



VOCATIONAL EDUCATION AND TRAINING

Policy and Practice in the field of
Special Needs Education

Literature Review



European Agency for Development in Special Needs Education

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Education and Culture DG

Lifelong Learning Programme

The production of this document has been supported by the DG Education and Culture of the European Commission: http://ec.europa.eu/dgs/education_culture/index_en.htm

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More information on the project can be found at the project web area: <http://www.european-agency.org/agency-projects/vocational-education-and-training>

ISBN (Print): 978-87-7110-409-7

ISBN (Electronic): 978-87-7110-410-3

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CONTENTS

1. INTRODUCTION	5
1.1 Development of VET across the EU	5
1.2 Towards the inclusion of people with disabilities/SEN	7
1.3 An outline of key challenges in VET.....	8
1.4 Relevant Agency work	9
1.5 Methodology for the literature review	10
2. CONCEPTUAL FRAMEWORK.....	12
2.1 Target group	13
3. KNOWLEDGE BASE RELATING TO VOCATIONAL EDUCATION AND TRAINING WITHIN EUROPEAN BASIC EDUCATION – OPENING OPPORTUNITIES FOR THE FUTURE	16
4. ACCESS AND CHOICE IN VOCATIONAL EDUCATION AND TRAINING.....	18
4.1 Gender exclusion	19
5. TYPES OF VOCATIONAL EDUCATION AND TRAINING SETTINGS	20
5.1 VET in centres for learners with special educational needs.....	20
5.2 Compensatory vocational education	22
5.3 Towards the inclusion of learners with special educational needs in mainstream education	23
5.4 Towards the inclusion of mainstream students in special vocational units.....	24
5.5 Flexible vocational and general education options for all in secondary education	25
5.6 Training in mainstream settings	25
6. KEY FACTORS THAT FACILITATE VOCATIONAL EDUCATIONAL AND TRAINING FOR LEARNERS WITH SPECIAL NEEDS EDUCATION: RELATIONSHIP WITH LABOUR MARKET	27
6.1 Co-operation of actors involved in school and training settings	27
6.2 Co-ordination of sectors and services.....	28
6.3 Learner involvement and individual needs in vocational education and training.....	30
6.4 Vocational skills and interpersonal knowledge related to future working outcomes.....	31
6.5 Flexible policies and measures.....	32
6.6 Relationship between VET and the labour market for learners in special needs education	35
6.7 Role of trainers or mentors in vocational education and training	36
6.8 Role of career counsellors and implementation of transition plans	37
7. KEY CHALLENGES FOR VET AND THE RELATIONSHIP WITH THE LABOUR MARKET	40
7.1 Drop out from VET and possible solutions.....	40



7.2 Limited implementation of measures and co-ordination of services.....	41
7.3 Limited career assessment tools	42
7.4 Relationship of VET to job practices and accessibility to the job market	43
REFERENCES	45



1. INTRODUCTION

Globalisation and an ageing population have brought about significant changes in the course of the last decade (Karmel and Maclean, 2007; Walker, 2009). There has been rapid progress in the areas of information and communication technology, financial markets, business strategies, management practices and the working practices of organisations. The resulting impact on global economic systems requires urgent and innovative responses in the field of technical and vocational education and training (VET) services, as the demand for skills is now higher than ever before (Hogstedt, et al., 2007; Maclean and Lai, 2011). The European Commission (2006) considers that equity and efficiency are critical factors in making this changing situation sustainable for all and is therefore developing these factors within the European Union's long-term strategy, alongside competitiveness and social cohesion (Brown et al., 2001; Mosson and Fretwell, 2009). Education and training systems will serve as the 'main instrument' in addressing new circumstances, adapting to change and reaping the benefits of the changing global order (International Labour Organization, 2000).

1.1 Development of VET across the EU

The Lisbon Strategy was launched in 2000 with a view to making Europe 'the most competitive and dynamic knowledge-based economy in the world, capable of sustainable growth with more and better jobs and greater social cohesion' (European Council, 2000, section 8). Revised in 2004, the Strategy aimed to unify social and employment policies with a focus on modernising the European Social Model. This modernisation was to be achieved by investing in people and building an active welfare state through education and training systems. An emphasis was placed 'not only on activating the unemployed in an attempt to reconnect them with the labour market and reduce overall levels of unemployment, but also on activating the economically inactive' (Annesley, 2007, p. 198).

Within the framework of the Lisbon Strategy, the European Parliament and the Council launched a Community Action Programme (2004–2006) in order to promote various bodies active in the field of education and training at European level, as well as to support specific activities in the field of education and training (Official Journal, 2004).

Prior to this, the launch of the Copenhagen Process confirmed the involvement and co-operation of 33 European countries (EU, EEA and candidate countries), who have subsequently met several times in order to follow up on and monitor their practices in the VET field (European Commission, 2002). In recent years the initial objectives and priorities contained in the 'Copenhagen declaration' (European Parliament, 2010a) have been revised in order to align them with the EU's current focus on both establishing an effective response to the economic and financial crisis and developing further objectives and targets where these were not achieved by the Lisbon strategy. In 2010, the Commission and European VET Ministers agreed upon areas of VET in which further European co-operation is necessary, including measures that should be taken at both European and national level. They recognised the importance of the transparency, recognition and quality of competences and qualifications, in facilitating the mobility of learners and workers in the European countries and improving the quality of teacher education (European Commission, 2010a; European Commission, 2010b).

In terms of European level measures, the National Qualifications Framework (NQF) is an instrument for the development and classification of qualifications according to a set of criteria for the achievement of certain levels of learning (Organisation for Economic Co-operation and Development/OECD, 2007). The European Quality Assurance Reference



Framework for Vocational Education and Training (EQAVET) was introduced as a tool to help Member States promote and monitor improvement in their educational systems by using a system based on a common European framework. Participating Member States present their policies in a report produced every four years, in order to develop a future Common Quality Assurance Framework (CQAF) (Official Journal of the European Union, 2008). In 2009, the ILO published the results of the Quality Assurance Framework's implementation, and concluded that the countries that receive positive responses from stakeholders are those that have adapted their existing educational system in order to make it more transparent, coherent and open to all learners (Raffe, 2009).

The European Credit System for Vocational Education and Training, which was established in 2009, contributes to the openness and coherence of European education systems. This system was developed in order to facilitate the transfer, recognition and accumulation of learning outcomes with the goal of transforming them into a qualification that would connect individual, organisational, local, regional, national and trans-national knowledge. The Credit System aims to improve the transfer of knowledge among Member States and promote the inclusion of labour market competences within different learning sectors. It also recognises that different areas of competences must all be valued. Participation in this policy framework is voluntary but countries that choose to participate are required to include all forms of learning outcomes in their new NQFs. The framework will therefore be made up of flexible, individual pathways for all learners, creating new levels of competences and new opportunities for the accessibility and recognition of different methods of teaching for learners with varied needs (Official Journal of the European Union, 2009).

In 2010, the European Parliament renewed the framework for co-operation in the youth field for the period 2010–2018. This framework aims to involve young people at the political level by means of a strategy known as the open method of co-ordination. It therefore works on the basis that all actors, from young people to experts and politicians, should be involved in the policy drafting process. The framework intends that young people in particular assist in drafting future policies relating to the youth sector. (European Parliament, 2010d). It also highlights the importance of developing clear indicators for future evaluations. An example of this initiative in practice is the launch of the European Parliament's traineeship programme for people with disabilities (European Parliament, 2006).

There are still many improvements to be made at European level, and these have been acknowledged within the framework of the EU 2020 Strategy. Launched on 3 March 2010, this strategy includes a headline target of increasing the employment rate across the EU to 70% and also seeks to create jobs. Among the objectives is the furthering of co-operation between EU Member States in the promotion of learner mobility (European Commission, 2010d). The Strategy emphasises that urgent action is needed in response to the 2008 crisis, which is the worst Europe has faced since the late 1930s (Fabregas-Fernandez, 2011).

The European Council (2000), ILO (2000) and European Centre for the Development of Vocational Training (Cedefop, 2001) all agree that future programmes should principally focus on adapting to the demands of a knowledge-based society and improving the level and quality of employment. The programmes must seek to enhance the employability, productivity and income-earning capacity of target groups, especially vulnerable groups such as learners with disabilities, and enable everybody to participate fully in society with autonomy and independence. Indeed, the European Commission has stressed that the EU 2020 Strategy will be successful only if the most vulnerable groups are taken into consideration, and the access of young people with disabilities to the labour market is



ensured. Furthermore, the ILO states that access to vocational education and training should be a right for all European citizens (ILO, 2004).

A specific example of a response to the Europe 2020 objectives is a Lithuanian programme launched in 2011, where teacher education in a vocational school is carried out in various settings during daily routines. This practice has been extremely valuable in increasing teacher awareness of student diversity and demonstrating how to promote pedagogical improvement and improved managerial skills among teachers (Kaikkonen, 2010).

1.2 Towards the inclusion of people with disabilities/SEN

The Lisbon Strategy constituted a positive step for groups that had traditionally been excluded from the labour market. The aims of the Lisbon Strategy, specifically the inclusive policies relating to disadvantaged learners including those with learning difficulties and disabilities, were also emphasised in the Council Conclusions of May 2007 on a coherent framework of indicators and benchmarks for monitoring progress towards the Lisbon objectives in education and training, and the Council Conclusions of May 2009 on a Strategic Framework for European Cooperation in Education and Training (OECD and European Commission, 2009).

