar den historiska bakgrunden, strukturen i undervisningsmaterialet, beskrivning av målgrupperna samt de pedagogiska insatser som utförts av respektive partners organisation.

Den tredje delen innehåller bedömning av sociala färdigheter. Den består av två artiklar; den första ger bakgrunden till bedömning av sociala färdigheter, teori och föreslagna metoder, medan den andra behandlar den metodik som använts och resultaten av utvärderingen hos respektive partner.

Bilagor till boken innehåller undervisningsmateriel/undervisningsmetoder, översatta till samtliga partners språk samt respektive lands originalrapport.

K. Kechagias

# Executive Summary (RO)

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Lucrarea a fost concepută ca o parte integrantă a proiectului Leonardo da Vinci - Transfer de inovație (MASS) "Măsurarea și evaluarea abilităților de viață", derulat în perioada 2009-2011, proiect finanțat parțial de către Comisia Europeană, prin Programul de învățare pe parcursul întregii vieți. Lucrarea reprezintă raportul final al capitolului referitor la Analiza de nevoi și pilotarea pachetelor de învățare.

Scopul general al proiectului (MASS) "Măsurarea și evaluarea abilităților de viață" îl constituie transferul programului educațional inovativ conceput și implementat de către Angus College, Scotland la nivelul celorlalte instituții din cadrul parteneriatului, în : Grecia, Suedia, România și Olanda.

Inovația propusă de Angus College constă în conceperea și aplicarea unui program de dezvoltare a abilităților de viață la elevii din cadrul învățământului profesional și tehnic (vocațional), elevi dezavantajați, cu scopul facilitării integrării lor socio- profesionale și dezvoltării unei personalități armonioase.

Metodologia implementată în cadrul programului și-a dovedit eficiența și eficacitatea, ratele de abandon ale elevilor participanți la program fiind minime. Rezultatele elevilor care au parcurs programul MASS s-au îmbunătățit simțitor, ei devenind mai motivați pentru continuarea studiilor și mai interesați de propriul destin socio-profesional.

Lucrarea de față constituie un deosebit de prețios instrument de lucru - ghid practic pentru consilierii și profesorii diriginți care se ocupă de formarea abilităților de viață ale elevilor, sau tinerilor cu cerințe educaționale speciale.

Lucrarea cuprinde trei părți:

I. Prima parte conține o privire de ansamblu asupra întregului proiect MASS, precum și studiul asupra importanței și nevoii de formare a abilităților de viață la adolescenți și tineri. Această parte este împărțită în două sub-capitole:

- a) Introducere în cadrul proiectului MASS- prezentarea proiectului
- b) Introducere în studiul abilităților de viață (incluzând contextual socio-politic, circumscrierea tematicii și domeniului de studiu, cadrul educațional European în care sunt formate abilitățile de viață la adolescenți și tineri)

II. Partea a doua cuprinde programul de dezvoltare a abilităților de viață la elevi. Și această parte cuprinde două sub-capitole:

- a) Prezentarea elementelor cheie din literatura de specialitate referitor la formarea abilităților de viață. Cadrul conceptual privind formarea abilităților de viață.
- b) Prezentarea detaliată a metodologiei educaționale propusă prin proiectul MASS.

Sunt surprinse în detaliu istoricul și experiențele acumulate în cadrul implementării programului, structura materialelor educaționale, caracteristicile grupului țintă, precum și demersurile întreprinse de către fiecare organizație parteneră.

III. Partea a treia se referă la evaluarea abilităților de viață.

- a) Cadrul teoretic conceptual al evaluării abilităților de viață, precum și posibile exemple de bună practică.
- b) Metodologia utilizată și rezultatele obținute prin aplicarea instrumentelor propuse. La nivelul grupului țintă al proiectului, în fiecare dintre instituțiile partenere.

Anexele cuprind în întregime materialele educaționale, traduse în toate limbile din cadrul parteneriatului, precum și rapoartele realizate de fiecare.

K. Kechagias

# Executive Summary (NL)

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Dit rapport is geschreven als onderdeel van het project “Measuring and Assessing Soft Skills”(MASS), dat werd uitgevoerd in de periode 2009-2011. Het werd deels gesubsidieerd door de Europese Unie in het kader van het Leven Lang Leren Programma (Leonardo da Vinci), Transfer of Innovation. Het is het afsluitende rapport van het MASS werkpakket tezamen met de Needs Analysis van de deelnemers en de uitgevoerde pilots met de Learning Materials.

Het doel van MASS was ‘transfer of innovation’, de overdracht van een innovatief programma ontwikkeld door Angus College, Schotland, naar partner instituten in Griekenland, Zweden, Roemenië en Nederland.

De innovatie hield verband met het onderwijzen en ontwikkelen van sociale vaardigheden bij jongeren in achterstandssituaties, met het doel hen beter toe te rusten voor maatschappelijke deelname en hen kansen op werk te doen groeien. De methode van Angus College liet veelbelovende resultaten zien, het aantal voortijdig schoolverlaters nam sterk af en het grootste deel van de deelnemende studenten ging door in vervolgonderwijs of vond werk.

Dit boek is geschreven als een praktische handleiding voor degenen die aan de slag willen met het werken aan sociale vaardigheden bij kansarme groepen jongeren. Het is opgedeeld in drie delen.

In het eerste deel wordt zicht gegeven op het MASS-project en de noodzaak om te werken aan de ontwikkeling van sociale vaardigheden. Het bevat twee artikelen. Het eerste artikel dient als een introductie op het MASS-project, het tweede is een introductie op het gebied van sociale vaardigheden, met aandacht voor de sociaal-politieke achtergronden, het geeft definities en toont enkele internationale schema's.

Het tweede deel draait om het onderwijzen en ontwikkelen van sociale vaardigheden. Het omvat eveneens twee artikelen. Het eerste is een uitgebreide beschrijving en uitwerking van de methode van het MASS-project. Het bevat een historische achtergrond, de structuur van het lesmateriaal, de kenmerken van de doelgroepen en de onderwijswerkzaamheden die zijn ondernomen bij ieder partner-instituut.

Het onderwerp van het derde deel is het beoordelen van sociale vaardigheden. Het betreft twee artikelen (alweer!) waarbij het eerste de achtergrond van theorieën over het meten van sociale vaardigheden beschrijft en wijze waarop we dat in de praktijk tegenkomen, terwijl in het tweede de gebruikte methodiek wordt behandeld en de resultaten van pogingen van projectpartners in deze.

De bijlagen van het boek bevatten de lesmaterialen, vertaald in de talen van de projectpartners, en de oorspronkelijke rapportages.

K. Kechagias

# **PART 1: INTRODUCTION**

# Introduction to MASS project

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## Abstract

Teaching professionals at Angus College, Scotland, have been working with a method, based on measurement and assessment of soft skills, within a classroom context for a number of years. The model has been used to improve disadvantaged young persons' chances to get jobs or go on to further studies. The results have been very successful.

The main aim of the MASS project is to transfer the model/pedagogy to other European partner organisations. By testing the method in different cultural environments and institutions, we enhanced the materials to encompass the needs of different groups of young unemployed persons, some of them in danger of social marginalisation.

## Main Goals

The main goal of MASS was to find out whether the model, developed by Angus College, Scotland, is transferable to the other partners' institutions and if it can be used for other target groups.

The three project objectives were:

- To develop the pedagogical and curriculum skills of a number of VET teachers/trainers/tutors in measuring and assessing soft skills.
- To ensure that the didactic role of VET professionals takes into account a shift to learning outcomes and use of EQF (European Qualification Framework).
- To establish and enhance links with Small and Medium sized Enterprises, to strengthen collaborative VET initiatives.

Our consortium brought together 6 VET organisations from UK, GR, SW, RO and NL; 3 of which directly provide training and support for disadvantaged young learners, 1 which provides vocational training for VET professionals who work with young disadvantaged learners and 1 training provider with a speciality in working with SMEs.

## Products

Training manuals and assessment tools for VET professionals and employers were produced, which may lead to a greater understanding of soft skills within each partner's institutions and hopefully in partner's countries also. The products include teaching materials, teachers' and students' packs, all translated in the languages of the partners'.

## Target Audiences

The ultimate target group for the project is young disengaged learners, who have difficulties of inclusion in society and in entering the labour market. We addressed their needs through the development of skills and competences of VET teachers, trainers and tutors, concerning the teaching and assessment of soft skills.

Our dissemination strategy also targeted employers, with the aim to learn more about soft skills, EQF and skills focus. Employer consultation leads to results which can be used when recruiting new employees.

## Finance

The MASS project is partly financed from the EU Life Long Learning Programme, Leonardo Da Vinci, Transfer of Innovation, under the contract UK/09/LLP-LdV/TOI/163\_271.

## Partners

- **Angus College, Arbroath, Scotland**  
Angus was established as an FE College in 1956 and has a history of steady growth and currently supports 11,000 enrolments per year across 120 vocational programmes from introductory level to advanced HN courses. Nationally, the college is recognised as one of the most efficient and financially sound colleges within the further education sector, managing a budget of around £11 million pa. In 2006 Angus established the SkillZone, an experimental approach to dealing with the growing numbers of hard to place, disadvantaged young people. The overall model has proven to be hugely successful, evidenced by better performance indicators than other college mainstream programmes and is also recognised as a model for leading innovative practice by HMIE. Particular success has been attributed to innovation in approaching learner development for measuring and developing soft skills in a class environment, skills which are considered critical by employers.
- **Second Chance School of Neapolis, Thessaloniki, Greece**  
Second Chance School of Neapolis Thessaloniki is a public adult education school which targets adults that have not completed compulsory education. Created in 2001 by the Secretary of Adult Education of Greece, the school supports 100 students per year of all ages and social groups. Attendance is for 2 years and leads to a high school diploma which covers maths, sciences, informatics, social education, arts and specialised vocational subjects. Provision is very different from that of Greek secondary education in that content is flexible to meet the individual needs and preferences of students and favours active learning concepts. The school has specific expertise in working with students who have disengaged from compulsory education, characteristically the group are at risk of social exclusion, are unemployed, have learning difficulties and disabilities.
- **Adult Learning and Employment (Larande och Arbete), Bollnas, Sweden**  
Adult Learning and Employment (Larande och Arbete), Bollnas, Sweden is a public body which works at local, municipal level in the provision of adult education from basic to upper secondary level, labour market activities for the unemployed and the integration of immigrants. The overall aim of the organisation is to undertake initiatives which upskill and motivate learners to engage in lifelong learning, training and encourage participation in the labour market.



- **The Teacher Training Centre, Bucharest, Romania**  
The Teacher Training Centre is a leading provider of in-service training and professional development for teaching professionals in Romania and is based in Bucharest. The overall goal of the centre is to contribute to permanent improvement in teaching and learning and adapting teacher training methodologies to meet the needs of students within schools. The centre supports all teaching professionals in the city and each year supports 6000 professionals through delivery of over 25 different training courses covering a wide range of subjects. These include: didactics of different school subjects, character education, communication and negotiation, management and leadership. Many of the educational programmes run involve teachers and their students in collaborative activities related to specific subjects.
- **ROC Aventus, Apeldoorn, the Netherlands**  
ROC Aventus is a regional training centre providing vocational education & training and adult education across a broad range of courses. ROC supports 17,000 learners per annum from Apeldoorn, Deventer and, Zutphen. ROC have particular expertise in working with those who lack or have low basic skills and qualifications but currently have no recognised model for measuring and assessing soft skills through this work.
- **Bureau Zuidema, Utrecht, the Netherlands**  
Bureau Zuidema offers consultancy and training for individuals and organisations. They provide training but also offers advice when it comes to changing, developing and learning, both on an individual and on a company level. Bureau Zuidema has unique expertise in the field of influence and development of interpersonal skills. They provide training on this subject on all levels. They focus on the development of behaviour, self-awareness, and skills. With their unique expertise in the field of influence and influencing they support people to build on their strengths instead of focusing on their weaknesses. They have a special expertise in (organising and stimulating) formal and informal learning and have participated in some Leonardo project.



# Introduction to Soft Skills and Generic Competencies

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## Abstract

This paper is a comprehensive, but also extensive introduction to soft skills and generic competences. It is written in the framework of the final report of MASS project. Its main intention is to highlight the importance of soft skills. It reviews the relevant International frameworks and the reasons that led to their development. It tries to define the relevant concepts and briefly discuss several approaches. It also tries to review the theoretical frameworks, upon which soft skills practices are based.<sup>1</sup>

## Introduction

Few people would argue against the idea that there are skills and abilities necessary for success in life. Asking people to name them, however, would generate a wide variety of responses. This should not be surprising, since skills and abilities important to one person may not be as important to another. Differences may arise from occupation (e.g., corporate executive vs. assembly line worker), lifestyle (e.g., head of a large household vs. single person with no dependents), society and culture (e.g., industrialized vs. agrarian) or from differences in the dominant technologies of production and associated ways in which work is organized. Despite these differences, there has been a great deal of interest in trying to look across individual and cultural contexts to identify and measure a common, definable core of necessary skills and abilities.

It is important to emphasize that life skills must be connected to success in life. There are many skills, talents, and abilities that do not meet this criterion, even though they may involve sophisticated intellectual processes. This means that not all academic abilities are necessarily life skills, nor are all life skills likely to be taught in school. This criterion also means that one must recognize that these skills will not be the same—or will not be valued equally—in even a limited range of cultural settings.

The definition of life skills should also address how they are used. The most common way — and the way that appears in conventional definitions of intelligence— is through adaptation to the environment. For example, people must adapt to workplace environments and to new responsibilities as their family lives change. Individuals can use life skills to shape their environments, such as when a worker modifies a piece of machinery or a production process to increase comfort or efficiency. When neither adaptation nor shaping leads to a successful interaction with the environment, individuals can use life skills to select a new environment, such as when a person decides to change workplaces, move to a new location, or become friends with a new group of people.

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<sup>1</sup> This work is largely based on (Curtis, 2010; Talavera & Perez-Gonzalez, 2007).

There are many different definitions of life skills, depended of the main focus of interest, and the local conditions. For example, we use different definitions when we are interested in the integration of life skills in the workplace, and a different one when we are concerned with active citizenship. A broad definition of life skills is (Binkley et al., 2005, p. 51):

*...skills or abilities individuals need in order to achieve success in life, within the context of their socio-cultural milieu, through adaptation to, shaping of, and selection of environments.*

There has been a proliferation of efforts in the fields of education and labour to develop lists of skills, knowledge, and competencies necessary for success in the workplace and society. This perspective has received increased attention through the release of several documents setting out lists of such skills. These studies and reports cite a need to identify generalizable skills and abilities necessary to better prepare people for success in a changing and globalized economy. In so doing, they call attention to the emerging belief that traditional notions of “basic skills”, such as literacy and numeracy, are not sufficient for success in the workplace. A number of intra- and inter-personal skills (or socio-emotional competences) are required, such as communication, ability to work on multidisciplinary teams, flexibility etc. These skills we call “soft skills”, in order to distinguish from technical, or “hard skills”.

There are many different terms, often used interchangeably or in a vague sense (Binkley et al., 2005, p. 52) to describe similar concepts, including “enabling skills,” “generic skills,” “core skills,” “key competencies,” “essential skills,” and “necessary skills.” These different terms would seem to have slightly different implications, but they were often chosen to meet specific local circumstances and preferences, and, thus, are not related in any systematic way to differences in the way these skills were conceptualized.

## Historical framework

The beginning of interest on skills, which can be useful in various professions, began during 1970s. The report Learning to Be (Faure et al., 1972) was a response to social and labour market dislocation in Europe, especially France, set the basis for lifelong education. It recognized that a once-only experience of education could not prepare citizens with the knowledge and skills they would need throughout their lives. The changing context included globalisation and technological innovation, and one of the Faure Report’s prescriptions was for learning throughout life. Instead of preparing adults for a lifetime vocation, it suggested the preparation for mobility among professions. The Faure report also identified that education “...prepares people for a type of society which does not yet exist” (p. 13).

Mertens (Mertens, 1974) argued that the traditional separation of vocational education from academic secondary education in lower secondary, had led to a skills divide. The gymnasium had provided a broad general education but vocational education had become too narrowly focused and was not providing a broad preparation for the changing context of work. His solution was to provide four categories of skills. These included basic skills, 'horizontal' skills (information seeking and learning), broadening elements (that were applicable across a range of vocations) and knowledge of general subject matter and conceptual systems.

This focus has received significant attention in the last decades (Boyatzis, 1982; Fletcher, 1994; Wolf, 1995), finally being applied by European education and vocational training policies.

In the US, the Report of The Secretary's Commission on Achieving Necessary Skills (The Secretary's Commission on Achieving Necessary Skills, 1991), known as SCANS report, was released in June 1991. The Commission's remit was to identify the skills required for employment, to propose levels of proficiency in them, to suggest effective ways to assess them, and to disseminate its findings. On the basis of analyses of the skills required in a range of jobs and in-depth interviews with workers from five major industry groups, the report defined what it called "workplace know-how" which comprised a set of five workplace competencies and three foundation elements. The workplace competencies were an ability to productively use: resources, interpersonal skills, information, systems and technology. The foundation comprised three elements: basis skills, thinking skills and personal qualities.

In 1992, Mayer Committee in Australia (Australian Education Council. Mayer Committee, 1992) went on to outline the need for a "multi-skilled, flexible and adaptable workforce" and in order to achieve this, individuals would need "a strong foundation of knowledge, skills and understanding" (p. 3). In addition to a general education and specific vocational skills, employees would require a set of broad skills that would enable them to apply their general education to the world of work. The Committee articulated a set of seven key competencies intended to achieve this objective.

The case for changes in the skills requirements of work and changing work organisation in a globalized economy, is made in a comprehensive analysis by Friedman (Friedman, 2006). He identified 10 major influences on changing patterns of work. Many of these changes have been enabled by the integration of information and communication technologies. He identified outsourcing, supply-chaining and off-shoring as being among these influences and he illustrated them with examples. In various ways, work is subdivided into components that require different skill levels. An enterprise can then allocate these work components in ways that ensure the work is completed at the lowest net cost, some of it in-house and some of it by suppliers who may be located in another country. The challenge to governments in more advanced economies is to ensure that the workforce (or at least a substantial proportion of it) is equipped with the high-level skills that will enable them to undertake the highest value-added components of the work. The demand for individuals with knowledge and skills required a greater focus on generic skills in education.

The analyses cited above reflect a relatively common theme that economic competition is growing and becoming global. This movement has been developing for some time and is driven by economic policies that include reduced trade and capital barriers embraced by many developed countries; increased ease of transportation of people, goods and services; and the deployment of new technologies. Increased global competition through reduced trade barriers has led to low-skill work being relocated to countries with low wage costs. This has led to reduced demand for low-skill workers in advanced economies and pressure to develop high-skill employment opportunities. Workforces must respond to this reality by

developing higher skill levels and by becoming more adaptable. A key solution espoused in many countries is the development of broadly applicable skills. The nature of some of the proposed skills sets is discussed below. However, before discussing the particular sets of skills that have been proposed, the terms used to describe them warrant consideration.

Advanced Western societies need more and more professionals endowed with a wide range of skills, and in particular with those skills that are not restricted to the technical content of their jobs, but which are also related to the way of working, to attitudes towards work and others, to the quality of relationships, and to flexibility and the capacity to adapt. It is not simply a question of knowing how to do something (know-how), but also of wanting to do it and knowing how to be. Education must meet this demand, and guidance in particular may be seen as an appropriate educational tool for addressing the demand.

The importance of skills training has been highlighted by various leading international institutions such as the Organisation for Economic Cooperation and Development (OECD), the International Labour Organisation (ILO), and the European Union itself. In short, an interest has been clearly expressed in what has been called the 'skills focus' at an international level.

## Definitions

The definitions of skills that are regarded as generally applicable to many occupational and vocational roles and to other dimensions of people's lives need to be understood at two levels. First, clarity is required about which skills qualify as being generic and which do not; that is, a definition of what makes a skill generic is required. Second, having defined generic skills, each candidate skill requires definition.

Without such clarity, instructors may generate quite different conceptions of what is intended and may work towards diverse, and possibly incompatible, goals. The definitions developed are also used as a guide to specify the goals of assessment and evaluation of educational outcomes. Weak definitions may also lead to inefficient assessment design.

Each framework uses its own sets of definitions. Sometimes these definitions are given explicitly, and sometimes implicitly, through examples. In what follows we will give the basic definitions of the terms widely used, such as the definition of "skill" and "competence". While these definitions are widely acceptable, they are not immune to criticism. Several authors have discussed and disputed them.

## Ability/Capability

The terms ability and capability convey similar meanings (New Shorter Oxford English Dictionary 1997). Ability is the "...power ...to perform a particular feat at a particular time. The essence of the term is that the person can perform the task now, no further training is needed" (Reber, 1995). Sternberg (R. J. Sternberg, 1998) used the terms intelligence and ability interchangeably, and Reber, described intelligence tests as ability tests.

## Skill

Although a large number of definitions may be found in the literature on the concept of 'skill', most emphasize that all skills are learned, or are capable of being learned and developed, and necessarily involve the appropriate (and observable) performance of particular types of activity and task. According to some writers, for example, skills are behaviours that are carried out when knowledge, aptitudes and personality traits are put into practice; others say that they constitute the corpus of knowledge, procedures, competences, aptitudes and attitudes that are needed to carry out various activities (e.g. doing a job or solving problems) to a certain degree of quality and effectiveness, and in an independent and flexible manner. The holistic approach takes the view that the word 'skill' mainly refers to the integration of the three levels of human functioning, usually referred to by the acronym KSA (knowledge, skills and attitudes), and originally described by Bloom et al. as the 'cognitive, psychomotor and affective' fields (Bloom, 1956; Dave, 1970; Krathwohl, Bloom, & Masia, 1999; Simpson, 1966; Harrow, 1972):

- knowledge, the outcomes of perceptive and conceptual processes such as attention, selection, symbolisation, codification/decodification, reflection and evaluation;
- execution of competences, the outcomes of the psychomotor process that enables individuals to give clear responses, and possibly to offer a tangible product that may be observed and assessed by another person;
- attitudes, the products of emotional responses to events and other specific objects.

We believe that it is important to stress that skills are not stable characteristics (traits), but rather the demonstration of an appropriate performance in particular contextual/situational conditions, despite the fact that this performance is only carried out thanks to the prior existence and combination of personal and contextual resources. With regard to skills, therefore, it is important to bear in mind that their acquisition, development and expression (or inhibition) depend at all times both on personal characteristics, such as contextual or situational characteristics, and on the dynamic interaction between both fields (personal and situational).

To put it in another way, it is important to point out that for a person to demonstrate skill in a job, function or role, s/he not only needs to master a series of conceptual (knowing), procedural (knowing how to do something (know-how)) and attitudinal (knowing how to be) knowledge, but must also, firstly, be motivated to act (wanting to do something) and secondly, be endowed with personal characteristics (cognitive skills, emotional intelligence and personality traits) and with contextual characteristics minimally appropriate and favourable to the performance to be carried out (able to do something). In this way, experience and practice in different (real and simulated) situations allow a person to be trained to link all these resources with a view to facilitating on each occasion the transfer of his/her skills to new, albeit similar, situations and demands.

## Competence

Perhaps the most thorough recent exploration of the concept was undertaken by the Organisation for Economic Cooperation and Development (OECD) in the DeSeCo Project.

Drawing on this work, the term competence was defined by Rychen and Salganik (Rychen & Salganik, 2000):

*“DeSeCo focuses on a functional approach, which places complex demands facing individuals at the forefront of the concept of competence. According to this viewpoint, competencies are structured around demands and tasks. Fulfilling complex demands and tasks requires not only knowledge and skills but also involves strategies and routines needed to apply the knowledge and skills, as well as appropriate emotions and attitudes, and effective management of these components. Thus, the notion of competencies encompasses cognitive but also motivational, ethical, social, and behavioural components. It combines stable traits, learning outcomes (e.g., knowledge and skills), belief-value systems, habits, and other psychological features. In this view, basic reading, writing and calculating are skills that are critical components of numerous competencies.”*

Then they go on to distinguish “competences” from “skills”:

*“While the concept of competence refers to the ability to meet demands of a high degree of complexity, and implies complex action systems, the term knowledge applies to facts or ideas acquired by study, investigation, observation, or experience and refers to a body of information that is understood. The term skill is used to designate the ability to use one's knowledge with relative ease to perform relatively simple tasks. We recognize that the line between competence and skill is somewhat blurry, but the conceptual difference between these terms is real.”*

They propose a holistic model of competence, which spans a range of human processes and actions and incorporates cognitive, affective and volitional elements, as well as an ethical dimension, implying moral agency and desire. Significantly, the site of a competence is at the interface between the person and the demands of the real world. Competencies are broader than knowledge or skills, and are acquired in an on-going, lifelong learning process across the whole range of personal, social and political contexts. The term competence is strongly value-dependent because a competence is expressed in action in the real world; for example, a person could be a competent thief, a competent mechanic or a competent carer.

Weinert (Weinert, 1999) explored the concept of competence in detail. While drawing attention to the confusion created by common uses of the term, he provided nine alternative technical definitions of it. These were: “(a) general cognitive ability, (b) specialized cognitive skills, (c) competence-performance model, (d) modified competence-performance model, (e) motivated action tendencies, (f) objective and subjective self-concepts, (g) action competence, (h) key competencies, and (i) meta-competencies”.

## **Key Competences**

Many writers and institutions also use the phrase ‘key competencies’. This mainly refers to those generic skills that warrant special recognition for their outstanding importance and applicability to the various areas of human life (educational and occupational, personal and social). Indeed, the words ‘generic’ and ‘key’ are sometimes used synonymously. In one of its papers, the Information Network on Education in Europe, Eurydice, outlines its position as follows: ‘Despite their differing conceptualisation and interpretation of the term in



question, the majority of experts seem to agree that for a competence to deserve attributes such as “key”, “core”, “essential” or “basic”, it must be necessary and beneficial to any individual and to society as a whole’ (Eurydice, 2002).

## **Soft Skills**

We define soft skills as intra- and inter-personal (socio-emotional) skills, essential for personal development, social participation and workplace success. They include skills such as communication, ability to work on multidisciplinary teams, adaptability etc. These skills should be distinguished from technical, or “hard skills”.

We characterized them as “skills” in order to emphasize the fact that they can be learned/developed by suitable training efforts, and they can also be combined, towards the achievement of complex outcomes.

## **Generic Skills**

As generic skills are characterized skills which are applicable and useful in various contexts, thus they can be supposedly transferred among different work occupations. They include soft skills and additional abilities, such as literacy, numeracy, technology use etc.

Soft skills are considered a subset of generic skills.

## **Basic Skills**

‘Basic skills’ are not the same as “key competencies”. Most experts usually talk about ‘basic’ skills when referring to the sub-group of generic or key competencies that are instrumentally essential in a given culture for every person and job, and particularly as we use ‘basic’ skills to communicate with one another and continue learning. Classic examples of basic skills are: carrying out basic arithmetical calculations (adding, subtracting, multiplying and dividing), and reading and writing in one’s mother tongue. Since the 1990s, at least two more basic skills, the outcomes of both economic globalisation and accelerated technical progress, have come to the fore: speaking foreign languages and using electronic Information and Communication Technologies (ICT).

## **Theoretical approaches**

### **Types of socio-emotional competences**

With regard to the classification of soft skills, it is important to bear in mind that it varies from one writer to another, and from one theoretical approximation to another. Increasing interest in Emotional Intelligence (EI) since the mid-1990s has also contributed to the rediscovery of emotional skills in particular and, by extension, to that of soft skills. We set out below a summary of the main theoretical models of socio-emotional skills to be found in the specialist literature.

As for a typology of emotional skills, the evolutive psychologist Carolyn Saarni (Saarni, 1999) says there are a total of eight: awareness of one’s own emotions; the ability to discern and understand others’ emotions; the ability to use the vocabulary of emotion and expression; capacity for empathetic involvement; the ability to differentiate internal subjective

emotional experience from external emotional expression; capacity for adaptive coping with aversive emotions and distressing circumstances; awareness of emotional communication within relationships; capacity for emotional self-sufficiency.

From the perspective of educational interventions aimed at developing soft skills, the Collaborative for Academic, Social and Emotional Learning (“CASEL | Collaborative for Academic, Social, and Emotional Learning,” n.d.), a research body of international standing in school programmes on ‘socio-emotional education’, has drawn up a list of socio-emotional skills and competencies that fall under four headings: knowing oneself and other people (an example of this is the skill to recognize and label one’s own feelings), taking responsible decisions (for which it will be necessary to have, for example, appropriate emotional regulation), caring for other people (in which empathy is a key factor) and knowing how to behave (a group including verbal and non-verbal communication, the management of interpersonal relationships, and negotiating).

The cognitive psychologists Mayer and Salovey (Mayer, Brackett, & Salovey, 2004) do not speak about skills in the real sense of the word, but of four large ‘emotional’ competences, or branches of EI: a) the perception, assessment and expression of emotions; b) the emotional facilitation of thinking; c) an understanding of emotions and emotional knowledge; and d) the reflexive regulation of emotions.

As for skills more accurately referred to as ‘social’, Bunk (Bunk, 1994) says that examples include the capacity for social adaptation, a disposition for cooperation, and team spirit.

Using their international experience of working for international human resource consultants and earlier research conducted for the Hay Group consultancy (Boyatzis, 1982; Boyatzis, D. Goleman, & Rhee, 2000), concluded that the main socio-emotional skills required for success at work may be summarized in a series of 20 skills, which in turn fall into four general blocks: emotional self-awareness, self-management or self-government (self-control), social awareness (empathy), and management of social relations and skills. This is one of the most frequently employed models in human resources in organisations, despite the fact that insufficient empirical research has been carried out with a view to supporting its validity.

Following an analysis of the content of the main models of emotional intelligence trait (EI trait) in the literature (Salovey & Mayer, 1989; Bar-On, 1997; Daniel Goleman, 2006), Petrides and Furnham (Petrides & Furnham, 2001) have recently drawn up a list of the 15 most important socio-emotional dimensions for this construct: adaptability, assertiveness, emotional assessment of oneself and of others, emotional expression, the emotional management of others, emotional regulation, low impulsiveness, the skills required to form relationships, self-esteem, self-motivation, social skill, stress management, empathy, happiness and optimism.

## Perspectives

There are three main theoretical perspectives or models (Talavera & Perez-Gonzalez, 2007):

a) the conductist, analytical or molecular model, originally from the United States, in which the emphasis is laid on the molecular elements of skills. According to this model, skills are seen as a coherent corpus of “observable” behaviours which allow a particular activity to be appropriately carried out. This is the perspective that gave rise to the skills focus itself, and as a reaction to the “focus on traits” in psychology (McClelland, 1973). In this model, the accent is placed both on behavioural observation and on interviews concerning critical events, with a view to determining the behaviour profiles of successful workers and high fliers. From this perspective, performance is deemed to be competent when it adjusts to a job described on the basis of a list of clearly specified tasks. These tasks are described as very concrete and meaningful actions (e.g. ‘recognizing and altering an incorrect accounting entry’ for somebody working in bookkeeping, and ‘smiling at customers and calling them by their name’ for people dealing directly with the public;

b) in the personal qualities and attributes model, originally from Great Britain, and described as ‘functionalist’, skill is seen as a combination of attributes (traits) which underlie successful work, and are usually defined more broadly and generically in such a way that they may be applied in different contexts. Examples of these attributes are leadership, initiative and team-working;

c) the holistic, or integrated, model has its roots in France, but is also applied widely in Australia and England. This approximation of the skills focus embraces skills such as the skill to integrate tasks carried out (behaviours) and the person’s attributes, and simultaneously takes the setting into account. In short, this model sees skills as the outcome of dynamic interaction between separate masses of knowledge, abilities, attitudes, and aptitudes and personality traits mobilized according to the characteristics of the context and the work that the individual is engaged on.

## Frameworks

There is no one definitive list of generic skills; instead, there are a number of lists. Each list has been compiled under the influence of both global and local factors and reflects a particular situation. Collectively, the lists have six common elements (NCVER, 2003):

- Basic/fundamental skills—such as literacy, using numbers, using technology
- People-related skills—such as communication, interpersonal, teamwork, customer-service skills
- Conceptual/thinking skills—such as collecting and organizing information, problem-solving, planning and organizing, learning-to-learn skills, thinking innovatively and creatively, systems thinking
- Personal skills and attributes—such as being responsible, resourceful, flexible, able to manage own time, having self-esteem
- Skills related to the business world—such as innovation skills, enterprise skills
- Skills related to the community—such as civic or citizenship knowledge and skills

Apart from the basic/fundamental skills, all the others belong to the category of “soft skills”. This fact reveals the importance that the modern approaches give to the development and assessment of soft skills.

Generic skills schemes have been developed in many countries. In some countries, more than one scheme has been developed, either sponsored by different organizations or because the original scheme has been modified as a result of experience.

These schemes represent taxonomies of skills, to varying levels of complexity, and as taxonomies, they are informative about the theoretical bases – most of which are tacit, that formed the foundations for the development of these schemes.

Three approaches can be identified in the delineation of generic skills. First, skills have been identified by employer organizations through interviews with and focus groups of employer representatives and reviews of other schemes. Second, skills have been identified through analyses of the skills enacted by practitioners in workplaces. Third, a discipline-based approach has been taken in the DeSeCo Project in which academics from six discipline groups were commissioned to propose lists of generic skills (Rychen & Salganik, 2000).

## European Union

The European Reference Framework (European Communities, 2007) identifies and defines, for the first time at the European level, the key competences that citizens require for their personal fulfilment, social inclusion, active citizenship and employability in our knowledge-based society.

According to the European Reference framework as globalization continues to confront the European Union with new challenges, each citizen will need a wide range of key competences to adapt flexibly to a rapidly changing and highly interconnected world. Education in its dual role, both social and economic, has a key role to play in ensuring that Europe’s citizens acquire the key competences needed to enable them to adapt flexibly to such changes.

Competences are defined as a combination of knowledge, skills and attitudes appropriate to the context. Key competences are those which all individuals need for personal fulfilment and development, active citizenship, social inclusion and employment.

The Reference Framework sets out eight key competences, which are given below along with their definitions.

- 1. Communication in the mother tongue** - Communication in the mother tongue is the ability to express and interpret concepts, thoughts, feelings, facts and opinions in both oral and written form (listening, speaking, reading and writing), and to interact linguistically in an appropriate and creative way in a full range of societal and cultural contexts; in education and training, work, home and leisure.
- 2. Communication in foreign languages** - Communication in foreign languages broadly shares the main skill dimensions of communication in the mother tongue: it is based on the ability to understand, express and interpret concepts, thoughts, feelings, facts and opinions in both oral and written form (listening, speaking, reading and

writing) in an appropriate range of societal and cultural contexts (in education and training, work, home and leisure) according to one's wants or needs.