The EU Disability Action Plan 2003–10 (European Commission, 2003) prioritised the development of policies at national level that aimed to improve accessibility for all. The Commission utilised this initiative to encourage Member States to collect information and publish reports evidencing their progress in this area.

Further relevant measures include the Council Directive 2000/78/EC (Employment Framework Directive) which aims to promote equal opportunities and combat discrimination on several grounds, including disability, in employment, self-employment and occupation (European Commission, 2000). As of 2006, or 2007 in the case of the recently acceded countries Bulgaria and Romania, all Member States are required to have incorporated the directive into their domestic law. Many Member States have already implemented this directive at national level (The Citizens Information Board, 2011). The European Commission is responsible for monitoring Member State practices and responding to any failure to properly implement legislation, including through launching enforcement procedures in the European Courts (Council of the European Union, 2004).

In the last few years there has, therefore, been a visible shift at the European level towards integrating people with disabilities into the labour market. Unfortunately however, the direct impact of programmes has not been monitored and evaluated because, in the majority of cases, programmes have been implemented through traditional procedures and without alternative support (Greve, 2009). Nevertheless, practices identified as effective include vocational training programmes that establish specific measures for learners with SEN and employers, such as funding for the adaptation of infrastructure and workplaces and tax incentives (Shima et al., 2008).

Through its community action programme Socrates, the European Commission has created special grants for young people with disabilities through various programmes at different levels. The Leonardo Da Vinci programme is dedicated to vocational education and training and aims to support the improvement of vocational training systems in the Member States by enhancing the language skills of participants and disseminating innovative practices in this area of work. (European Commission, 1995, 2000). The programme also finances projects that seek to improve the quality of training for people with disabilities. The 'Agora' project, for example, was developed in 1996 and sought to identify the factors contributing to the low percentage of young people with disabilities



entering the labour market following their initial vocational training in the United Kingdom, Italy and Greece (Leonardo da Vinci, 1996). Another relevant programme is 'Vomasi', which was developed with the main aim of bringing together leading European experts in the area of employment of people with developmental disabilities. The experts analysed existing policies aimed at promoting vocational mobility, rehabilitation and training for people with developmental disabilities in Europe (Leonardo da Vinci, 2002).

The European Commission, under the umbrella of the 6th Framework programme, has promoted other significant projects such as 'Opti-work' (optimising strategies for integrating people with disabilities into work). This project began in 2006 and lasted 3 years, involving partners from the Netherlands, Ireland, the United Kingdom, Finland, Greece and Belgium. Researchers evaluated the implementation of national policies relating to vocational education and training that affect disabled persons across these European countries, in areas such as vocational assessment, aids and support for adults looking to come back to work (McDaid and Matosevic, 2008).

Furthermore, for the first time at European level, a research project has been developed using statistical analysis to compare the training and employment situations of young people with and without disabilities at European Level. The European Commission launched this research in 2007 and sought to show that the training and employment situation of disabled people is far worse than that of non-disabled people. People with disabilities tend to only attain the lowest levels of education; only 63% of the 16–19 age group considered restricted in their ability to work participate in education and training, compared with 83% of non-disabled people. The employment rate of disabled people is 50%, far below the rest of the population (68%) and only 27% of young people aged 16 to 24 are employed, compared with 45% of non-disabled people (SEC, 2007).

1.3 An outline of key challenges in VET

The investigation into potential solutions to the issues outlined above is complex in the European context. The vocational education and training systems in Europe encompass a wide range of legislation, education and training structures and key actors, including governments and social partners. This diversity is increasing with the enlargement of the European Union (Schlicht et al., 2010). However, although the approaches and policies in respect of people with disabilities vary substantially (Official Journal of the European Communities, 2003; Sapir, 2006), there does exist a common focus on integrating and including learners with special educational needs in mainstream society and ensuring that their rights are respected (ILO, 1999a). It is nevertheless important that, in addition to policy analysis, this literature review takes into account the diversity of needs across the group of learners with disabilities or special educational needs as well as the variation in European educational systems and resources. This heterogeneity creates complex settings that can teach us valuable lessons about unique solutions which have worked in specific situations.

This review acknowledges the urgent need for European educational institutions to effectively promote knowledge based skills and competences that enable individuals to adapt quickly to the aforementioned changes associated with globalisation (European Commission, 2008). At the same time, these institutions must avoid any form of discrimination and ensure that they promote equity in future employment outcomes (ILO, 2000).

It is also important to highlight the challenging circumstances experienced by many young people in Europe: 1 young person in every 7 leaves school early and 1 in every 4 fifteen-year-olds has poor reading skills. It has been predicted that the number of illiterate young



people will rise in the coming years. Following the publication of these statistics in 2010, the European Parliament decided to make addressing these circumstances an urgent priority (European Parliament, 2010c). In a non-legislative Resolution, it observed that the unemployment rate among young people is double the overall rate of unemployment in the EU and is therefore one of the most important issues to be addressed, together with reducing the school drop-out rate. In selecting these particular areas of focus, the Parliament recognises that the participation of young people in education and training directly influences their potential to be included in the labour market. Indeed, the Resolution recommends that European countries respond to this worsening situation as a matter of urgency, in light of the fact that unemployment among young people increases their risk of social exclusion, poverty and a general lack of opportunities. It also states that vocational education and training should be of a high standard and tailored to learners' individual needs, with particular attention being paid to the integration of specific groups including people with disabilities (European Parliament, 2010b). The European Parliament further stressed that Member States should guarantee flexibility in the labour market with the principal aim of helping young people to find jobs. Concrete measures were outlined, such as facilitating the mobility of learners within Europe during study periods and traineeships, modernising vocational education and training programmes with a focus on including key competences, recognising educational credits from extra curricula experiences such as volunteer and community work, and encouraging a better transition between secondary vocational education and training and higher education (European Parliament, 2010c and 2010d).

1.4 Relevant Agency work

In 1999, the European Agency for Development in Special Needs Education initiated a literature review of documents produced in the period 1996–1999 relating to the employment of learners with special educational needs. This was the starting point for European research into compulsory education (secondary and vocational education and training centres) with a focus on the future employment of learners in special needs education. The literature review was later complemented by analysis conducted in 16 different European countries for the *Transition from School to Employment* project (Soriano, 2002). This project examined the main challenges facing young people with special educational needs and their families and professionals, with a particular focus on the facilitating factors and barriers in the transition from school to employment. Following this key undertaking by the Agency, it is important to elaborate upon the project's findings relating to vocational training research. Among the principal challenges identified in the project were the following: the educational content of vocational training is not sufficiently related to the needs of the labour market, learners with special educational needs are segregated and their learning is not oriented towards complex professions requiring diplomas. The project also examined possible ways of overcoming these challenges, such as increased co-operation between all parties involved, adaptations of curricula and flexibility in training practices. These proposed solutions will also be considered as part of the current research, in order to assess whether there have been any significant changes over the past 9 years.

The project entitled *Individual Transition Plans: Supporting the Move from School to Employment* (Soriano, 2006) was a continuation of the project discussed above and focused on the development of an Individual Transition Plan (ITP) as the main facilitator for the future employment of learners with special educational needs. The rationale for the project was the need for and benefits of the development of an ITP. The project developed a practical guide for professionals and concluded that vocational and training skills are essential for obtaining future employment and must be well co-ordinated between actors in



the education system and job market. It is therefore clear that the research now being conducted on European vocational education and training programmes and the employment of young adults with special educational needs forms part of a necessary and innovative project.

1.5 Methodology for the literature review

This document aims to provide a detailed literature review of the state of Vocational Education and Training (VET) related issues for learners with special educational needs. According to the Agency's approved Multi-annual Work Programme (2007–2013) this review is intended to complement the *Vocational Education and Training – Policy and Practice in the field of Special Needs Education* (VET) project in its preparatory phase. The literature review takes account of existing research literature in the field of VET and SEN and uses this information to ensure that the project utilises suitable methods and theories of research in its generation and analysis of data.

The principal methods used to search for literature were computer searches in abstract databases and citation indexes, browsing library shelves and online catalogues, and 'Footnote Chasing' or conducting searches in subject indexes for references in peer reviewed articles (Cooper and Hedges, 1994). The coverage of the literature review was exhaustive, with a predominant focus on European and International vocational documents, studies in academic journals indexed in education, economics and social science databases (e.g. Academic Search Premier ASSIA, CERUK, EBSCOhost, EMERALD, ERIC, IBSS, ISI WEB OF KNOWLEDGE, Professional Development Collection, PsycINFO, VOCED, PUBMED, Education: A SAGE Full Text Collection, SOCIOFILE), books and research work (Anglia Ruskin University in Chelmsford, United Kingdom and British Library, London, UK), international and European reports and relevant European funded projects (Commission of the European Communities, Council of Europe, Cedefop, ILO, UNESCO). The literature research was structured to primarily focus on the conceptual terms linking both VET and SEN and their synonyms. The research only includes studies focusing on VET within compulsory education and focuses mainly on literature that is no more than 15 years old. The relevance and acceptability of the research methodology used were also two key factors (Cooper, 1998). The descriptive analysis of the literature has been prepared by extracting the key results and important attributes to give a useful picture of the issues already investigated as well as to highlight existing gaps in the literature. The common methodological practices and bases for assessment are also highlighted, particularly in the areas in which VET has been effective (Cooper and Hedges, 1994). Thematic synthesis was the literature review method employed. This method is recommended as the preferred research technique for decision-making, as it transforms the results from primary qualitative and quantitative research into reliable answers to particular questions (Lucas et al., 2007). The texts were coded according to the similarities and differences between them, in order to achieve a hierarchical structure of the foremost descriptive themes in terms of relevance and presence across studies. When the synthesis was finalised, these were grouped into a list of themes going beyond the content of the original studies, hence transforming them into answers relevant to the objectives of this study (Thomas and Harden, 2008).

This review provides an analysis of the research relating to vocational education and training for learners with special educational needs, their relationship with the labour market and the key challenges they face. Each document has been analysed according to the research outcomes, research methods, theories and application to practice in order to identify the central issues (Sandelowski and Barroso, 2007).



The next section of this review will outline the Agency VET project focus on learners with special educational needs and will then present the literature on vocational education and training settings and key factors and challenges in taking forward this vital area of work.



2. CONCEPTUAL FRAMEWORK

The principles of Universal Instructional Design (UID) require that technological and pedagogical tools are adaptable to all learners, and this ensures that all potential needs are considered in the process of development (Evans, 2008). The UID has been recognised within several areas of specialisation including architecture and cognitive neuroscience (Higbee, 2003), educational doctrines (Blamires, 1999) and human resources (Vreeburg Izzo et al., 2001). It constitutes an ideological shift from focusing on the learner's disability itself to considering the direct influence of the environment on the 'functional limitations attached to the disability' (Higbee, 2003, p. 8) and therefore combines the best methods for adapting structures to all learners (Shmitz, et al., 2009). These methods include innovative teaching methods that reflect the diversity of all learners (Strobel et al., 2007) including 'learning challenges' which are acknowledged as a normal phenomenon of human diversity (Mcguire et al., 2006). In terms of learning, UID requires that the design of instructions, materials and activities creates feasible learning objectives (Burgstahler, 2005). This philosophy goes further in conceptualising disability using the social model instead of the medical model and recognises that many 'capabilities and opportunities were being restricted or curtailed by poor social organisation' (Makin, 2001, p. 185). The disability rights paradigm should be considered as an essential starting point for analysis.

This literature review intends to use the above ideas as a theoretical baseline for approaching inclusion. The ideological shift means that it is essential to take into account in all fields, the 'exceptional nature of each learner and the need to accommodate these differences by building learning experiences that suit individuals and maximise their ability to progress'. These ideas were formulated over 40 years ago when an architect and wheelchair user named Ronald Mace proposed that all physical environments should be able to accommodate all users. This idea was followed by cognitive psychology studies that affirmed the enormous individual differences in learning styles and preferences. It is therefore important that all interested parties are able to participate in the education process and enjoy richer experiences. Above all, learners should be motivated and engaged and, most importantly, actually have the opportunity to be a learner in the first place, which is the most essential aim of this model (Eagleton, 2008). This moral imperative must allow for the development of the capabilities and talents of all individuals in order to deliver opportunities to them (Ashley Stein, 2007). These ideas were incorporated into a progressive document entitled 'The Madrid Declaration', which was developed under the Spanish Presidency of the EU following the European Congress of People with Disabilities (European Disability Forum, 2002). This declaration proposed a framework of actions to be launched during the European Year of People with Disabilities in 2003. These actions aimed to promote equal opportunities, non-discrimination and social justice. Specifically, the Declaration aimed to promote the access of people with disabilities into mainstream employment and education systems as the most important way of fighting social exclusion and promoting the autonomy and dignity of disabled people (European Disability Forum, 2002).

The following instruments enshrine the most fundamental human rights related to this field: the European Convention on Human Rights and Fundamental Freedoms (Council of Europe, 1950), the ILO standards on Human Resources Development (Convention 142, 1975 and a Recommendation in 2004), the ILO Convention concerning the Vocational Rehabilitation and Employment of Disabled Persons (number 159, 1983), the Standard Rules on the Equalisation of Opportunities for Persons with Disabilities (United Nations/UN, 1993) and the United Nations Convention on the Rights of Persons with



Disabilities (UN, 2006). All EU Member States have signed the UN Convention and on the 23rd of December 2010 the European Union also ratified it (Clifford, 2011). In addition, the United Nations Educational, Scientific and Cultural Organization's 2012 global monitoring report describes the discourses around policies that are effective beyond formal education, exploring skills that prepare youth and adults for the world of work (informal education, apprenticeship and enterprise based training) as well as the policies that need to be improved (UNESCO and Adams, 2011).

In spite of these instruments, many disabled people in Europe still do not enjoy many fundamental rights such as the right to work and the right to education (Council of Europe, 2003; Kanter, 2007). Further research is essential in order to shed light on this particular situation.

2.1 Target group

Little research is available concerning vocational education and training programmes in Europe designed to meet the needs of particular groups. The few studies that do focus on specific groups of learners in VET use significantly different terminology to describe these groups. As observed by UNESCO (2002), individuals with special educational needs are, in relation to the labour market, usually categorised as marginalised or at risk of social exclusion. Recent studies, perhaps as a result of the worldwide economic crisis (Carone, et al., 2009), have confirmed an increase in groups being categorised as at risk of social exclusion (Buiskool et al., 2009). Nowadays the makeup of this group is so complex that, in the majority of cases, it is difficult to ascertain the real needs of learners with disabilities (Anuncibay, 2007). According to the UN Convention, 'Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which, in interaction with various barriers, may hinder their full and effective participation in society on an equal basis with others' (Article 1, 2008, p. 4). Those referred to as 'socially excluded' form a very heterogeneous group because all of the individuals, identities, personal needs and circumstances within it are unique and shaped by multiple factors (Mansell and Steinmueller, 2000). Among these factors 'disability is another dimension' that most of the population experiences at some stage in the course of their lifetime (Powers and ILO, 2008).

The aforementioned studies also highlight the importance of conducting research around learners with special educational needs. Learners with special educational needs have often been denied access to basic education, which limits their future skills acquisition and puts them at a very specific and notable disadvantage, reflected in their lack of access to and participation in economic growth (ILO, 2008). It is therefore of the utmost importance that the lack of available data is addressed. This issue was highlighted by a group of scholars from Greece who intended to develop a descriptive study focusing on the situation of people with intellectual disabilities. The authors concluded that, due to the lack of national data and rigorous research, they were unable to complete the study (Anagnostopoulos and Soumaki, 2011). Strengthening the availability and quality of data could increase the potential for drawing comparisons between European countries on the present situation and the vocational outcomes for young Europeans with special educational needs (OECD, 2004). The data could also assist in further developing provision for vocational education and training, preferably with a focus on improving access to employment (ILO, 1999a).

Analytical vocational education and training studies confirm that choice and provision in VET vary according to defined categories of learners with special educational needs. In the Balearic Islands of Spain for example, learners with learning difficulties usually complete compulsory education and enter into a social guarantee programme or



employment insertion programme. They occasionally go on to intermediate level vocational training. Learners with hearing disabilities usually enter into training programmes, while the majority of learners with visual, sensory and motor disabilities continue with upper secondary education, higher education study courses and university studies (Rossello and Verger Gelabert, 2008).

European political advocacy needs to promote the gathering of data on students with SEN and further develop ideas or projects that work at the national level. The European Commission is focused on helping Member States to achieve better results that will enhance young people's quality of life by developing auxiliary policy co-operation on issues relating to learners with special educational needs in education and training (Commission of the European Communities 2008). The methods specified include: promoting personalised learning through timely support and well coordinated services, integrating services within mainstream schooling and ensuring pathways to further education and training (Commission of the European Communities, 2008). Furthermore, Member States and the European Union have tasked themselves with implementing the European Pact for Youth by adopting coherent European measures and VET policies (The Helsinki Communiqué, 2006) in order to reach the target group and take into account their needs, backgrounds and motivations (Official Journal of the European Union, 2007).

It is important to consider that, in many cases, being classified as a person with disabilities (and therefore often considered part of a minority group) can have a negative impact on a person's social environment. This impact is often greater than the impact of the disability itself (Cedefop, 2001). Researchers and policymakers therefore recommend that all learners be considered equal, without discrimination, according to the societal approach of normalisation of equal opportunities and provision of resources (Cedefop, 2008; Quisumbing and Leo, 2005). Furthermore, the European Council (2000) considers that learners with special educational needs should be a priority group in terms of VET initiatives, in order to promote equity and human-centred sustainable development (UNESCO, 2004). These themes were highlighted in 2009–10 at the UNESCO World Conference on Education for Sustainable Development (UNESCO, 2009). It is clear that educational policies cannot address educational disadvantage without the coordination of other factors, such as personal, social, cultural and economic aspects which, in combination, have the potential to restrict or enhance future educational opportunities. For example, if learners have been excluded during their early years despite the existence of inclusion policies in their country, then it is likely that they will also have a limited experience of inclusion and encounter institutionalisation at secondary level and in the future. It is therefore important to look at the pedagogical approaches used in the classroom that benefit all learners, not only 'the group at risk' (Cedefop, 2001).

A handful of studies have undertaken comprehensive analysis of programmes using multiple and interlinked sources to identify causes of disadvantage. These studies have served as a baseline for the development of effective policies and programmes to improve vocational education and training for learners with special educational needs (Freedman, 2008). They identify the concept of 'diversity' as an alternative to 'terms with negative connotations' or commonly used labels. This concept covers a number of dimensions such as cultural and linguistic diversity and social and gender related constraints on access to knowledge. These constraints are often associated with a series of factors, both 'intra' and 'extra' personal, while the idea of special educational needs is normally associated with learning difficulties, gifted children and children and adults with functional problems associated with their vision, mobility, hearing and cognition (Asin and Peinado, 2008).