Communication in foreign languages also calls for skills such as mediation and intercultural understanding. An individual's level of proficiency will vary between the four dimensions (listening, speaking, reading and writing) and between the different languages, and according to that individual's social and cultural background, environment, needs and/or interests.

**3. Mathematical competence and basic competences in science and technology**

- a. Mathematical competence is the ability to develop and apply mathematical thinking in order to solve a range of problems in everyday situations.

Building on a sound mastery of numeracy, the emphasis is on process and activity, as well as knowledge. Mathematical competence involves, to different degrees, the ability and willingness to use mathematical modes of thought (logical and spatial thinking) and presentation (formulas, models, constructs, graphs, charts).

- b. Competence in science refers to the ability and willingness to use the body of knowledge and methodology employed to explain the natural world, in order to identify questions and to draw evidence-based conclusions.

Competence in technology is viewed as the application of that knowledge and methodology in response to perceived human wants or needs.

Competence in science and technology involves an understanding of the changes caused by human activity and responsibility as an individual citizen.

- 4. Digital competence** - Digital competence involves the confident and critical use of Information Society Technology (IST) for work, leisure and communication. It is underpinned by basic skills in ICT: the use of computers to retrieve, assess, store, produce, present and exchange information, and to communicate and participate in collaborative networks via the Internet.

- 5. Learning to learn** - Learning to learn is the ability to pursue and persist in learning, to organize one's own learning, including through effective management of time and information, both individually and in groups. This competence includes awareness of one's learning process and needs, identifying available opportunities, and the ability to overcome obstacles in order to learn successfully. This competence means gaining, processing and assimilating new knowledge and skills as well as seeking and making use of guidance. Learning to learn engages learners to build on prior learning and life experiences in order to use and apply knowledge and skills in a variety of contexts: at home, at work, in education and training. Motivation and confidence are crucial to an individual's competence.

- 6. Social and civic competences** - These include personal, interpersonal and intercultural competence and cover all forms of behaviour that equip individuals to participate in an effective and constructive way in social and working life, and particularly in increasingly diverse societies, and to resolve conflict where necessary. Civic competence equips individuals to fully participate in civic life, based on knowledge of social and political concepts and structures and a commitment to active and democratic participation.

- 7. Sense of initiative and entrepreneurship** - Sense of initiative and entrepreneurship refers to an individual's ability to turn ideas into action. It includes creativity, innovation and risk-taking, as well as the ability to plan and manage projects in order to achieve objectives. This supports individuals, not only in their everyday lives at home and in society, but also in the workplace in being aware of the context of their work and being able to seize opportunities, and is a foundation for more specific skills and knowledge needed by those establishing or contributing to social or commercial activity. This should include awareness of ethical values and promote good governance.
- 8. Cultural awareness and expression** - Appreciation of the importance of the creative expression of ideas, experiences and emotions in a range of media, including music, performing arts, literature, and the visual arts.

The key competences are all considered equally important, because each of them can contribute to a successful life in a knowledge society. Many of the competences overlap and interlock: aspects essential to one domain will support competence in another. Competence in the fundamental basic skills of language, literacy, numeracy and in information and communication technologies (ICT) is an essential foundation for learning, and learning to learn supports all learning activities.

There are a number of themes that are applied throughout the Reference Framework: critical thinking, creativity, initiative, problem-solving, risk assessment, decision-taking, and constructive management of feelings play a role in all eight key competences.

## United States

In the US, the Report of The Secretary's Commission on Achieving Necessary Skills (The Secretary's Commission on Achieving Necessary Skills, 1991; a Living, 1992), (subsequently referred to as the SCANS Report) was released in June 1991. The Commission's remit was to identify the skills required for employment, to propose levels of proficiency in them, to suggest effective ways to assess them, and to disseminate its findings. On the basis of analyses of the skills required in a range of jobs and in-depth interviews with workers from five major industry groups (Kane, 1990; Kane, Berryman, Goslin, & Meltzer, 1990; Wise, Chia, & Rudner, 1990), the report defined what it called "workplace know-how" which comprised a set of five workplace competencies and three foundation elements.

The workplace competencies were an ability to productively use:

- Resources
  - Time – selects goal relevant activities, ranks them, allocates time, and prepares and follows the schedule.
  - Money – uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives.
  - Materials and Facilities – acquires, stores, allocates and uses materials or space efficiently.
  - Human Resources – assesses skills and distributes work accordingly, evaluates performance and provides feedback.
- Interpersonal
  - Participates as a Member of a Team – contributes to group effort.

- Teaches Others New Skills – helps others learn needed knowledge and skills.
- Serves Clients/Customers – works to satisfy customer's expectations.
- Exercises Leadership – communicates ideas to justify position, persuade and convince others, responsibly challenges existing procedures and policies.
- Negotiates – work toward agreements involving exchange of resources, resolves divergent interests.
- Works with Diversity – works well with men and women from diverse backgrounds.
- Information
  - Acquires and Uses Information – identifies a need for data.
  - Organizes and Maintains Information – organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion.
  - Interprets and Communicates Information – selects and analyzes information and communicates the results to others.
  - Uses Computers to Process Information – employs computers to acquire, organize, analyse, and communicate information.
- Systems
  - Understands Systems – knows how social, organizational, and technological systems work and operates effectively with them.
  - Monitors and Corrects Performance – distinguishes trends, predicts impacts on system operations, diagnoses systems' performance and corrects malfunctions.
  - Improves or Designs Systems – suggests modifications to existing systems and develops new alternative systems to improve performance.
  - Selects Technology – chooses procedures, tools or equipment including computers and related technologies.
  - Applies Technology to Tasks – understands overall intent and proper procedures for setup and operation of equipment.
  - Maintains and Troubleshoots Equipment – prevents, identifies, or solves problems with equipment, including computers and other technologies.

The foundation comprised three elements:

- Basic Skills
  - Reading – locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.
  - Writing – communicates through, ideas, information, and messages in writing; and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.
  - Arithmetic/Mathematics – performs basic computations and approaches practical problems by choosing appropriately from variety of mathematical techniques.
  - Listening – receives, attends to, interprets, and responds to verbal messages and other cues.
  - Speaking – organizes ideas and communicates orally.
- Thinking Skills
  - Creative Thinking – generates new ideas.
  - Decision Making – specific goals and constraints, generate alternatives, considers risks, and evaluates and chooses the best alternative.

- Problem Solving – recognizes problems; devises and implements a plan of action.
- Seeing Things in the Mind’s Eye – organizes and processes symbols, pictures, objects, and other information.
- Knowing How to Learn – uses efficient learning techniques to acquire and apply new knowledge and skills.
- Reasoning – discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.
- Personal Qualities
  - Responsibility – exerts a high level of effort and preserves towards goal attainment.
  - Self Esteem – believes in own self-worth and maintains a positive self-view.
  - Sociability – demonstrates understanding, friendliness, adaptability, empathy and politeness in group settings.
  - Self-Management – assesses self accurately, sets personal goals, monitors progress, and exhibits self-control.
  - Integrity/Honesty – chooses ethical courses of action.

## England and Wales

For the last 15 years there has been a series of policy initiatives that have advocated for the development of employability skills by young and unemployed people in the United Kingdom (Turner, 2002; “Key Skills qualifications : Directgov - Education and learning,” n.d.). These policy initiatives have sought to incorporate such skills into both academic and general education (secondary and tertiary) and vocational education and training. Although one cannot over-generalize, the call for these employability skills has been championed by two distinct but related movements:

- Key Skills Development Movement
- Enterprising Skills Development/Education Movement

The call for the value and relevance of these skills has been heralded by employer organizations and relevant government officers/civil servants in the Department for Education and the former Department of Trade and Industry (DTI). Their collaboration led to the Secretary of State for Education and Employment introducing a ‘Key Skills National Qualification’ that focused upon:

- effective communication—including written skills
- application of numbers—the ability to work with numbers
- the use of information technology

In addition to the promotion of these three skills, recent British Government policy papers, such as the lifelong learning green paper, have stated their enthusiasm for young people and adults to develop certain skills at school, in the workplace or in life that will help individuals to develop and maintain their employability. These skills are now defined as the ‘wider key skills’. They are:

- working with others—how you work with others when planning and carrying out activities to get things done and achieve shared objectives,



- improve own learning and performance—how you manage your own personal learning and career development,
- problem solving—about recognizing problems and doing something about them.

Each key skill is described in a unit, which helps the learner to develop the skill, collect evidence and record achievements. These units are at five levels and there is progression in terms of:

- the degree of responsibility of the learner for using the skill
- more complex and demanding tasks, problems and situations

Whilst the first three key skills represent a qualification that requires the learner to produce a portfolio of evidence and undertake external assessment (tests), the wider key skills are not a nationally recognized qualification and only demand a portfolio of evidence from the learner which can include a report arising from a ‘witnessed’ verbal presentation—that is, at the conclusion of an individual or team exercise.

## Canada

In the early 1990s the Conference Board of Canada sponsored a series of projects that attempted to respond to the question of educators: “What are employers looking for?” The Conference Board is a forum for leaders from business, education, government and the community that seeks to address concerns about education in Canada. The projects were organized through the National Business and Education Centre, an auxiliary of the Board.

Through research and consultation with employers of all sizes the Board developed an Employability Skills Profile that identified the generic academic, personal management and teamwork skills that are required, to varying degrees, in every job. Three broad domains of employability skills were identified:

- Academic skills: those skills which provide the basic foundations to get keep and progress on a job and to achieve the best results.
- Personal management: The combination of skills, attitudes and behaviours required to get, keep and progress on a job and to achieve the best results.
- Teamwork skills: those skills needed to work with others on a job and to achieve the best results.

The Conference Board reviewed the work of the 1992 Essential Skills project recommendations and published Employability Skills 2000+ (“Employability Skills 2000+,” n.d.). This framework is outlined below.

- **Fundamental skills** - The skills needed as a base for further development. You will be better prepared to progress in the world of work when you can:
  - Communicate
    - Read and understand information presented in a variety of forms (e.g., words, graphs, charts, diagrams)
    - Write and speak so others pay attention and understand

- Listen and ask questions to understand and appreciate the points of view of others
  - Share information using a range of information and communications technologies (e. g., voice, mail, computers)
  - use relevant scientific, technological and mathematical knowledge and skills to explain or clarify ideas
- Manage information
  - locate, gather and organize information using appropriate technology and information systems
  - access, analyse and apply knowledge and skills from various disciplines (e. g., the arts, languages, science, technology, mathematics, social sciences, and the humanities)
- Use numbers
  - decide what needs to be measured or calculated
  - observe and record data using appropriate methods, tools and technology
  - make estimates and verify calculations
- Think & solve problems
  - assess situations and identify problems
  - seek different points of view and evaluate them based on facts
  - recognize the human, interpersonal, technical, scientific and mathematical dimensions of a problem
  - identify the root cause of a problem
  - be creative and innovative in exploring possible solutions
  - readily use science, technology and mathematics as ways to think, gain and share knowledge, solve problems and make decisions
  - evaluate solutions to make recommendations or decisions
  - implement solutions
  - check to see if a solution works, and act on opportunities for improvement
- **Personal management skills** - The personal skills, attitudes and behaviours that drive one's potential for growth. You will be able to offer yourself greater possibilities for achievement when you can:
  - Demonstrate positive attitudes and behaviours
    - feel good about yourself and be confident
    - deal with people, problems and situations with honesty, integrity and personal ethics
    - recognize your own and other people's good efforts
    - take care of your personal health
    - show interest, initiative and effort
  - Be responsible
    - set goals and priorities balancing work and personal life
    - plan and manage time, money and other resources to achieve goals
    - assess, weigh and manage risk
    - be accountable for your actions and the actions of your group

- Be adaptable
  - work independently or as a part of a team
  - carry out multiple tasks or projects
  - be innovative and resourceful: identify and suggest alternative ways to achieve goals and get the job done
  - be open and respond constructively to change
  - learn from your mistakes and accept feedback
  - cope with uncertainty
- Learn continuously
  - be willing to continuously learn and grow
  - assess personal strengths and areas for development
  - set your own learning goals
  - identify and access learning sources and opportunities
  - plan for and achieve your learning goals
- Work safely
  - be aware of personal and group health and safety practices and procedures, and act in accordance with these
- **Teamwork skills** - The skills and attributes needed to contribute productively. You will be better prepared to add value to the outcomes of a task, project or team when you can:
  - Work with others
    - understand and work within the dynamics of a group
    - ensure that a team's purpose and objectives are clear
    - be flexible: respect, be open to and supportive of the thoughts, opinions and contributions of others in a group
    - recognize and respect people's diversity, individual differences and perspectives
    - accept and provide feedback in a constructive and considerate manner
    - contribute to a team by sharing information and expertise
    - lead or support when appropriate, motivating a group for high performance
    - understand the role of conflict in a group to reach solutions
    - manage and resolve conflict when appropriate
  - Participate in projects & tasks
    - plan, design or carry out a project or task from start to finish with well- defined objectives and outcomes
    - develop a plan, seek feedback, test, revise and implement
    - work to agreed quality standards and specifications
    - select and use appropriate tools and technology for a task or project
    - adapt to changing requirements and information
    - continuously monitor the success of a project or task and identify ways to improve

## Australia

The Mayer Committee was a major milestone concerning the development of generic skills in Australia (Curtis, 2004). It offered a clear recognition of the importance of generic skills and has played a significant role in the development of government policy in this area, most particularly in the vocational education and training (VET) sector. The Mayer Committee identified the key competencies as:

*“... competencies essential for effective participation in the emerging patterns of work and work organization ... [which] focus on the capacity to apply knowledge and skills in an integrated way in work situations. Key Competencies are generic in that they apply to work generally rather than being specific to work in particular occupations or industries. This characteristic means that the Key Competencies are not only essential for participation in work, but are also essential for effective participation in further education and in adult life more generally.”*

The key competences proposed and their descriptions are given below.

- Collecting, analysing and organizing information  
The capacity to locate information, sift and sort the information in order to select what is required and present it in a useful way, and evaluate both the information itself and the sources and methods used to obtain it.
- Communicating ideas and information  
The capacity to communicate effectively with others using a whole range of spoken, written, graphic and other non-verbal means of expression.
- Planning and organizing activities  
The capacity to plan and organize one's own work activities, including making good use of time and resources, sorting out priorities and monitoring performance.
- Working with others and in teams  
The capacity to interact effectively with other people both on a one to-one basis and in groups, including understanding and responding to the needs of others and working effectively as a member of a team to achieve a shared goal.
- Using mathematical ideas and techniques  
The capacity to use mathematical ideas, such as number and space, and techniques, such as estimation and approximation, for practical purposes.
- Solving problems  
The capacity to apply problem-solving strategies in purposeful ways, both in situations where the problem and the desired solution are clearly evident and in situations requiring critical thinking and a creative approach to achieve an outcome.
- Using technology

The capacity to apply technology, combining the physical and sensory skills needed to operate equipment with the understanding of scientific and technological principles needed to explore and adapt systems.

The employability skills project was another important step in on-going efforts to give effect to generic skills in Australian education and training (Curtis, 2004). It was an initiative of two of Australia's peak employer organizations, namely the Business Council of Australia (BCA) and the Australian Chamber of Commerce and Industry (ACCI).

The definition of 'employability skills' was:

Employability skills are defined as 'skills required not only to gain employment, but also to progress within an enterprise to achieve one's potential and contribute successfully to enterprise strategic directions'.

The taxonomy suggested in the employability skills report consisted of 13 personal attributes and eight key skills. For each key skill a set of elements or facets were described that elaborated the skill and suggested how it might be applied in industry contexts. It was argued that each substantive skill was generic, but that the relative importance of the elements would vary between job roles and levels of employment. The taxonomy, but without the facets, is summarized below.

### *Personal Attributes*

- Loyalty
- Commitment
- Honesty and integrity
- Enthusiasm
- Reliability
- Personal presentation
- Common sense
- Positive self-esteem
- Sense of humour
- Balanced attitude to work and home life
- Ability to deal with pressure
- Motivation
- Adaptability

### *Key Skills*

- Communication skills - that contribute to productive and harmonious relations between employees and customers
- Team work skills - that contribute to productive working relationships and outcomes
- Problem-solving skills - that contribute to productive outcomes. Initiative and enterprise skills that contribute to innovative outcomes
- Planning and organising skills - that contribute to long-term and short-term strategic planning
- Self-management skills - that contribute to employee satisfaction and growth

- Learning skills - that contribute to on-going improvement and expansion in employee and company operations and outcomes
- Technology skills - that contribute to effective execution of tasks

### The OECD DeSeCo project

The DeSeCo project (The Definition and Selection of Competencies) was an OECD project developed under the umbrella of the Indicators of National Education Systems (INES) project (Rychen & Salganik, 2003). In establishing the DeSeCo project, there was a concern to ensure that the effectiveness of education systems was measured using a broader range of indicators than was available from subject-specific assessments.

The DeSeCo project set out to establish sound and broadly based theoretical conceptions of competencies. It recognized that these competencies had to apply to school and work settings but equally to life situations beyond those areas. Rychen and Salganik (2000) noted that the various national attempts to develop definitions of generic skills can be characterized as:

- boosting productivity and market competitiveness;
- developing an adaptive and qualified labour force; and
- creating an environment for innovation in a world dominated by global competition.

In order to achieve a broad theoretical consensus, the project commissioned a series of expert papers from individuals and groups from the disciplines psychology, sociology, economics, anthropology, politics and philosophy.

Perhaps not surprisingly, each discipline based group in the DeSeCo project developed a distinct set of generic competencies. For example Haste, writing from the perspective of social psychology, identified technological competence; dealing with ambiguity and diversity; finding and sustaining community links; management of motivation, emotion and desire; and agency and responsibility. Two economists, Levy and Murnane, suggested basic reading and mathematics skills; communicating orally and in writing; the ability to work in groups; the ability to relate well to other people; and familiarity with computers. While there are similarities between these sets of skills, there are also differences. Haste's suggested skills were rather abstract: technological competence included the ability to read, write and do calculations using technologies such as pen-and-paper or a computer. In comparison, Levy and Murnane's suggestions were more concrete, identifying basic reading and mathematical skills. It would appear that the DeSeCo contributors were operating independently and without an agreed metaframework.

The DeSeCo project focused upon the definition of competences from multidisciplinary perspectives but did not develop methods for assessing and measuring them. However, this was clearly the primary intention of the project.

## Target groups

The development of soft skills is discussed with respect of four main target groups: corporate employers, university students, vocational education and compulsory education students.

The importance of development of soft skills to corporate employers, for the growth of socio-economic benefits is well established in most western societies: 'American industry currently spends around USD 50 billion every year on training, and much of this training focuses on social and emotional skills' (Talavera & Perez-Gonzalez, 2007).

Numerous works have been published on the subject of developing soft skills to university graduates. The interest seems to extend in virtually all specializations, such as engineering, financial studies, health care etc. An example of the interest can be seen in Shuman et. al. (Shuman, Besterfield-sacre, & McGourty, 2005), where the specification of "professional skills" (including soft skills) determined by Accreditation Board for Engineering and Technology (ABET) are presented and analysed. The importance of soft skills to engineer's employability and their contribution to salaries is emphasized.

All the frameworks of generic skills, presented in another part of this paper, are mainly targeting in the Vocational Education and Training (VET). The main reason for their development was the increased unemployment faced by the graduates of vocational education, as well as the requirements employers had from them. The majority of the studies concerning the application of these frameworks focus on Vocational Education.

Concerning obligatory education, a leading player in these initiatives is CASEL, under whose aegis dozens of socio-emotional training courses have been developed. A recent meta-study (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011) shows significant improvement of the academic achievement of student who participated in programmes of Socio-Emotional Learning.

Social inclusion and reduction of school dropout is an area where the benefits from developing soft skills have not been studied (Bradbrook et al., 2008, p. 35). A search for relevant publications returned no results. The MASS project examined effects the teaching of soft skills to disadvantaged groups may have. The findings are very promising. From this aspect, the MASS project is unique and may lead to exploration of benefits of developing soft skills not considered so far.

## Discussion/Conclusions

In this paper we presented the concepts underlying soft skills practices. We examined the historical framework that led to their popularity and gave the basic definitions, with a brief discussion on their different approaches. We presented the theoretical frameworks, upon which the soft skills practices are based. We also presented some of the major generic competencies frameworks, developed in several countries or from international organizations. Finally, we discussed the applicability and importance of soft skills development in several target audiences.

The importance given in the development of soft skills and generic competencies from several countries and international organizations is evident. It is based upon a globalized economy and the need for workforce that can deal effectively with high demand jobs. For this reason, a lot of money has been invested from countries and international organization in relative research. The training on soft skills for corporate workers is also a big market, estimated in several billions per year.

The usefulness of developing soft skills of disadvantaged groups and for reasons other than workplace success, such as promoting social inclusion and reduction of school drop-out rate, is an under developed, but very important, domain. However a search for relevant publications has not returned any. From this perspective, the MASS project methodology is not only innovative, but also pioneering in its approach.

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# **PART 2: SOFT SKILLS TEACHING**



# Teaching Soft Skills

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## Abstract

In the present paper a selected bibliography on teaching and developing soft skills is presented. Several aspects are covered, including the effect of ill definitions, the influence of discipline, the target group (VET/higher and initial education) and the pros and cons of workplace vs. classroom teaching. Good teaching practices are presented, for both workplace and classroom education.

## Introduction

The importance of soft skills for enhancing employability, personal fulfilment and social participation is widely accepted. However, it seems that there is not a single best approach, but rather the most appropriate one depends on the context under which the teaching is taking place, e.g. target group (corporate/higher education/VET/initial education), the specific goals of the programme and the discipline. Even in the case where target group and goals are well defined there are several alternatives, depending on the actual definition of soft skills in use, the decision on intermixed vs. autonomous teaching, classroom vs. workplace training and the underlying learning theory.

In this paper we attempt to analyse issues and alternative approaches in teaching and developing soft skills, through presentation of selected literature. The domains and target group covered are these of interest to the MASS project, which is initial education/VET/young workers and face to face teaching, either in classroom or in workplace. We excluded corporate employees and e-learning/blended methodologies, which are separate domains by themselves.

Initially we examine two important factors, with major consequences on teaching decisions. These are the definitions we use and the intermixed vs. autonomous teaching approaches.

Concerning the definition of soft skills, we should emphasize that there is not globally accepted ones. Each discipline, educational sector and country defines soft skills according to their own needs. Even in the framework of a single country, discipline and educational sector the understanding of the function of soft skills from the educational staff and students may vary considerably. As a result major difficulties are met in the efforts to find a more unified view.

The choice of autonomous soft skills teaching instead of one which infuses soft skills in discipline subjects may have a major impact. Both approaches have pros and cons. Intermixed teaching has the advantage of easier transfer to the workplace. However it creates specialization which may hinder the transfer to a different situation. Autonomous teaching is appropriate for those outside of a work placement, like student of initial and prevocational education and unemployed. In this case, the transfer of skills to a particular occupation has been proven to be difficult.

There are several good teaching practises that promote the development of soft skills. We reviewed the most important of them. We categorize these practises according to the target group, VET and initial education students. For VET students practices of both classroom and workplace are presented. For initial education the notion of Social and Emotional Learning (SEL), according to CASEL organisation, is given. Methodologies and benefits of SEL are presented.

## Issues in teaching soft skills

### Definition uncertainty and its consequences

It seems that educational institutions worldwide have accepted that they should prepare their students for a complex and uncertain society and labour market. While they appear to have accepted their new vocational role, there is considerable confusion over how these things – generic competencies, soft skills, attributes or capabilities - should be defined and implemented.

This confusion is evident in both the different set of required skills each nation considers necessary and in the meaning these skills may have in different disciplines.

We have presented extensively, in another part of this report, the approaches several countries have undertaken. These approaches vary widely, not only concerning the specified skills list, but also in the point of view and the directions of their integration in the educational system. For example, some of the approaches consider generic competencies from a purely vocational aspect, while others take into account a wider view, which also includes perspectives of personal fulfilment and participation in society.

The understanding of the same term in different disciplines and contexts can be different also (Green, Hammer, & Star, 2009, p. 5). For example, the term, 'critical thinking', is often used interchangeably with problem solving and decision-making to describe an attribute most educational institutions desire for their graduates. Humanities students are more likely to approach a problem with the intention of developing a deeper understanding of it; they will analyse or critically evaluate the problem, rather than try to 'solve' it. This approach would be quite foreign to management students who are routinely presented with case studies, which highlight problems or potential problems they might be required to solve in practice. Thus, business students will be more likely to see critical thinking or problem solving as key components of decision making processes.

For some time now, researchers have argued that problems of implementation ultimately stem from the theoretically nebulous nature of the generic competences agenda (Green et al., 2009, p. 4). The variety of terms used, often interchangeably, to describe desirable outcomes is also indicative of this confusion. Adjectives such as 'generic', 'soft', 'core', 'key', 'enabling', 'transferable' and 'professional' are used in tandem with nouns such as 'attributes', 'skills', 'capabilities' or 'competencies', to name just a few. Yet, researchers argue that 'skills' are not the same as 'attributes' and 'generic' may not necessarily equal 'transferable'. Such theoretical confusion will almost certainly have practical implications for the teaching and learning of generic skills.



From the above discussion it is obvious that there appears to be considerable confusion over how generic skills should be defined, what they look like within each discipline and therefore how they should be taught, assessed and evaluated, and how their adoption should ultimately shape teaching practices.

### **Autonomous vs. intermixed teaching**

There are two schools of thought concerning the teaching and development of 'soft skills' (Moore, 2004): the 'generalists' and the 'specificists'. The generalists first came to the fore in the 1970s and believe that soft skills are indeed generic, and can therefore be taught separately from content and applied to any discipline. For example generalist approach argues that the attribute of critical thinking is universal, so it can be taught independently as a set of cognitive processes then applied to any context. By contrast, specificists argue that attributes, such as the ability to think critically, cannot be separated from their disciplinary context. Knowledge is seen as fundamentally situated. From this perspective, critical thinking cannot be taught separately from a students' chosen discipline/s as a 'one-shot inoculation' of skill development.

The debate regarding the nature of graduate attributes or skills has become more, rather than less fine-grained over time. There is disagreement even amongst those 'relativists' who sit in the middle of the generalist and specificist positions. Some argue that a generic attribute such as critical thinking needs to be learned contextually, but once learned, can be transferred to another context. Yet, more recently, Davies (2006) has argued that those on either side of the generalist/specificist divide must move beyond the 'fallacy of the false alternative' (p.179), by recognising the possibility of both general and specific attributes. For Davies, students should learn 'general skills' – 'the principles of good reasoning simpliciter', which can then be 'used and deployed in the service of the academic tribes' (p.179). However, it is difficult to see how the 'the principles of good reasoning simpliciter' can be taught in a context-free environment.

The specificist/relativist approach seems to be strengthening by the recognition that soft skills are much more difficult to be transferred in practise than hard skills (Georges, 1996; Laker & Powell, 2011). Laker suggests that this difference results from the fact that the characteristics of soft skills and the relative training requirements are different from that of the hard skills. Georges argue that teaching soft skills in the classroom is actually education not training. He makes a parallelism with trying to teach how to ride a bicycle while sitting around a table.

Based on the above remarks, we may argue that, the explicit development of generic skills needs to be embedded into each course or subject and becomes, by extension, the responsibility of the subject specialist, albeit with the advice and support of learning specialists/developers.

However, Resnick (1987) criticised the use of highly specific learning situations because the learning may become bound to that setting (for example, the workplace), and not transfer to other situations. Falk (1999) suggests that considering workplaces as sites for learning in part avoids the problem of transfer from the classroom to the workplace. However, Billett (1998)

warns that it cannot be assumed that this knowledge will transfer easily from one situation to another, either in the same workplace in a different context or to another workplace. It appears that it is the problem solving activities engaged in by learners, and the guidance provided to them which will determine the possible transfer of the knowledge.

Billett (1999) notes that workers reported that although they learnt different things from both their educational setting and through their workplace experience, both settings provided conceptual and practical experiences. He emphasises that it is the variety of experiences, and not necessarily the learning setting, which is important in development of expertise. Informal workplace training and learning is very common as work and learning are inextricably interlinked (Harris, Simons, & Bone, 2000). In their analysis of the role of the workplace trainer 350 enterprises were contacted and five main functions, including building an enterprise learning culture, and 32 different 'trainer actions' used by participants in the study were identified.

There are two possible approaches to integrating key competencies, language, literacy and numeracy into units of competency and training programs: built in or integrated approach and bolted on or separate approach (Dawe, 2002, p. 31). The integrated approach intermixes the key competencies explicitly with vocational competencies in all aspects of training. This holistic approach to the development of technical and generic skills has been supported because it is thought to be closer to the real experience in the workplace. Teaching generic skills integrated with technical skills is the more complex approach but is perceived as making them more relevant and so increasing motivation to learn. However, separate generic skills units, such as communication and teamwork, may be used as foundation units. For the existing adult workers, who have specific learning needs, teaching these generic skills, including learning skills, separately from the technical skills may also be needed. For some people, especially those who are unemployed, in prevocational education, or still in initial education, a standalone soft skills course may be the only way to acquire these competences.

## Teaching practices

Soft skills teaching and development is discussed in relation with three target groups: corporate employees, VET/university students as well as novice workers and initial education students.

As the focus of the project is on young people, many of them entering the labour market, in this paper we will not discuss the aspects of teaching soft skills in corporate employees. We will confine ourselves to the examination of the practises concerning the development of soft skills in students of initial and VET education and novice workers, entering the labour market.

An additional target group of the MASS project is disadvantaged young people, many of them in danger of social marginalization. However, extensive search in the scientific literature did not returned any relevant publications. It seems that the subject of developing

soft skills in order to foster social inclusion is under-researched. This makes the MASS project not only innovative, but a pioneer in the area.

In this paper we will examine face to face approaches of teaching soft skills. Another possible methodology is that of e-learning and blended learning. However, since these methodologies were not part of the MASS project are not covered here. Utilization of e-learning methodologies for teaching of soft skills is a big subject by itself, which is beyond the intentions of this writing.

## **VET/University Students**

For VET and university students the places of soft skills training can be the classroom or the workplace. Classroom training is essential during their studies in the relevant educational institutions, before they actually enter the workplace and in the context of lifelong learning.

### **Classroom training**

#### ***Learning Theories***

The most widely used learning theories in competency education are:

- Experiential Education Theory
- Social Cognitive Theory

Experiential education (“Association for Experiential Education: A community of progressive educators and practitioners. - Home,” n.d.) suggests that people are inspired to learn (or do something differently or change) by an experience of their own or perhaps by observing someone else’s experience. Experiential learning can be used in some industry sectors, for example, to allow training participants to feel directly what it is like to be the client for a hairdresser or to be an elderly care home client for a day.

Social cognitive learning (Bandura, 2011), for example, role modelling, observing and imitating, is used, especially by young children and adolescents, and is the basis of the mentoring or coaching strategies. The information gathered from the experience, or observation of other people’s experience, only becomes a learning experience once there is an opportunity to reflect on it, relate it to some theoretical concepts and apply it.

Apart from the learning theory in use, another factor that determines the outcomes is the consideration of students’ different learning styles. Kolb (1984) developed a Learning Style Model to classify the way students take information in and how they internalise information. Some people can start with the theory (abstract concept) and apply it in their own life. Others prefer to start with an activity (concrete experience). To some it only becomes clear through a discussion with others or reviewing it themselves (reflective observation) and to others it is clarified when they engage in active experimentation. Kolb concludes that the point at which the learning becomes interesting reflects a preferred learning style. However, the learning process is not complete until it has passed through the whole cycle (experience – reflection – concepts – doing – new experience). In order for a course to be efficient, it should consider the different learning styles of the students.

### *Conditions for effective learning*

Dawe (2002) suggests that good practice in delivering generic skills training requires the provision of a large variety of experiences and learning strategies. This ensures that learners acquire conceptual, technical and generic skills and are then capable of transferring these skills to new contexts. In enterprises, good training practice emphasises a holistic approach, which involves integrating the development of skills, knowledge, values and attitudes. Given the belief that it is better for generic skills to be taught intermixed with discipline knowledge, she insists that when training in the workplace is not possible, simulation and role-play should be used. She suggests that approaches to help foster the development of generic skills include (NCVER, 2003):

- In general
  - Promote their importance
  - Develop mechanisms for communicating the scope of generic skills
  - Use authentic experiences
  - Use team-based and integrated approaches to foster generic skills
- In training organisations
  - Use learning strategies such as
    - workplace projects
    - community projects
    - mini-companies or practice firms
    - use of critical incidents to focus discussion and problem solving
    - investigation or enquiry-based learning
    - problem solving learning
    - project learning
    - reflective learning and workplace practice

Shuman et. al. (2005) suggest that the effective training should have two characteristics: fidelity and complexity. Referring to development of teamwork, he says that fidelity is defined as the similarity of the training situation to the students' present and future working conditions. The higher the fidelity, the more superior the transfer of learning to the workplace. The fidelity of a particular activity can be increased by matching the conditions of the work environment as closely as possible. This may be difficult, especially when it comes to physical conditions, but many of the environmental conditions can be simulated. An example is "temporal environment," which involves such factors as time limits and deadlines the team may experience. Research has shown that time has a definite effect on team performance. Such conditions as actual time to complete the task or make decisions should be matched to real conditions where possible. "Social context" is another environmental condition that can be manipulated. Few teams work in a vacuum; instead, they typically co-exist with other teams that are working within a similar context. The more that inter-group activities can be designed into the team activity, the more a team can engage in real-world team behaviours such as inter-group communication, coordination, and conflict.

Complexity is defined by two sub factors: task interdependence and cognitive effort. The more complex the activity, the more team skills are required by the participant. Activities

also can range from high to low degrees of complexity. In general, the higher the fidelity and complexity of the activity, the better the transfer of team skills to the workplace.

Experiential activities categorized as high fidelity/high complexity most resemble real workplace conditions, but typically are more difficult for the instructor to manage, resource intensive, and time consuming. Activities that are lower in fidelity are typically more structured and easier to administer, but may be perceived as less relevant by the student, resulting in the experience having less of a learning impact. Finally, team activities that are lower in complexity may not challenge the team nor provide the environment necessary for intense interaction among team members.