Practices that acknowledge diversity aim for equality without regard to differences and focus on abilities such as strengths, skills and potential (ILO, 1999) as well as the unique



abilities, needs and interests of individuals (Schalock and Kelly, 1999). Disability should no longer focus on medical aspects internal to the individual; research should advance from this basic theory to a methodology using the social model of disability (Grönvik, 2009). By listening to young people with special educational needs in vocational training centres, it is possible to achieve a broader understanding of how to improve the educational experiences, which are so essential for their future lives and occupational status (Shah, 2005). Having a voice affects a person's status and their empowerment (Nagle, 2001) but the voices of young people need to be heard more clearly; there are very few options available for people with disabilities who attend segregated educational institutions or are part of a mainstream education system with inadequate funding to provide full inclusion (Shah, 2005) because they often have a limited choice of subjects and low labour expectations. Scholars such as Niesz, Koch and Rumrill (2008) have concluded that the direct involvement of people with disabilities in research is an empowering tool for 'being defined for themselves' (Niesz and Rumrill, 2008, p. 121).



3. KNOWLEDGE BASE RELATING TO VOCATIONAL EDUCATION AND TRAINING WITHIN EUROPEAN BASIC EDUCATION – OPENING OPPORTUNITIES FOR THE FUTURE

International and European institutions such as UNESCO, the ILO and the European Commission all recognise that basic education should be for all and should lead to employment for all. It should promote vocational knowledge that can be converted into opportunities not only for the individual but also for society as a whole (Figel, 2009). Therefore, in light of the fact that the vast majority of the labour force require technical and vocational knowledge, skills for life should be included as part of basic education curricula (UNESCO, 2004a). The option of ‘vocationalising’ or including a knowledge base relating to vocational education and training in primary and secondary curricula has also been suggested (UNESCO, 2002).

This philosophy acknowledges the range of society’s needs, with knowledge, practical and social skills acknowledged as essential generic competences and brought together both in the curriculum and in terms of organisation. It is clear that the absence of basic skills such as numeracy and literacy makes it difficult to acquire the core skills that help to enhance employability and enable learners to find and retain employment and adapt to change (ILO, 2004). It is generally accepted that including the key generic competences and non occupation-specific practical capabilities within compulsory education could be a solution, which would also reduce the discrimination that occurs when learners are segregated into fixed ability groups, and in which they become aware that they are being tracked according to their level of performance (Peters and Oliver, 2009). Technical and vocational education should begin with a broad base and be designed so that it is ‘an integral part of everyone’s basic general education in the form of an initiation to technology, the world of work and human values and standards for responsible citizenship’ (UNESCO 2004b, p. 10). By teaching basic skills for life and generic competencies (including the ability to identify, analyse and solve problems, the capacity to learn new skills and adapt to new work tasks and the ability to communicate with others and to learn and use information independently) it will be easier for young people to access the world of work. Entrepreneurship, civic responsibility, planning skills (UNESCO 2005), computer literacy and a grasp of simple scientific knowledge and technology (ILO, 2000) will also support this aim.

The Lisbon Council (2009) considered that education and training systems should involve social media and innovative learning opportunities and practices by including new technologies to prepare learners for the 21st century. Indeed, programmes and software have been developed in order to offer autonomy and help to overcome any barriers to communication. For example, the SEVERI (electronic learning environment) has been trialled in vocational and education settings in Lithuania, Hungary and Finland and has been confirmed as an effective tool for learners with severe learning disabilities (Starcic and Niskala, 2010). By drawing on 240 cases, 16 in-depth case studies and a workshop of experts, this study describes the experiences with e-learning (learning via the internet and social media) of students from Germany, Switzerland, Greece and Finland. Students with SEN who have worked with the platform within modules of vocational education and training highlighted that it supports learners working at different paces and using different cognitive styles and that, in general terms, it empowers them. Activities that could disadvantage dyslexic learners such as wikis or blog writing have also been compensated for by the use of alternative tools (Redecker and Punie, 2010).

In the European context, a gap has been identified between basic education, social and life skills instruction and the labour force skills desired by future employers (Tomblin and



Haring, 1999). This gap has been illustrated in a study in the context of Greece, which explored the impact of teachers using a limited range of resources for teaching social and life skills to young adults in adult training centres and schools for learners with learning disabilities. The study concluded that more contextualised learning to help generalisation would be a possible solution to the gap, and that teaching materials and curricula should support this pedagogy. Teachers believe that the implementation of innovative techniques should be considered, which requires support from school leaders and the promotion of flexibility and innovation (Dereka, 2001).



4. ACCESS AND CHOICE IN VOCATIONAL EDUCATION AND TRAINING

Access to VET should be available to all. Indeed, Article 14 of the Charter of Fundamental Rights of the European Union (2000) states that everyone has the right to have access to vocational and continuing training and free compulsory education. This Article has proved influential in judgments of the European Court of Justice and is now legally binding following the Treaty of Lisbon. In particular, the VET option should be offered as a priority to groups experiencing exclusion who have not previously been considered for VET. This will facilitate their integration into society and help them to improve their potential productivity, employment and income-earning prospects (UNESCO, 2004b; ILO, 2008). In Ireland for example, vocational education and training centres have a high percentage of students with assessed disabilities (more than 10 percent) at post primary level compared to secondary, community and comprehensive schools (O’Gorman and Drudy, 2011).

In general however, European learners with special educational needs encounter a lack of opportunities and poor access to vocational education and training (ILO, 2008) and are still ‘marginalised’ as a result of not accessing the mainstream education system and being part of a school community (Nagle, 2001). Some of the causes of this marginalisation have been identified as a lack of in-class physical accessibility and related accommodation facilities (ILO, 1999b). In addition, an analysis of vocational training services in Greece reported a lack of statistical information and research, which makes the identification and monitoring of vocational services for people with learning disabilities in the country difficult. As a result, curricular flexibility was increased and specialised training of educational staff was undertaken to assure continuity for learners in their vocational and educational training (Tsiantis, 2006). Another illustration has been provided by Spanish research, which highlights that learners with special educational needs are at a ‘higher social risk’ than other groups, such as women or people dependent on drugs, as a result of greater difficulty in accessing training and vocational opportunities (Anuncibay, 2007).

Access is not the only challenge; the range of options open to learners with special educational needs is also limited. Ideally, learners with special educational needs would be presented with the same educational choices as other learners, but in practice – perhaps due to inadequate preparation or inaccessibility of provision to learners with disabilities – they are generally offered programmes oriented towards social welfare, leading to low skills, low productivity employment or low-paid work (Cedefop, 2003a; ILO, 2008). More research is needed to tackle the significant challenges that have been observed in countries such as the United States and it is imperative to investigate these issues further in the context of Europe. For example, learners with disabilities who live in rural areas but study in cities will find their job possibilities limited on returning to their home town, as their education will not match the requirements of that context (Richards, 2004). However, some practices have been identified as being effective. This review will outline the possible options for accessing vocational education and training through mainstream and special training institutions.

The European Commission has conducted a study as part of a two-month public consultation with people with disabilities, in order to inform the EU Disability Strategy 2010–2020. As regards accessibility in education, it is significant that the majority of respondents (90%) felt that learning materials and accessibility of buildings (89%) need to be improved, as well as the transition from special to general education (83%) and adaptations to adult education and training programmes (82%) (European Commission, 2010c). The Danish Educational VET system is an example of a flexible strategy that gives learners the opportunity to try out different occupational experiences and jobs on the labour market. It offers short programmes to students with disabilities that have been



designed so that students can be trained in the sectors in need of workers. Their system is also flexible in terms of offering, in the majority of VET programmes, the possibility to obtain a partial qualification, before working for a period of time and then returning to complete the remainder of the qualification. An apprenticeship pathway entitled 'Mesterlare' is also offered, which provides opportunities to learn full time during placements in companies and supplement academic qualifications with vocational qualifications (Rosenfeld et al., 2008).

4.1 Gender exclusion

Women constitute one of the most excluded and isolated groups of people in every society. Across all cultures and developmental levels, some may be triply disadvantaged; by their disabilities, by their sex, and by poverty. The work carried out by a woman is, stereotypically, considered secondary to that of a man and she is more likely to experience poverty and a lack of essential resources (ILO, 1999b). This exclusion makes their access to education and training even more difficult (ILO, 2008) and is generally caused by negative attitudes within society towards a person with a disability becoming a wife and/or mother or finding employment. If women with disabilities receive vocational education and training they are also generally segregated by 'gender differentiated vocational training' (Powers and Hogansen et al., 2008, 250). Although women more often participate in vocational education and training than men, they nevertheless experience disproportionately low employment rates and salaries in comparison to men. This is particularly predominant among women aged 16 to 20 (Mwachofi, 2009).