### *Workplace simulation practices*

Since various writers suggest workplace simulation as the most effective way to develop soft skills for VET students, we will present some practices, taken from Dawe (2002):

#### *Practice firms*

The practice firm operated in its own economic environment, and simulated commercial activities were undertaken with other practice firms nationally and internationally. It was run like a real business in line with the mentor company's policies and practice.

Administration students were first introduced to work in the practice firm before undertaking industry work placement. Students were able to complete tasks using their skills and knowledge, while working in the practice firm. This assisted the transfer of skills and knowledge to the workplace, as the students had experienced what was involved in assuming complete control of their activities. In the practice firm students had to ask for assistance if they required it, meet time constraints and present their work for evaluation. Thus soft skills, such as communication and time management skills, and attributes, such as self-confidence, were further developed.

#### *Workshops*

Workshops were used by many disciplines for the apprentices to practise their skills.

#### *Experiential learning*

Experiential learning can help staff to understand that they can work in various ways to achieve their goals. Often these differences, although subtle, are very important to quality care. In one experiential activity, participants assumed the role of a nursing home resident for one day. The trainer assumed the role of the carer. The staff members assumed the role of the resident. The carer attended and treated them as she had seen other real residents being treated. When the training exercise was completed, the trainer conducted the debriefing on a one-to-one basis. She helped participants talk about their training experience, empathise with residents and identify the practices and habits that they would need to change.

#### *Role play*

In most industries, scenarios are enacted to help participants empathise with clients and practise workplace situations. These are used, especially when teaching generic skills or soft

skills, such as communicating on the telephone, dealing with difficult clients, or practising negotiation skills.

## **Workplace training**

### ***Workplace as a learning environment***

Talavera et al. (2007) suggests that when students and recent graduates of vocational training and higher education take part in on-site training, they have a chance to learn from experience, although it has to be remembered that experience in itself involves no learning nor is it educational. For the experience of on-site training to become a genuine learning process, it must boast at least three characteristics:

1. integrating well planned and coherent experiences with skills to be developed;
2. promoting reflection over experience;
3. facilitating the integration of experience through self-assessment, the analysis of consequences, and the promotion of transference to other situations.

The learning process during on-site training calls for a form of tutoring that embraces features including coaching and mentoring. In coaching, the supervisor offers students advice and guidance, and reaches agreements with them about substantive action plans designed to improve their training in particular skills. The broader process of mentoring may be defined as an on-going process whereby the supervisor, who is known as the 'mentor', instructs and guides new or inexperienced work colleagues in their process of adapting to their job and to the organisation. Lastly, the person carrying out the tutoring/guidance role in one way or another is known as the 'tutor'.

Tutors play a key role with students undergoing on-site training, offering them direction, guidance, assistance and support during their period of occupational training. This work carried out by the tutors needs to be offered to small groups of students and those who have recently completed their on-site training, although the tutors also give each student personal attention.

### ***Good practices***

NCVER (2003) suggest that the good practices for fostering generic and soft skills development in the workplace include:

- Make generic skills a key feature in job descriptions and recruitment process
- Use a range of ways to help familiarise staff (including induction programmes) so that they learn what the organisation expects in terms of key employability skills, standards of work and the key attributes it expects of its employees
- Model the behaviours sought (which can be made more formal by discussing the approaches being modelled at an appropriate occasion)
- Use buddy or mentoring approaches, or working alongside another employee (a less formal version of the buddy or mentor approach)
- Use rotation of tasks or working at higher duties where relevant
- Use relevant targeted training for workplace supervisors to help them develop employability skills in their staff

- Use staff or teams to role play or discuss particular procedures or issues, such as dealing with difficult customers within workplace requirements
- Use quality circles and improvement teams to examine processes and other issues in the company or work unit
- Use work-based projects to assist the development of employability skills
- Use staff assessment and the performance management system to reflect on these skills
- Use critical incidents, including dealing with mistakes, conflict resolution or performance problems
- Involve staff in appropriate community projects

Dawe (2002) in the study of several case studies, which supported the integration of generic and technical skills training and development, gave a variety of learning strategies to develop generic and soft skills in employees, such as:

#### One-to-one or small group training

In the case study companies, on-the-job training was conducted by a qualified workplace trainer or supervisor on a one-to-one or small group basis. Six core or generic units were required for all staff. These included:

- Communication
- Planning daily work
- Industry knowledge
- Health and safety for work
- Personal work ethics—courtesy and enthusiasm
- Personal skills—housekeeping duties

#### Learning guides or activities sheets

Learning guides or activities sheets were given to trainees to provide practice activities or written tasks to be completed while on-the-job. In most companies the training package learning materials had been adapted and enterprise-specific material added to produce their own learning guides or activity sheets. This structured, self-paced learning remained activity-based.

#### Mentoring or coaching

A trained workplace mentor or coach was used to guide employees while working. For example, the role of trained workplace mentor was often to develop the generic skills, such as enhancing communication, presentation and negotiation skills. This structured, self-paced learning encouraged 'learning by doing' with the guidance of a mentor. Any risk of the project not meeting the client's requirements was managed as the mentor would ultimately be responsible for the work.

#### Recording difficulties and successes

In some cases, workbooks were also used on the job to record difficulties or successes, and the different strategies used by staff with individual residents during a shift. Questions about these strategies were then asked by staff at the time of handover to the next shift. This process assisted learning and, once again, emphasised the importance of effective

communication between employees and client, teamwork and application of skills and knowledge to solve problems for individual clients.

### Learning teams

Most companies emphasised the importance of working in teams. In addition, the team approach was used to enhance other generic skills. In one case culturally diverse teams were formed to prepare written reports for clients. This enhanced a number of generic competencies, such as communication with colleagues and customers, working with cultural diversity, working in teams, problem solving, delegation of tasks, planning and organising, project and time management, research and technical or report writing.

In a second case, workplace learning team were formed, where team members needed to understand how to complement each other's skills, knowledge and efforts. The learning team approach, based on adult learning theory, encouraged the group to share experiences through open-ended, problem-centred learning. New learning was deliberately integrated with existing knowledge and experience. This emphasised the generic skills of communication, teamwork, willingness to learn, enthusiasm for improving performance, commitment, flexibility and adaptability.

In a construction context a learning team approach was promoted. All staff, including engineers, supervisors, specialist support personnel, workers, and in some cases sub-contractors and suppliers, participated in the 'work activity briefing'. The aim of this activity was to identify and apply the best solution to a problem or opportunity within the project context. By using the learning team approach, the company achieved improved skill levels, safety, quality and efficiency and developed the project personnel (or future project managers). By rotating the chair for WAB meetings, natural leaders arose in the process and good relationships were developed. This relationship greatly enhanced the learning process. With increased empowerment, commitment and self-esteem of the participants were high. Staff worked in harmony, exceeded client expectations, and wanted to stay working with the particular company.

### Formal training sessions

In most companies, the core competency units required an off-the-job training session conducted by a qualified workplace trainer. This was followed by activities to practise these skills off the job and on the job. When the employee was ready, holistic assessment of performance was conducted on the job.

Role play and communication games were used to practice communication skills. Scenarios and case studies were used to analyse examples and situations with questions, such as 'What if this action were taken?' or 'What did they do wrong?' or 'How would you fix it?'.

Mature-aged workers, and workers from multicultural backgrounds, were able to use their experience in the learning situations (training sessions) and co-facilitate in the learning groups, for example, for cultural diversity training. This added excitement to the learning process.



In one case there was an internal education programme, which was conducted in the evenings. This training included management and human resources related courses, such as training for mentoring, public speaking, interviewing, conducting performance reviews, team building, and professional behaviour. It also included training sessions on service excellence, equal employment opportunity and, working with cultural diversity, disability.

#### Discussion groups or meetings

In an information technology sector case study focus groups were used, where developers, project managers and business analysts met off the job once a month to discuss technical or project management issues. This further developed their generic skills, such as communication, problem solving and project management skills.

#### Self-directed learning activities

Self-directed learning activities, using video, interactive computer software and other learning material, or observation, interviews, personal experience or other project work, were also used for developing and enhancing generic skills.

Scenarios and case studies were also used in self-directed learning activities to analyse examples and situations with questions, such as 'What if this action were taken or this was said?' or 'What did they do wrong?' or 'How would you fix it?'. Projects were sometimes assigned to staff as a learning and development activity.

Visits to other sites or organisations by individuals or teams were sometimes used as training and development activities for staff. In a number of the companies the staff were professional trainers and assessors, who were able to train or assess staff from other organisations.

### Initial Education Students

Teaching and learning in schools have strong social, emotional, and academic components (Elbertson, Brackett, & Weissberg, 2010; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Students typically do not learn alone but rather in collaboration with their teachers, in the company of their peers, and with the encouragement of their families. Emotions can facilitate or impede children's academic engagement, work ethic, commitment, and ultimate school success. Because relationships and emotional processes affect how and what we learn, schools and families must effectively address these aspects of the educational process for the benefit of all students (Elias, Zins, & Weissberg, 1997).

Research has shown that emotional skills are prerequisite to the thinking and learning skills that comprise the time-honoured academic focus of education. For instance, "we know emotion is very important to the educative process because it drives attention, which drives learning and memory". Moreover, emotions impact on perception, motivation, critical thinking, and behaviour.

The social aspects of the learning environment also contribute significantly to learning. As the level of attachment, communication, and respect shared between a child and teacher is enhanced, the child's attention, learning, and brain development follow. Students who report warm, supportive, positive, and respectful interactions with their teachers also tend

to display academic motivation and engagement. When students feel connected emotionally to peers and teachers with high values of learning and expectations of academic success, they adopt these positive values and achievement orientations. Similarly, students perform better academically when they experience a sense of belonging at school and learn in environments characterized by positive relationships.

It has been posited that universal school-based efforts to promote students' social and emotional learning (SEL) represent a promising approach to enhance children's success in school and life (Elias et al., 1997; Zins & Elias, 2006). Extensive developmental research indicates that effective mastery of social-emotional competencies is associated with greater well-being and better school performance whereas the failure to achieve competence in these areas can lead to a variety of personal, social, and academic difficulties. The findings from various clinical, prevention, and youth development studies have stimulated the creation of many school-based interventions specifically designed to promote young people's SEL.

### **Definition and Goals of Social Emotional Learning (SEL)**

Elias et al. (1997) defined SEL as the process of acquiring core competencies to recognize and manage emotions, set and achieve positive goals, appreciate the perspectives of others, establish and maintain positive relationships, make responsible decisions, and handle interpersonal situations constructively. The proximal goals of SEL programs are to foster the development of five interrelated sets of cognitive, affective, and behavioural competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision making. These competencies, in turn, should provide a foundation for better adjustment and academic performance as reflected in more positive social behaviours, fewer conduct problems, less emotional distress, and improved test scores and grades. Over time, mastering SEL competencies results in a developmental progression that leads to a shift from being predominantly controlled by external factors to acting increasingly in accord with internalized beliefs and values, caring and concern for others, making good decisions, and taking responsibility for one's choices and behaviours.

Within school contexts, SEL programming incorporates two coordinated sets of educational strategies to enhance school performance and youth development (CASEL, n.d.). The first involves instruction in processing, integrating, and selectively applying social and emotional skills in developmentally, contextually, and culturally appropriate ways. Through systematic instruction, SEL skills may be taught, modelled, practiced, and applied to diverse situations so that students use them as part of their daily repertoire of behaviours. In addition, many programmes help students apply SEL skills in preventing specific problem behaviours such as substance abuse, interpersonal violence, bullying, and school failure. Quality SEL instruction also provides students with opportunities to contribute to their class, school, and community and experience the satisfaction, sense of belonging, and enhanced motivation that comes from such involvement. Second, SEL programming fosters students' social-emotional development through establishing safe, caring learning environments involving peer and family initiatives, improved classroom management and teaching practices, and whole-school community-building activities. Together these components promote personal and environmental resources so that students feel valued, experience greater intrinsic

motivation to achieve, and develop a broadly applicable set of social-emotional competencies that mediate better academic performance, health-promoting behaviour, and citizenship.

The leading international organisation for promoting SEL is Collaborative for Academic, Social, and Emotional Learning (CASEL). It was formed with the goal of “establishing high-quality, evidence-based SEL as an essential part of preschool through high school education”.

Since its conception, CASEL has defined SEL more specifically and has served as a guide to school-based SEL programming (CASEL, n.d.). According to CASEL, SEL describes the acquisition of skills including self- and social awareness and regulation, responsible decision making and problem solving, and relationship management. The first of CASEL’s 39 Guidelines for Educators delineates four primary domains of SEL: “(1) life skills and social competencies, (2) health promotion and problem prevention skills, (3) coping skills and social support for transitions and crises, and (4) positive, contributory service” (Elias et al., 1997; Kress & Elias, 2006). The key SEL competencies, as defined by CASEL, are given in Table 1 (Payton et al., 2000).

**Table 1**  
**Key Social-Emotional Learning (SEL) Competencies**

#### **Awareness of Self and Others**

- Awareness of feelings: The capacity to accurately perceive and label one's feelings.
- Management of feelings: The capacity to regulate one's feelings.
- Constructive sense of self: The capacities to accurately perceive one's strengths and weaknesses and handle everyday challenges with confidence and optimism.
- Perspective taking: The capacity to accurately perceive the perspectives of others.

#### **Positive Attitudes and Values**

- Personal responsibility: The intention to engage in safe and healthy behaviours and be honest and fair in dealing with others.
- Respect for others: The intention to accept and appreciate individual and group differences and to value the rights of all people.
- Social responsibility: The intention to contribute to the community and protect the environment.

#### **Responsible Decision Making**

- Problem identification: The capacity to identify situations that require a decision or solution and assess the associated risks, barriers, and resources.
- Social norm analysis: The capacity to critically evaluate social, cultural, and media messages pertaining to social norms and personal behaviour.
- Adaptive goal setting: The capacity to set positive and realistic goals.
- Problem solving: The capacity to develop, implement, and evaluate positive and informed solutions to problems.

## Social Interaction Skills

- Active listening: The capacity to attend to others both verbally and non-verbally to demonstrate to them that they have been understood.
- Expressive communication: The capacity to initiate and maintain conversations and to clearly express one's thoughts and feelings both verbally and non-verbally.
- Cooperation: The capacity to take turns and share in both pairs and group situations.
- Negotiation: The capacity to consider all perspectives involved in a conflict in order to resolve the conflict peacefully and to the satisfaction of all involved.
- Refusal: The capacity to make and follow through with clear "NO" statements, to avoid situations in which one might be pressured, and to delay acting in pressure situations until adequately prepared.
- Help seeking: The capacity to identify the need for support and assistance and to access available and appropriate resources.

## Features of successful programmes

The features of quality SEL programs, as suggested by CASEL, are given in Table 2(Payton et al., 2000).

**Table 2**

### Features of Quality Programs that Enhance Social-Emotional Learning (SEL) Competencies

#### Programme Design

Clarity of rationale: Programme objectives and the methods for achieving them are based on a clearly articulated conceptual framework.

Promotion of effective teaching strategies: Programme includes detailed instructions to assist teachers in using a variety of student-centred teaching strategies.

Infusion across subject areas: Programme provides structure for the infusion and application of SEL instruction across other subject areas within the school curriculum.

Quality of lesson plans: Programme lessons follow a consistent format that includes clear objectives and learning activities, student assessment tools, and a rationale linking lessons to program design.

Utility of implementation monitoring tools: Programme provides tools for monitoring implementation and guidance in their use, including how to use the collected data to improve programme delivery.

#### Programme Coordination

School-wide coordination: Program includes structures that promote the reinforcement and extension of SEL instruction beyond the classroom and throughout the school.

School-family partnership: Programme includes strategies to enhance communication between schools and families and involve families in their children's SEL education both at home and at school.

School-community partnership: Programme includes strategies that involve students in the community and community members in school-based instruction.

### **Educator Preparation and Support**

Teacher training: Programme provides teachers with formal training to enable them to comfortably and effectively implement the programme within their classrooms and schools.

Technical support: Programme provides teachers with on-going assistance to further build their capacity to successfully implement the programme and to facilitate the resolution of any implementation issues.

### **Programme Evaluation**

Quality of evaluation: Programme provides evidence of positive effects on SEL-related student outcomes from at least one methodologically sound study that includes program implementation data.

According to Durlak et al. (2011) there is broad agreement that programmes are likely to be effective if they use a sequenced step-by-step training approach, use active forms of learning, focus sufficient time on skill development, and have explicit learning goals. These four recommended practices form the acronym SAFE (for sequenced, active, focused, and explicit). The literature suggests that these recommended practices are important in combination with one another rather than as independent factors. In other words, sequenced training will not be as effective unless active forms of learning are used and sufficient time is focused on reaching explicit learning goals.

An example of an effective SEL programme that has been met with success in various districts in the United States and the United Kingdom is the ELC programme (M. A Brackett et al., 2009; Marc A. Brackett, Rivers, Reyes, & Salovey, 2010; Nicole A. Elbertson et al., 2010). ELC is rooted in emotional literacy, which is derived from work on emotional intelligence and includes five skills identified by researchers as important for successful functioning and adaptation: recognizing, understanding, labelling, expressing, and regulating emotion (RULER programme). ELC includes continuous training to provide teachers and administrators with tools and techniques to enhance their own professional relationships, and the educational, social, and personal lives of their students. The classroom programme involves a series of lessons or “steps” that focuses on an emotion-related concept or “feeling” word. The steps ask students to recall personal associations with each feeling word, use the word in writing assignments pertaining to academic lessons and current events, teach and discuss the word with their families, engage in creative tasks such as artistic representations of the word, and participate in strategy-building sessions to learn techniques for problem solving and regulating emotions. Students in classrooms integrating ELC have demonstrated higher social and emotional competence (e.g., leadership, social skills, and study skills) and better academic performance compared to students who do not receive the programme.

### **Reasons why SEL programmes are effective**

There are a variety of reasons that SEL programmes might enhance students’ academic performance (Durlak et al., 2011). Compelling conceptual rationales based on empirical

findings have been offered to link SEL competencies to improved school attitudes and performance (Zins & Elias, 2006). For example, students who are more self-aware and confident about their learning capacities try harder and persist in the face of challenges. Students who set high academic goals, have self-discipline, motivate themselves, manage their stress, and organize their approach to work, learn more and get better grades. Also, students who use problem solving skills to overcome obstacles and make responsible decisions about studying and completing homework do better academically. Further, new research suggests that SEL programmes may affect central executive cognitive functions, such as inhibitory control, planning, and set shifting that are the result of building greater cognitive affect regulation in prefrontal areas of the cortex.

In addition to person-centred explanations of behaviour change, researchers have highlighted how interpersonal, instructional, and environmental supports produce better school performance through the following means: (a) peer and adult norms that convey high expectations and support for academic success, (b) caring teacher–student relationships that foster commitment and bonding to school, (c) engaging teaching approaches such as proactive classroom management and cooperative learning, and (d) safe and orderly environments that encourage and reinforce positive classroom behaviour. It is likely that some combination of improvements in student social-emotional competence, the school environment, teacher practices and expectations, and student–teacher relationships contribute to students’ immediate and long-term behaviour change.

## Summary

In this paper we presented a selected bibliography on teaching and developing soft skills. Issues that arise by the specific definitions and views of different disciplines have been presented. It has been evident that there are various different approaches concerning what soft skills are and their utility. They are not only based on divergent theoretical approaches, but on intrinsic views of different disciplines also.

There are several approaches on teaching and developing soft skills. One important distinction comes from where the training taking place, that is workplace vs. classroom. The common background of both approaches is the difficult transferability of soft skills among different settings. In this context, workplace training make the transfer easier, since the training is focused in a particular job description, however does not guarantee the transferability among different work environments. For many, like students in initial education and unemployed people, classroom training is the only choice. In this case efforts should be made for adequate simulation of a work environment.

Several good teaching practices have been presented, for both workplace and classroom environments. Soft skills train requires active learning methodologies. Some researchers suggest that the effectiveness of soft skills training is dependent mainly on the range of experiences trainees are exposed to, and not so much on the workplace vs. classroom dualism.

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# MASS teaching

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## Abstract

In this paper we present the context of operation and teaching methodology of Angus Colledge's SkillZone and MASS project. SkillZone's approach is the base of MASS project, so it is examined first. Its target group, main characteristics and teaching methodology is analysed. The characteristics of MASS partner's institutions are presented; their similarities and differences are identified. The educational framework and the characteristics of partners' target groups are compared with respect to several characteristics. The comparison reveals that there are both considerable similarities and differences among the target groups of the partners' institutions. They are all disadvantaged, albeit for different reasons.

## Introduction

The MASS project may be seen as a pilot study of the methodology developed in the framework of Angus Colledge's "SkillZone" programme.

The target of SkillZone is twofold: 1) social inclusion and return to education or employment of disadvantaged and disaffected young people and, 2) improvement of their employability skills, through teaching and developing soft skills. As the two targets are largely interrelated, SkillZone approach may be characterised as a holistic approach, targeting the personal development, social participation and employability, at the same time.

In literature social inclusion initiatives based on arts, sports or use of ICT can be found (Bradbrook et al., 2008). However, a search for an approach similar to SkillZone's one did not return any results. What make the approach unique is its holistic approach and the teaching and development of soft skills as means to achieve its targets.

The main aim of the MASS project is to examine the suitability of SkillZone's approach to a wide range of target groups, with different characteristics and in different cultural environments. In terms of Social Sciences it may be characterized as pilot study, mainly aiming to justify suitability of the approach in different environments, having as additional goals to develop a more systematic framework for data collection, assessment methodologies and discover essential target group characteristics that may impact effectiveness.

This paper consists of three parts. In the first we present SkillZone's methodology, which is the base for the project. We present its target group, principles and framework of operation. In the second part we present the basis of the MASS project, the learning materials provided, their structure, content and the recommendations for their use. In the third part we examine the characteristics of the institutions and target groups of the partners, as well as the educational framework of MASS project, in order to spot similarities and differences which may impact the effectiveness of the approach.

By covering these topics we analyse the context and the teaching methodology of the MASS project. The assessment methodology and the results of the study will be presented in another paper of this volume (see p. 139).

## SkillZone

Angus College's "Skill Zone" ("SkillZone / Angus College," n.d.) aims at developing soft skills to disaffected young people who disengaged from education. Its current form, with the soft skills focus, on which the MASS project was based, started in 2006. Since start approximately 200 young people have engaged in the programme.

SkillZone has been in existence, under various guises and names, for about 13 years when the original focus was more on vocational education. However, the changing student base meant it had to shift that focus onto the soft skills aspect of work and life. Over this long period of time SkillZone has worked with approximately 1300 young people.

The main goal of the "Skill Zone" is the social inclusion of a broad range of disaffected students. Development of soft skills for fostering social inclusion is a field short of research. Searches in the international journals, for similar attempts, haven't revealed any. That makes the SkillZone approach, and thus the MASS project, pioneering.

SkillZone has both full time and part time students. The weekly program for the full time students is 18 hours per week, while for the part time ones is anything from 3 to 9 hours.

Full time students do not attend other programmes. They are usually over 16; however, there is a high number of under 16 who have received permission from the education authority to come to SkillZone full time, instead of going to school. This is usually for young people who never attended school or who are unlikely to achieve any qualifications at all. The over 16 students consist of school leavers, low achievers, youngsters with additional support needs ranging from educational to behavioural.

Part time students, in majority, are still of compulsory education age (ie under 16) and it is desirable for them to also attend school when not in SkillZone. However, this tends not to happen as they usually don't go to school at all. All part time school link students aged 15 get clearances from the education authority to use SkillZone as a school alternative/addition.

The outcomes of the approach are impressive, including reduction of the drop out rate and increase of motivation. Measurements during MASS project (2010-2011) shows that the attendance rate of full time students is 92%. Regarding part time students there is no drop out, 66% having 100% attendance. The attendance of the rest is erratic, however it is considered satisfactory by Angus College, since they have records of early school leaving.

## Narrative

We feel it is better to start the description of SkillZone's operation and characteristics with a narrative, which is also a success story, of one of the students. Apart from the human

aspect, the basic aspects of SkillZone operation become evident. The story was given by a leading teacher.

*“Lewis came to us on a part time basis only (9 hours per week) and attended school on the other days.*

*Prior to joining us he did not have a good relationship with teachers at school and felt they did not support or help him with his work. This resulted in him being angry and resentful towards staff and he got into a lot of trouble for insubordination and even aggression, eventually being asked to leave one school and go to another.*

*This new school tended to almost ignore Lewis given the fact that he would be leaving school officially within 4 months of transferring in and his timetable was very limited and sparse, resulting in him attending Angus College as an alternative curriculum.*

*When he started with us Lewis had a “what is the point” attitude - he felt that he would be receiving the same treatment at college as he had at school.*

*He was interested in a career in uniformed services (army or medical) and so I tried to arrange a work experience programme for him with a local military camp. Unfortunately, with funding and budget cuts within the Ministry of Defence, this was not possible. I expected Lewis to disbelieve me but instead he was very grateful for the efforts made and for the communication and consultation with him.*

*At this point I suggested to Lewis that he may wish to be considered as a class representative - a role which requires election by his peers and would increase his self-confidence and give him a sense of purpose. He agreed and was duly elected.*

*When he officially left school in December, I offered him a full time place in SkillZone (18 hours per week) and he was delighted. He has grown immensely in maturity and responsibility over the past 6 months and has been a very successful, popular and involved student. It must be stressed that Lewis always had this in him - he had just had no opportunity to shine or to grow. SkillZone gave him the respect and consideration he craved, and the result was a grateful, very capable student.*

*Unlike most other students, who have personal issues either on a mental health, financial, or family basis, Lewis lives in a pretty stable family home environment and this obviously helped to shape him into the young man he has become. SkillZone and MASS gave him wings - but deep down he could always fly!”*

## Practices

As it can be seen from the previous story, the operation of SkillZone is based upon three main principles:



1. Individualized approach to students' needs,
2. creation of safe environment,
3. teaching of good social practices and opportunity for self-reflection, through soft skills training.

An individualized growth plan is constructed for each individual student, as part of the standard practice. Each week the teachers, together with the student, evaluate his/her progress toward the specified goals. Support is available in many levels, e.g. psychological, health, career advice etc., as required.

During the operation of SkillZone a safe environment is created for all students. This environment results from both the infrastructure and the attitude of the teachers towards students. Teachers function mainly as facilitators, allowing the self-reflection and expression of the students. Within this environment students are free to express and self-develop themselves without being subjected to criticism and rejections.

In the process of self-reflection a major contribution comes from the development of students' soft skills. By being presented with a number of good practices, and through the study and discussion of several case studies, they come to reflect on their previous actions and behaviours and make decisions for their lives. The group discussions taking place during the courses, allows for team building, which further enhances the feeling of belonging and gives positive feedback.

From the above discussion it is evident that the operation of SkillZone is based mainly upon three learning theories: Experiential Learning Theory, Social Cognitive Theory (Bandura, 2011), and the humanistic Carl Roger's theory (Rogers, 1983).

Social cognitive learning, for example, role modelling, observing and imitating, is used, especially by young children and adolescents, and is the basis of the mentoring or coaching strategies. The information gathered from the experience, or observation of other people's experience, only becomes a learning experience once there is an opportunity to reflect on it, relate it to some theoretical concepts and apply it.

According to humanistic Roger's learning theory the human is seen as inherently good, aiming at his/her self-development and self-expression. He believed that the highest levels of learning include personal involvement at both the affective and cognitive levels. Learning is self-initiated, and so pervasive they can change attitudes, behaviour, and in some cases, even the personality of the learner. It is evaluated by the learner and takes on meaning as part of his/her total experience. Rogers offered several general principles, including:

- We cannot teach another person directly; we can only facilitate his learning.
- The structure and organization of the self appears to become more rigid under threat; to relax its boundaries when completely free from threat...
- The educational situation which most effectively promotes significant learning is one in which 1) the threat to the self of the learner is reduced to a minimum, and 2) differentiated perception of the field of experience is facilitated.

## Target Group Characteristics

### Demographics

The average age of the students involved in the SkillZone is 15 years old, with a range extending from 14-18 years old. Their sexes are mixed, with 50/50 analogy.

### Material/Economic

13% full time SkillZone students are in some form of social work/foster care and a further 10% have their own tenancy in local council accommodation. The remaining 77% reside with parents or guardians. They come from a mix of both poor and affluent areas of the county. Approximately 12% come from single parent families or 2nd/3rd marriages with extended families. Approximately 80% of full time students qualify for an Educational Maintenance Allowance (£30 per week of Government grant).

### Social Capital

Almost all students have partners, families or friends to whom they can talk. Where this is lacking, the College provides additional support in the form of guidance support workers and “buddies” whose role is to have one to one sessions with the young person and provide opportunities and links to external agencies and partnerships which will increase their network of social contacts.

### Health and well-being

SkillZone learners suffer from various disabilities, from mental health to physical and learning issues. These are supported as part of the SkillZone programme via a student services team and a course leader who provides a guidance service to all students on the course. The student services team has access to additional external agencies and resources to help facilitate support for individual students in any area affecting health and well-being. Of the full time SkillZone students 67% currently receive this additional support outwith MASS time.

### Crime and harm

A few SkillZone students have criminal records or tendencies and these ranges from minor infractions to major offences. Most (approximately 90%) have never been charged with any crime.

### Drug abuse

As a rough approximation, 20% of the 65 students involved in SkillZone in 2010-2011 have indulged in or currently do use ‘social’ drugs. For two of them this has caused difficulties. Included in this is alcohol abuse – either by the learner or by relatives at home. 6% of students have difficulties attending college or school because of parental/sibling abuse of substances/alcohol.

## Teaching materials

In the framework of operation of SkillZone and as a part of the MASS project, paper based learning material developed and given to the rest of partners for testing (MASS project, n.d.). These materials are the products SkillZone teachers’ experience. They comprise of 17

“Learning Bytes”, an “Introduction” and some “Additional Materials”. Each “Learning Byte” has the intention to develop one soft skill and contains lesson plans as well as teacher and students resources.

### Soft skills included

The soft skills included in the MASS material, with their synonyms and examples for each are given in Table 1.

**Table 1**  
**Soft Skills included in MASS Materials**

<b>Soft Skill</b>	<b>Other words that mean the same thing</b>	<b>Examples of when this soft skill is used</b>
Manners	Politeness, consideration, courtesy	Saying thank you, holding doors open for others, asking permission to do things etc
Ownership of tasks	Responsibility, duty, dependability	Making sure tasks are done properly, turning up on time for meetings, working in partnership with others and doing your role so they can do theirs etc
Attendance	Turning up, coming in, appearing	Arriving on time for meetings and for work. Making sure you keep people informed regarding your attendance or availability.
Motivation	Incentive, inspiration, drive, impulse	Taking on new challenges, working hard to achieve goals, thinking of new ways to do things
Professionalism	Competent, skilful, dedicated	Working to a high standard, being consistent in attitude (not allowing emotions or personalities to influence you)
Work output	Activity, productivity, production	Meeting deadlines and standards for work. Producing products to target.
Conduct in workplace	Behaviour, attitude, maturity	Respecting others, not playing games when you should be working etc
Timekeeping	On time, not late	Arriving for work or meetings on time, leaving at the right time

<b>Soft Skill</b>	<b>Other words that mean the same thing</b>	<b>Examples of when this soft skill is used</b>
Verbal Communication	Talking, Consulting, meetings, discussing	Using the right tone of voice and words when speaking with colleagues etc
Organisation/ planning	Preparation, scheduling, arranging	Having all required resources to hand, thinking jobs through, arriving on time, meeting deadlines etc
Team-working/ Respect	Esteem, valuing others, helping others, consideration	Working well together on a task, making best use of your skills and the skills of others. Acknowledge the status of others and act accordingly
Helping others	Supporting, offering, training	Giving up some of your time to support those who are struggling or need help to meet a deadline
Conscientiousness	Careful, meticulous, thorough, hard working	Paying attention to detail, accurate work, making sure you do what you are paid to do
Ability to ask for help	Admitting own limitations, confidence, courage	Asking colleagues to show you how to do something or to help you complete a task on time etc
Adaptability/ Flexibility	Compliance, accepting change	Taking on new challenges, accepting changes to rules and conditions, staying late to finish urgent tasks etc

Considering the characteristics of the target group, the soft skills are “defined” through synonyms and examples, not through formal definitions. Since SkillZone’s target group mainly consist of early school leavers, formal definitions may not been understandable and create aversion for the programme. For the same reason the soft skills are not further classified into categories. Every possible precaution has been taken to keep language and presentation as simple as possible.

### Structure of materials

There are 17 learning bytes, one for each soft skill in Table 1, an introductory one and a general one, concerning attitudes and behaviour in general . Each learning byte contains:

- Resource list, which lists the contents of the learning byte.
- Introductory presentation, which explains what the soft skill is about and creates triggers for initial discussion.

- 1-5 lesson plans, relative to the development of the particular soft skill. Each lesson plan is designed for duration of 1 school hour. It contains the timeline of the activities and teaching recommendation.
- Student pack, with the activities contained in all lesson plans.
- Teacher pack, with indicative answers in the activities of the student pack.

Apart from the Learning Bytes, there is an additional introduction to the programme, setting goals and aims and proposing an assessment methodology. It contains separate material for students and teachers.

Also, included is a list of additional resources, which may be useful during the courses.

The activities proposed address a wide range of educational needs, from clarification of terms used to case studies and initiatives for discussion. They come in several forms, including linguistic puzzles, multiple choice questions, case studies, free form questions etc. The main goal of all activities included, irrelevant to their form, is to serve as a basis for discussions, to give examples of good social practice and to promote self-reflection.

## **MASS Project**

As we extensively refer to another paper of this volume (see “Introduction to MASS project”), the MASS project’s main intent is the transfer of SkillZone experience to a number of partners from other countries. The partners translated the learning materials and applied them in their own institutions.

In this paper we will present the target groups and teaching efforts of the partners. The assessment methodology and results are presented in another paper in this volume (see p. 139). Even though we have already presented the SkillZone’s target group characteristics, in what follows, for completeness we will also include the same data with the ones from the rest of the partners.

## **Data Collection Methodology**

In order to ensure some degree of uniformity and comparison among the results reported from different partners, the data collection has been done through a standardized document structure, having the form of a template, presented at Figure 1. The partners were asked to input actual data under the headings provided. They were allowed to modify the template’s structure, if it didn’t fit in their approach and framework of operation. However the modifications made were minimal.

The format of the template reflects a compromise between the need for the partners to act independently and the need for a uniform report, which make comparisons feasible. As each partner has different context of soft skills training, it is expected that different teaching methodologies and assessment practices are required. Concerning the assessment frameworks, they should be compatible with each partner’s operational practices and give information of interest to them, which may be different for each partner. On the other hand, some least common denominators should exist, so as to be able to draw some conclusions.

The template proposed addresses this problem by providing quite general headings, which try to organise the information in a uniform way, while giving the freedom to each partner to present a different methodology.

Each part of the template aims at examining a different part of the teaching effort or the assessment of the results.

Figure 1

The structure of the template used for the pilot course data collection

## **1 Framework of operation and Target groups of the organization, in general**

### **2 Educational Framework**

#### **2.1 Targets**

#### **2.2 Success Criteria**

#### **2.3 Teaching methodologies**

#### **2.4 Assessment**

##### **2.4.1 plan**

##### **2.4.2 methodology**

#### **2.5 Context / Target group**

##### **2.5.1 Number of classes**

##### **2.5.2 Weekly programme of the classes**

###### ***2.5.2.1 for MASS teaching***

###### ***2.5.2.2 overall***

##### **2.5.3 Number of students**

##### **2.5.4 Number of teachers**

##### **2.5.5 Courses conditions**

###### ***2.5.5.1 Distance form home***

###### ***2.5.5.2 Classroom Personalization***

###### ***2.5.5.3 Placement of desks***

###### ***2.5.5.4 Teaching aids (computer, whiteboard etc)***

###### ***2.5.5.5 Obligatory / no obligatory attendance***

### **3 Characteristics of the MASS students**

#### **3.1 Comparison with the general target group**

#### **3.2 Statistical Indices**

##### **3.2.1 Age**

##### **3.2.2 Sex**

##### **3.2.3 Employment**

#### **3.3 Socio-economic factors**

##### **3.3.1 Resources**

###### ***3.3.1.1 Material/Economic***

###### ***3.3.1.2 Public and Private Services***

###### ***3.3.1.3 Social Capital***

##### **3.3.2 Participation**

###### ***3.3.2.1 Economic***

###### ***3.3.2.2 Social***

*3.3.2.3 Culture, education and skills*

*3.3.2.4 Political and Civic*

**3.3.3 Quality of Life**

*3.3.3.1 Health and well-being*

*3.3.3.2 Living environment*

*3.3.3.3 Crime and harm*

**3.3.4 Drug abuse**

## **4 Selection Procedure**

**4.1 Why did you select the specific group?**

**4.2 How did you select them?**

## **5 Initial Soft Skills assessment**

**5.1 How did you evaluate the initial level of your students' soft skills?**

**5.2 Why do you think they require training on soft skills?**

## **6 Progress assessment**

**6.1 Experiences**

**6.1.1 Students' involvement**

**6.1.2 Stories of success**

*6.1.2.1 Comment and discussion*

**6.1.3 Stories of failure**

*6.1.3.1 Comment and discussion*

**6.2 Assessment**

**6.2.1 Strong points**

**6.2.2 Weak points**

## **7 Final assessment**

**7.1 Assessment Targets**

**7.1.1 Learning Materials**

**7.1.2 Student progress**

**7.1.3 Teacher's evaluation**

**7.1.4 Relations among Students / team dynamics**

**7.1.5 Relations among Student and Teachers**

**7.2 Criteria**

**7.3 Method(s) description/application/results**

**7.4 Rate of attendance**

**7.5 Drop out rate**

**7.5.1 From MASS classes**

**7.5.2 From school**

## **8 Discussion/Results**

**8.1 Comments/Overall impression**

**8.2 Impact on students**

**8.3 Impact on teachers**

**8.4 Impact on Institution**

## 8.5 Suggestions

The rationale behind the form for data collection template is given below:

- 1 Framework of operation and target groups of the organization in general:** This part has the intention to collect information about the business case of the various institutions which participated in the project. This way the general framework of operation is made clear and comparisons among the institutions can be made.
- 2 Educational Framework:** The intention of this part is to collect information on the educational framework under which the MASS courses have been delivered. It contains sub parts which deal with subjects concerning both teaching and evaluation.
  - 2.1 Targets:** The educational targets each institution had when they decided to participate in the project and deliver the MASS courses.
  - 2.2 Success Criteria:** The criteria each partner uses to decide the degree of success of MASS courses.
  - 2.3 Teaching methodologies:** Description of the most frequently used methods of each partner (e.g. brainstorming, discussion groups, role play etc). This indicator suggests whether active learning methodologies were used.
  - 2.4 Assessment:** A description of the assessment methodology each partner used in order to measure against the success criteria. Both assessment plan and assessment methods are requested, as subparts. Each partner had the freedom to use the methodology that best fits into its framework of operation.
  - 2.5 Context/Target group:** Information regarding the context of MASS courses, such as number of classes, number of students, number of teachers and course conditions that may influence the success of the trial.
- 3 Characteristics of the MASS students:** Several indicators that may characterize the MASS target groups.
  - 3.1 Comparison with the general target group:** Is an indicator whether the MASS target group might be representative of the institutions' target group.
  - 3.2 Statistical Indices:** Demographics of the MASS students (age, gender, employment etc).
  - 3.3 Socio-economic factors:** Some quality of life factors (poverty, crime, drug abuse etc.) that might correlate with the success of the MASS approach. The original SkillZone target group was a disadvantaged one. We want to estimate whether the degree of success of MASS approach depends on the degree of disadvantage of the target group.
- 4 Selection procedure:** The rationale behind the partners' choice of selecting the specific group. Sub topics about why and how the selection had been made are included.
- 5 Initial Soft Skills Assessment:** Feedback about the method and the result of the initial MASS students' soft skills assessment, to serve as a basis of comparison with the results after the courses. Sub topics for the process of initial evaluation and why partners think their target groups needed more soft skills training are included.



**6 Progress Assessment:** In this section we assess the quality of process during MASS courses. The assessment is mainly qualitative. As indicators student involvement and narratives of successes and failures are used. Additional means of assessment, chosen by each partner, are used in order to evaluate the strong and weak points of the process.

**7 Final assessment:** In this section partners are requested to give results of the final assessment.

**7.1 Assessment Targets:** All the usual educational assessment targets were included, namely learning materials, student progress, teachers' point of view, relationships among students and among students and teachers. In this sub-section, partners were requested to give the results of the relevant assessments.

**7.2 Criteria:** If partners' criteria for the final assessment were different from the ones in section 2.2, partners were requested to elaborate further.

**7.3 Method(s) description/application/results:** This section is meant to include a detailed description of the final assessment method(s), its/their application and results.

**7.4 Rate of attendance/Dropout rate:** This criterion is inherited from SkillZone, which achieved a low dropout rate. Its intention is to explore whether MASS courses have the same effect in the other partners institutes. It may not be relevant for some partners.

**8 Discussion/Results:** Partners were requested to evaluate their results, elaborate on the impact of the courses, develop possible explanations and make suggestions for further improvement. Subsections with specific targets are included.

## Partners

### Institutions

In Table 2 the general descriptions of partners' institutions are given. The points more relevant to the MASS pilot study are reviewed in

Table 3. From

Table 3 we can see that two of them, United Kingdom (UK) and Netherlands (NL) - ROC Aventus, are vocational schools, aiming at adolescents. Two others, Greek (GR) and Swedish (SW) ones, are lifelong learning institutions. Greek institution is an adult general education institution, at gymnasium (lower secondary) level. The Swedish one targets education for labour market. The Romanian (RO) institute is a teacher training centre; while the remaining one, Netherlands- Bureau Zuidema, is a training company aiming mainly at corporate employees.

From the above project description it becomes evident that in the MASS project a large variety of organizations have participated, targeting different groups with different goals. This gives the chance to explore the efficiency of SkillZone methodology in various contexts, countries and target groups.

Table 2

## General description of partners' institutes

UK	<ul style="list-style-type: none"> <li>Angus College, Arbroath, Scotland Angus was established as an FE College in 1956 and has a history of steady growth and currently supports 11,000 enrolments per year across 120 vocational programmes from introductory level to advanced HN courses. Nationally, the college is recognised as one of the most efficient and financially sound colleges within the sector, managing a budget of around £11 million pa. In 2006 Angus established the SkillZone, an experimental approach to dealing with the growing numbers of hard to place, disadvantaged young people. The overall model has proven to be hugely successful, evidenced by better performance indicators than other college mainstream programmes and is also recognised as a model for leading innovative practise by HMLe. Particular success has been attributed to innovation in approaching learner development for measuring and developing soft skills in a class environment, skills which are considered critical by employers.</li> </ul>
GR	<ul style="list-style-type: none"> <li>Second Chance School of Neapolis, Thessaloniki, Greece Second Chance School of Neapolis Thessaloniki is a public adult education school which targets adults that have not completed compulsory education. Created in 2001 by the Secretary of Adult Education of Greece, the school supports 100 students per year of all ages and social groups. Attendance is for 2 years and leads to a high school diploma which covers maths, sciences, informatics, social education, arts and specialised vocational subjects. Provision is very different from that of Greek secondary education in that content is flexible go meet the individual needs and perferences of students and favours active learning concepts. The school has specific expertise in working with students who have disengaged from compulsory education, characteristically the group are at risk of social exclusion, are unemployed, have learning difficulties and disabilities.</li> </ul>
SW	<ul style="list-style-type: none"> <li>Adult Learning and Employment (Larande och Arbete), Bollnas, Sweden Adult Learning and Employment, Municipality of Bollnäs, is a public body which works at local, municipal level in the provision of adult education from basic to upper secondary level, labour market activities for the unemployed and the integration of immigrants included unaccompanied minors. The overall aim of the organisation is to undertake initiatives which up skill and motivate learners to engage in lifelong learning, training and encourage participation in the labour market. The main function of the Labour Market Unit is to support the individual in order to enhance their entering to the labour market.  This takes the form of individually tailored interventions such as workplace practices, job training, coaching, individualized employment, training and guidance.  The work takes place in collaboration with the Public Employment Service, the Social Administration in the municipality, the Swedish Social Insurance Agency and other partners in both public and business sector. Cooperation takes place at local, regional, national and international level.  The Labour Market Unit consists of many different activities and conducts its</li> </ul>

	activities directed to the target group. In addition, the activity has a large number of people employed in various forms of employment, some of which are publicly funded.
RO	<ul style="list-style-type: none"> <li>The Teacher Training Centre, Bucharest, Romania The Teacher Training Centre is a leading provider of in-service training and professional development for teaching professionals in Romania and is based in Bucharest. The overall goal of the centre is to contribute to permanent improvement in teaching and learning and adapting teacher training methodologies to meet the needs of students within Schools. The centre supports all teaching professionals in the city and each year supports 6000 professionals through delivery of over 25 different training courses covering a wide range of subjects. These include: Didactics of different school subjects, character education, communication &amp; negotiation, management and leadership. Many of the educational programmes run involve teachers and their students in collaborative activities related to specific subjects.</li> </ul>
NL	<ul style="list-style-type: none"> <li>ROC Aventus, Utrecht, the Netherlands ROC Aventus is a regional training centre providing vocational education &amp; training and adult education across a broad range of courses. ROC supports 17,000 learners per annum from Apeldoorn, Deventer, Zutphen. ROC have particular expertise in working with those who lack or have low basic skills and qualifications but currently have no recognised model for measuring and assessing soft skills through this work.</li> <li>Bureau Zuidema, Leusden, the Netherlands Bureau Zuidema offers consultancy and training for individuals and organisations. They provide training and advice when on changing, developing and learning, both on an individual and on a company level. Bureau Zuidema has unique expertise in the field of influence and development of interpersonal skills, providing training on this subject on all levels. They focus on the development of behaviour, self-awareness, and skills. They have a special expertise in (organising and stimulating) formal and informal learning and have participated in Leonardo projects with this expertise. Recently they participated with the Dutch Centre for accreditation of prior learning and ROC Aventus in an Leonardo project on APL in companies.</li> </ul>

**Table 3**

Overview of the partners' institute missions and target groups

Country	Orientation	Target Group
UK	Vocational school	Adolescents
GR	General education school	Adults
SW	Vocational training organisation	Adolescents, Adults
RO	Teacher Training Center	Adults (Teachers)
NL-Roc Aventus	Vocational school	Adolescents
NL-Bureau Zuidema	Training Company	Adults (mainly corporate employees)

### Characteristics of the MASS pilot groups

In Table 4 the basic characteristics of the groups participated in the MASS pilots are given.

Table 4

Basic characteristics of the MASS pilot groups

Country	Group Description	No of Students	No of teachers
UK	1. Full time SkillZone students	30	5 (overall)
	2. Part time SkillZone students	20	
	3. "Skills for Work" (part time)	12	
GR	Regular school students	22	4
SW	Regular students (2 groups)	35	5
RO	Vocational Students (5groups)	60	20
NL	1. Multi-sector orientation	14	7
	2. Healthcare orientation	20	8

UK groups no 1 and 2 (from now on referred as UK - 1 and UK - 2, respectively) are regular SkillZone groups, as described earlier in this paper. Group no 3, "Skills for Work" (from now on referred as UK-3), comprise 12 student hairdressers, who were sent to SkillZone from another department of the College, as lacking soft skills. They attended SkillZone in a part time basis.

SW groups are unemployed young people who have been registered at the Public Employment Service for at least three months.

RO collaborated with vocational colleges in the area of Bucharest, because, as a Teacher Training Centre, it does not have students itself.

NL groups are both in MBO-1 level. In the Netherlands, there are a number of different forms of vocational education, each for different age groups and with different goals. After leaving primary school, all pupils are required to enter secondary education where they choose between general secondary education (HAVO/VWO, age 12-17/18) and pre-vocational education (VMBO, age 12-16). Pre-vocational education serves as a preparation for vocational education (MBO, age 16-20), taken at a Regional Training Centre (in Dutch: Regionaal Opleidings Centrum, ROC).

NL group no 1 (from now on referred as NL – 1) had multi-sector orientation, while group no 2 (from now on referred as NL – 2) had a healthcare orientation.

All groups, except the UK ones, are representative samples of the students of each institution. They are not specially selected. This means that we may generalise the trends observed rather safely, thus becoming able to speculate about the effectiveness of the MASS approach for the respective populations, not just the samples examined. It should be noted, however, that the samples used in the study were small, making generalisations to population limited, limiting the generalisations to trends speculations.

In total, 213 students and 49 teachers/trainers participated in the MASS pilot.

**Table 5**

Demographics of the students who participated in MASS pilot study

Country	Age (Range)	Gender		Employment
		Male	Female	
UK - 1	14-18	15	15	No
UK - 2	14-16	10	10	No
UK - 3	14	0	12	No
GR	21-47	13	9	Unemployed (50%), Full Time (36, 4%)
SW	16-24	15	20	Unemployed
RO	15-17	21	39	Part Time
NL - 1	16-20	7	7	Part Time
NL - 2		2	18	Part Time

In Table 5 the demographics of the students who participated in the MASS pilot study are given. It can be seen that the majority of students are in the age range 14-20. Exception is the GR group, which consisted of adults. This gives the opportunity to examine the effectiveness of the MASS methodology in a completely different target group.

In total 83 male and 130 female students participated. Their employment status ranges widely, from fully employed, to unemployed.

SkillZone students do not have additional jobs, apart from school.

SW students are unemployed, since this is a requirement to participate in the employability programme, in the framework in which the MASS pilot took place.

GR group, consisted of adults who wanted to have a full time job, in order to support themselves and their families. However, as the Greek partners report, 50% unemployment is close to the school average. This was a strong initiative for Greek participation, hoping that through soft skills development they will enhance their students' chances for employment.

NL and RO groups both consisted of part time working students. NL students work mainly during weekends and they also take some money from their internships, during their study time. As RO partners reported, most of their students work to cover their personal expenses, however some need to work to support their families also.

**Table 6**

Overall and MASS weekly program of the student groups that participated in the pilot study

Country	Overall			MASS classes			
	Weekly (hours)	No of weeks	Obligatory attendance	Weekly (hours)	No of weeks	No of Learning Bytes	Obligatory Attendance
UK - 1	18	36	Yes	3	36	17	Yes
UK - 2	3-9	36	No	1	36	17	No
UK - 3		36	Yes	1-2	36	17	No
GR	25	40	Yes	2	17	13	No
SW	40	12	Yes	4	12		Yes
RO	30	40	Yes	2 + some subjects in normal classes	16	17	No
NL - 1	25	40	Yes	2	10	10	Yes
NL - 2	25	40	Yes	2	10	10	Yes

In Table 6 the overall programmes and MASS pilot weekly programme, for each participating group are given. The “Overall” columns refer to the normal weekly programme of the institutions, including all of the subjects taught. The “MASS classes” columns refer to the programme of the MASS pilot, taught within, or additional, to the overall programme.

GR and NL, UK and RO are normal schools that operate throughout school year, for approximately 40 weeks, depended on the specific educational system.

SW is a labour market oriented program, which lasted 12 weeks.

In NL, GR and RO institutions the MASS pilot ran for a period of several weeks, much shorter than the overall institute programme. In this sense MASS courses may be considered an addition to the normal operation of the school and it should be considered a short to medium term training activity.

In the case of UK and SW MASS courses ran throughout the program. Actually, the design of the overall program included MASS teaching as an essential element.

Summarizing the combinations among duration and inclusion of MASS training as essential or additional part to the overall programme we can differentiate among 3 different cases:

1. Long term training as essential part of the overall programme design (UK).
2. Short/Medium term training as essential part of the overall programme design (SW).
3. Short/Medium term training, additional to the overall programme, without major impact on the rest of the program (GR, NL, RO).

Each of these cases may have different outcomes, resulting from the way MASS courses are integrated to the overall programme alone, even though in all cases the same philosophy, materials and guidelines were used. For a pilot study, like the one conducted in the MASS

project, this may be a good thing. However, for a research aiming at producing generalizable results, this variability may be viewed as a methodological problem.

**Table 7**  
**Conditions that may facilitate or inhibit participation in the MASS courses**

Country	MASS course conditions			
	Distance from school/transportation	Classroom Personalisation	Placement of desks	Teaching aids
UK - 1	40% within walking distance. College transport for the rest	No	Mostly workstation. For group discussions no desks used (only chairs) or a 'round the table' approach, using large tables.	IT, Whiteboard
UK - 2	60% within walking distance. College transport for the rest.			
UK - 3	60% within walking distance. College transport for the rest.			
GR	5km in average. Local transport and private cars are used for transport.	Yes	Round table	Laptop, projector, whiteboard, TV, DVD, flipchart
SW	6km on average. The transportation means of the students are unknown.	No	Walking distance, public transportation, private cars.	Computers, whiteboards, smart boards
RO	10km average distance from school. Local transportation.	No	Variable, according to classroom used.	Board, computer, video projector, CD player and flipchart
NL - 1	0-20km from school. Transportation means are not given.	Yes	Variable.	Computers, smart boards, blackboards
NL - 2		No	Variable.	

There are conditions which, even though not critical by themselves, can either facilitate or inhibit the effectiveness of the educational efforts. Some of these conditions, as applied to MASS partners' institutes are given in Table 7.

Distance from school/transportation means relates with how easy it is for a student to reach school. Obviously, if it is very difficult, it might be reason to abandon school by itself. If it is easy, even in a difficult situation, it may influence the decision to continue in school.

Concerning the distance from school and the transportation used, therefore how easy it is for a student to reach school, there are no major differences among partners' institutions. In all cases the average distance is in the range of few kilometres and local transport, even public or provided by the school, is used.

Classroom personalisation relates to the feeling of a safe environment. When the students have the ability to personalise their classroom they obtain a sense of active participation in a

school that respect their needs. They feel their decisions are respected and the team spirit may be enhanced, especially if the decorations result from teamwork. They feel more comfortable during lessons and their experience is closer to one “like home”. This may result in an enhanced feeling of a safe environment, which in turn may facilitate learning.

In the case of UK, SW, RO, UK and NL - 2 there is not classroom personalization, while for GR and NL - 1 there is.

It should be noted that the partner’s institutes have considerable differences concerning classroom personalization.

The teaching aids used are more or less similar among partners.

**Table 8**  
Students’ quality of life indices

Country	Living Conditions			
	Material / Economic	Public and Private Services	Social Capital	Health and well-being
UK - 1	Low	Adequate. Limitations due to rurality of geographical area.	Adequate	Various disabilities from mental health to physical and learning issues.
UK - 2				
UK - 3				
GR	Near official level of poverty	Adequate in principle. Limitations due to functional illiteracy.	Adequate	Public average.
SW	Adequate	Adequate	Unknown	Public average.
RO	Low compared to average RO income	Adequate for public services. Limitations for private services, due to limited income.	Adequate	Public average.
NL - 1	Adequate	Adequate	Low	Public average.
NL - 2				



**Table 9**  
**Students' quality of life indices**

Country	Living conditions		
	Living environment	Crime and harm	Drug abuse (including alcohol)
UK - 1	Ranges from third generation unemployed to financially comfortable and secure.	Criminal record for 10% of students	20% of students (rough approximation). 6% with alcoholic parents or siblings.
UK - 2			
UK - 3			
GR	Unknown	No criminal records.	None
SW	With families or cohabiting.	Some criminal records.	Some drug abuse
RO	Live with families.	No criminal records	50% occasional users. 10% with alcoholic parents.
NL - 1	Low quality	A lot have criminal records.	50% alcoholic
NL - 2		10% with criminal records	Unknown

Table 8 and

Table 9 contain information related to students' quality of life.

As we analyse earlier in this paper, SkillZone's students are disadvantaged ones. The MASS project had a double target: on one hand social inclusion of disaffected young people and on the other enhancement of their employability qualifications. These two targets are complementary; however emphasis to one of them may be given, according to characteristics and degree of disadvantage of each group.

In this context it is useful to examine some indices which may characterize the disadvantaged state of each group (Bradbrook et al., 2008, p. 17).

The Swedish institution's data collection policies differ from the other groups so their information is not included here.

Poverty and access to material resources is the dominant reason for disadvantage (Bradbrook et al., 2008). UK, GR and RO reported that their students are below or close to the official levels of poverty in each country. This is a strong indication that the target groups are disadvantaged ones. NL reports that their financial state of their target group is "adequate".

Concerning access to public and private services (e.g. hospitals, libraries, cinemas etc.) all partners report that it is adequate, however limited due to different reasons. For UK the main reason that prohibits access to services is rurality, for GR functional illiteracy, and for RO low income.

All partners, except NL, say that their students have adequate social capital. This means that they have significant others (e.g. parents, friends etc.) with whom they can talk and get support in their problems.

The state of health is close to the public national average for GR, RO and NL. UK students suffer from several health problems, either physical or psychological. Therefore there is considerable variability among the groups of different partners.

The information on living environment is rather sparse. For UK there is a great variability, for GR it is unknown, RO says that their students live with their families, however there is not information on the wellbeing of families. Finally, NL students have a low standard of living, compared to the national average. There is a great variability within and among partners, which make it a subject worthy of further investigation.

Significant variability can also be observed concerning crime and harm. Initially we should observe that there is no information on whether the students are victims of serious crime or abuse from any of the partners. Concerning criminal records, at least 10% of students from NL and UK have ones. However GR and RO students have not been charged with any serious crimes. Both significant variability among the partners and significant level of criminal records for NL and UK can be observed.

Elevated drug abuse (including alcohol) can also be observed in almost all partners' target groups (UK, RO, NL). GR do not report drug use among its students. This is caused by the fact that they don't accept drug users, due to lack of supportive infrastructure.

Summarizing, we can observe that target groups of all partners have characteristics of social disadvantages, even though not for the same reasons. The SkillZone approach and MASS project have a double orientation by design; both to promote social inclusion and enhance employability skills, which fit well with the characteristics of groups like the ones presented above. This double orientation is what makes the approach unique and holistic in its nature. No previous report of a similar approach can be found in the relevant scientific literature.

## Discussion

In this paper we have presented the framework of operation of Angus Colledge's "SkillZone" and of the MASS project. SkillZone is the base of MASS project, so it has been examined first.

SkillZones' target is to enhance social participation and employability chances of a wide variety of disadvantaged and disaffected young people. The main characteristic of its target group are early school leaving, physical or mental disorders, drug and alcohol abuse. Its methodology is based on individualized approach, creation of safe environment and development of soft skills.

The MASS project, based on SkillZone methodology, aims at examining the effectiveness of the approach to different target group, operating in different cultural environments. A critical comparison among the characteristics of partners' institutes and target groups has been given. There are considerable similarities and differences among these groups. Their main similarity is attributed to the fact that they are all disadvantaged, facing social marginalization, albeit for different reasons. A widespread problem, common to most of the partners, is drug and alcohol abuse.

The educational framework varies considerably among partners. Some MASS project programmes operated as a short to medium term training, attached to a larger and given educational programme. In others, the framework of operation designed from the beginning to encompass the MASS methodology as an essential part. The effects of the different approaches must be examined.

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# **PART 3: SOFT SKILLS ASSESSMENT**



# Soft Skills Assessment

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## Abstract

In this paper we review assessment theory and practice, with focus on soft skills assessment. Basic facts concerning standard educational assessment theory and practice are given, including formative and summative variations, quality indicators and design principles. Soft skills assessment is addressed, with reference to its principles, factors influencing the choice and design in a particular situation, assessment models and challenges.

Soft skills assessment is still a new and under developed domain that requires more research and standardization. Each institution has to choose among a variety of options and approaches what is most appropriate for its particular conception of soft skills and teaching practices.

## Introduction

Educational assessment has been a topic of great concern since the beginning of education. Its forms and aims, however, change over time, according to the specific goals of education and training and learning theories in use.

With the transformation towards competence-based education and training, the characteristics and methods of assessment should also change. Traditionally assessment examines the acquisition of basic skills and knowledge. However it is necessary to evolve as dealing with complex competencies, in diverse environments, having an increasingly formative orientation.

Additional implications arise if we include soft skills, as part of the whole picture. Recently involved in the process of self-growth, active citizenship and employment, they still lack the clarity, typical of well-established constructs. The lack of clarity can be pinpointed in the absence of stable and widely acceptable definitions, the way they should be taught and the interwoven with traditional subjects. These difficulties are reflected in soft skills assessment, its goals, design and implementation.

In this paper we present selected literature reviews of educational assessment with a focus on soft skills assessment. We cover the basics of assessment, the notions of formative and summative assessment as well as traditional quality indicators. We continue by focusing on the changes required in assessment theory and practice in order to be useful in competence based approaches. Finally we examine the principles, models and challenges exist in soft skills assessment.

## Assessment basics

### Definition

Educational assessment is a process of gathering evidence, making judgments and drawing inferences about student achievement and performance (Curtis, 2010). Pellegrino, Chudowsky and Glaser (Pellegrino, Chudowsky, & Glaser, 2001, p. 42) described assessment in the following terms:

*An assessment is a tool designed to observe students' behaviour and produce data that can be used to draw reasonable inferences about what students know.*

That description is useful as it draws attention to three key elements common to all assessments: observation, data and inference. The authors went on to describe these elements as 'the assessment triangle with observation, interpretation (of data) and learner cognition (the object of inference) at its vertices. The description leads to several questions. First, what observations are to be made? This question draws attention to the contexts and tasks that are used in order to gather evidence. Second, what data are to be gathered? This element requires that some mechanism be used to rate observed behaviours. This rating may be qualitative only, or qualitative descriptors may be ranked in order to generate scores. Third, what inferences are envisaged? Further, whether the judgments are quantitative or qualitative, they are made about current behaviours in relation to expected standards of performance. Indeed, it seems that the process of recognising standards and of judging students' work in relation to those standards is central to the assessment enterprise.

Each of these questions cascades into further sets of questions. Many constructions of the assessment domain are possible and each leads to different inferences and requires different tasks and contexts. How the tasks are constructed can vary widely, from selection to construction of responses. Selection occurs in multiple-choice tests while constructed responses may vary from short answers to test questions, to extended responses in essays, to products and to performances. Finally, how the data are used can vary from feedback to learners using qualitative descriptions, to diagnostic investigations and to very detailed psychometric modelling and measurement in order to draw inferences about individuals, class or school groups, or national education systems.

Wiggins (1998, p. 7) asserted, "the aim of assessment is primarily to educate and improve student performance, not merely to audit it." However, various other authors have identified three broad purposes for assessment, namely to monitor and improve learning, to direct instruction and to monitor system level performance. Airasian and Russel (2007) identified six purposes, namely to:

- diagnose student learning difficulties;
- make judgements about student academic performance;
- provide feedback and incentives to students;
- placement of students;
- planning and conducting instruction; and
- establish and maintain social equilibrium in the classroom.

Appropriate assessment at the individual level may lead to enhanced individual learning, in part by signalling that what is being assessed is regarded as important. The signalling function of assessment may be particularly important in situations where the assessment is mandated by agencies outside the learner–instructor interface, since importance is indicated both to learners and to their teachers. A corollary of this is that, where assessment of particular attributes is not mandated, low importance is being signified.

Assessment also reveals individuals' achievements and this may be useful information to both individuals and potential employers, indicating areas of strength and weakness. Aggregation of individual achievement can be used at the system level to monitor system performance.

Others have described assessment purposes as assessment of and for learning (P. Black & Wiliam, 1999) and assessment as learning (Earl, 2003). Of these approaches, assessment of learning relates most closely to evaluating individual achievement. This may be done at the end of a term or school year or at the end of compulsory schooling and may be used to assign grades and to rank students for admission to further stages of education. When appropriately aggregated, using multilevel methods, data on individual achievement can be used to evaluate programs, schools and education systems. Programs such as the OECD's Programme for International Student Assessment (PISA) and the International Association for the Evaluation of Educational Achievement (IEA) Trends in Mathematics and Science Study (TIMSS) use data in this way to compare national education systems.

Assessment for learning is a process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there. This approach occurs typically within classrooms during a school term or year, but it is also used, particularly in special education, to diagnose learning difficulties and to prescribe learning programmes to remediate those learning difficulties.

Assessment as learning exhorts teachers to use assessment activities as opportunities for learning as well as for making judgments about student's understandings to inform teaching processes and to direct individual learning for students. Others have proposed that all classroom activities, including assessment tasks, should be opportunities for student learning. In these cases, assessment tasks become learning tasks and the phrase 'assessment as learning' becomes particularly apt.

Boud (1995, p. 38), having summarised a body of research on assessment, concluded that much assessment is of those aspects of learning that are easy to assess, which leads to low-level skills development. He cited Eisner (1993) who listed desirable attributes of assessment as including:

- assessment should be authentic (real-world like);
- assessment should be process rather than results oriented;
- the act of assessment signals the importance of what is being assessed, so assessment is a driver for learning; and assessment activities need to be seen by students as worthwhile and interesting activities. (Boud, 1995, p. 40)

## Formative and Summative Assessment

Assessments have been described as either formative (assessment as and for learning) or summative (assessment of learning) and a clear demarcation has been drawn between them. Formative assessment, where the purpose is to assist learning, is most useful to individuals because they have time to make changes as a result of assessment, if necessary. Summative assessment, designed as a basis for summarising and reporting achievement, presents information on achievement in a concise way that is of use to potential employers.

### Summative Assessment

There are certainly instances where the distinction is clear. In high stakes academic assessments and in professional or trade licensing, summative assessment is the primary and perhaps only interest. Before candidates can be admitted to professional practice, licensing bodies must be assured that candidates have the knowledge and skills that are regarded as necessary. These assessments are summative only; licensing bodies are responsible primarily for ensuring that practitioners are competent.

Curtis (2010), reviewing literature, gave a categorization of summative assessment, based on the criteria used. The categories and a short description for each one is given below.

#### *Norm-referenced assessment*

Students are assessed normatively, when they are compared against each other. That was common practice in the past and continues to be used when assessment is conducted for selection and sorting purposes. For these purposes, it is effective, as the absolute level of a student's performance is not at issue; rather, the purpose is to identify those students who demonstrate superior performance compared with others.

#### *Criterion-referenced assessment*

In criterion-referenced assessment, criteria were specified for each assessed task and students' performances were compared with the criteria. Provided raters applied the criteria consistently, their judgments of student performance should be objective (that is, independent of the student or the rater or the particular set of tasks on which the assessment occurred).

A clear advantage of criterion-referenced over norm-referenced assessment is that students can be informed of the criteria that will be used in advance of undertaking the tasks. Thus informed, students can direct their learning strategies at meeting criteria at the level of their choice. If criteria for acceptable, commendable and outstanding work are specified, students can allocate effort in order to attain their target level.

The criteria specified for a particular test may include a level of arbitrariness. For example in a classroom the teacher sets the passing score. Deciding the passing score is subjective, not objective. Sometimes the requirements for cut scores may be lowered as to allow more students to pass the test. A small change in the cut score would not change the meaning of the test but may greatly influence the number of student that passes the test ("Criterion- and Standards- Referenced Tests | FairTest," n.d.).



### ***Standards-referenced assessment***

In "standards-referenced testing" or "standards based assessment" criteria are given in the level of course/curriculum content (or "curriculum frameworks") which describe what students should know and be able to do at various grade levels. They also have performance standards that define how much of the content standards students should know to reach the "basic" or "proficient" or "advanced" level in the subject area. Tests are then based on the standards and the results are reported in terms of these "levels". This way the arbitrary determination of criteria (like the passing level) may be reduced ("Criterion- and Standards-Referenced Tests | FairTest," n.d.)

### ***Construct-referenced assessment***

William (2001) proposed construct-referenced assessment. He was critical of criterion-referenced assessment, especially for high stakes testing, suggesting that it might lead to 'teaching to the test'. That is, teachers may focus upon the specified criteria and not attend to other aspects of the domain that were important, and because criteria tended to be defined narrowly and specifically in terms of the assessment tasks that were set, criterion based assessment might not yield the learning goals that were desired. William's solution to the problem was to use expert assessors who had shared understandings of the domain.

The innovative feature of such assessment is that no attempt is made to prescribe learning outcomes. In that it is defined at all, it is defined simply as the consensus of the teachers making the assessments. The assessment is not objective, in the sense that there are no objective criteria for a student to satisfy, but the experience in England is that it can be made reliable.

### ***Formative Assessment***

Formative assessment has the potential to enhance learning and performance. In their review paper, Black and William (1998) identified two consistently important components of formative assessment, namely feedback and self-assessment and these issues warrant some discussion.

### ***Feedback***

Feedback is an essential component of formative assessment. According to Sadler (1989) formative assessment is concerned with how judgments about the quality of student responses (performance, pieces of work) can be used to shape and improve the student's competence by short-circuiting the randomness and inefficiency of trial-and-error learning. (p. 120)

He continued (1989, p. 120) defining feedback as "information about how successfully something has been or is being done." He drew upon Ramprasad's (1983, p. 4) description of feedback as "...information about the gap between the actual level and the reference level of a system parameter which is used to alter the gap in some way." The notion of a 'gap to be bridged' and the role of feedback in that process were elaborated.