There have been very few international studies focusing on vocational education and training for women. Further studies are therefore necessary in order to raise awareness of the issue and identify influential factors, including an increased focus on facilitating factors in the career development of this section of the population (Noonan, Gallor, et al., 2004). Studies in the United States have confirmed the following as positive predictors of post-school competitive employment for young women with disabilities (Doren et al. 1998; Lindstrom et al., 2004):

- Involvement in two or more work experience placements while in compulsory education (Tomblin and Haring, 1999);
- Active collaboration with school staff;
- The possibility of participating in opportunities within their community in order to help improve skills and self confidence;
- The use of their own and family/friend networks to find a job (Doren et al., 1998);
- Training on finding a career, decision-making and problem-solving had a direct impact on the decision-making and problem-solving strategies of young girls with learning disabilities (Lusk and Cook, 2009).



5. TYPES OF VOCATIONAL EDUCATION AND TRAINING SETTINGS

5.1 VET in centres for learners with special educational needs

Vocational education in special centres is implemented predominantly by following vocational rehabilitation approaches. The centres emphasise separate designated training facilities for people with disabilities (ILO, 2008). Many European countries are implementing inclusive education, but in some countries, such as Germany and Slovakia, learners with special educational needs and the majority of people with learning disabilities are placed into segregated settings (Pohl and Walther, 2007). There is some suggestion that these institutions are an alternative for learners who do not have the opportunity to find a job in the open labour market or find a place in a supported occupation programme. The aim of these programmes is mainly focused on developing vocational skills (Lifshitz and Klein, 2007). Scholars such as Graham and Jahnukainen (2011) have highlighted that the maximisation of categorisation processes and segregation of students with SEN is the cause of an increase in exclusive approaches being adopted around the world (Adams et al., 2000). The authors exemplified their point through three case studies, in New South Wales, Alberta and Finland.

Pfahl and Power (2011) describe school segregation in Germany as occurring because, when students are classified as having learning difficulties, they are placed directly into segregated schools at an early age. The majority of these students then remain in these schools, which advocate a transition into special vocational training programmes and do not offer the opportunity to find either an apprenticeship or a job. Since early 2009 in Finland, state institutions for people with intellectual disabilities have merged with the non-governmental not-for-profit organisations catering for students with different kinds of learning difficulties. Changes have taken place across various departments, including the social and health department and the education department, which had previously shared responsibility for state special vocational schools. Since the change, state schools have expressed a feeling that their duties have been transferred to the community, their services have become more inclusive and the meaning of care has begun to emphasise de-institutionalisation, normalisation and community care related to learners' rights (Hakala, 2010).

Special VET centres generally include sheltered workshops, use a production-based approach for training, and continue to operate in both developed and developing countries (ILO, 2008). According to the European Commission (2007), there has been no change at European level in the overall percentage of students (2.2%) with special educational needs who were in segregated compulsory education during the period 1999/2001 to 2004/2006. If individual countries' analyses are considered however, it becomes clear that half of the countries have actually reduced their number of special centres by one half. The other countries have doubled the number of centres. Only Austria and the United Kingdom have maintained the same number during that period.

Although initially these special educational organisations appear supportive, some serious limitations surface upon closer examination. Some of these have been identified as: the learners' exclusion from and lack of awareness of the rest of society, a tendency for changes to be slower in these programs compared with the rapidly changing labour market, and a tendency to maintain disability or gender stereotyped activities. In addition, such programmes are less sustainable in terms of funding in a crisis situation - they only address a small fraction of training needs and increase the lack of access to information, services and future jobs for learners with special educational needs (ILO, 1999b). Furthermore, these institutions often place people with disabilities based on stereotypical



views of their disability or on market availability and consequently, very few learners have placements that take their own choice into account. These challenges were illustrated in the project 'Let's keep in contact with Europe', implemented from 1999 to 2001 and funded by the European Commission. This project, implemented by various European researchers from Spain, Hungary, Italy and the United Kingdom, analysed the type of curriculum provided for adults with learning disabilities. The project report concludes that the vocational centres visited all included social and work skills within their curricula, but it also highlighted that factors such as societal attitudes, policies toward inclusion, resources and opportunities all differentiate the curricula and the learners' future working experiences (Fernandez et al., 2002).

A study on Norwegian schools reveals a clear example of such exclusion. The upper secondary education is orientated towards all learners, but the final diploma varies according to three options – vocational competences, study competences and low level competences. This study observes that learners with special educational needs who completed their education in special schools are more likely to obtain the low level competence option than learners in ordinary classes (80% compared with 52%). The research also shows the negative impact of a high amount of assistance within the attainment of formal competences for learners within SEN. It is suggested that this assistance focuses on the learner's disabilities instead of training their strengths (Markussen, 2004).

Conversely, other studies consider segregated settings to be useful for learners with severe disabilities in particular, as these groups need greater support and sometimes targeted or separate training (ILO, 2008). In Greece however, groups of people with disabilities, and especially those with severe and profound intellectual disabilities, are denied access to targeted and separate training. This leaves the group with very little access to services of any kind and is a matter, which should be addressed with urgency (Tsiantis, 2006). Teaching learners with multiple disabilities in vocational training centres is generally oriented to individual teacher and learner tasks, innovatively introduced into programmes that encourage working cooperatively, with positive results for the promotion of co-operation, skills and friendship between persons with disabilities and their trainers (Lancioni et al., 2002).

In fact, some special needs vocational training centres enhance the pedagogical quality of their practices and offer better services than in the mainstream. Effective pedagogical adaptations focus on improving learner skill acquisition in work place training for people with severe disabilities (for example children diagnosed with severe cognitive disabilities and autism) and simulating these skills in training centres (simulation based training technology). These practices have resulted in a higher quality and quantity of skills and more rapid skill acquisition than in mainstream.

However, such practices have also been studied in mainstream educational settings, for example the reiteration of competences to overcome problems of non-generalisation in non-work settings as opposed to developing competences in work settings alone (Lattimore et al., 2006). In special cases where work-based opportunities are limited, the use of experiential instructional methodology is recommended (Guy, 2009) with probable positive results as it allows learners flexible time for repetition and acquisition of individually adapted skills (Lattimore et al., 2006).

It is worth noting here that the information that parents receive varies according to whether their child attends a special or mainstream vocational education setting. Scholars have identified that parents of deaf children in special schools are more informed with regard to



transition and future working possibilities than those in mainstream settings in the United Kingdom (Polat et al., 2004).

An alternative to learning in vocational education centres is demonstrated in the example of a project that was run by Central England People First (CEPF). As a consultancy service, they offered a training programme aimed at teaching learners with various disabilities to be trainers. The project consisted of providing people with disabilities with initial training on various skills and competences related to providing staff training, with a view to this being implemented later. They ultimately intend for this method to be implemented in the mainstream. In the study, CEPF explains how the skills learned were put into practice in ordinary companies, through two day workshops in 8 different organisations including a care village, another People First Group and two social service departments. The services offered by this project helped trainers to feel empowered and were very positively evaluated by the workshop participants (Weeks et al., 2006).

5.2 Compensatory vocational education

Compensatory programmes are usually connected with the goal of remedying the negative repercussions for learners with disabilities who have not been successful in the mainstream environment. In some cases, attempts to resolve problems through compensatory programmes have resulted in learners with special educational needs being segregated in sheltered organisations where they do not always receive validated certification (Pohl and Walther, 2007). However, in certain circumstances, these programmes can be effective in allowing a high number of learners to gain a secondary education certificate and work skills. In Spain for example, where in 2009 38.2% of learners over 16 did not obtain the standard secondary education certificate (European Commission, 2009), compensatory vocational programmes were implemented as an urgent measure (Asin et al., 2008). The government, in response to the new Spanish Organic Education Law (LOE, 2006), introduced an initiative known as 'Initial Vocational Qualification Programmes' (PCPI) for all learners approaching the age of 16 who had entered the educational system late or had been excluded and wanted to gain extra vocational skills and the final certificate. The completion rate was very high due to the methodology used and the learners' desire to find work, together with the positive environment generated. The initiative increased learners' self-awareness and their expectations in terms of gaining basic skills and competences. 70% of the participants continued their studies in vocational training education (Asin et al., 2008). According to these learners the main benefit of the programme was the opportunity to carry out vocational training at an early age, which starkly contrasts with UNESCO's position that 15 years old is too early to specialise (UNESCO, 2004b). The results also indicated the importance of introducing general vocational units into the mainstream environment.

Similar initiatives have also found success in the United Kingdom (England); they provide vocational training for groups of learners aged between 14 and 19 years old with special educational needs or learning difficulties and a history of failing or being excluded from compulsory education. The majority of learners who completed such courses were highly motivated in terms of their future vocational outcomes. It has been suggested that this success could be due to the course flexibility, counselling and guidance and elements of work-related learning in the curricula (Attwood et al., 2005). According to some scholars however, although this practice in special needs schools is clearly beneficial for learners with significant learning difficulties due to the curriculum flexibility and enhanced opportunities to accredit learners' learning and achievements, under-achieving learners in mainstream schools are still being excluded. A more inclusive alternative would be to offer the possibility of the vocational training option to all learners (Waite et al., 2006).



Moreover, one of the initiatives discussed above, entitled 'Entry to Employment (E2E)', focuses on 'generic skills' such as literacy, numeracy and ICT; 'vocational skills'; and 'personal and social skills', which arguably promotes low level employment, thereby reinforcing the social class divide in England (Simmons, 2009). In order to avoid this, it is recommended that flexible and inclusive learning paths for all are introduced. For example, Tomblin and Haring (2000) adopted a single-subject design study that grouped social skills together with training on attendance in order to help adolescents with disabilities ensure success at work.