*...the learner has to (a) possess a concept of the standard (or goal, or reference level) being aimed for, (b) compare the actual (or current) level of performance*

*with the standard, and (c) engage in appropriate action which leads to some closure of the gap. (Sadler, 1989, p. 121)*

Feedback must be clear to the learner and inform performance. Sadler suggested that feedback, coded as letters or numbers, is "too deeply coded" to be useful to students to understand the quality of their own work and cannot lead to improvement. This is consistent with the finding reported by Black and Wiliam (1998, pp. 12–13) that feedback as grades decreased performance compared with informative feedback that led to enhanced performance. It might be that the type of feedback interacted with or generated a particular goal orientation. Informative feedback increased a learning motivation while grades as feedback led to an achievement orientation. It might be that grades were not "too deeply coded"; instead they might lead to grade seeking rather than learning goals.

Feedback must be timely and provided frequently. In two related studies, Schunk (1996, cited in Black & Wiliam, 1998, p. 13) demonstrated that frequent feedback exerted a strong influence on learning, equivalent to having task rather than ego-oriented goals. However, the issue of frequency is not a simple one, as a learning task is rarely repeated (except perhaps in some mastery learning contexts) so that students can receive feedback specific to that one task. More commonly, students engage in learning and assessment tasks that are sufficiently similar so that the feedback on each task can inform performance on subsequent ones.

In summary, feedback is central to formative assessment, and that, in turn, has been shown to contribute to enhanced learning. Because students must be able to interpret standards, judge their performances and take corrective action in order to achieve the learning outcomes that are posited for formative assessment, it is apparent that learners must be capable of assessing their own performances.

### ***Self-assessment***

Boud (1995, p. 12) offered a definition of self-assessment. First, he noted that all assessment depended upon establishing appropriate standards and setting criteria for judging whether those standards had been met. Specifically, assessment was a capacity to make those judgments. Second, he defined self-assessment as "the involvement of students in identifying standards and or criteria to apply to their work and making judgments about the extent to which they have met those criteria and standards."

Self-assessment can only be effective if learners understand the expected level of performance, so the expected performance must be expressed in terms that are accessible to them. Wiggins (Wiggins, 1998) said that self-assessment was facilitated by the "clear specification of standards and criteria expressed as performance goals."

Self-assessment is an important attribute of lifelong learners. Those who master it are able to take responsibility for their actions and to improve their performance. Self-assessment involves the cognitive processes of reflection and evaluation.

A capacity for self-assessment, that is for making judgments about one's work, is necessary for effective learning. A complete reliance on teacher assessment might encourage students

to adopt either surface learning or achieving orientations to learning but that self-assessment could promote deep approaches to learning. He recommended that self-assessment should be introduced in order to promote reflection and metacognition in learning.

## Assessment quality criteria

Typically, validity and reliability are the two main criteria that are used, but others, such as the objectivity and feasibility of the assessment are also worthy of consideration.

### Reliability

Reliability is demonstrated by showing that the assessment produces a consistent result for a person of a given ability, over time and irrespective of who administers or grades the assessment ("Classroom Assessment | Basic Concepts," n.d.). Different forms of assessment require different methods for demonstrating reliability. Where judgements of performance are made, consistency of judgement, or inter-rater reliability, must be demonstrated. In paper-based tests, test items are calibrated, and sets of similar items that yield common and consistent results are established. The calibration of items provides a basis for claims of test reliability using alternative forms of a test on different occasions.

Table 10 outlines three common reliability measures.

**Table 10**  
Reliability measures.

Type of Reliability	How to Measure
<b>Stability or Test-Retest</b>	Give the same assessment twice, separated by days, weeks, or months. Reliability is stated as the correlation between scores at Time 1 and Time 2.
<b>Alternate Form</b>	Create two forms of the same test (vary the items slightly). Reliability is stated as correlation between scores of Test 1 and Test 2.
<b>Internal Consistency (Alpha, <math>\alpha</math>)</b>	Compare one half of the test to the other half. Or, use methods such as Kuder-Richardson Formula 20 (KR20) or Cronbach's Alpha.

### Validity

A valid assessment is one which measures what it is intended to measure. For example, it would not be valid to assess driving skills through a written test alone ("Classroom Assessment | Basic Concepts," n.d.). A more valid way of assessing driving skills would be through a combination of tests that help determine what a driver knows, such as through a written test of driving knowledge, and what a driver is able to do, such as through a performance assessment of actual driving. Since teachers, parents, and school districts make

decisions about students based on assessments (such as grades, promotions, and graduation), the validity inferred from the assessments is essential.

There are three ways in which validity can be measured. In order to have confidence that a test is valid (and therefore the inferences we make based on the test scores are valid), all three kinds of validity evidence should be considered (Table 11).

**Table 11**  
Validity measures

<b>Type of Validity</b>	<b>Definition</b>	<b>Example/Non-Example</b>
<b>Content</b>	The extent to which the content of the test matches the instructional objectives.	A semester or quarter exam that only includes content covered during the last six weeks is not a valid measure of the course's overall objectives -- it has very low content validity.
<b>Criterion</b>	The extent to which scores on the test are in agreement with (concurrent validity) or predict (predictive validity) an external criterion.	If the end-of-year math tests in 4th grade correlate highly with the state wide math tests, they would have high concurrent validity.
<b>Construct</b>	The extent to which an assessment corresponds to other variables, as predicted by some rationale or theory.	If you can correctly hypothesize that ESOL students will perform differently on a reading test than English-speaking students (because of theory), the assessment may have construct validity.

From the above we can see that the starting point for the assessment of soft skills, must be an adequate construct definition, meaning one that defines the equivalent class of tasks for which successful performance will be taken as evidence indicating the presence of the construct (to a certain extent), and unsuccessful performance as evidence of the lack of the construct (to a certain extent).

Compromises are required between attaining high reliability and high levels of validity in assessment. Some forms of standardised assessment can yield highly reliable and precise estimates of performance, but may not adequately reflect the scope of the target construct. This is the basis of criticisms of standardised tests in some domains. For example, it may be possible, using a multiple-choice test, to assess with great precision a learner's ability to solve common problems. Such tests, however, may not enable the assessment of the candidate's ability to apply that knowledge in novel contexts. On the other hand, assessing the application of problem solving skills in real contexts may add to the authenticity and

validity of the assessment, but at the cost of reliability and precision. Judgments about an appropriate balance between achieving high levels of reliability and precision and high levels of authenticity and validity are required, and the balance may differ when different assessment purposes are invoked.

### **Objectivity**

Conventionally, objectivity is assured by creating tests and test items so that candidates' responses can be scored consistently by anyone who marks the test. That is, the subjectivity of judgments by different raters is minimised. This is the sense in which objectivity differs from reliability. Reliability focuses on the consistency with which different sets of items lead to similar judgements of student performance while objectivity deals with the influences of different judges. Objectivity is assured most easily by using structured response (e.g., multiple-choice) formats for test items. Alternatively, constructed responses can be used provided the rules for scoring those responses are clear and comprehensive.

### **Feasibility**

"Feasibility means capable of being done, with the connotation of convenience and practicability in the doing. While many things are doable, fewer are feasible" (Matters & Curtis, 2008, p. 15). The feasibility of a problem solving assessment requires that all aspects of the assessment meet the criteria of cost and time effectiveness and that the benefits flowing from the assessment justify the costs and time required. These aspects include development and validation of assessment instruments, administration of the assessment, gathering students' responses, marking responses, assigning overall grades, recording and analysing student grades, and reporting and maintaining records of student achievement. For standardised assessments, a practical time limit of 90 minutes for the student testing component is estimated. Having students complete a test (or assessment task) is only one component of an assessment regime, but greater time may be justified if multiple purposes are served by an assessment activity; for example, if employability skills assessment are integrated with existing assessment activities.

### **Assessment development**

The development of a good assessment system is rooted in the inferences that the system is intended to support (Wilson et al., 2010). Those inferences will frame and inform the development of the assessment. In order to be successful, development of the assessment system will require careful consideration of a series of elements including (a) the definition and elaboration of the constructs that it is intended to measure; (b) how those definitions guide the development and selection of the tasks or instruments that will be used to assess the constructs; and (c) how to code, classify or quantify student responses to those tasks, in terms of assigning values to the responses (for instance, qualitative codes or quantitative scores) that relate back to the construct in a meaningful way.

This system perspective also requires a different vantage point for considering assessment quality. Rather than focusing only on a single test, we need to consider the quality of the system for providing valid evidence to support the varied decision-making needs at multiple levels of the educational system.

Since assessments are designed to support inferences, it is logical to begin with the inferences that are to be made, and to work backwards from there, which is one of the central features of the evidence-centred approach to the design of education assessments.

### **Balanced assessment**

A balanced approach to assessment includes a continuum of strategies within a range of frequency and purpose, including formative, summative (classroom scale) and large scale (Binkley et al., 2010). Each kind of assessment provides a different perspective, and one cannot take the place of another. Together, they provide a balanced approach to assessment that informs decisions at the classroom, school, district, state, and national levels. A balanced system, in their view, incorporates three critical principles: coherence, comprehensiveness, and continuity.

- A coherent assessment system is built on a well-structured conceptual base—an expected learning progression, which serves as the foundation both for large scale and classroom assessments. That foundation should be consistent and complementary both across administrative or bureaucratic levels of the educational system and across grades.
- A comprehensive assessment system uses a range of assessment methods to ensure adequate measurement of intended constructs and measures of different grain size to serve decision-making needs at different levels of the education system. Inherently, a comprehensive assessment system also is useful in providing productive feedback, at appropriate levels of detail, to fuel accountability and improvement decisions at multiple levels.
- Continuity captures the principle that assessment at all levels is conceived as part of a continuous stream of evidence that tracks the progress of both individual students and educational programmes over time. This can only be possible when there is consistency in the definition of the constructs across time, e.g., from the beginning of the year to the end and across grades.

### **Competence based assessment**

As a consequence of the shift towards competence-based education, assessment practices have to be changed as well, along with the ideas about what constitutes high quality assessment (Baartman, 2008).

When education becomes increasingly competence-based, adequate assessment methods are needed to monitor and assess competence acquisition. Biggs (1996) presented the idea of constructive alignment, which prescribes that learning, instruction and assessment should be based on the same principles, in this case competence acquisition. From this perspective, it is inevitable that assessment methods are changed if approaches to learning and instruction change as described in the previous paragraph. Studies have shown that a strong relationship exists between learning and assessment, implying that what and how is assessed strongly influences what is learned. Therefore, if assessment approaches are to be aligned with learning and instruction, they need to focus on the integration of knowledge,

skills and attitudes. This means that more and different assessment methods should be used than 'just' traditional knowledge tests.

### Testing vs assessment culture

The current views on learning and instruction have changed the prevailing views with regard to the functions and methods of assessment (Baartman, 2008). Some authors even speak of a paradigm shift or a transition from a testing culture to an assessment culture. A number of characteristics are often used to describe the differences between the testing culture and the assessment culture, in which the two are presented as extremes along a continuum.

First, the content or the 'what' of assessment has changed, as was shown in the previous paragraph. While assessment in the testing culture mainly addressed lower level knowledge and skills, the assessment culture stresses the multidimensional nature of competence. Second, while assessment was seen as isolated from the learning process in the testing culture, the assessment culture holds that learning and assessment should be interconnected. Assessment should not only focus on learning outcomes, but also involve the learning process leading to this outcome. The third change is related to the previous one and pertains to the changed function of assessment. In the testing culture assessment was mainly used as a summative measurement of what the student had learned at the end of the learning process. In the assessment culture, summative and formative functions are carefully balanced and assessment becomes part of a continuous cycle of assessment and feedback. Fourth, assessment has changed from a decontextualized event to a relevant and interesting learning experience taking place in an authentic context, mirroring the importance of the context in the learning process in constructivist theories. Fifth, the assessment methods have changed. The most common assessment methods used in the testing culture are standardised tests, for example paper-and-pencil tests. The assessment culture added many different assessment methods, such as performance assessments and portfolios, which are used in different combinations over a prolonged period of time. The sixth change relates to the responsibility of the assessment process, which has changed from being a sole teacher responsibility to a responsibility shared by the teacher and the learner, in which the learner gradually takes on responsibility for the learning and assessment process. Finally, the notion of what constitutes high quality assessment has changed.

As these examples show, testing and assessment are often presented as two extremes. During the transition from a testing to an assessment culture, many new assessment methods have been developed, which are sometimes referred to as 'alternative assessments'.

### Psychometrics vs "edumentrics"

The psychometric approach could be regarded as the description of what constitutes quality in the testing culture, while the "edumetric" approach is presented as an alternative to better account for the different characteristics of the assessment culture (Baartman, 2008, p. 12). Again, psychometric and edumetric approaches are often presented as two extremes.

First, the psychometric approach stems from psychological measurements of fixed traits (e.g., intelligence or personality), based on which different characteristics of people could be distinguished. In the edumetric approach, on the other hand, the objects of measurement

are not unchangeable personal traits, but the competence development of a learner, which is even expected to change over time. Second, and related to the first difference, the psychometric approach sought to discriminate between individuals and used norm-referenced measurement in which different people are compared to each other. The edumetric approach uses a criterion-referenced approach, in which learners are not compared to each other, but to criteria that specify what should be learned, or a self-referenced approach in which learners are compared to their own past accomplishments. Third, in psychometric traditions, reliability is generally achieved by standardisation and 'objectivity'. Edumetric approaches acknowledge that competence assessment has to rely at least partly on human observation, and shifted the focus from standardisation to the use of multiple measurements and generalizability across assessors and tasks. Fourth, edumetric approaches emphasise the importance of the formative function of assessment. This already implies the addition of other quality criteria than just reliability and validity, for example, that assessment should generate meaningful learning experiences, useful feedback, and stimulate the desired learning processes (Shepard, 2000).

## Soft Skills Assessment

### Principles

A literature review suggests that soft skills standards and assessments should (Binkley et al., 2010):

- Be aligned with the development of significant, soft skills goals. Assessments that support learning must explicitly communicate the nature of expected learning. Standards and assessments must fully specify the rich range of soft skills students are expected to understand and apply. In addition, the standards and assessments should ideally represent how that knowledge and set of skills is expected to develop from novice to expert performance.
- Incorporate adaptability and unpredictability. One hallmark of soft skills demands is the need to adapt to evolving circumstances and to make decisions and take action in situations where prior actions may stimulate unpredictable reactions that in turn influence subsequent strategies and options. Dealing with such uncertainty is essential, but represents a new challenge for curriculum and assessment
- Be largely performance-based. The crux of soft skills is the need to integrate, synthesize and creatively apply content knowledge in novel situations. Consequently, soft skills assessments must systematically ask students to apply content knowledge to critical thinking, problem solving, and analytical tasks throughout their education, so that we can help them hone this ability and come to understand that successful learning is as much about the process as it is about facts and figures.
- Add value for teaching and learning. The process of responding to assessments can enhance student learning if assessment tasks are well crafted to incorporate principles of learning and cognition. For example, assessment tasks can incorporate transfer and



authentic applications, and can provide opportunities for students to organize and deepen their understanding through explanation and use of multiple representations.

- Make students' thinking visible. The assessments should provide a window into students' understandings and the conceptual strategies a student uses to solve a problem. Further by making students' thinking visible, assessments thus provide a model for quality practice.
- Be fair. Fair assessments enable all students to show what they know and provide accommodations for students who otherwise would have difficulty accessing and responding to test items for reasons other than the target of the assessment.
- Be technically sound. Assessment data must provide accurate and reliable information for the decision-making purposes for which they are intended to be used. If there is an absence of reasonable precision of measurement, inferences from results and decisions based on them may well be faulty. The requirement for precision relative to intended purposes means both that intended uses and users must be clearly specified and evidence of technical quality must be established for each intended purpose. Establishing evidence of quality for innovative approaches to assessing 21st century skills may well require new psychometric approaches.
- Valid for purpose. To the extent an assessment is intended to serve as an indicator of schools' success in helping students acquire 21st century skills and skills, test results must be both instructionally sensitive and generalizable. That is, instructionally sensitive tests are influenced by the quality of instruction: students who receive high quality instruction should out-perform those who do not; the alternative is that students' basic ability or general intelligence, which are not under a school's control, are the reason for performance. A generalizable result transfers to other real life applications.
- Generate information that can be acted upon and provides productive and usable feedback for all intended users. Teachers need to be able to understand what the assessment reveals about students' thinking. And school administrators, policymakers, and teachers need to be able to use this assessment information to determine how to create better opportunities for student learning.
- Provide productive and usable feedback for all intended users. It seems axiomatic that if stakeholders, for example, teachers, administrators, students, parents, and the public at large are expected to use the results of an assessment, they must have access to reports that are accurate, understandable and usable.
- Build capacity for educators and students. Feedback from assessments can help students, teachers, administrators and other providers to understand the nature of student performance and the learning issues that may be impeding progress. Teachers and students should be able to learn from the process.
- Be part of a comprehensive and well-aligned system of assessments designed to support the improvement of learning at all levels of the educational hierarchy.

### **Factors for choosing an assessment**

There are several and varied methods to assess soft skills, one system will not suit all (Dewson, Eccles, Tackey, & Jackson, 2000). What may work well for a particular situation and institute a may not work for another. The system of choice and its implementation depends very much on the activities and objectives, the target group, the course duration, and the available resources.

### ***Assessment design and soft skills definitions***

The importance of an appropriate and meaningful definition of the skills to be assessed cannot be overstated (Wilson et al., 2010). The success of any attempt to assess them will rely on these definitions and their elaborations in terms of descriptions of emerging understandings for the design and selection of the assessment instruments and activities, and the appraisal of the products of the assessments.

The task of defining the different soft skills is not an easy one. As mentioned above, the definitions will have to address questions such as: the unit of analysis (are they intended to reflect individuals, large groups or both?); the age span of these skills (will they be confined to obligatory, upper secondary, higher education or beyond?); whether the definitions are to be universal or susceptible to cultural differences; and whether the skills are to be defined as domain-general or closely associated with specific contexts or disciplines.

These are just some of the questions that need to be addressed by the definition of each skill, and the response to these questions will play a determining role in the delineation of the inferences that can be drawn from the assessment process. In other words, the definition of the constructs will determine the kind of information that will be collected. It will therefore constrain the inferences that different stakeholders will be able to make based on the results of the assessment process.

Considering the overwhelming amount of possible elements involved in each definition, where can we start the construction of models of proficiency that can serve as a solid base for assessment?

Current literature in the field of educational assessment stresses that any measurement should be rooted in a robust cognitive theory and a model of the learner that informs, not only what counts as evidence of mastery, but also what kind of tasks can be used to elicit them (Pellegrino et al., 2001).

### ***Domain dependence vs domain independence***

When defining constructs for measurement, a key question that can arise is the degree to which any particular context will influence measures of the construct (Wilson et al., 2010).

However, with soft skills, the context can be quite distal from the constructs. For instance, if communication is considered, it can be measured within numerous subject matter areas. Communication skills in mathematics, involving a quantitative symbolic system, representations of data patterns, and so forth, is different than communication skills in, for instance, second-language acquisition, where mediation and meaning-making must occur across languages. On the other hand, some underlying aspects may be the same for

communication across these contexts -- it may be important to secure the listener's or audience's attention, monitor for understanding, and employ multiple avenues for understanding, across contexts.

At this point in the development of robust measures of soft skills, there may be more questions than answers to the issue of contexts. Some educators see context as amounting to an insurmountable barrier to measurement. They may claim that the item-specific variability is so high that sound generalizations are not possible. Or they may go further and believe that there is no such thing as a general construct, just specific performances for specific contexts as measured by specific items.

It is important to note that the relevance of these debates goes beyond the purely theoretical. The adoption of a domain general versus a context specific approach will have practical implications in the description of learning targets, progress variables, levels of achievement, and learning performances. Different options will affect the grain size of the operational definitions and will determine the specificity of the characterization of the products and actions that are considered as evidence of performance, therefore circumscribing the domains in which is possible to make inferences.

### *Audience dependence*

The kinds of inferences that we intend to make will influence the evidence that will be collected. In this sense, a crucial area that requires definition is the clarification of the intended users and, tied to that, the levels of analysis and reporting that need to be addressed. The range of intended users and stakeholders will delineate the scope of the project, the characteristics of the data that needs be collected and, therefore, the methodological challenges that need to be met.

A direct consequence of determining the intended user is the realization that what constitutes useful information for decision making will vary widely between, for example, teachers and government officials. In other words, the kind of and/or the level of detail required to support student learning are different in the classroom than at the policy level. At the same time, it is necessary to keep in mind that making reliable inferences about each student in a classroom requires considerably more information than to make inferences about the classroom as a whole; in other words, reaching an adequate level of precision to support inferences demand considerable more data when talking about individuals.

### *Assessment models*

There are several methods that can be used for assessment purposes. They vary widely, from quantitative to purely qualitative, and from having high to low validity and reliability to low. In this section we will present several such methods, taken from (Curtis, 2004, 2010; Dewson et al., 2000).

The various approaches to generic skills assessment are categorised as (Curtis, 2004, 2010):

- standardised assessment;
- common assessment tasks;
- performance assessments;

- teacher/holistic judgment; and
- portfolio assessment.

### *Standardised assessment*

Standardised tests comprise items for which students select responses from prescribed options (typically multiple-choice items) or for which students provide limited constructed responses. These items are developed according to item specifications that include the particular constructs to be tested and the scope and range of abilities that are being assessed. The broad scope of a test is subdivided into small units of knowledge or skill and each element is assessed by a number of discrete items. Test items are evaluated by expert panels then trialled and are accepted, rejected or modified before final testing.

Where constructed response items are included, e.g. items eliciting short answers, raters are trained to recognise key features in responses and multiple ratters are used, at least on a subset of scripts, to check that inter-ratter reliability reaches an acceptable standard.

Although many judgments are made in delimiting the scope of the test and in prescribing the scope and range of items, variability in grading responses is either eliminated (for multiple-choice items) or minimised (in grading constructed responses).

The results of trial and final tests are analysed statistically to ensure that acceptable criteria are achieved, usually in relation to reliability, but validation studies are also conducted to check that test scores correlate with constructs that are thought to be related and to other criterion performance measures.

Standardised assessment, often in the form of multiple-choice tests, has many critics. A common criticism is that the selection of responses tests much lower level cognitive skills than does the generation of a response.

### *Common assessment tasks*

Common assessment tasks, because they are tasks not tests, typically allow for the assessment of a wider range of skills and practices than standardised tests, in a range of formats and settings that more closely approximate how people function in the wider world outside the classroom. Standardised tests are closely controlled in their development, implementation and marking. Common assessment tasks are designed or selected so that they provide opportunities for students to demonstrate (and possibly develop) the constructs that the tasks are intended to assess. The standards by which student performances are judged are also established when the suite of tasks is selected.

Whereas the marking of standardised tests is often automated, the assessment of common assessment tasks requires expert judgment, typically by the teachers involved in the implementation of the task. The credibility of the grades awarded to students across (and even within) sites depends upon teacher–assessors having a shared understanding of the standards. A moderation process is required to ensure fairness and comparability of the assessment across schools. The process also helps to create common understandings among teachers from different locations. The moderation provides a basis for the fairness and credibility of the reported results. In high stakes testing, scoring is conducted by raters

trained in the use of the rubrics and normally a sample of responses is assessed by at least two raters so that inter-rater reliability can be checked.

### *Performance assessment*

“Performance-based assessment is a type of testing that calls for demonstration of understanding and skill in applied, procedural, or open-ended settings” (Baker, O’Neil, & Linn, 1993, p. 1210). Performance assessment has been used in judging activities that do not normally leave an artefact that could be evaluated later. Examples have included gymnastics and dance, but the act of making an object was also a performance that could be evaluated separately from any assessment of the object that was produced. Performance assessment has been extended to a wider range of activities, including science laboratory classes, medical diagnoses and building brick walls. In these cases, products existed that were evaluated, but soft skills are more likely to be observed in their execution during construction of the artefact than in the artefact that is produced. It is the act of producing, rather than the product, that is being judged.

Performance assessment was characterised by the use of open-ended tasks with responses constructed by the student rather than being selected from defined options and by a focus on complex skills in a curriculum context, and were judged in terms of domain specific criteria rather than against a generalised trait (E. L. Baker et al., 1993, p. 1211). The last of these claims is a challenge to the generalizability of any inferences that may be drawn from a performance assessment. One goal of assessment is to judge and provide feedback about a specific activity, but if that feedback cannot be used in subsequent performances, it is of little value to the learner.

### *Teacher/Holistic judgment*

Teacher judgment has featured prominently in the literature on assessment and has been shown to be central to almost all forms of assessment. An obvious exception is the multiple-choice format, although in that format, judgments are made when the tasks and response alternatives are chosen.

Teacher judgement has been shown to work well in the school sector where teachers know students’ attributes well through frequent and close observation. Consistency of judgements within panels of teachers has been demonstrated. What cannot be shown is that this consistency extends across school boundaries. This means that students from different schools may be judged against different standards, and so individual achievement, assessed using this method, does not provide a basis for broad comparison.

This method is unlikely to transfer to either the VET or higher education sectors where such close observation in a range of contexts does not occur. A trainer may monitor learners in an institutional classroom or workshop setting, but is unlikely also to see them in social or workplace settings. Similarly, workplace supervisors may observe individuals in that context, but not in others. The bases of judgements made by these raters will be restricted to a limited range of contexts.

An issue raised in the literature reviewed above is a restriction of the knowledge of standards and their application to a community of assessment practitioners (Sadler, 1989). This is shown to have implications for feedback and for a role for students in self-

assessment. If individual teachers are not privy to this information, they are constrained in the quality of feedback they can provide. In many situations (other than multiple-choice assessments), teacher judgment could be scaffolded, for example by scoring rubrics, which might increase the consistency of judgments between teachers and increase the reliability and fairness of the assessment. In other contexts, teachers' judgments could be reviewed through moderation processes, a method used commonly in school based assessment.

### *Portfolio assessment*

The construction of a portfolio is the selection and aggregation by individuals of evidence of their own achievement of particular skills (which may include soft skills). Portfolios may be paper-based or electronic. Electronic versions are popular because of the ease with which they can be updated. Templates can be provided, and electronic portfolio systems may have facilities, such as filters, that enable students to select and present views of the contents in print or electronic form for specific purposes and audiences. Having constructed a portfolio, a student may submit it for assessment, although portfolios are often used simply as devices for recording supportive evidence that may be used for job applications.

Two approaches to portfolio assessment were described by Troper and Smith (1997). The first was the Michigan Work Readiness Portfolio. This was a framework for evaluating students' analyses of how their activities revealed the skills student claimed to have developed. The framework comprised three categories, namely academic skills, personal management skills, and teamwork skills. Raters were trained to judge items in the portfolio as either credible (having been produced by a third party rather than the student) or not, and to recognize whether evidence for a skill was present (present or not). Dichotomous judgments were used to limit the amount of time taken in preparing portfolios and in making judgments about them, but this limited the level of evidence that was presented.

A second scheme was developed by the Centre for Research in Evaluation, Standards and Student Testing (CRESST). The scheme consisted of a rating scale comprising five main elements (general impression; communication skills; personal management skills; interpersonal and team skills; and thinking, problem solving and technical skills). The instrument included 16 items and for each a seven point rating scale (poor to superb) was used.

One of the disadvantages of this form of assessment is that, while it provides a very detailed account of a learner's achievements, it is not in a form that is neither readily digestible nor readily comparable. Validity is compromised because a very good portfolio may well represent a person with highly developed generic skills, but it also reflects a person who is capable of assembling a persuasive document and this is a separate, albeit important, skill.

Reliability depends upon having the portfolios assessed by independent and trained raters. They suggested that portfolios be used for low-stakes, but not for high-stakes, purposes. However, portfolios are used in hiring decisions, and for the individual, this is a high-stakes application.

### *Workplace assessment*

Work experience assessment appears to be a useful method to produce a simple report, although like portfolio assessment, it is not standardised and may not be amenable to ready comparisons. The comments made in relation to the assessment of student-produced portfolios are applicable to this form of assessment. Indeed, workplace assessment might be considered to contribute an important component to a student's overall portfolio.

The opportunities for developing all skills, including soft skills, provided by workplaces vary. The quality of both the learning and the assessment depends upon the context provided by the workplace and knowledge and diligence of the assessors, notion of generalizability, variations in workplace contexts will contribute to variation in opportunities afforded to develop generic skills and therefore to a lack of precision in the results and inferences that can be drawn from them.

Review and comparison of the above mentioned models are given in Table 12.

**Table 12**

Review and comparison of the assessment models given by Curtis (2004, 2010)

<b>Assessment model</b>	<b>Strengths</b>	<b>Limitations</b>
Holistic judgements	Authentic, provided relevant situations are chosen for observation Multiple performance levels appear to be discernible	Reliable within context, e.g. in a school, where several raters may be used, but lacks comparability across sites Summative, rather than formative— limited learning potential
Portfolio assessment	Provides a rich data source Compiling portfolio may be a valuable learning experience for the learner	Influenced by other factors, e.g. written fluency of author, which may limit content validity Lack of comparability among individuals (low reliability) Time-consuming to extract information from portfolio
Workplace assessment	High validity High learning potential if judgements are accompanied by informative feedback	Low reliability: influenced by training of assessors and by opportunities presented by the work context
Standardised instrumental assessment	Efficient High reliability Produces a score comparable across individuals and occasions Known precision, can lead to identification of number of discernible performance levels	Limited authenticity Summative rather than formative— limited learning potential

Dewson et.al. (2000) suggest several qualitative methods suitable for formative evaluation. They include:

- Individual action planning, personal action planning and goal setting;
- reviews between trainers/assessors and clients to record soft outcomes

- daily diary or personal journal;
- in-depth reflection during or after the course;
- recorded observations of group or individual activities.

### *Individual action planning, personal action planning and goal setting*

The drawing up of individual action plans is normally carried out during the initial assessment session and then reviewed at regular intervals to gauge whether goals have been met. An action plan can include personal objectives, priorities and reflections on progress.

### *Reviews between trainers/assessors and clients to record soft outcomes*

Improvements over time can be noted and recorded during regular formal or informal reviews. This system is largely reliant on a sound judgement from the client or project worker and will not provide an absolute or formal measure of distance travelled.

### *Daily diary or personal journal*

Clients can be encouraged to write about progress towards soft outcomes. Issues of confidentiality should be considered.

### *In-depth reflection during or after the course*

Beneficiaries could be asked to consider and review their progress as they come to the end of their training course, or a particular element of the project (such as a work placement). This could be incorporated as an assignment that could be included in a beneficiary's portfolio of evidence of achievement. Baseline information is particularly useful here as data can be compared over time. Questionnaires are an important tool for this purpose.

### *Recorded observations of group or individual activities*

It is important to have comprehensive documentation systems that will allow for the recording of anecdotal evidence of outcomes achieved and progress made. This method requires a high level of observer skill, and there is the danger of observer bias, and also that the observer will influence the behaviour being observed. If the beneficiary/ies are unaware that they are being observed, this may negate the problem.

## **Soft Skills Assessment Challenges**

The quest for evidence-based assessment of soft skills is hindered by many factors. First, there are huge variations in formal and informal learning environments and the kinds of assessment that are possible in those settings (Binkley et al., 2010; Scardamalia, Bransford, Kozma, & Quellmalz, 2010). Second, knowledge and skills about the media and technologies used within a domain need to be distinguished from domain-specific soft skills. Third, methods for designing soft skills assessments and for documenting their technical quality have not been widely used. Fourth, assessments need to be coherent across levels of educational systems. Coherence must start with agreement on soft skills and their component knowledge and skills. Moreover, designs of international, national, state and classroom level tests must be clarified and aligned or assessments at different levels will not be balanced and inferences about student performance compromised.



Systematic, direct assessment of soft skills in classrooms is rare. Although students may be taught to use common and advanced tools, teachers tend not to have specific standards for soft skills that students must meet nor testing methods to gather evidence. The state of practice for assessing soft skills integrated into learning activities remains in its infancy.

More specifically, the challenges soft skills assessment has to face include:

#### *Using models of skill development based on cognitive research*

The knowledge about acquisition of soft skills and their development is very limited, and the developers of assessments do not yet know how to create practical assessments using even this partial knowledge effectively (Bennett & Gitomer, 2009).

#### *Transforming psychometrics to deal with new kinds of assessments*

Psychometric advances are needed to deal with a dynamic context and differentiated tasks, such as tasks embedded in simulations and using visualization that may yield a number of acceptable (and unanticipated) responses. While traditional assessments are designed to yield one right or best response, transformative assessments should be able to account for divergent responses, while measuring student performance in such a way that reliability of measures is ensured.

#### *Making students' thinking visible*

Assessments should reveal the kinds of conceptual strategies a student uses to solve a problem. This involves not only considering students' responses, but also interpreting their behaviours that lead to these responses. Computers can log every keystroke made by a student and thus amass a huge amount of behavioural data. The challenge is to interpret the meaning of these data and link patterns of behaviour to the quality of response. These associations could then illuminate students' thinking as they respond to various tasks.

#### *Interpreting assisted performance*

New scoring rules are needed to take into account prompting or scaffolding that may be necessary for some students. Ensuring accessibility for as many students as possible and customization of items for special needs students within the design of the assessment is critical.

#### *Assessing soft skills in traditional subjects*

Where the aims and goals of soft skills learning are described in countries' frameworks, they are generally specified as being taught through, within and across the subjects. However, computers can facilitate the creation of micro-worlds for students to explore in order to discover hidden rules or relationships. Tools such as computer-based simulations can in this way give a more nuanced understanding of what students know and can do than traditional testing methods. New approaches stress the abilities to use information and knowledge that extend beyond the traditional base of reading, writing, and mathematics. However, research shows that students still tuned into the old test situation with correct answers rather than explanations and reasoning skills can have problems in adjusting their strategies and skills. Without highly valued assessments of 21st century aims or goals requiring their teaching, it is difficult to see when or how education systems will change significantly for the majority of learners.

### *Accounting for new modes of communication*

To date newer modes of communication have rarely been represented in large-scale assessments. There is a mismatch between the skills young people gain in their everyday cultures outside of schools and the instruction and assessment they meet in schools. Different skills such as creativity, problem solving and critical thinking might be expressed in different ways using different modes and modalities, which ICT provides. In light of the developments described in the paper, it is essential that the radical changes in communication, including visual ways of communicating and social networking, be represented in some of the tasks of soft skills large-scale assessments. The speed with which new technologies develop suggest that it might be better to assess whether students are capable of rapidly mastering a new tool or medium than whether they can use current technologies.

### *Including collaboration and teamwork*

Traditional assessments are focused on measuring individual performance. Consequently, when faced with a collaborative task the most important question is how to assign credit to each member of the group, as well as how to account for differences across groups that may bias a given student's performance. This issue arises whether students are asked to work in pre-assigned complementary roles or whether they are also being assessed on their skills in inventing ways to collaborate in an undefined situation. Questions on assigning individual performance as well as group ratings become even more salient for international assessments where cultural boundaries are crossed.

### *Including local and global citizenship*

The assessment of citizenship, empowerment and engagement, both locally and globally, is underdeveloped. At this time, no measures exist that assess these skills, even though the research literature on 'young citizens online' has been growing in recent years. For international assessments, cultural differences and sensitivities will add to the challenge of developing tasks valid across countries. Having students solve problems from multiple perspectives is one way to address the challenge of cultural differences.

### *Ensuring validity and accessibility*

It is important to ensure validity of standards on which assessments are based; accessibility with respect to skills demands, content pre-requisites and familiarity with media or technology; and an appropriate balance of content and intellectual demands of tasks.

### *Considering cost and feasibility*

Cost and feasibility are factors operating for any assessment but will be greatly exacerbated for the innovative and transformative assessments that are to address the kinds of soft skills discussed in this paper.

## **Summary**

In this paper we covered several aspects of educational assessment, both in general context and specifically, as concerning soft skills. We dealt with the basic notions of assessment, as summative and formative ones, and we referenced several methodologies and good practices. We elaborated on quality indicators, both traditional, as reliability and validity,

and the need for the use of additional quality indicators that better suit the modern views of assessment. We referred to the characteristics of soft skills assessment and the challenges lying ahead.

Soft skills assessment is a new and as yet underdeveloped domain. Several factors are interwoven, including the ill definitions of soft skills, the different environment in which soft skills are developed, the intermix of their teaching and assessment with traditional subjects and the lack of a theory that explains their acquisition and development. Additionally the soft skills assessment design should suite the individual characteristics of each institution and workplace. Several challenges are lie ahead than need to be addressed.

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# MASS Assessment

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## Abstract

In this paper we present the assessment methodology and the results obtained from the pilot study of the MASS project. Initially a short review of the general framework of operation is given. Then comparative reviews and full details of each approach and the results obtained are presented. Positive feedback received from both students and teachers, concerning the quality of the learning materials and the lesson plans, the coverage of soft skills, the ability for adaptation for specific audiences and suitability for both adolescents and adults.

## Introduction

Soft skills assessment is a new and under developed domain. Many attempts have been reported (p. 120), that aim to set a framework and propose a methodology for developing soft skills assessments. However, the concrete and tested examples are few, controversial and confined to special target groups.

In the design of soft skills assessment many factors come in play. Some important ones are the relevance with the educational targets set by course design, the characteristics of the target group, the information required for the operation of the institute hosting the course and the previous experiences of the staff.

As Table 13 suggests, MASS project partners come from a wide variety of educational institutions, aiming at different target groups with different educational targets. This made it difficult to adapt a common strategy for all partners. It was decided that partners would develop the assessments to better suit their own needs. This decision resulted in a variety of approaches on soft skills assessment, aiming at different aspects and different target audiences. All together they form an adaptable set of assessment proposals that allows for several possibilities of modification and adaptation for a particular institute and target audience.

The sources of information used in all approaches were students, through self-assessment and psychometric tests, and teachers.

Concerning students, difficulty in getting accustomed to the notion and practice of self-assessment was reported from several partners. Students gave positive feedback on material and course quality, relevance with their studies and suitability for their level.

Teachers from all partners' institutes reported student improvement towards self and soft skills awareness, active participation and evident interest. They gave very good feedback on material and lesson plan quality, adaptability and coverage of soft skills needed in vocational education and training. Suggestions for improvements along several axes were also made.

## Partner Institutions Characteristics

Extensive description of partner's institutions is given in another paper of this volume (p. 78). For convenience we repeat here Table 3 (p. 91), which reviews the institutes' missions and target groups.

**Table 13**

Overview of the partners' institute missions and target groups

Country	Orientation	Target Group
UK	Vocational school	Adolescents
GR	General education school	Adults
SW	Vocational training organisation	Adolescents, Adults
RO	Teacher Training Center	Adults (Teachers)
NL-ROC Aventus	Vocational school	Adolescents
NL-Bureau Zuidema	Training Company	Adults (mainly corporate employees)

## Target Group Characteristics

The characteristics of each of the partners' target groups are elaborated in another paper of this volume (p. 91). For convenience, we repeat here Table 5 (p. 93), which reviews the main demographic data.

**Table 14**

Demographics of the students participated in MASS pilot study

Country	Age (Range)	Gender		Employment
		Male	Female	
UK - 1	14-18	15	15	No
UK - 2	14-16	10	10	No
UK - 3	14	0	12	No
GR	21-47	13	9	Unemployed (50%), Full Time (36, 4%)
SW	16-24	15	20	Unemployed
RO	15-17	21	39	Part Time
NL - 1	16-20	7	7	Part Time
NL - 2		2	18	Part Time

UK groups no 1 and 2 (from now on referred as UK - 1 and UK - 2, respectively) are regular SkillZone groups, as described earlier in this paper. Group no 3, "Skills for Work" (from now on referred as UK-3), comprise 12 student hairdressers, who were sent to SkillZone from another department of the college, as lacking soft skills. They attended SkillZone on a part time basis.

NL group no 1 (from now on referred as NL – 1) has multi-sector orientation, while group no 2 (from now on referred as NL – 2) has a healthcare orientation.

## Data Collection Method

In order to ensure some degree of uniformity and comparison among the results reported from different partners, the data collection has been done through a standardized document structure, having the form of a template, presented at Figure 1. The partners were asked to input actual data under the headings provided. They were allowed to modify the template's structure, if it didn't fit in their approach and framework of operation. However the modifications made were minimal.

The format of the template reflects a compromise between the need for the partners to act independently and the need for a uniform report, which make comparisons feasible. As each partner has different context of soft skills training, it is expected that different teaching methodologies and assessment practices are required. Concerning the assessment frameworks, they should be compatible with each partner's operational practices and give information of interest to them, which may be different for each partner. On the other hand, some least common denominators should exist, so as to be able to draw some conclusions. The template proposed addresses this problem by providing quite general headings, which try to organise the information in a uniform way, while giving the freedom to each partner to present a different methodology.

Each part of the template aims at examining a different part of the teaching effort or the assessment of the results.

Figure 2

The structure of the template used for the pilot course data collection

## 1 Framework of operation and Target groups of the organization, in general

## 2 Educational Framework

### 2.1 Targets

### 2.2 Success Criteria

### 2.3 Teaching methodologies

### 2.4 Assessment

#### 2.4.1 plan

#### 2.4.2 methodology

### 2.5 Context / Target group

#### 2.5.1 Number of classes

#### 2.5.2 Weekly programme of the classes

##### 2.5.2.1 for MASS teaching

##### 2.5.2.2 overall

#### 2.5.3 Number of students

#### 2.5.4 Number of teachers

#### 2.5.5 Courses conditions

##### 2.5.5.1 Distance from home

##### 2.5.5.2 Classroom Personalization

##### 2.5.5.3 Placement of desks

##### 2.5.5.4 Teaching aids (computer, whiteboard etc)

*2.5.5.5 Obligatory / no obligatory attendance*

### **3 Characteristics of the MASS students**

#### **3.1 Comparison with the general target group**

#### **3.2 Statistical Indices**

3.2.1 Age

3.2.2 Sex

3.2.3 Employment

#### **3.3 Socio-economic factors**

3.3.1 Resources

*3.3.1.1 Material/Economic*

*3.3.1.2 Public and Private Services*

*3.3.1.3 Social Capital*

3.3.2 Participation

*3.3.2.1 Economic*

*3.3.2.2 Social*

*3.3.2.3 Culture, education and skills*

*3.3.2.4 Political and Civic*

3.3.3 Quality of Life

*3.3.3.1 Health and well-being*

*3.3.3.2 Living environment*

*3.3.3.3 Crime and harm*

3.3.4 Drug abuse

### **4 Selection Procedure**

4.1 Why did you select the specific group?

4.2 How did you select them?

### **5 Initial Soft Skills assessment**

5.1 How did you evaluate the initial level of your students' soft skills?

5.2 Why do you think they require training on soft skills?

### **6 Progress assessment**

#### **6.1 Experiences**

6.1.1 Students' involvement

6.1.2 Stories of success

*6.1.2.1 Comment and discussion*

6.1.3 Stories of failure

*6.1.3.1 Comment and discussion*

#### **6.2 Assessment**

6.2.1 Strong points

6.2.2 Weak points

### **7 Final assessment**

#### **7.1 Assessment Targets**

7.1.1 Learning Materials

7.1.2 Student progress

- 7.1.3 Teacher's evaluation
- 7.1.4 Relations among Students / team dynamics
- 7.1.5 Relations among Student and Teachers
- 7.2 Criteria
- 7.3 Method(s) description/application/results
- 7.4 Rate of attendance
- 7.5 Drop out rate
  - 7.5.1 From MASS classes
  - 7.5.2 From school
- 8 Discussion/Results
  - 8.1 Comments/Overall impression
  - 8.2 Impact on students
  - 8.3 Impact on teachers
  - 8.4 Impact on Institution
  - 8.5 Suggestions

The rationale behind the form for data collection template is given below:

- 1 Framework of operation and target groups of the organization in general:** This part has the intention to collect information about the business case of the various institutions which participated in the project. This way the general framework of operation is made clear and comparisons among the institutions can be made.
- 2 Educational Framework:** The intention of this part is to collect information on the educational framework under which the MASS courses have been delivered. It contains sub parts which deal with subjects concerning both teaching and evaluation.
  - 2.1 Targets:** The educational targets each institution had when they decided to participate in the project and deliver the MASS courses.
  - 2.2 Success Criteria:** The criteria each partner uses to decide the degree of success of MASS courses.
  - 2.3 Teaching methodologies:** Description of the most frequently used methods of each partner (e.g. brainstorming, discussion groups, role play etc). This indicator suggests whether active learning methodologies were used.
  - 2.4 Assessment:** A description of the assessment methodology each partner used in order to measure against the success criteria. Both assessment plan and assessment methods are requested, as subparts. Each partner had the freedom to use the methodology that best fits into its framework of operation.
  - 2.5 Context/Target group:** Information regarding the context of MASS courses, such as number of classes, number of students, number of teachers and course conditions that may influence the success of the trial.
- 3 Characteristics of the MASS students:** Several indicators that may characterize the MASS target groups.

- 3.1 Comparison with the general target group:** Is an indicator whether the MASS target group might be representative of the institutions' target group.
- 3.2 Statistical Indices:** Demographics of the MASS students (age, gender, employment etc).
- 3.3 Socio-economic factors:** Some quality of life factors (poverty, crime, drug abuse etc.) that might correlate with the success of the MASS approach. The original SkillZone target group was a disadvantaged one. We want to estimate whether the degree of success of MASS approach depends on the degree of disadvantage of the target group.
- 4 Selection procedure:** The rationale behind the partners' choice of selecting the specific group. Sub topics about why and how the selection had been made are included.
- 5 Initial Soft Skills Assessment:** Feedback about the method and the result of the initial MASS students' soft skills assessment, to serve as a basis of comparison with the results after the courses. Sub topics for the process of initial evaluation and why partners think their target groups needed more soft skills training are included.
- 6 Progress Assessment:** In this section we assess the quality of process during MASS courses. The assessment is mainly qualitative. As indicators student involvement and narratives of successes and failures are used. Additional means of assessment, chosen by each partner, are used in order to evaluate the strong and weak points of the process.
- 7 Final assessment:** In this section partners are requested to give results of the final assessment.
  - 7.1 Assessment Targets:** All the usual educational assessment targets were included, namely learning materials, student progress, teachers' point of view, relationships among students and among students and teachers. In this sub-section, partners were requested to give the results of the relevant assessments.
  - 7.2 Criteria:** If partners' criteria for the final assessment were different from the ones in section 2.2, partners were requested to elaborate further.
  - 7.3 Method(s) description/application/results:** This section is meant to include a detailed description of the final assessment method(s), its/their application and results.
  - 7.4 Rate of attendance/Dropout rate:** This criterion is inherited from SkillZone, which achieved a low dropout rate. Its intention is to explore whether MASS courses have the same effect in the other partners institutes. It may not be relevant for some partners.
- 8 Discussion/Results:** Partners were requested to evaluate their results, elaborate on the impact of the courses, develop possible explanations and make suggestions for further improvement. Subsections with specific targets are included.



## Methodology and Outcomes

### Success criteria, plan and methodology

As MASS project include partners from diverse background, it is expected that each one has different application context, which leads to the need of different assessment practices. The assessment procedure each partner select is depended upon framework of operations and the goals it sets for the school, information useful for daily operation and familiarity with various methods of assessment. The different choices, concerning success criteria, assessment plans and methodologies are given in

Table 15.

**Table 15**  
Success criteria, assessment plan and methodology for each partner

Country	Success Criteria	Assessment	
		Plan	Methodology
UK - 1	Student retention and employment. Student comments on the materials.	Measurement at the end of the course.	Comparison with previous' year results, students' comments analysis, progression into employment, MASS grading system.
UK - 2			
UK - 3	Student retention. Student comments on the materials.		Comparison with retention of control group, acceptance to next year's course.
GR	Results from LEQ-H test. Active student participation. Student and teacher satisfaction.	Measurement at the beginning and end of courses. Control group. Interviews at end.	LEQ-H questionnaire at the beginning and end to both experimental and control groups. In depth interviews of students and teachers at the end.
SW	15 % of the students should be in work or studies three months after the course.	Measurement of employment three months after the end of course. Measurement "... if the participants learn" about soft skills at the end of course.	Questionnaire with questions on soft skills. Tutor observations. Self-evaluation through proposed methodology.
RO	Active involvement, low drop out rates from counselling groups. Results from Rosenberg and Goleman questionnaires.	Measurements at the beginning and end of the course.	Rosenberg self-esteem test, Goleman Emotional Intelligence Assessment. Teacher evaluation.

Country	Assessment		
	Success Criteria	Plan	Methodology
NL - 1	1. I make a plan of approach before starting. 2. I can plan my activities. 3. I stick to my plan 4. I pay attention to what I do. 5. I am open minded to a different opinion. 6. I like to work with others.	Measurement at the beginning and end of the course.	Self-assessment questionnaire based on the Success Criteria.
NL - 2	7. Others like to work with me. 8. I feel stress easily. 9. I like to participate in activities. 10. I feel confident when I do something new. 11. I can explain something clearly to someone else. 12. I listen well to others. 13. I am polite. 14. I do my best. 15. I give others a compliment.		

Table 15 is a comparative matrix among the different assessment choices made by the partners. It summarizes the success criteria established from each partner as base for assessment, the plan and the methodology of the assessment. The plan of the assessment refers to the design and process of the assessment while the methodology includes the tools used. The rationale behind the choices of each partner and the influences toward the specific decision is given below.

## UK

UK's success criteria reflect the standard Angus College's SkillZone criteria, which are presented and elaborated in another paper of this volume (p. 145). The primary criterion, which is also the primary SkillZone's goal, is students' retention, reduction of dropout and further involvement in education and training or employment. An additional criterion is students' satisfaction with the material. The two success criteria have different targets. The first one tries to assess the quality of SkillZone approach as a whole, while the second one targets the evaluation of the MASS material, which is one of the major products of the project.

A slight variation of the criteria applies for the third group. These are hairdressers who want to be accepted for further training; therefore their goal was not immediate employment.

Concerning students' retention, comparison with the results from previous years and the averages of the College performed. This will give an objective measurement of the quality of the programme, within Angus College context of operations.

Apart from students' retention and comment analysis, progress judged based on the suggested MASS measurement methodology (see below).

To qualitatively evaluate students' satisfaction, comment analysis was performed.

### *MASS suggested measurement methodology*

MASS suggested measurement methodology (see Learning Byte 1, p. 200) comprise two rubrics, one for students' self-assessment and one for their evaluation from the tutors. A grade, in a 4-point scale, is given against each soft skill each week, by students themselves. The tutors also evaluate each student separately, following the same procedure. Additionally, students may give open form explanations, concerning their improvement, or lack of it. Only the UK pilot actually used this grading system, however it reports that it puts too much burden on the tutors. The rest of the partners found it inconvenient.

### **GR**

For the assessment of MASS courses results, three measures were used by the GR partners:

- LEQ-H questionnaire (see below),
- Active student participation, as reported from the teachers and students themselves,
- Students' and teachers' satisfaction.

In Second Chance School of Neapolis, Thessaloniki, the assessment method that is used is a qualitative one. Students are given their assessment twice a year, separately for each subject, in a qualitative form, judging active participation, collaboration within the class with students and teachers, progress made concerning knowledge skills and competencies and giving hints for improvement. Thus the students are used to a kind of qualitative assessment.

Use of LEQ-H questionnaire resulted as an experiment to introduce a psychometric self-assessment culture in the school and to evaluate the appropriateness of the particular test in the MASS context.

The qualitative assessment, concerning active participation and satisfaction, were performed through interviews with tutors and some students, after the end of the course.

The LEQ-H questionnaire was given to both the experimental and control group before the beginning and after the end of the course. A control group was used in order to eliminate the influences from the participation in the school, irrespective of MASS courses.

### *LEQ-H Questionnaire*

LEQ-H questionnaire addresses self-perception of “Life Effectiveness” factors, through 24 questions (Richards, Ellis, & Neill, 2002; “Life Effectiveness Questionnaire (LEQ) - A Research Tool for Measuring Personal Change,” n.d.). The factors it addresses are given in Table 16.

**Table 16**  
**Factors addressed by LEQ-H questionnaire**

<b>LEQ Dimensions</b>	<b>Description</b>
Achievement Motivation	The extent to which the individual is motivated to achieve excellence and put the required effort into action to attain it.
Active Initiative	The extent to which the individual likes to initiate action in new situations.
Emotional Control	The extent to which the individual perceives he/she maintains emotional control when he/she is faced with potentially stressful situations.
Intellectual Flexibility	The extent to which the individual perceives he/she can adapt his/her thinking and accommodate new information from changing conditions and different perspectives.
Self Confidence	The degree of confidence the individual has in his/her abilities and the success of their actions.
Social Competence	The degree of personal confidence and self-perceived ability in social interactions.
Task Leadership	The extent to which the individual perceives he/she can lead other people effectively when a task needs to be done and productivity is the primary requirement.
Time Management	The extent that an individual perceives that he/she makes optimum use of time.

Even though the factors of LEQ-H questionnaire are, generally, in accordance with MASS soft skills, there is no one to one correspondence. For example, “Emotional Control” is not included in MASS as a skill by itself. These discrepancies possess questions, whether it is suitable for evaluation of MASS skills.

Only the Greek partner chose to use it. The closest approach from another partner is the Romanian one, who used Rosenberg’s self-esteem (Rosenberg, 1989) and Goleman Emotional Intelligence Assessment (“Utne Test,” n.d.) questionnaires. The rest of the partners did not use psychometric tools, mainly because their institutes were not familiar with this approach.

## SW

For the Swedish partner the MASS success criteria coincide with the general success criteria of the programme in which the MASS pilot took place, which means that 15% of the students should be in work or studies three months after the course.

In the partner's assessment plan, apart from the above stated success criterion, measurement "...if participants learn something" about soft skills, through a questionnaire, is stated. However, neither what "learning" mean is specified nor details about the questionnaire and its application is given.

An additional self-evaluation attempt through proposed methodology is reported.

## RO

The base methodology followed by the Romanian partner, apart from teachers' judgments, is the use of two questionnaires, for self-esteem measurement, by to Rosenberg (Rosenberg, 1989), and an emotional intelligence measurement one, by Goleman ("Utne Test," n.d.). They are both well-known and well established test. The Romanian partner carried out the MASS pilot in the framework of counselling classes. The chosen tests are well known and previously used by the teachers of these classes, psychologists in specialty.

The tests were addressed before the beginning and after the end of the MASS course and they results were compared.

An additional criterion is the active participation of students during the course, judged by their teachers.

### *Rosenberg's self-esteem test*

The Rosenberg self-esteem scale (Rosenberg, 1989), developed by Dr. Morris Rosenberg, is a widely-used self-esteem measure in social science research. It is a ten item questionnaire, with items answered on a 4-point scale — from strongly agrees to strongly disagree. Five of the scale items have positively worded statements and five have negatively worded ones. The scale measures state self-esteem by asking the respondents to reflect on their current feelings.

## NL

For the pilot NL partners developed a list of criteria, based on the assessment competences of junior vocational education and training. This was done because the students have worked with this list before. The list includes the following criteria:

1. I make a plan of approach before starting
2. I can plan my activities
3. I stick to my plan
4. I pay attention to what I do
5. I am open minded to a different opinion
6. I like to work with others
7. Others like to work with me
8. I feel stress easily
9. I like to participate in activities

10. I feel confident when I do something new
11. I can explain something clearly to someone else
12. I listen well to others
13. I am polite
14. I do my best
15. I give others a compliment.

These criteria were included in a self-assessment questionnaire, designed on a 4-point scale – from Never to Always -, which was addressed to students before the beginning and after the end of the pilot courses. The results were compared in order to make decisions.

In addition teachers' judgment was used to inform about students' active participation.

### Initial Soft Skills Assessment

Initial assessment serves as a base for measuring students' progress toward soft skills awareness, and as a justification that training on soft skills is actually needed. A comparative matrix of the methods used for initial assessment and the justification for training need is given in Table 17.

**Table 17**  
**Methodology of Initial soft skills assessment and need for relevant training**

Country	Initial Soft Skills Assessment	
	Initial Soft Skills Evaluation	Need for soft skills training
UK - 1	Self-grading (acceptance application, MASS grading system), interview, tutor grading (based on first week observation)	The students themselves realize their need for soft skills improvement, otherwise they wouldn't have applied.
UK - 2		
UK - 3	Initial assessment by hairdressing tutors after observation on hairdressing course in salon and dealing with customers.	They were sent to SkillsZone from another department due to lack of soft skills.
GR	Self-assessment (MASS tool, LEQ-H questionnaire). Teachers' assessment (MASS evaluation sheet).	Lack of communication, teamwork, active listening, oral and written expression skills (known from experience and verified from teachers' assessment).
SW	Self-assessment. Interviews.	Previous experience indicates that students need soft skills training.

Country	Initial Soft Skills Assessment	
	Initial Soft Skills Evaluation	Need for soft skills training
RO	Self-evaluation and teacher evaluation through MASS assessment tool. Self-evaluation through Rosenberg and Emotional Intelligence Assessment tests.	Rosenberg test shown low average student self-esteem. Emotional intelligence assessment test shown average and below average emotional intelligence.
NL - 1	Self-assessment questionnaire based on the Success Criteria.	Low level of soft skills. Need to raise awareness of their importance.
NL - 2		

In general the assessment methods of initial students' soft skills are in accordance with the assessment plan of each partner. However, as the tests used by most partners are not standardized for their national populations, an increased reliance on teachers' judgement is observed. An elaboration for procedure followed and results obtained, for each partner, is given below.

#### UK

Initial student assessment is done based on a paper-based application form where the student has declared any additional needs they are aware of. During interview these are further probed and notes taken which will form the basis of the Personal Learning Support Plan for that learner. At the start of the MASS project the learners were asked to grade themselves against all of the soft skills using the grading assessment tool within the MASS material. The tutors also gave an initial assessment grade based on the first week's observation of the students in class.

The students themselves accept the need to improve their soft skills, upon their application to SkillZone. This need was confirmed by their teachers.

#### GR

There is no official procedure, in the school, to evaluate students' soft skills. The initial evaluation was based on:

- Self-assessment through the evaluation sheet provided with MASS learning materials.
- Self-assessment through LEQ-H (Richards et al., 2002; "Life Effectiveness Questionnaire (LEQ) - A Research Tool for Measuring Personal Change," n.d.) questionnaire.
- Teacher assessment through the evaluation sheet provided with MASS learning materials.

Since LEQ-H questionnaire is not standardised for the Greek population, it cannot be used to obtain objective measurements. It can only be used in comparative measurements, before the beginning and after the end of course, or in comparison with a control group or both.

Regarding the need for soft skills training, it is known from previous experience, even though not measured, that students lack skills in the areas of communication, teamwork, active listening, oral and written expression. One of the major goals of the school is the improvement of these skills.

### SW

The initial soft skills evaluation was based on self-assessment and personal interviews. An example of self-assessment is given. Student presented a long list of soft skills and s/he is asked to underline the 15 more important, according to him/her, add and (\*) in the skills s/he thinks s/he has and put an (x) to those which s/he doesn't have.

The need for soft skills training is based on previous experience with similar student groups.

### RO

After the presentation and short introduction to each of the soft skills included in MASS courses, students grade themselves against each one, using a 4-point scale –from Unsatisfactory to Very Good-. Teachers also grade each student the same way. The average results, from both self-assessment and tutors assessment, are between “Unsatisfactory” and “Fair”.

Rosenbergs' self-esteem test (Rosenberg, 1989) revealed that 65% of the students had low self-esteem.

Golemans' Emotional Intelligence Assessment test (“Utne Test,” n.d.) revealed that 40% of students had “Bellow Average”, while 48% of the students had “Average” Emotional Intelligence.

### NL

For the initial evaluation NL partners used the questionnaire they constructed based on their criteria (see p. 148). They used it as a self-assessment tool, where students rate themselves. The averages vary widely among the different criteria.

However the teachers think that the students often do not have a realistic reflection on their soft skills.

## Progress Assessment

In this section we assess the quality of process during MASS courses. The assessment is mainly qualitative. As indicators student involvement and narratives of successes and failures are used. Additional means of assessment, chosen by each partner, are used in order to evaluate the strong and weak points of the process.



Table 18

## Assessment of the MASS courses progress

Country	Progress Assessment				
	Students' involvement	Stories of success	Stories of failure	Strong points	Weak points
UK - 1	Active participation.	90-100% of SkillZone students enter vocational area of their choice. ...I improve my self-esteem / time management / motivation / self-knowledge / manners / listening skills / relations with tutors.	...he didn't grasp the importance of soft skills.	Feedback to the students, grading system.	Assessment is time consuming for the tutors. Common consensus required among teachers deal with the same student.
UK - 2					
UK - 3					
GR	Active participation.	...I understood why I lost some friends in the past. ...I modified my attitudes toward my child. The stories imply increased self-reflection and actual modification of attitudes.	None	Generally, increasingly active participation. Sharing of experiences among students. Strong team building among students. Improvement of student – student and student – teacher relationships.	Student boredom in few cases, due to repetition of subjects.
SW	Students enjoyed the MASS program. They were active and interested.	Study of MASS materials helped student to discover his goals.	Student dismissed MASS approach as "childish". Possible cause: disruption of her security zone.	Embedded measurement system. Free use of material.	Long translation time needed. Not suitable for "everyone".

Country	Progress Assessment				
	Students' involvement	Stories of success	Stories of failure	Strong points	Weak points
RO	Active participation. Took a while to use to self-assessment.	Most usual comments: Improve my relations with my family / motivation / school attendance / self-expression / assertion / communication / adjustment in workplace.	None.	Students make aware of their behaviour and soft skills. Motivation to improve was increased. Standardization in a quite subjective domain.	Student assessment is time consuming for tutors. Tutors not used in the 4-degrees scale used in MASS assessment tool.
NL - 1	Students were not used to work in teams and share experiences with each other, as in the MASS courses. At the end of the course they were happy to participate.	...a student that wanted to become social worker for teenagers was able to practice guiding the rest of the class by discussing one of the MASS material discussions.	None.	The MASS materials are a great and large source of information. The students are more aware about the impact of their behavior.	Students found it hard to comprehend what they read. This is partly a translation problem.
NL - 2		...there was a problem with gossiping that stopped after the learning bite that discussed gossip.			

From all partners positive experiences during MASS courses were reported. They all report active student involvement, while some report that innovative elements were introduced in their educational practice, like self-assessment (reported by RO) and working in teams (NL). Strong and weak points reported by partners vary, which implies several alternative views and suggests ways of improvement. Stories of failure were few among all partners and they were greatly overcome by the stories of success. In what follows details from the report of each partner are given.

## UK

Students actively participated in most learning bytes. It took a while for them to become comfortable with the concept of grading themselves weekly on the soft skills but as time went on, this became a habit with them. Evaluation after each lesson was given by the learners and on the whole it was good. Almost all lesson plans ran to the timed 60 minute schedule but due to a range of reasons, some had to be cut short. Other lesson plans

needed contingency activities to be implemented as the student interest or focus waned. There is no real comparable data or specific lessons this affected as each lesson plan was received differently by each group within the pilot scheme and the same lesson did not fall into these categories for more than 1 group. However, it was noticed by all staff involved that the more practical the learning, the better the engagement by (and behaviour of) the learners.

The students like the feedback they receive from tutors on their development and the formal grading system is written evidence of their progress. Awareness of how their problems and moods can affect their ability to behave appropriately at work/College has been raised and 17 of the 50 full/part time students (34%) have come forward and asked for additional support to help them develop coping strategies for these moods.

It is time-consuming for tutors to grade large numbers of students at one time and may be difficult to sustain if other work pressures come up. Likewise, when more than one member of staff engages with the learner, it is important for these staff to get together to discuss each student before grading them (to get a common consensus) and this again is difficult to facilitate due to other staff duties and commitments. If due importance and time not given to the grading process, students can perceive it as a “numbers game” where they just randomly choose a number rather than read the criteria that number is assigned to.

## GR

Active participation throughout the lessons recorded both in the tutors and students interviews.

Large amount of personal experiences interchange is reported from both tutors and students.

Strong point includes:

- Generally, increasingly active participation.
- Share of experiences among students.
- Strong team building among students.
- Improvement of student – student and student – teacher relationships.

At some lessons student boredom was observed. Interviews shown that it mainly came from the repetition of some subjects, seen as already been covered, having nothing new to offer.

## SW

After a group discussion a part of the Learning Bytes selected based on the participants' needs and interests and the tutors individual assessment. The students really enjoyed the MASS programme, of course everybody didn't like everything but they were active and interested in the exercises and there were a lot of discussions.

The concept of the Soft Skills, MASS programme has, brought thoughts of behaviour among the participants in a simple and good way. Using MASS measurement and assessment methodology is considered a strength. The free use of the material and the opportunity to discuss with tutors in other countries during the project is also a success factor.

The weak point that emerged in MASS is the time it took to translate the material and that the materials do not always suit everybody. One example is the "Word Search" task that was childish of the vast majority of young people. The participants who have reading problems appreciated these exercises.

## RO

Students actively participated in most learning bytes. They got involved and very attracted to activities different from general curriculum teaching, especially where there was project and group centred learning. It took a while for them to become comfortable with the concept of grading themselves weekly, but as time went on, this became a habit with them.

Students were asked to fill in the Personal Development Plan during the pilot MASS course. Most of them wrote weekly, but some other found it difficult to complete, some even didn't do it for all weeks.

Strong points:

- Made students more aware at their behaviour, soft skills, and taught them compare with other people
- Brought certain standards in a quite subjective domain
- Motivate students to improve their skill level

Weak points:

- time-consuming for tutors to grade large numbers of students

## NL

The teachers did not use the progress assessment because they did not find it efficient. They also found it important to focus on stimulating and encouraging the progress of the students instead of what they do not do well. The students completed a questionnaire based on self-assessment on soft skills in the beginning of the pilot and at the end. The teachers discussed the outcome with their students.

The students had to get used to the materials, because they were different from the materials they used to have (different style, different communication). Besides this, the MASS-classes included working as a group, share experiences with each other. They were not used to doing this and had to get used to it. At the end of the pilot students were involved and happy about this way of working.

Strong points: The students were more aware about the impact of their behaviour.

Weak points: The students from the pilot groups found it hard to comprehend what they read. This is partly a translation problem. These students are not used to read a lot.

## Final Assessment

In this section we present the results obtained from the final assessment. The main targets of the final assessment were:

1. learning materials,

2. students' progress,
3. teacher evaluation,
4. relationships among students,
5. relationships among students and teachers,
6. rate of attendance and
7. dropout rate.

In addition, all the assessments made from individual partners, not fitting in any of the above categories, are presented.

The assessments outcomes are briefly presented in Table 19 and Table 20. The results are presented in two tables for convenience, as 7 columns are too many to fit in a page in portrait orientations.

**Table 19**  
**Final Assessment (Part 1)**

Country	Final Assessment		
	Learning Materials	Student progress	Teacher's evaluation
UK - 1	Positive: Flexible and adaptable, helpful for the tutor (tutors). Bright and colourful, attractive, easy to read (students). 8.13 average evaluation form students (1-10 scale). Good pace of activities (students). Negative: Language difficult for the target group (peer evaluation). Sometimes the content is a lot (students).	Excellent for the full time students. Very good for the part time student. The results of the part time students are inferior from the full time ones due to limited time in the programme.	They enjoy working with the materials. They found lesson plans very useful.
UK - 2			
UK - 3			
GR	Generally satisfactory. Sometimes repetitions / quite theoretical. No time left for activities such as role playing. Most of the content known to adults. Require adjustment of notions of flexibility and adaptability, as to take under consideration employee rights.	<ul style="list-style-type: none"> <li>• Notions and ideas clarification.</li> <li>• Improvement of self-reflection and self-knowledge.</li> <li>• Improvement of self-esteem.</li> <li>• Improvement in assertion.</li> <li>• Modification of attitudes and behaviour.</li> </ul>	Generally satisfied. Clarified notions and ideas themselves. Strong team building effect observed. Sometimes pressure to complete lesson plans.