A key variable in learner involvement in education is greater teacher intervention in strategies to enhance self-determination, whereby learners in compulsory education, both with and without disabilities, take control of their lives (Wehmeyer, 2008). This variable is directly linked to dropout status, lower educational aspirations, lower achievement levels, negative attitudes toward school and seeing school as irrelevant (Eisenman, 2007). In Spain, the administration, the development of national regulations and the implementation of educational policies are all the responsibility of the regional autonomies within their Departments of Education. The autonomies develop the curricula based on minimum requirements set by the State (Ministerio de Educacion Gobierno de España, 2011). Across the different autonomous communities, various programmes have been developed with a view to providing compensatory education (Asin et al., 2008). In Zaragoza the quantity and quality of programmes offered has been increasing since 2004. The classes on compensatory education have been reduced to 6 learners per teacher and the main focus is on adequate didactic and methodological approaches.

In relation to the education systems in the United Kingdom (England, Wales and Northern Ireland), Warnock (2010) has highlighted the ideas of Tomlinson (2005) regarding the reform of the education of learners aged between 14 and 19, which would aim to eliminate one of the national examinations (A levels) in order to ensure that all students receive a certificate when they finish school. Both practical and academic achievements would be included in this certificate. This reform would mean practical and vocational courses start earlier, at the age of 14, in order to give learners the opportunity to choose their path and be responsible for their own progression (Warnock, 2010).

5.3 Towards the inclusion of learners with special educational needs in mainstream education

There are different models of mainstream education systems in Europe. In some countries vocational and secondary education are two distinct paths, whereas elsewhere the systems integrate both academic and vocational learning into one path. This heterogeneity enriches the field of research and shows the different ways in which various systems go about including special needs children and addressing the implications for their future.

There is support for the idea that separating learners by ability early in their schooling has a negative effect overall on the achievement levels of disadvantaged children. This is partly because it tends to channel them towards less prestigious (in terms of quality and future working possibilities) forms of education and training. By postponing this 'tracking' until upper secondary level and allowing for the possibility of transfer between different types of school, segregation can be reduced and equity promoted without reducing efficiency (Commission of the European Communities, 2006).

The key idea of promoting equal opportunities for people with disabilities is assumed to support inclusion (UN Convention on the Rights of Persons with Disabilities/UNCPRD, 2006). Wherever possible, learners with disabilities should receive education and training with and under the same conditions as non-disabled people (Cedefop, 2003) who



participate in general vocational training institutions and programmes. It is very important to consider that people with disabilities are a diverse group with different support requirements who can benefit from inclusive training once reasonable accommodations are made (ILO, 2008). In keeping with this approach, the Action line from Council of Europe Recommendation 1592 (2003) entitled *Towards full social inclusion of persons with disabilities* stated that 'Equal status' is necessary, pointing out that an inclusive approach should be the goal, with mainstream and specialised structures encouraged to work together to support disabled people in their local communities. These practices should be positive for learners with special educational needs and also contribute to non-disabled people's awareness and understanding of human diversity (Council of Europe, 2006).

The positive results of inclusive practices in vocational education have been evidenced by the job prospects for young people with special educational needs in England and Norway. Firstly, pupils who have experienced schooling in mainstream settings are likely to be more certain in their aspirations for future education, training and employment. Secondly, learners become more proactive in investigating their own ideas for their future inclusion, which has positive implications for the school in reducing the cost of careers advisory services. Thirdly, learners are more socially integrated and will be more likely to aspire to independent living (Casey et al., 2006). Studies have also shown that inclusive practices promote in learners an interest in continuing into higher education as a natural progression, instead of directly entering the labour market (Grigal and Neubert, 2004). In Norway, effective teaching practices included close relationships with and support for learners completing vocational education. These learners succeeded in obtaining the upper secondary leaving certificate and vocational qualifications. A longitudinal study has also confirmed the positive effect of inclusion in vocational education (Cedefop, 2003b). In Finland, during the period 2006–08, a project was implemented with the aim of promoting changes in vocational education, among which was increased support from communities and the individualisation and functionality of the curricula. It confirmed that it is essential that learners are supported in the form of tutoring, supervision and guidance (Hirvonen, 2010).

5.4 Towards the inclusion of mainstream students in special vocational units

Reverse inclusion or reverse mainstreaming is a strategy that involves introducing a small group of children without disabilities into a special needs class or unit (so that the non-disabled form 20% of the total) and includes the provision of special services (Odom and McEvoy, 1990; Guralnick, 2001). This term was introduced by scholars who used early education settings as an environment to explore the effect of learning on different groups of children with different needs. Rafferty, Boettcher and Griffin (2001) have investigated the benefits of reverse inclusion, highlighting that a high percentage (94%) of parents of children with and without disabilities would place their children in such settings. In terms of vocational settings, Mei (1994) introduced a pioneer study in which high school students worked as teaching assistants in facilities catering to students with SEN. The students with disabilities studied high school subjects and both groups enjoyed participating in various activities within the interdisciplinary units that promoted their interpersonal skills and gave them access to the curricula of all students. In 2006 this study was replicated by a teacher who included general education students in his classroom, resulting in high social interaction opportunities for students with SEN (Schoger, 2006). This reverse inclusion strategy was implemented further following its positive impact, however, there is very little research demonstrating that the strategy has been widely explored in vocational and training settings.



5.5 Flexible vocational and general education options for all in secondary education

Policy in several European countries links general secondary education and vocational training in mainstream schools by means of a consistent curriculum resulting in a decrease in discriminatory provision (Lewis, 1998; Stern et al., 1996; Lauterbach et al., 2000; Kupfer, 2009). UNESCO proposes that 'Technical and vocational education should begin with a broad base which facilitates horizontal and vertical articulation within the education system and between school and the world of work, thus contributing to the elimination of all forms of discrimination' (UNESCO 2004b, p. 11). Examples of this approach can be found in the Norwegian, Dutch and German vocational systems. Since the 1994 reforms, the Norwegian vocational education and training system has been a fully integrated aspect of secondary education (Bergli et al., 1998). In the Netherlands, the secondary education system is free to organise the curriculum based on dual courses. Study and work experience are combined using a flexible approach with a variety of different assessments, with enough time for the completion of education, flexible teaching time, special needs support structures, continual learning lines and lump sum funding of employment-oriented training. Following a similar model, Germany offers three options in secondary education (and one mixture in the Hauptschule, leading to 'part-time enrolment in upper-secondary vocational schools combined with apprenticeships until the age of 18' (Kupfer, 2009)). Vocational education in some areas of Germany is characterised by a high success rate, which makes it a good example for other countries to draw on, although special contextual characteristics do make this model difficult to implement elsewhere. As yet it has only been successfully adopted in Singapore and the Czech Republic. The common denominator of the VET curricula in these three countries is the fact that the different secondary options have full equivalence for all graduates (UNESCO, 2005). 'Learning skills' should be indispensable and must be incorporated into general curricula for all students with an extracurricular element addressing additional skills. It is very important that, in order to help learners in VET, learning paths are sufficiently flexible and clearly define the competences involved in all of the units that they study. With help, learners should be able to reflect upon their choices and the experiences that motivated their independence (Boote, 2005).

5.6 Training in mainstream settings

The integration of vocational education and training is important for giving learners with special educational needs the opportunity to access mainstream provision during their education and in their future working life. Curricula should therefore include workplace behaviours, occupational skills and careers awareness, as well as provide work exploration opportunities to help learners with special educational needs identify career interests and be proactive in developing the skills critical to a successful transition (Wagner and Davis 2006; Eisenman, 2007). Research exploring the experiences of learners with special educational needs in mainstream secondary vocational education stresses the importance of offering a combined classroom-based and work-based approach, complemented with learner-teacher feedback and guided instruction when needed (Guy, 2009). The majority of these studies give an indication as to the likelihood of finding employment, but the studies are limited. Further in-depth analysis is necessary into the type of employment commonly entered into and how long it is maintained.

The primary aim of training should be higher employment productivity and higher wages, in good-quality formal jobs. Although mainstream training policies have been adopted in many countries, there is to date no compelling evidence with regard to their effectiveness in achieving this aim. Scholars generally agree that on-the-job training promoted by vocational centres is more effective than institution-based training. In line with this view,



European countries, such as the United Kingdom, prioritise learners with special educational needs and their access to training within the mainstream school system (Freedman, 2008) and an overwhelming majority of trainers and educators feel this approach is the clearest way of showing people with disabilities that they are valued and equal members of society (ILO, 1999). However, several special vocational centres that have introduced relevant training, effectively delivered in institutions with accredited certification and follow-up support services in mainstream organisations, have had considerable success in placing graduates in jobs after the institutional training (ILO, 2008).

Some companies in United Kingdom (England) have adopted the American 'place, train and maintain' model, consisting of training at the regular work place (predominantly small businesses) and supported employment through training and re-training. Following a commonly used training method, a six-weekly Individual Learning Plan (ILP) is used, which covers progress on soft skills: reliability, punctuality, attitude, taking instructions, personal presentation, as well as task-performance and hard skills (Ruggeri-Stevens and Goodwin, 2007). Learners accessing these follow-up services in their post-vocational training were more likely to be employed and receive higher wages or participate in a training programme than groups without this support (Izzo et al., 2000).

Koblik et al. (2009) have conducted a study on a group of learners, all identified as having psychiatric problems, who were included in various computing programmes as part of their vocational training. Those included in mainstream programmes found the training more beneficial than those in a restructured individualised programme, because they felt that it improved their motivation, self esteem and self efficacy.