Country	Final Assessment		
	Learning Materials	Student progress	Teacher's evaluation
SW	Useful, they cover a lot of soft skills. Ability to combine several pieces, tailored for the audience. Good structure. Sometimes childish.	Students' behaviour awareness / time keeping / active participation increased. Change in behaviour cannot be observed in during the time of the trial.	MASS material is very easy to work with. Possibility for variations.
RO	Useful, ready to use materials. Simple and effective in achieving behavioral and attitudinal change.	Measurements with Rosenberg and Emotional Intelligence Assessment Test show substantial improvement in students' self-esteem and emotional intelligence. Teachers' evaluation with MASS tool shown improvement in students' soft skills.	Very satisfied. Clarified notions and ideas themselves. Strong team building effect.
NL - 1	The MASS materials are a great and large source of information. The students are more aware about the impact of their behaviour. Students found it hard to comprehend what they read. This is partly a translation problem. Teachers rated MASS material with mixed outcomes.	Comparison of results among the initial and final measurement indicate increase of self-awareness. Hard to decide what part originated to MASS course.	Teachers rated MASS material with mixed outcomes.
NL - 2			Teachers rated MASS material with mixed outcomes.

**Table 20**  
**Final Assessment (Part 2)**

Country	Final Assessment			
	Students-students relations (team dynamics)	Students-teachers relations	Rate of attendance	Dropout rate
UK - 1	Heavy amount of learning is done through sharing experiences and group discussions. The activities encouraged teamwork and co-operative learning. The spirit of competition is high and the comradeship, respect and support for each other was growing with each activity. Less conflict in class.	Excellent.	92%	1 student
UK - 2			66% of the students had 100% attendance. Erratic, but acceptable for the rest.	0 student
UK - 3			100%	1 student
GR	Very good / strong	Excellent.	100%	None
SW	Most students knew each other. Generally good cooperation. The relation with MASS course is unknown.	Good, irrespective of MASS project.	100%. Attendance was obligatory for the students to receive their funds.	4/35 (11,5%)
RO	Unique and very close and personal relationship among the group of students.	Excellent.	92%	5/60 (8%)
NL - 1	Hard to say what is due to MASS.	Hard to say what is due to MASS.	40% of the students have 100% presence. Varying for the rest.	5 due to objective reasons like moving from the city and finding job.
NL - 2			98%	2

Partners, both teachers and students, are generally satisfied from the quality of the materials. Among the positive comments made included extensive soft skills coverage, adaptable, nice appearance, easy to read and good pace of activities. However partners also indicate that improvement is needed as in some points they are too much theoretical, the language is difficult, repetitions and overlap exist and content is not suitable/known to adults.

All partners report progress in students' awareness of their soft skills and behaviour, even though some (SW, NL) cannot decide what part came from MASS courses. Some also reports increase in self-esteem (GR, RO) and emotional intelligence (RO). Some actual soft skills improvement was observed from teachers; however the only indications of improvement in real life come from a story told by one Greek student and from acceptance of the 3<sup>rd</sup> UK group (hairdressers) for further studies (it is reminded that this group has been rejected due to lack of soft skills). It is known that the transfer of soft skills in practise is very difficult. Additional difficulties stem from the short duration of the project, which makes that kind of observation nearly impossible.

Teachers generally enjoyed working in MASS classes. Most found material, lesson plans and adaptability very useful. In some occasions improvement of teacher's skills are also reported (GR). In one case (NL) mixed opinions were expressed.

The relations among students generally improved during MASS courses. The main impetus for creating strong team dynamics seems to be the sharing of experiences and group discussions, although the part that is attributed to MASS courses is not always easy to estimate.

Concerning students – teachers relationships, they are reported as excellent in all cases, but no connection with MASS courses is given.

The rate of attendance was excellent in all cases, roughly ranging 90-100% of the total hours.

The dropout rate was very small, as well. In the cases where the attendance were not obligatory (UK, GR, RO) the high rate of attendance can be attributed in the perceived usefulness and interest of the MASS courses. However, in the cases of obligatory attendance (SW, NL) it is difficult to decide which part came from the usefulness of the MASS courses.

The measurement and the results of each partner are given in detail below.

## UK

The inbuilt lesson plans are invaluable in helping the tutor to focus on the areas of importance and not to be side-tracked or caught up in an unimportant issue. The notional 1 hour guidance duration for each lesson is a very good basis for all lessons and has the flexibility to be extended or reduced as necessary. Student feedback on materials is that they are "bright and colourful, attractive and easy to read". Some objective feedback received during a formal peer observation session at the College (where staff development tutors sit in on lessons to identify training needs and/or good practice) implied that the language used in the byte being observed (LB2) was too high a level for the academic ability/age group of the learning group (our 15 year old part timers).

Student progress has been excellent, with particular emphasis on the success of the 14-year old 'Skills for Work' students all of whom have positive destinations. The part timers (20) have a reduced level of study due to the nature of their attendance (between 3 and 9 hours per week) and so some engaged more than others. This was particularly true for the 2 students who only attend 3 hours/week – it was difficult to do other things in addition to the MASS material in this timeframe and so had less impact for these students as there was no



opportunity to contextualize the learning or link it into other aspects of their programme of study (the employability qualification that all other students were working towards). There is no doubt that using the MASS model is more powerful and successful when used in conjunction with full time courses of study (18 hours per week or more).

Tutors enjoy working with the materials as a base line. Additional teaching materials are included to ensure contextualization to the specific vocational area. The lesson plans help to focus the topic and give guidance to the teachers.

As can be seen in the feedback from the learners in section 6.1.2 those learners who struggle to mix with others have made excellent progress and effort to do so. The nature of the subject matter means that a heavy amount of learning is done through sharing experiences and group discussions. Completion of the activities in the MASS materials encourages teamwork and co-operative learning.

12 'Skills for Work' students attend 3 hours per week for 36 weeks. Since the start of the pilot, attendance has been 100% for the 11 students still on the programme.

2 part time SkillZone students are only required to attend 3 hours per week (100% attendance to date) for 36 weeks. Attendances for the other 18 part time students are erratic with only 66% having 100% attendance and have records of non-attendance at school. The fact that they continue to attend College with this minimum attendance rate is classed as a success by the schools concerned. The full time students need to complete 18 hours per week for 36 weeks and their average attendance rate is 92%.

The dropout rate was 3% (1 Skills for Work and 1 full time SkillZone).

## GR

In the interviews with students and tutors the following were reported:

- The learning materials were generally characterized as satisfactory.
- Several repetitions have been reported. The materials need reorganization.
- In some points quite theoretical.
- Sometimes the activities are a lot for the available time. That doesn't leave time for more time consuming methods, such as role playing.
- Most of the content is known to adults.
- The notions of employee flexibility and adaptability proposed need to be counterbalanced with notions from employee rights; otherwise they suggest a slave-employee situation.

Students reported progress toward:

- Notions and ideas clarification.
- Improvement of self-reflection and self-knowledge.
- Improvement of self-esteem.
- Improvement in assertion.
- Modification of attitudes and behaviours.

In general they felt that the time and effort spent in the courses were worthwhile. They propose the introduction of the course in more schools.

The results obtained for the factors examined by LEQ-H questionnaire (Table 16) are given in Table 21, and in form of bar charts in Figure 3 - Figure 10.

In Table 21 the three (3) main columns correspond to the competences that LEQ-H test examines and the measurements for the experimental and control groups, respectively. The experimental and control groups columns are subdivided in three sub columns each, which contain the initial, the final and the difference among the final and initial measurement.

Figure 3 - Figure 10 all have the same structure. Each Figure corresponds to one of the competencies examined by LEQ-H. Along the horizontal axis there are two areas, one for the experimental and one for the control groups, with two columns each, the initial and the final measurement. On the vertical axis there is the scale on which the relevant competency is measured. The heights of the columns represent the average measurements.

The first observation is that all of the values, both for experimental and control group, are above 5, in an 8-point scale. This may indicate that students do not have good sense of their soft skills, or that they are not used to self-assess themselves this way. Both alternatives imply compromise of the validity of the answers.

**Table 21**  
Results from LEQ-H questionnaire

Competences	Experimental			Control		
	Initial	Final	Difference	Initial	Final	Difference
Social Competence	6,20	6,21	0,01	5,28	6,19	0,92
Time Management	5,69	6,00	0,31	6,06	6,69	0,64
Achievement Motivation	7,41	7,12	-0,29	6,97	7,11	0,14
Intellectual Flexibility	6,24	6,42	0,19	6,25	7,03	0,78
Task Leadership	5,08	5,46	0,38	4,06	5,00	0,94
Emotional Control	4,84	4,70	-0,14	4,64	4,47	-0,17
Active Initiative	7,18	7,02	-0,16	6,92	6,94	0,03
Self Confidence	6,39	6,70	0,31	5,75	5,86	0,11

Figure 3

Mean Social Competence

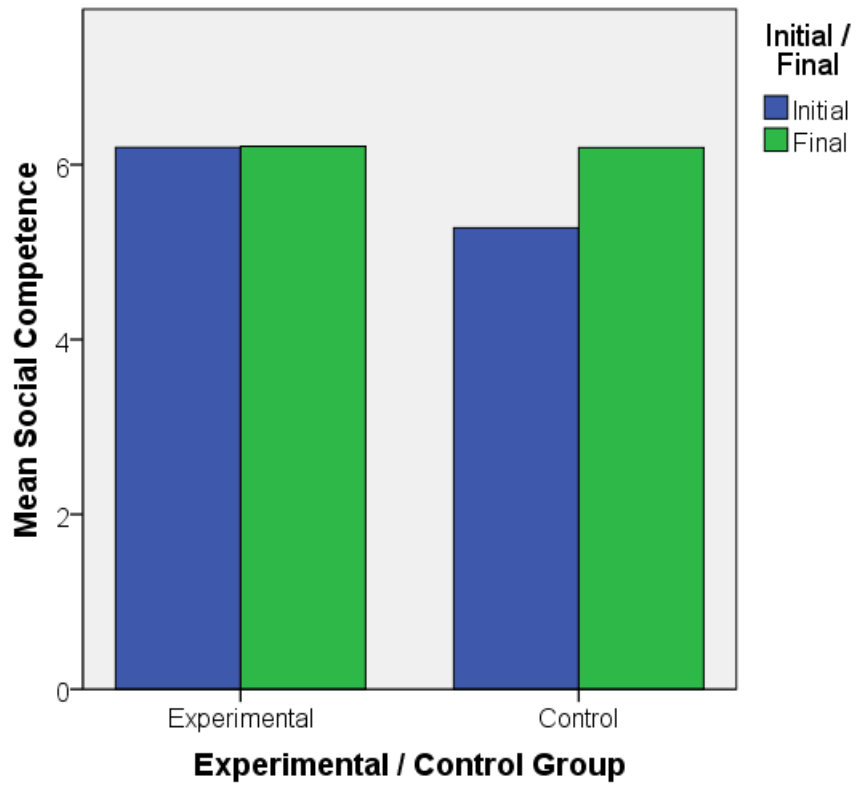


Figure 4

Mean time management

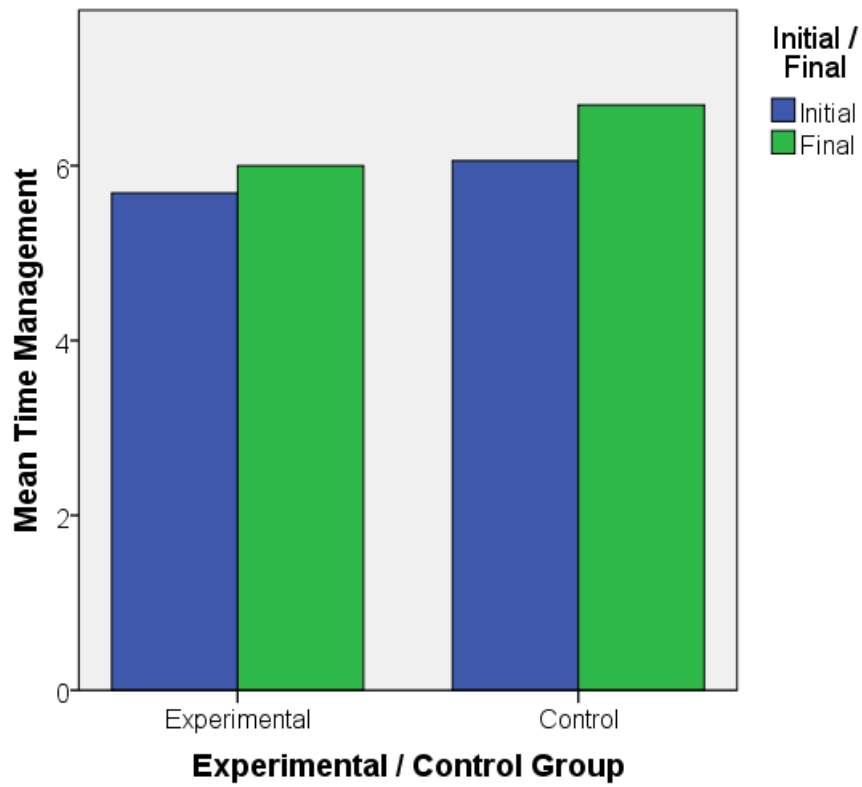


Figure 5

Mean Achievement Motivation

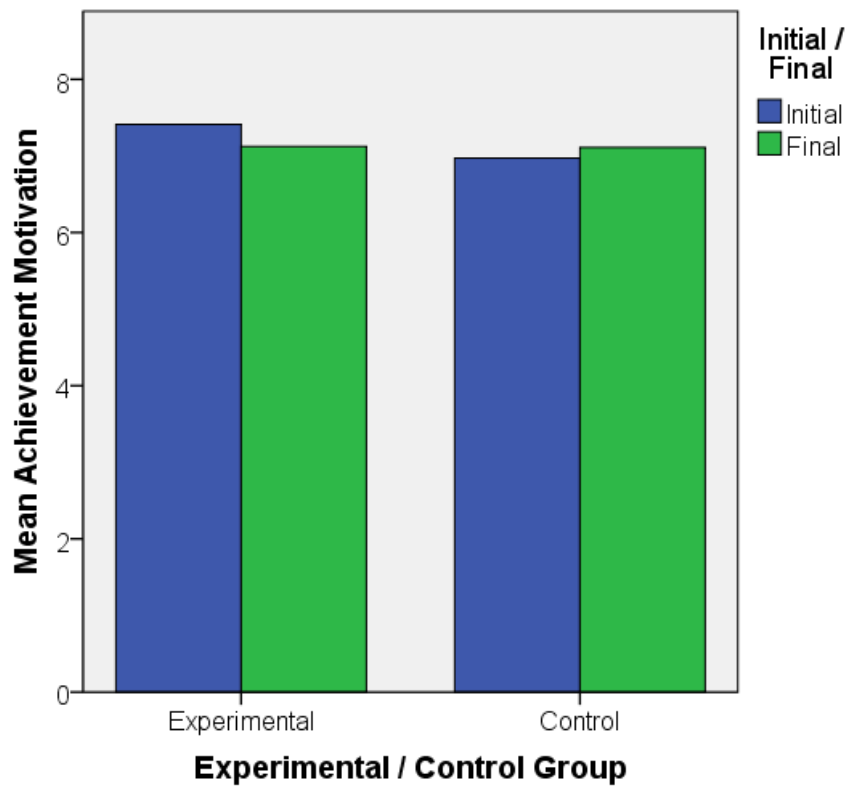


Figure 6

Mean Intellectual Flexibility

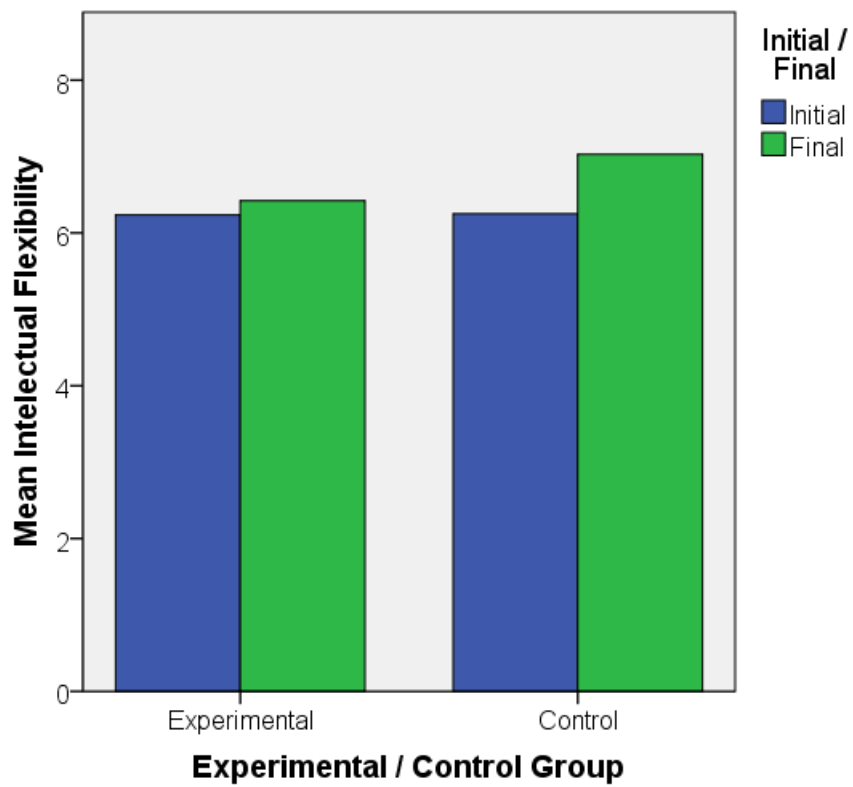


Figure 7

Mean Task Leadership

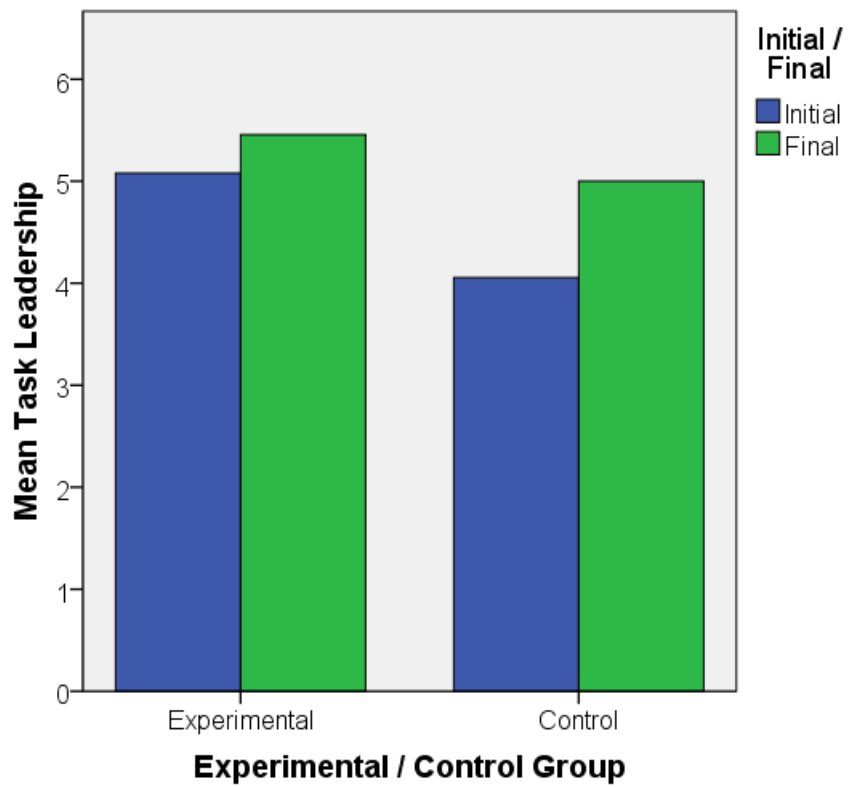


Figure 8

Mean Emotional Control

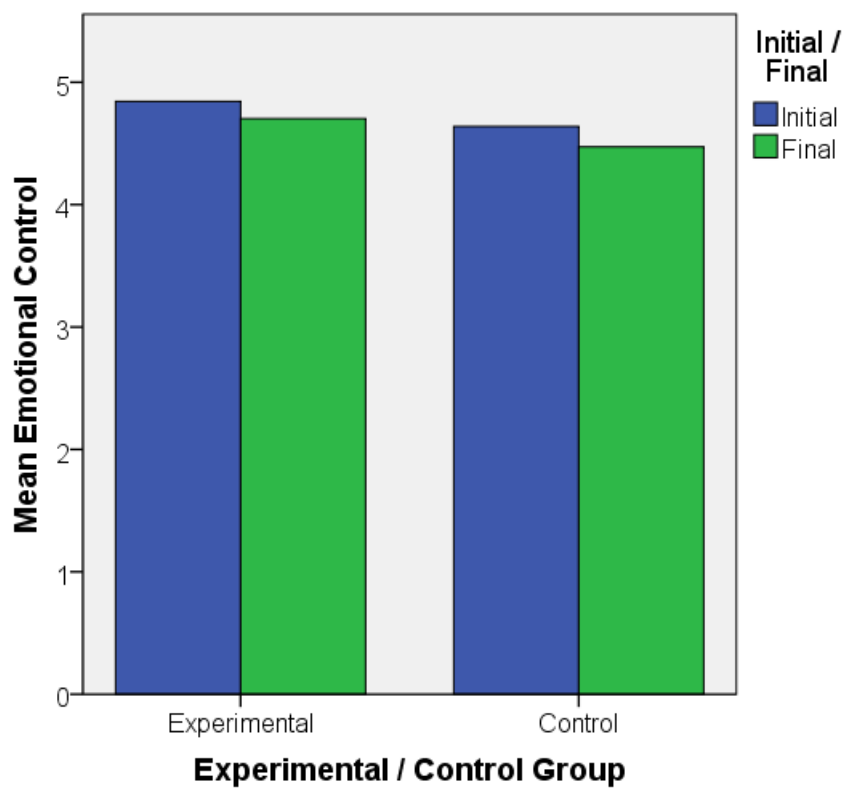


Figure 9

Mean Active Initiative

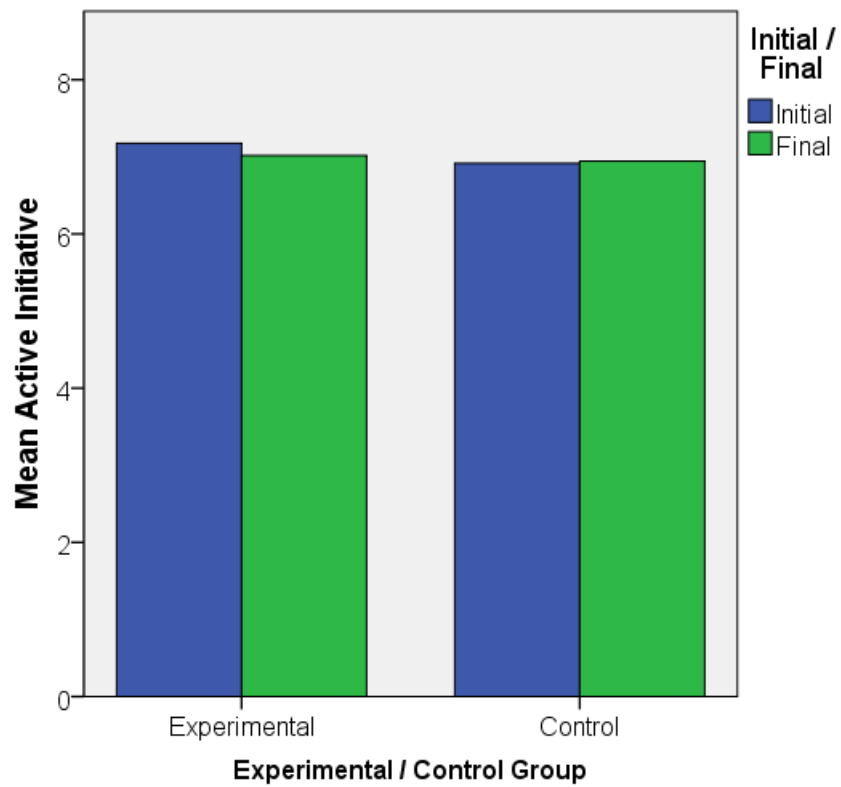
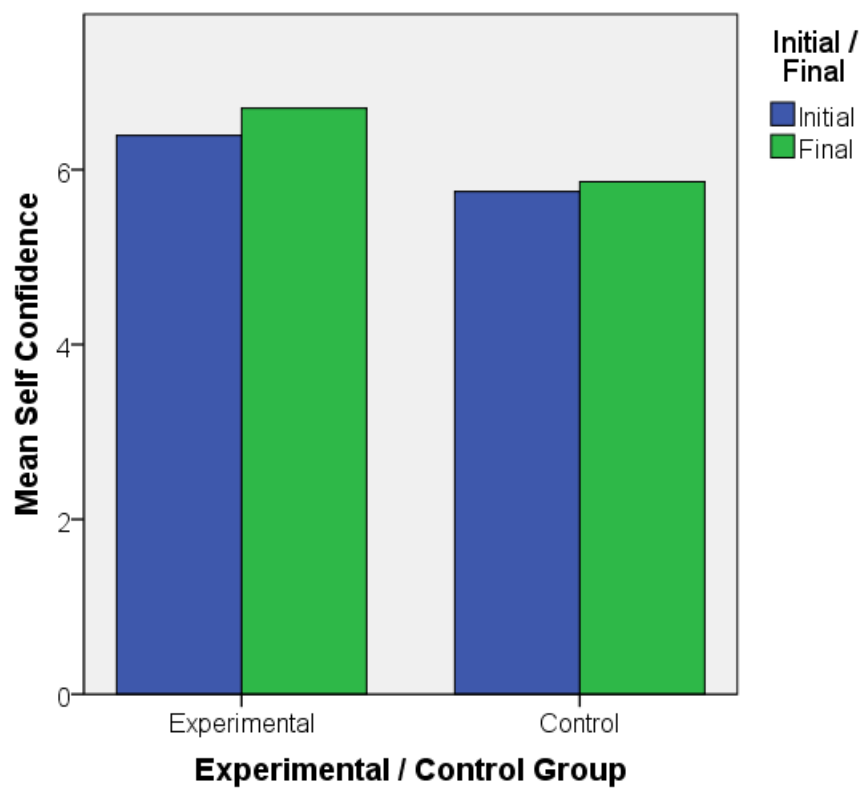


Figure 10

Mean Self Confidence



None of the above results is statistically significant. They show trend of change in both experimental and control group, mostly in the same direction. It cannot be concluded that the rate of change is bigger in the one group than the other.

There are a number of reasons for the inconclusive results with the most significant:

- Small size of the sample.
- The questionnaire does not correspond to the factors targeted by the classes.
- The students lack the skills needed to complete the questionnaire.
- Since the test is not standardized for the Greek population, it may not be suitable at all.

The major difference among the two groups is not in the results but in the correlation that initial and final answers had.

The correlation coefficients, among the initial and final answers and their significance are given in Table 22. The structure of Table 22 is similar with the one of Table 21. The columns of experimental and control groups give the correlation coefficients among the initial and final measurements and their significance.

**Table 22**  
Correlation coefficients among the initial and final answers and their significance for experimental and control groups.

Competences	Experimental		Control	
	Correlation	Significance	Correlation	Significance
Time Management	0,73	0,00	0,00	0,99
Social Competence	0,42	0,14	0,83	0,01
Achievement Motivation	0,16	0,58	0,43	0,29
Intellectual Flexibility	0,46	0,10	-0,01	0,99
Task Leadership	0,16	0,59	0,59	0,12
Emotional Control	0,16	0,59	0,66	0,08
Active Initiative	0,40	0,16	0,76	0,03
Self Confidence	0,13	0,66	0,44	0,28

The correlation among the initial and final answers of the control group seems to be significantly lower than the ones of the control group. This can be judged from the correlation coefficients. The experimental group has correlation coefficient greater than 0.4 in 3 skills while the control group has correlation coefficient greater than 0.4 in 6 skills. That

strongly indicates that the students in the control group gave final answers, which are not in accordance with the initial answers, more than their colleagues in the control group.

The above observation may suggest that the major contribution of the MASS classes were in the improvement of self-knowledge. MASS students improved their self-knowledge and they change their final answers more than the ones of the control group. A part of the improvement, of both the experimental and the control groups came from the participation in the school itself.

The rate of attendance was almost 100%, while there were no dropouts.

## SW

After translation of the material, they were very useful because they cover many areas of soft skills. Sometimes they are not suitable to the audience e.g. too childish, but the ability to modify and replace them for a specific audience with more suitable ones is very good.

Most of the participants became gradually more aware of their own and each other's behaviours, time keeping became more important and they liked to be active in class and tried to discuss and solve problems. Most participants understood the benefits of changing their own behaviour and why others behave as they do. But to understand and then make changes is not the same thing. For some persons, 12 weeks is a short time to make these changes of their habits. But the understanding of your behaviour and why you do what you do grew in all who participated in the MASS project.

The teachers think that the MASS materials are very easy to work with and the significant variations are possible. Being able to replace and substitute materials is very good. The additional materials and the free material on Internet is a great help.

The catchments area is small and it means that many young people know each other before entering the labour programme. This facilitates usually, not always, team building and group activities. The teachers don't think that MASS specifically had any effect to the team dynamics.

Contact between tutors and participants are intense as they get together 40 hours / week and MASS are 4 hours of that time. There is no indication that relates students – teachers relationships with MASS courses.

Attendance is nearly 100%, because the participants lose their allowances for inexcusable absence.

## RO

Romanian partners examined the student progress by using:

1. Self-assessment based on grading against each soft skill contained in MASS materials, in a 4-point scale – from Unsatisfactory to Very Good – at the beginning and after the end of the course.
2. Teachers' assessment, with the same procedure described above.
3. Rosenberg's self-esteem test before the beginning and after the end of course/



4. Goleman's emotional intelligence assessment test, before the beginning and after the end of course.

Bellow the results from each measurement methodology are presented.

### *Self and teacher assessment against each soft skill*

The self and teacher assessment against each soft skill were taken place after a short introduction of soft skills and their meaning to the students. This introduction lasted two weeks.

A 4-point scale was used, from Unsatisfactory to Very Good. The results, from both self and tutor assessment are given in Table 23. It consists of three main columns, from left to right, the name of each skill, the results of self-assessment and the results of teachers' assessment. Self and teacher assessment are further subdivided in three columns each, containing the initial and final average grade, as well as the difference among the final and initial evaluation, in order for the progress to be easier visible.

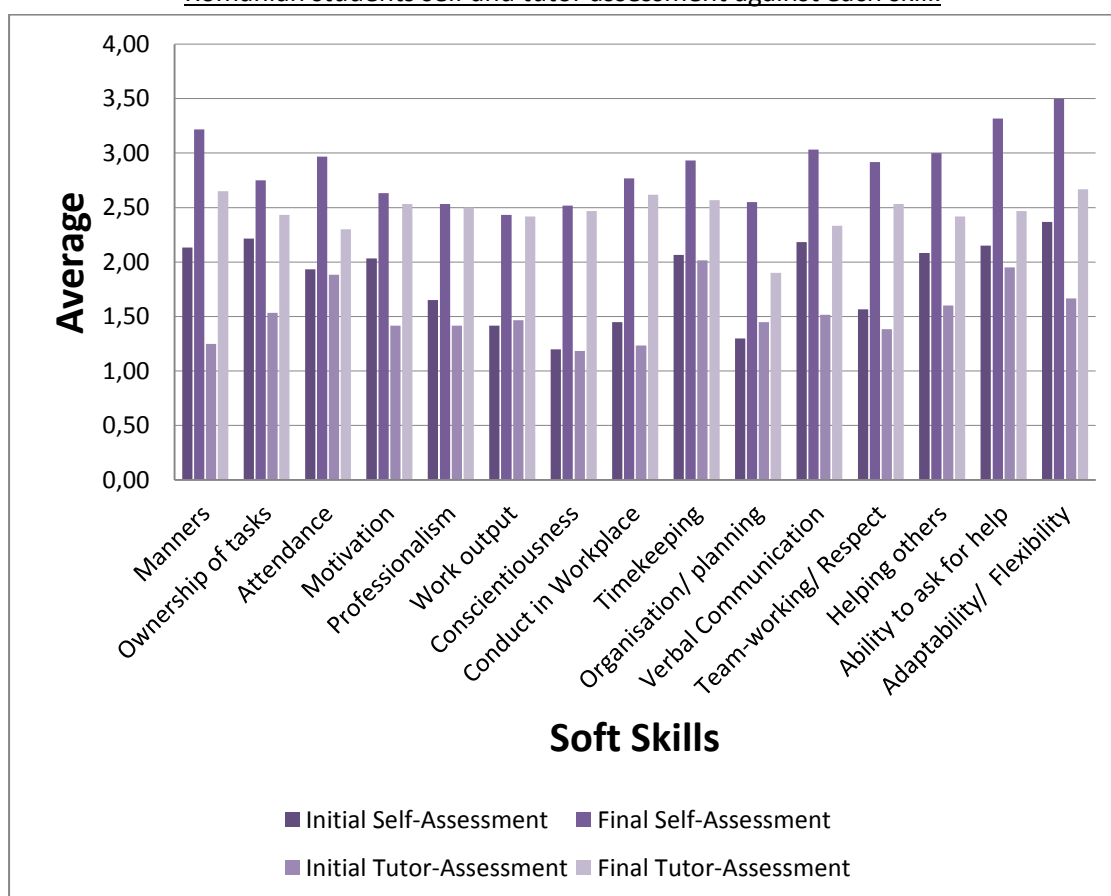
**Table 23**  
Romanian students self and tutor assessment against each skill.

Skills	Self-Assessment			Tutor Assessment		
	Initial	Final	Difference	Initial	Final	Difference
Manners	2,13	3,22	1,08	1,25	2,65	1,40
Ownership of tasks	2,22	2,75	0,53	1,53	2,43	0,90
Attendance	1,93	2,97	1,03	1,88	2,30	0,42
Motivation	2,03	2,63	0,60	1,42	2,53	1,12
Professionalism	1,65	2,53	0,88	1,42	2,50	1,08
Work output	1,42	2,43	1,02	1,47	2,42	0,95
Conscientiousness	1,20	2,52	1,32	1,18	2,47	1,28
Conduct in Workplace	1,45	2,77	1,32	1,23	2,62	1,38
Timekeeping	2,07	2,93	0,87	2,02	2,57	0,55
Organisation/ planning	1,30	2,55	1,25	1,45	1,90	0,45
Verbal Communication	2,18	3,03	0,85	1,52	2,33	0,82
Team-working/ Respect	1,57	2,92	1,35	1,38	2,53	1,15
Helping others	2,08	3,00	0,92	1,60	2,42	0,82
Ability to ask for help	2,15	3,32	1,17	1,95	2,47	0,52
Adaptability/ Flexibility	2,37	3,50	1,13	1,67	2,67	1,00

The same information is given in chart form in Figure 11. Each subdivision along the horizontal axis corresponds to one soft skill. In each soft skill 4 bars are shown. From left to right they correspond to initial self-assessment, final self-assessment, initial teachers' assessment and final teachers' assessment. Thus, the two left of the bars refer to self-assessment, while the rest to teachers' assessment.