6. KEY FACTORS THAT FACILITATE VOCATIONAL EDUCATIONAL AND TRAINING FOR LEARNERS WITH SPECIAL NEEDS EDUCATION: RELATIONSHIP WITH LABOUR MARKET

6.1 Co-operation of actors involved in school and training settings

All actors should co-operate to build the capacity of schools and colleges and provide specific solutions in VET for a range of learners with special educational needs (Cedefop and Education and Culture Lifelong Learning Programme, 2009) and consequently for all learners. In both secondary and vocational education settings, the relationship between special educators, general educators (pre-service teachers, teachers, vocational counsellors, vocational teachers and other support personnel), parents, learners and community service and agency representatives should be encouraged, as well as mutual collaboration which helps them to gain an understanding of each other's roles within the model programme (Tomblin and Haring, 1999). As acknowledged by Stowitschek, Lovitt and Rodriguez (2001), extensive collaboration will encompass elements of consultation, shared decision-making and cooperative participation between all the stakeholders involved in facilitating vocational education for learners with special educational needs.

Learners with special educational needs usually have to go through a difficult process in order to gain a good, well-paid job. Family involvement is therefore essential in supporting learners with special educational needs during this process and helping them to plan their future. As the family is generally the most familiar with the learner's potential and skills, their interaction with the learner, training institutions and job providers is considered to be a key supporting factor (Tamol, 2007). The family can provide moral support and practical assistance and act as a role model in terms of a good work ethic. They can also protect the learner from challenging circumstances and exploitation and provide family cohesion, all of which have been identified as helpful to a group of young people with mild intellectual disabilities who were successful in gaining competitive employment (Dixon and Reddacliff, 2001). Lindstrom et al. (2007) have identified a list of variables relating to the family as an influential factor in the success of young people with disabilities finding employment. Among them is the family vision of the young person's future (career expectations) and the social class of the family. As regards the latter, it should be pointed out that this correlation is affected where an advocate group is connected to the learner's case. Scholars have identified a lack of opportunities for families to guide learners on career opportunities available to them based on their skills. Building relationships between parents and guidance teams or transition professionals is therefore highly recommended.

Moreover, it has been confirmed that emotional support from parents and good communication between parents and children with special educational needs can support learner self-determination instruction and decision-making strategies that empower learners to choose their own future (Trainor, 2005). It is noteworthy that parents' educational backgrounds significantly affect the job aspirations of learners with special educational needs in mainstream settings but not those of learners in special schools (Casey et al., 2006).

Furthermore, knowledge of vocational education and training systems and processes, understanding future possibilities and sharing realistic expectations within the family could all be significant in maximising a learner's future independence (Tamol, 2007). This collaboration between professionals and families must therefore start as soon as learners begin their education (Vila et al., 2007). It is valuable for primary stakeholders such as educators and parents to communicate and acknowledge their roles in improving the quality of vocational skills for learners with learning disabilities. Parents' values, in terms of



their children's vocational choices, have a huge influence on the courses and programmes in which their children participate (Lovitt and Cushing, 1999). Thus effective information and orientation from professionals together with this collaboration will decisively affect children's futures and their preparation for adulthood (Grigal and Neubert, 2004). School professionals need to make educational centres a place for giving learners the opportunity to explore these options (Trainor, 2005). Furthermore, teachers, who are sensitive towards the challenges faced by the learners, should include effective accommodations to individual programmes in order to help learners develop self awareness, self efficacy and appropriate expectations as to the outcomes of their choices (Hutchinson et al., 2008). Studies in the United States concerning the implementation of collaboration with parents in secondary settings report high teacher satisfaction as a result of being able to obtain valuable information on learners' needs. The inclusion of these procedures in the future provision of school services was recommended by Hutchinson et al. (2008). They further highlighted the implementation of this provision in coordination with the teaching of school programmes and the inclusion of adapted skills in the individual learner's curriculum (Tomblin and Haring, 1999).

School staff should arrange meetings with parents as part of a collaborative programme as taking part in their children's individual plan meetings will strengthen parents' ability to identify and set future goals. They should also receive information on their children's rights and privileges and have knowledge of major trends in pedagogy or education, post-school possibilities and external agencies. This collaboration should extend to the relationships between different professionals, such as special needs teachers and regular teachers; the effectiveness of this collaboration in working towards inclusion in mainstream vocational centres in Belgium has been clearly documented (Cedefop, 2003b). Successful practices in United Kingdom (Northern Ireland) also confirm that co-ordination between parents, vocational training services and local employers helps in the provision of employment training and support for vulnerable young adults with a wide range of disabilities. The research concludes that the identification of appropriate training placements and employment opportunities should be matched with the candidate's basic needs, abilities and aspirations and that during work placements, the necessary support should be provided to help learners adapt to the work culture. It also emphasises the importance of building successful relationships between stakeholders (Taylor, 2007). MacNaughton and Arnold (2000) have identified several strategies that facilitate obtaining and maintaining employment among learners who used AAC (Augmentative and Alternative Communication). These strategies are: developing knowledge and skills that are valued in the workplace, identifying jobs that are a good match for the skills and interests of individuals who use AAC and ensuring that necessary support is available to maintain employment success.

A Swedish study has shown the impact of training for professionals who work with families of learners with special educational needs in the area of vocational orientation. Karlsson et al (2008) identified that in-service training (professional training together with resources) is an effective way of changing practice on both the individual and organisational levels. Families observed that changes had been implemented and the authors therefore advise on the importance of conducting several evaluations with stakeholders following the professional training.

6.2 Co-ordination of sectors and services

The co-ordination of vocational educational services for learners with special educational needs at macro level requires the state, market (employers offering training and jobs) and civil society (NGOs providing services and training, trade unions and youth organisations)



to work together at local and regional levels (Pohl and Walther, 2007). The continued generation of European level policies that link education providers and the private sector is also indispensable (UNESCO, 2002), as are policies highlighting the importance of promoting social, occupational and geographic mobility for the young and the disadvantaged (Council of the European Union, 2008). In New Zealand, vocational training and supported employment providers are working more closely following initiatives at national level. Umbrella groups across the country have developed a system to ensure ongoing commitment and collaboration, to create more individualised support oriented to individual needs and to offer a broad range of opportunities for obtaining the socially valued role of 'employee' (Grant, 2008).

On the local level, it is highly important that relevant training and community involvement efficiently facilitate the process of collaboration in terms of cost sharing, and effectively focus on adaption to the local context and needs (Aspel et al., 1999). The process should be organised, in a non-discriminatory way, on national, regional and local levels in order to respond positively to the global social economics, educational requirements and the needs of different groups of the population (UNESCO, 2004b). Rather than being limited to the institutional level, partnerships need to start from and centre on the individual's background and then develop links to the local transition system according to the individual's needs (Pohl and Walther, 2007).

Individual support should be orientated towards offering training in new economic growth areas and should take into account the needs and aspirations of learners (UNESCO, 2002) and include well coordinated and integrated services within the mainstream and pathways into further education and training (Commission of the European Communities, 2008). An effective programme from the University of Washington exemplifies this model. By means of the programme, which was developed jointly by the University and the Committee on Employment of People with Disabilities, high schools were able to increase the career success of individuals with disabilities by providing them with access to adaptive technology, career preparation activities, internet based mentorship, peer support through online communities and work experience before their graduation. It helped learners with disabilities prepare for success in high-tech careers in science, engineering and technology (Burgstahler et al., 2000).

It is imperative that the community level team (from public and private administrative bodies to adult services bodies), school level team (connecting learners with representatives from community bodies) and the team directly connected to the learners (learners, parents, school representatives, counsellors and teachers) all coordinate their efforts. There must be opportunities for the goals developed by these different teams, which should directly relate to the learners' future career interests and needs, to be integrated into school programmes. Subsequent long term and collaborative team efforts, with high levels of motivation, are also necessary aspects of this model (Aspel et al., 1999).

In Europe, vocational training has largely been the responsibility of schools, however American studies suggest a change in the roles of school staff is essential in order to accommodate collaboration with community post-school bodies and post-secondary services, with a view to addressing learner needs. This inter-body collaboration is increasingly necessary for job seeking and placements, as well as follow-ups and support services. It is also extremely important to consider the inequity of services for people living in rural areas (Mellard and Lancaster, 2000). Scholars have highlighted that a good, high quality VET programme, based on the partnership between professionals in schools and the community, has increased opportunities for learners with severe disabilities to obtain paid employment. Participation in workshops and follow-up consultations between



employers and employees that focus on vocational training in community college and post-employment settings have proved to be efficient, accomplishing a 74.4% success-rate in providing full-time paid employment during the 3 years of the research (Hagner et al., 2001). This study concluded that key relevant aspects to be included in an effective programme are the following: the normalisation of participation in workshops within a mainstream tertiary education state institution, a variety of in-school resources and career-centred materials by means of which learners take an active role in job-seeking, a curriculum that attracts the participation of students from the community, tutoring (model students buddy system and supplementary instructors), self-paced instructional software material, career planning and job search strategies, follow up consultations (employee and employer support system) and a pedagogy adapted to learner learning needs, style and skill levels (Hagner et al., 2001).