Figure 11

Romanian students self and tutor assessment against each skill.



Improvement in all soft skills is evident, both in self and tutor assessment. Frequently, teachers' marks differ considerably from self-assessment marks, with self-assessment resulting in bigger marks. This might indicate a lack of students' self-assessment skills.

### Rosenberg's self-esteem test

Rosenberg's self-esteem test was given to students before the beginning and after the end of courses. Table 24 gives the results of this test. It has three columns, from left to right, the self-esteem level (low, medium, or high), the number of students which score in the corresponding level in the initial evaluation ("Initial"), and the number of student in each level in the final evaluation ("Final").

Table 24

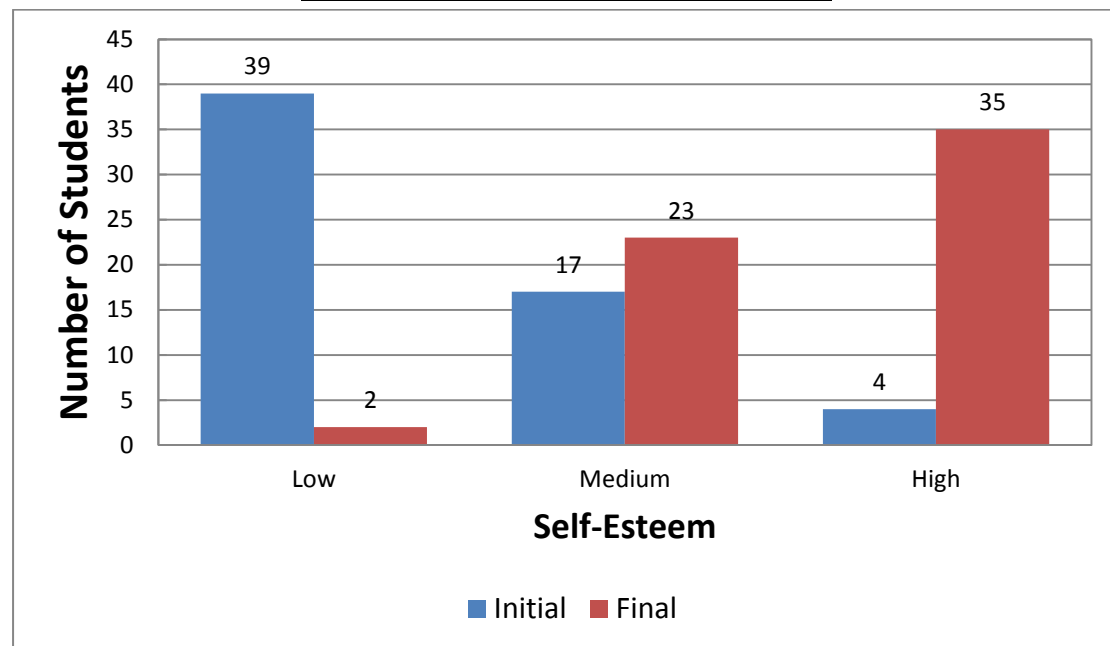
Romanian students' self-esteem test results.

Self-Esteem	Initial	Final
Low	39	2
Medium	17	23
High	4	35

The same information is given in the form of a bar chart in Figure 12. The three areas along the horizontal axis correspond to the three levels of self-esteem. In each area two bars are shown, the left one shows the number of students that scored in the particular level of self-

esteem in the initial evaluation, while the right one gives the number of students with the particular self-esteem level in the final evaluation.

**Figure 12**  
Romanian students' self-esteem test results.



From Table 24 and Figure 12 impressive improvement of students' self-esteem can be deducted.

#### *Goleman's emotional intelligence test*

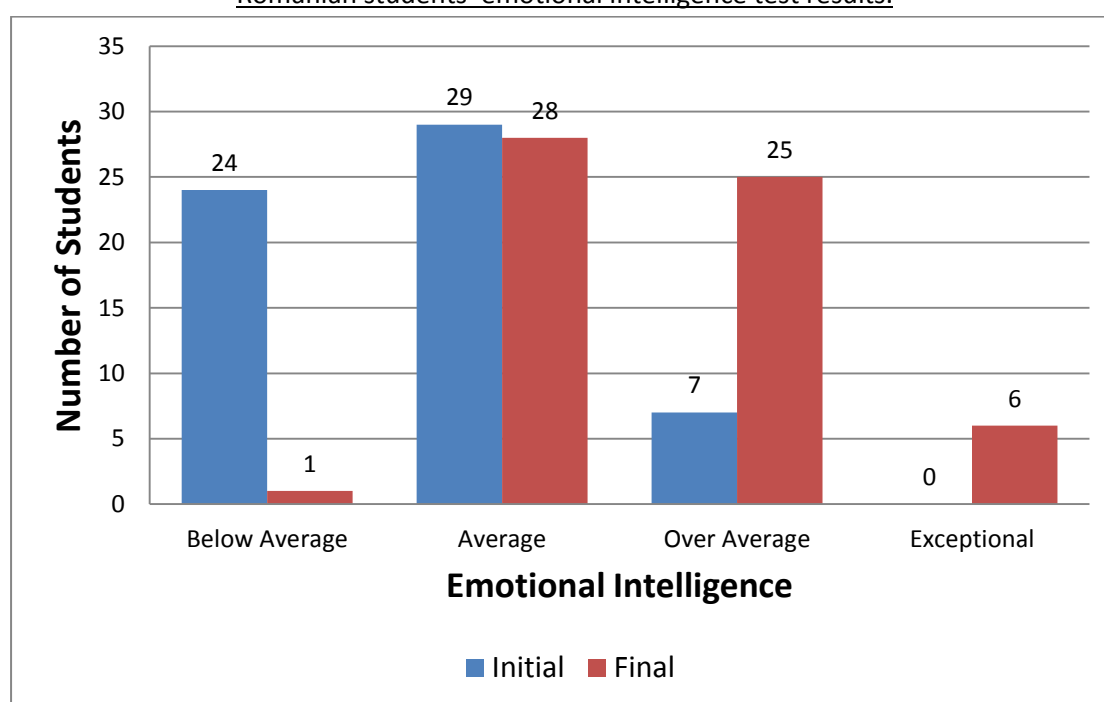
Goleman's emotional intelligence test was given to students in parallel with self-esteem test, before the beginning and after the end of courses. Table 25 gives the results of this test. It has three columns, from left to right, the emotional intelligence level (below average, average, over average, exceptional), the number of students which score in the corresponding level in the initial evaluation ("Initial"), and the number of student in each level in the final evaluation ("Final").

**Table 25**  
Romanian students' emotional intelligence test results.

Emotional Intelligence	Initial	Final
Below Average	24	1
Average	29	28
Over Average	7	25
Exceptional	0	6

The same information is given in the form of a bar chart in Figure 13. The four areas along the horizontal axis correspond to the four levels of self-esteem. In each area two bars are shown, the left one shows the number of students that scored in the particular level in the initial evaluation, while the right one gives the number of students with the particular self-esteem level in the final evaluation.

**Figure 13**  
Romanian students' emotional intelligence test results.



From Table 25 and Figure 13 impressive improvement of students' emotional intelligence can be deduced.

## NL

### *MASS materials and course quality assessment*

In order for Dutch partners to evaluate the suitability of the MASS material and usefulness of the MASS course, they gave to both students and teachers questionnaires, near as well as after the end of the course, in order to record their responses. The questionnaires were given separately to each of the two groups, since they have different orientation, which may influence the suitability of the materials. The 1<sup>st</sup> group (NL – 1) has a general vocational orientation (not yet engaged in a particular discipline), while the 2<sup>nd</sup> one (NL – 2) has healthcare orientation.

The questions and the answers given by both groups are presented in Table 26. From left to right, it has three main columns, the questions included in the questionnaire, the responses from the 1<sup>st</sup> group and the responses from the 2<sup>nd</sup> group. The responses from the 1<sup>st</sup> group are further divided in 3 sub columns, for "Yes", "No" and "Sometimes", while the 2<sup>nd</sup> group subdivided in 2 columns, for "Yes" and "No" answers. The numbers that appear in the cells show the number of students that gave the specific answer.

Table 26

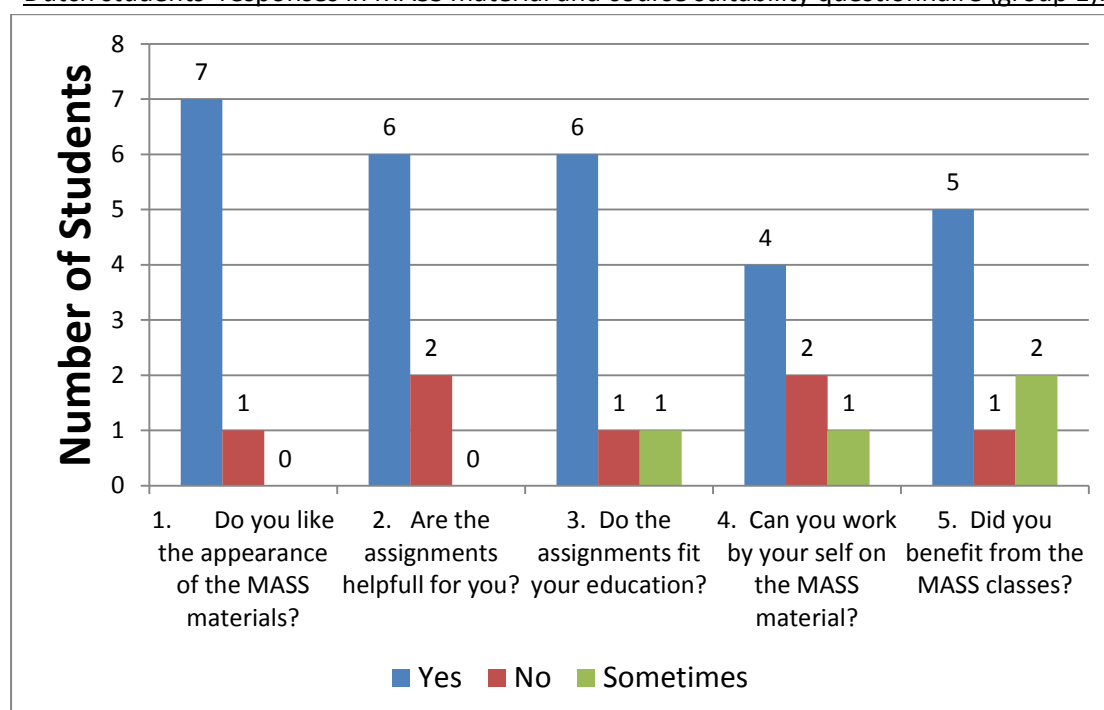
Dutch students' responses in MASS material and course suitability questionnaire.

MASS materials and course suitability for NL students (student questionnaire)					
	Group 1			Group 2	
	Yes	No	Sometimes	Yes	No
1. Do you like the appearance of the MASS materials?	7	1	0	5	6
2. Are the assignments helpful for you?	6	2	0	7	4
3. Do the assignments fit your education?	6	1	1	11	0
4. Can you work by yourself on the MASS material?	4	2	1	9	2
5. Did you benefit from the MASS classes?	5	1	2	11	0

The information contained in Table 26 is presented in form of bar charts, in Figure 14 and Figure 15, for the 1<sup>st</sup> and 2<sup>nd</sup> group respectively.

Figure 14

Dutch students' responses in MASS material and course suitability questionnaire (group 1).



From Table 26 and Figure 14 we can see that the answers of 1<sup>st</sup> group (general vocational orientation) are in favour of the high quality of MASS materials and course. The lowest number of positive answers is observed in question number 4, "Can you work by yourself on

the MASS material?" . Teachers suggest that the students cannot work alone in the materials, since they frequently need further instructions.

**Figure 15**

Dutch students' responses in MASS material and course suitability questionnaire (group 2).

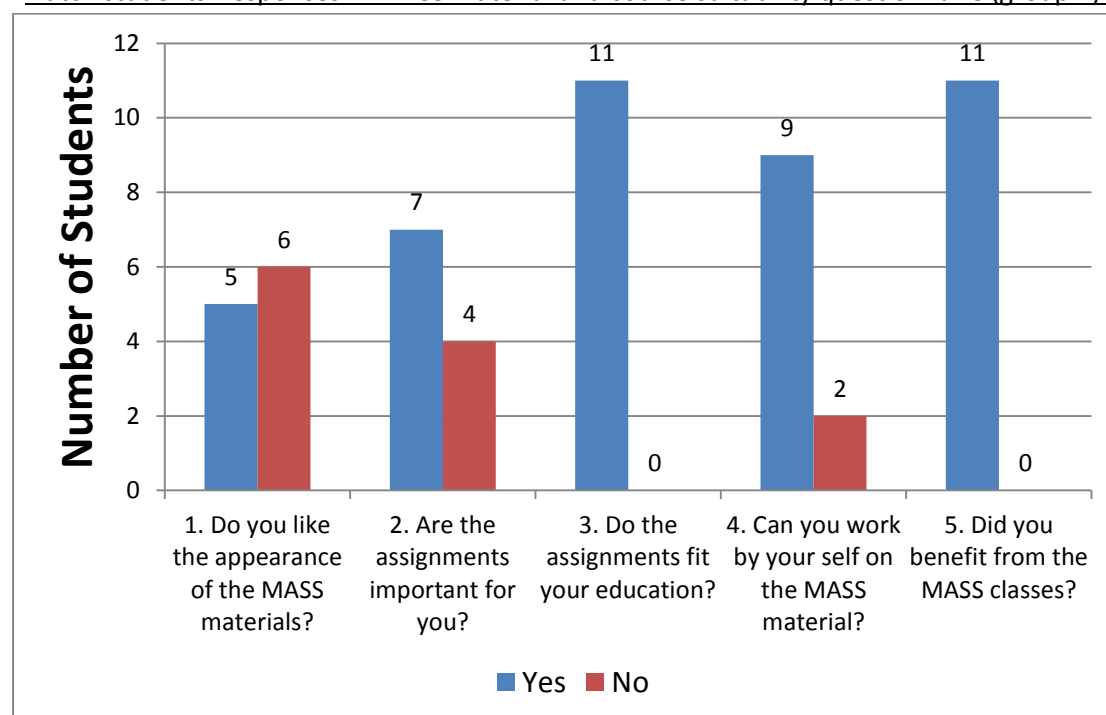


Figure 15 presents the answers from the 2<sup>nd</sup> group (healthcare orientation), derived from Table 26. Compared with group 1, positive responses are fewer in the questions concern the appearance and importance of assignment. This might indicate that the MASS design is not that suitable for the health care orientation group, which might further suggest that modification is needed in order to include it in different disciplines. This conclusion may be expected, since from conception MASS materials designed for a stand-alone course. The responses to the rest of the questions are very positive.

**Table 27**

Dutch teachers' responses in MASS material and course suitability questionnaire (group 1).

MASS materials and course suitability for NL students (teacher questionnaire)						
	Group 1			Group 2		
	Yes	No	Not always	Yes	No	Not always
1. Do you like the appearance of the MASS materials?	x			50%	50%	
2. Does the material fits with the target group?		x		x		
3. Does the material fits into the general qualification framework?	x			x		
4. Does the material fits with the Dutch culture?			x	50%	50%	

5. Are all the soft skills, needed in the vocational course, covered by these materials?	x			x		
6. Is it possible for the students to work with the materials on their own?		x			x	
7. Gives the tutor pack enough support?	x					x
8. Is the digital material helpful?		x			x	
9. Do you think that the students learn what they have to learn?	x					x
10. Do you register the progress of every student?		x			x	

Teachers of group 1 are satisfied with the appearance, the fitness with the general framework, the completeness of the soft skills included and the support for the teachers. They also report that the students learned what they had to. They don't think, however, that the materials fit with the specific target group, which is rather strange and in contrast with what students claim (Table 26, Figure 14). They did not like the additional digital material provided, also.

Teacher of group 2 are split concerning the appearance of the materials, but they think that they fit in the qualification framework and contain all the necessary soft skills. They also think that they are suitable for the particular target group, which is somewhat in contradiction with the student opinions (Table 26, Figure 15). They do not think that the students can work with the materials without supervision and that the additional digital materials were useful. In contrast with group 1 teachers, they do not think that the tutor packs always give enough support, neither that the students learned all they had to. Summarizing, the opinions of group 1 teachers (not yet in a particular orientation) seems to be more positive than group 2 teachers (healthcare orientation), which might indicate necessity for adaptation according the needs of specific disciplines.

### *Students' progress assessment*

In order to evaluate students' progress a self-reference questionnaire was constructed, based on the competencies given earlier in this paper and distributed to the students before the beginning and at the end of the course. The questionnaire uses a 4-point scale, from "Never" to "Always". The questions, as well as the averages obtained from the initial and the final evaluation are presented in Table 28 and Figure 16 for group 1, and in Table 29 and Figure 17 for group 2.

The structure of Table 28 and Table 29 are the same. They have four (4) columns. From left to right, the columns contain the question, the average of the initial self-assessment results, the average of the final self-assessment results, and, finally, the difference among the final and initial result. The difference is included in order to make the decisions easier.

The structure of Figure 16 and Figure 17 is also the same. Along the horizontal axes there are areas that correspond to each question. For each question two bars are given, which correspond to the value of the initial and final average, respectively.

**Table 28**  
Dutch students' self-assessment questionnaire results (group 1).

<b>NL Students self-assessment questionnaire (group 1)</b>			
	<b>Initial</b>	<b>Final</b>	<b>Difference</b>
1. I make a plan of approach before starting	2,29	2,56	0,28
2. I can plan my activities	2,71	2,88	0,16
3. I stick to my plan	2,29	2,81	0,53
4. I pay attention to what I do	2,29	2,88	0,59
5. I am open minded to a different opinion	3	2,94	-0,06
6. I like to work with others	2,57	2,81	0,24
7. Others like to work with me	2,36	2,63	0,27
8. I feel stress easily	2,5	2,19	-0,31
9. I like to participate in activities	2,57	2,75	0,18
10. I feel confident when I do something new	2,71	2,81	0,1
11. I can explain something clearly to someone else.	3	2,63	-0,38
12. I listen well to others	3,14	3	-0,14
13. I am polite	3,14	3,13	-0,02
14. I do my best	2,93	2,69	-0,24
15. I give others a compliment.	2,79	2,88	0,09



Figure 16

Dutch students' self-assessment questionnaire results (group 1).

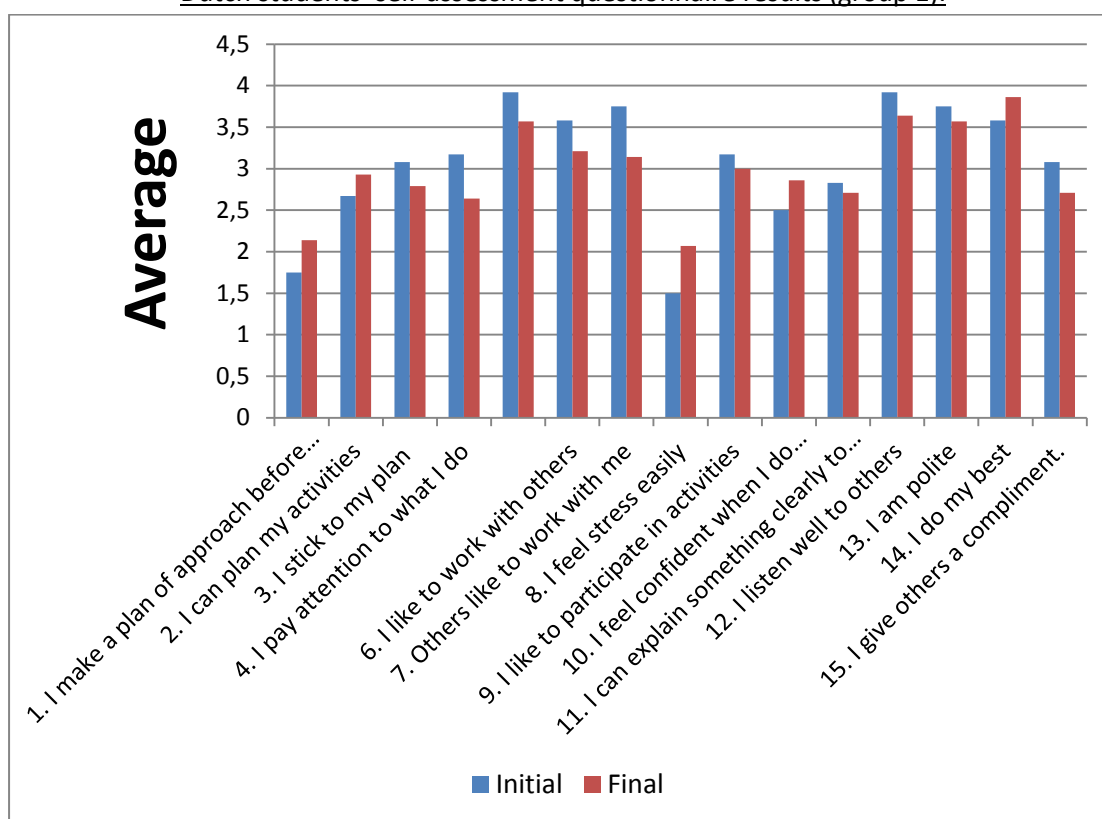


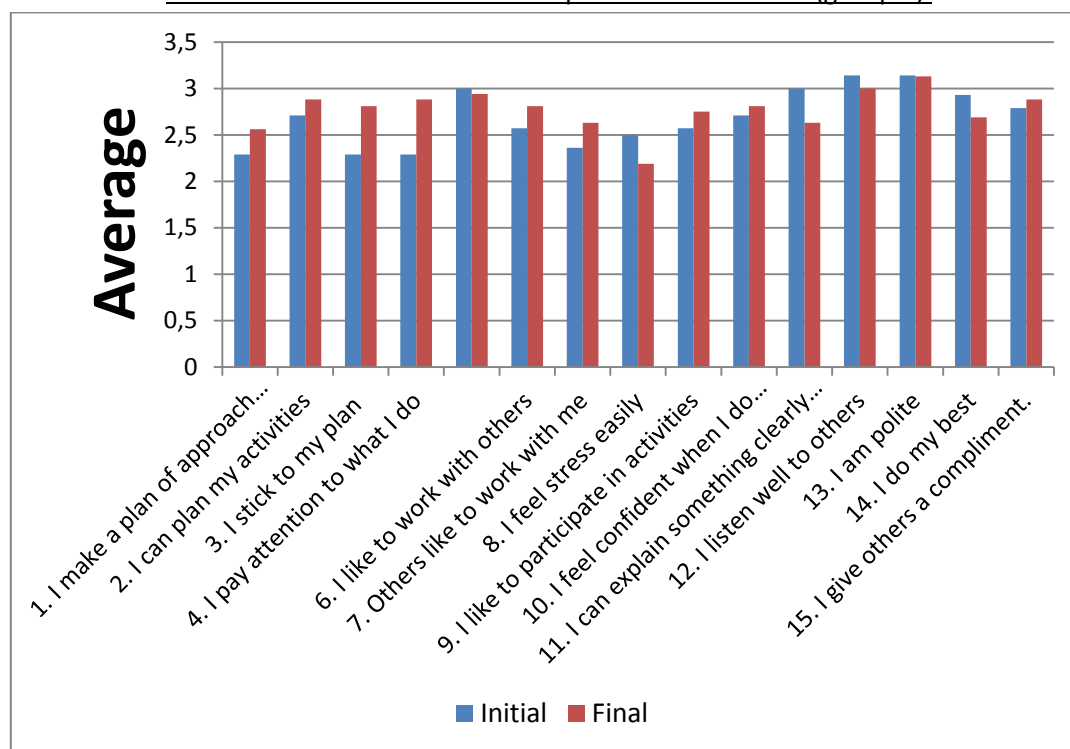
Table 29

Dutch students' self-assessment questionnaire results (group 2).

NL Students self-assessment questionnaire (group 2)			
	Initial	Final	Difference
1. I make a plan of approach before starting	1,75	2,14	0,39
2. I can plan my activities	2,67	2,93	0,26
3. I stick to my plan	3,08	2,79	-0,3
4. I pay attention to what I do	3,17	2,64	-0,52
5. I am open minded to a different opinion	3,92	3,57	-0,35
6. I like to work with others	3,58	3,21	-0,37
7. Others like to work with me	3,75	3,14	-0,61
8. I feel stress easily	1,5	2,07	0,57
9. I like to participate in activities	3,17	3	-0,17
10. I feel confident when I do something new	2,5	2,86	0,36
11. I can explain something clearly to someone else.	2,83	2,71	-0,12
12. I listen well to others	3,92	3,64	-0,27
13. I am polite	3,75	3,57	-0,18
14. I do my best	3,58	3,86	0,27
15. I give others a compliment.	3,08	2,71	-0,37

Figure 17

Dutch students' self-assessment questionnaire results (group 2).



The results presented in Table 28 and Table 29, as well as in Figure 16 and Figure 17 are inconclusive. Some variation among the initial and final soft skills can be observed, but it not large, neither in the same direction for all skills. It might be due to increased self-awareness, but it also might be caused from the degree of reliability of the questionnaire, which is unknown.

## Discussion

As presented above, each partner used its own methodology of assessment, according to their different context of operations, the information of interest and the assessment practices they are used to. Collectively, large number of alternatives suggested, which give a very good background on soft skills assessment and may form the base for and adaptable approach. Soft skills assessment is a new and underdeveloped field and different paradigms, with the advantages and disadvantages they may have, are valuable for institutions seeking a practical approach.

The tools used were mainly self-reference tests, either ready-made or self-made, or teacher judgement. More holistic methods, like portfolio assessment, or diary were not used. In the case of Scottish partners students' attendance and dropout rate was an objective indicator, but it is proved to be of concern for no other partner.

Tests made by other scientists are generally preferable, as they have measured validity and reliability and their results may be compared with other research in the literature. Some of

them are also well known and well tested. However, frequently do not measure exactly what we wish to, and their applicability in a particular context might be questionable. Self-made tests have the advantage of high construct validity however their predictive validity and reliability are usually not known.

Students' self-assessment through various tests gave results ranging from very positive, as in the case of Romanian partners, up to inconclusive as in the case of Dutch partners. A number of reasons may contribute to this discrepancies including that students do not know how to assess themselves (reported from RO, SW, NL) and teachers are inexperienced in applying psychometric tests.

An additional, and possibly important, reason is the lack of clear soft skills definitions. Romanian partners reported that before addressing the tests, they spend about two weeks reviewing the soft skills included. Such an approach was not reported from the other partners that applied the tests. Thus, a possibility is that the Romanian partners clarified the notions of the soft skills under consideration, which gave their students a framework for their self-assessment. Such a framework might be absent from Greek or Dutch students during the initial test, but maybe not during the final one, which led to a confusion in their initial and final answers. This observation may indicate the need for clarifying the notions and definitions of soft skills of interest.

When students were asked direct questions concerning the quality and relevance of MASS courses, in all cases they gave very positive answers. We believe that in the major part such answers did result from actual high quality and relevance, however in this kind of direct questions, students need for socialized answers and pleasing their teachers should be a concern.

When teachers judged the quality of MASS material, generally very positive responses were obtained. The most frequently stated strong points include:

- Wide coverage of soft skills, adequate for vocational education.
- Adaptability of materials, as to address specific target group needs.
- Good lesson plans, releasing teachers from the burden to design their lessons themselves.

Teachers also indicated ways in which the present material can be improved. Their suggestions include:

- More digital materials.
- Less theoretical and linguistic.
- Adaptation for specific disciplines.
- Remove repetitions.

Teachers' judgements of students' soft skills improvement are generally very positive. However, none of the partners suggested a set of criteria for judging the improvement. Moreover the only concrete example, which confirms improvement of soft skills, comes from Dutch partners, when they report that a gossip problem in the classroom stopped,

after teaching the relevant Learning Byte. Thus, it is not clear upon what criteria the teachers based their opinions. In some cases, even when improvement is reported, it is difficult to determine what portion comes from MASS intervention and what from the participation in the school itself.

All partners were concerned with summative assessment, to evaluate the results of the project. None reported efforts to develop formative assessment during the courses.

In general, the participation in MASS project is considered valuable. Partners had the opportunity to introduce and experiment with soft skills in ways which were novel for their educational system in all aspects, including content, educational paradigm and assessment. The progress made since the beginning of the project, towards both educational practices and design of assessment is remarkable. Some inconsistencies appeared during assessment are expected, since none of the partners is an assessment design expert.

If MASS project is seen as iteration towards the design of a European level soft skills training and assessment methodology it can be characterized as very successful. Starting from local (Scottish) experience, partners had to educate themselves about soft skills, adapt the learning materials to fit their own cultural background and target groups, and design the assessment according to their needs. In an effort of such scale not all the problems are visible from the beginning and a lot of innovative action is needed.

For future work, development of e-learning strategies, a reorganization and augmentation of learning materials based on a rigorous needs analysis, and design of a consistent assessment methodology can be suggested.

The comments and suggestions from each partner are presented below.

## **UK**

### **Comments/Overall impression**

Overall, the MASS materials have been positively received by staff and students and will continue to be utilized in future.

### **Impact on students**

Helped to raise awareness of soft skills and how this can influence their responses to certain situations.

### **Impact on teachers**

Is another useful tool to help focus learners on soft skills and help teachers also to realize importance of developing this area within students.

### **Impact on Institution**

Students better prepared for other courses. This will be measurable next year when success and retention rates measured and compared with those of previous, non-MASS students. The MASS materials have been disseminated at various in-house events and staff from all vocational areas are looking to use the materials as an additional resource to help focus on employability within introductory level courses.

## **Suggestions**

The MASS materials are best used as part of another programme or course of study – this allows flexibility in their use and can then also be more tailored to individual group needs (eg some students may only need to work on timekeeping and manners, so the tutors can use these Learning Bytes only. The assessment grading tool can also be adapted to meet the needs of different groups by removing soft skills listed). New words or phrases should be made known to the learners in advance to ensure full awareness before the lesson starts.

## **GR**

### **Comments/Overall impression**

- Both students and tutors were generally satisfied from the materials and courses progress.
- Both students and teachers suggest the integration of soft skills teaching into the regular courses, in a selective manner.
- Materials require clean up due to repetitions in subjects.
- A restructuring of the materials is also possible, in order to save time for activities such as role playing, which are time consuming, but essential.

### **Impact on students**

Very positive.

### **Impact on teachers**

Very positive.

### **Impact on Institution**

The school had the opportunity to develop expertise in a domain mostly absent from the Greek education. This expertise will be disseminated through publications in relative journals and oral papers in conferences, hopefully having an impact in other schools too.

## **Suggestions**

In order to improve the quality of MASS approach the following are suggested:

- Better definitions and classification of soft skills included. This will allow for more uniform understanding among participants.
- Specification of goals for assessment development.
- Design of assessment alternatives, suitable for different environments.
- Clean-up/restructuring of the materials, in order to reduce repetitions, reduce theory and terms used and allow for time consuming but essential activities, such as role playing.
- Development of computer assisted approaches for soft skills development.

## **SW**

### **Comments/Overall impression**

The tutors think that MASS approach provides a well-made material with much freedom for the users. It is easy to change and adapt. The MASS material does not always fit the Swedish

culture or the cultures that are represented in the pilot groups. This activity is complementary to the other Labour Market programmes.

### **Impact on students**

The participants have been more aware about the importance of Soft Skills.

### **Impact on teachers**

The project has enabled the exchange of experiences with teachers from other countries. The opportunity to participate in a transnational project has been part of the training sessions that were offered to staff in the Labour Market Unit. The MASS project has enabled a well-developed methodology used successfully in Scotland to be transferred to Sweden. The tutors who worked with Soft Skills have also translated the material and this has resulted in a developmental learning process and also thoroughly increased supervisors' skills. The staff have also gained an increased awareness of the on-going work of the EQF.

### **Impact on Institution**

The MASS project has given the Labour Market Unit a new method and has contributed to the improvement of our programs. In order to develop our normal field of activity, a European perspective is needed, where the MASS project has a significant role.

### **Suggestions**

New words or phrases about Soft Skills will probably appear in the future and therefore it is necessary to develop the method used in the MASS project. The pedagogical method suggested can be used in other European projects.

## **RO**

### **Comments/Overall impression**

- All the participants in MASS pilot appreciated it both as a concept and materials. They especially appreciated the significant gaining after getting involved into the course.
- Both teachers and students concluded that they learned much on the soft skills field which is proved to be the most important among other skills: intellectual and professional.
- The whole MASS concept and materials can be used as a base for curriculum for counselling and many counsellors shown their interest to put it in the group counselling offer for the counselling offices.
- Many counselors in Romania have shown their interest to use MASS materials, lessons, presentations, in the group counseling in different high schools, not only VET.

## **NL**

### **Comments/Overall impression**

The students and the teachers became more positive about the MASS material during the project.

The teachers learned how to use the materials in the Dutch context and the students got used to the didactic way of lessons and to the content of it.

The assignments are very focused on understanding words (cognitive). The students found this very hard in the beginning. The teachers had to explain a lot and have to make a summary for the students in order to let them understand the information. This fact is reason to translate the lessons in a level suitable for the students in the future.

The teachers found the digital material from great value to motivate the students. They are a good addition to the paper based MASS-material.

### **Impact on students**

Because of the pilot the students are more aware about the importance of social skills. This is clear from the conversation between the students and the teachers. This should also explain why their score is sometimes lower.

### **Impact on teachers**

The teachers liked to work and experiment with new learning materials. They would like to use it in the future if it is more computer based and doesn't depend too much to reading skills

### **Impact on Institution**

Hard to draw a conclusion based on the pilot. The teachers are going to evaluate the pilot in their teams. Our intention is to continue working with the materials and promote MASS to other teams.

### **Suggestions**

The teachers have the suggestion to make the material available on a disk so the students can work in their own pace and also to make the material and didactic approach more appealing to the students (the use of instruction video's etc).

## **Summary**

In this paper we presented the assessment approaches and the results obtained by MASS partners. Each partner used the assessment method best suited his/her. A variety of approaches were collected, which can be used as a base for an adaptable system, for many types of institutes and audiences. The results were very positive, concerning students' self and soft skills awareness, active participation and interest, quality of learning materials and lesson plans, wide soft skills coverage suitable for vocational education and training as well as adaptability.

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