6.3 Learner involvement and individual needs in vocational education and training

Several studies have identified that personal maturity and person-environment interactions are the main factors influencing the involvement of a learner with special educational needs in the process of vocational education and training. As a consequence, these factors also influence the likelihood of satisfactory entry into the labour market, a high salary and job retention. In addition, research shows that although learners both with and without disabilities usually have optimistic career outlooks and moderate motivation to take part in their own career decision making, special education learners usually have significantly lower scores than those of their general education peers on career maturity (decision making, self efficacy, career outcome expectations, career exploration intentions and vocational identity). Two principal methods for diagnosing the causes of this have been suggested, namely adapted tests and extra instructional efforts (Ochs and Roessler, 2001).

Scholars make reference to several tools and instructional approaches for learners with and without disabilities in vocational education and training settings. For example, learner advocacy effectively enhances vocational possibilities, together with career maturity programmes adapted to learners' own preferences. These results are significant because most learners who are studying in mainstream secondary education lack the vocational direction to empower them, resulting in them only obtaining low-paid jobs on entering the labour market. It is of the utmost importance that learners, after having identified possible options, enjoy early opportunities to explore different career paths with higher wages that will help them establish higher expectations as a result of the interest created through their experiences (Estrada-Hernandez et al., 2008).

Self determination skills and active learner participation in the selection of their own vocational pathways also provides a basis for productive interventions and effective instruction in assisting learners with learning disabilities to successfully function in adult environments, including post-secondary education and other post-school outcomes (Field et al., 2003; Martin et al., 2007). Although there is strong evidence that individuals with learning difficulties can learn to make choices and solve problems (in single-subject design or single-case research design literature), current literature demonstrates that few self-determination skills can be taught to this sub-set within the group of individuals with disabilities, and there is no evidence on how to teach complex self-determination skills (Algozzine et al., 2001).

Moreover, it is advocated that learners with special educational needs should be helped to develop self-awareness skills and to recognise potential roles for themselves in the community during their last three years of schooling. Learners should document their future vocational plans and how to develop them through personal vocational portfolios



providing evidence of their achievement (Lundine et al., 2006). In a Dutch Secondary Vocational training centre for hairdressing, these Developmental Portfolios have proved to be very effective for monitoring learners' learning through summative evaluations, when contrasted with teacher-only feedback methods. This research shows that the use of portfolios could significantly help a heterogeneous group of learners with diverse abilities in an inclusive way, as each plan is adapted to their own individual needs. This technique has positive implications for helping learners to better formulate their learning needs, as it was shown to increase their personal responsibility for selecting suitable tasks, adapting learning tasks to their own needs and completing practical assignments as well as enabling them to acquire more certificates than learners in the feedback-only group. It is relevant to point out that, during this process, coaching from a mentor is essential in guiding learners' performance (Kicken et al., 2009). In secondary vocational training centres in the Netherlands, self-regulation of learning strategies is becoming an essential practice in pedagogy. Teachers support behaviour towards self-regulation using various instruction formats such as independent group work, project-oriented learning and project-based learning, which are more effective than traditional approaches in motivating learners to learn. These approaches focus on the necessity of pedagogical flexibility and a learner-centred approach, providing the opportunity for learners to recognise their autonomy and thereby acknowledge the value of their tasks (Van Grinsven et al., 2006).

New technological tools have been developed to help people with severe developmental disabilities work independently without the need for constant support. For instance, the VICAID system is a mini computer which allows the learner to access pictorial information in order to identify procedures or instructions that they or their trainers identified as challenging. This effective tool has been developed by European universities with funding from the European Commission through the project 'Technology Integration for the Disabled and Elderly' (T.I.D.E) (Furniss et al., 2001). A programme introduced by Sussex County Council (United Kingdom) entitled 'About Us' has introduced a number of strategies involving the use of pictograms and photographs as memory books to evidence continuous learning and follow up learners' progress to help them through the transition period from school to job placements (Mack and Thomas, 2008).

6.4 Vocational skills and interpersonal knowledge related to future working outcomes

There is a continuous debate as to the kinds of skills that are the most important for learners to acquire in vocational education: either a specific set of skills with a certificate leading to employment in a particular occupation or a broad repertoire of working skills. Scholars generally leave the discussion open, considering the appropriateness of any one approach to be conditioned by economic circumstances and by the groups being targeted (Freedman, 2008). For that reason, it seems essential to plan for each individual learner the relevant skills, development systems and strategies that should play a part in their compulsory education and training, bearing in mind which will be valued by employers and impact positively on their future working environment (Vila et al., 2007; ILO, 2008). Along these lines, Spanish research has explored the statements of various companies declaring that they value social skills – communication and collaboration with others (Elksnin and Elksnin, 2001), participative skills (planning and organisation of tasks in an increasingly autonomous way) and methodological skills (solving problems at the workplace) over technical skills when it comes to integrating learners with disabilities into their workplaces (Vila et al., 2007).



Other research has proposed that a vocational social skills package could be effective for improving punctuality and prompt attendance by young adults with learning disabilities at the work place and could therefore be a factor in maintaining their position (Tomblin et al., 2000). Social skills are indispensable in gaining employment and can be developed through participation in social activities (Potts, 2005) together with enjoyable and appealing activities, through recreational training (Devine, 2003).

Special mention should be made of the need for the adaptation of assessments and teaching methods with a focus on the skills and educational needs of learners with learning disabilities. These aspects are sometimes ignored during curricular adaptation because of the false belief that learners' disabilities will disappear in adulthood; this belief can have a significant negative impact on learners' work and educational outcomes (Cummings, et al. 2000).

In light of the above, a potential approach would be to direct the teaching of vocational education and training towards market needs and specific learners' skills needs and include both aspects within school programmes in an inclusive manner for all learners (Hyland, 2006). In England, vocational policies take into consideration the specific needs of learners with special educational needs and have developed a culture of interpersonal skills mediation through therapeutic intervention objectives concerned with personal and social skills, emotional intelligence and the enhancement of self-esteem, confidence and motivation in learners.

In the opinion of some authors however, these post-compulsory vocational and training programmes could have negative consequences if they focus solely on individual needs and neglect the acquisition of vocational knowledge, or if the techniques are only implemented for learners with special educational needs. Taking only individual factors into account could promote drop out. Effective intervention should therefore include other systemic factors (Eisenman, 2007). Self-determination should aim to give learners the potential and the resources to choose their vocational future. This is dependent upon the availability of appropriate service opportunities, adequate funds and learners having the power to decide how they will be spent. These factors need to be considered with regard to the level of autonomous thinking of the learner and the information available on possible options (Laragy, 2004). Research also shows that certain types of disability need to be taken into consideration in connection with decision-making processes. Results indicate that individuals with cognitive impairments have more decision-making confusion and external conflict than individuals with physical disabilities (Yanchak et al., 2005).

6.5 Flexible policies and measures

Flexible policies and measures supporting free and varied choices for vocational learning and training courses could be the main facilitators enabling learners with special educational needs to attain qualifications, develop potential and talent and obtain a job. Furthermore, the optimisation of flexible conditions for learners' attendance allows them to access all stages of education and transfer from one field to another within vocational education in a system that maintains a general education component through all stages of specialisation (Pohl and Walther, 2007). This model demands a learner-centred, innovative pedagogy that identifies and addresses individual needs through flexible approaches and in-class pedagogy adapted to the pace of learner learning (UNESCO, 2004b; Commission of the European Communities, 2008).

Scholars encourage the implementation of policies such as quotas in order to increase the enrolment of women with disabilities in vocational courses. They further highlight the importance of disseminating relevant information in order to increase participation. A



possible way of increasing the participation of SEN students in VET would be to create flexibility for learners with disabilities in terms of lower entry qualifications and longer course durations (ILO, 1999b). In keeping with these ideas, the Lisbon European Council (2000) (cited in Barcelona European Council, 2002) encouraged the generation of greater transparency of European qualifications to increase co-operation and improve recognition within European Universities. Furthermore, European countries and stakeholders have proposed that improving accessibility and eliminating barriers to equal participation so that learners can fully exercise their capabilities should be the main priorities for active inclusion and access to rights (Commission of European Communities, 2007).

The respective foci of policies and research currently differ, making it necessary to promote common goals. Unfortunately, the majority of European VET comparative research does not cover the stakeholders' perspectives. Similarly, policies from various European countries focus merely on the role and responsibilities of the individual and do not acknowledge the complexities of the process. Both perspectives need to be taken into account, with the role of individuals and personal motivations, opportunities and resources taking centre stage. Policies are, in some cases, not adapted to reality. In Germany, for example, the quota level has recently been reduced from 6 to 5 per cent because there were insufficient numbers of qualified persons with disabilities to fill the available jobs. A further example is where the special vocational setting does not provide the qualifications that are useful for the labour market (ILO, 1999b).

On a positive note, there is an example of flexibility in the vocational education and training curriculum in the form of the inclusion of new technologies that accommodate learners' needs. For example, e-mentoring between the mentor and the learner has been successfully adapted to vocational training (Kempainen, 2011). Research shows that extra opportunities for enhancing communication skills, such as adapted software, often cultivate positive and supportive relationships without the barriers of time and space. (UNESCO, 2002; Shpigelman et al., 2008).

The ideal extent of flexibility in a vocational system is conceptualised as a 'dual system', which considers both education and training and maximises the connection with local market demands and existing jobs (Freedman, 2008). VET programmes should be comprehensive and inclusive systems that can accommodate all needs, and at the same time facilitate entry into the mainstream. This equity in adapting to all needs should consider different variables, such as location, languages, schedules and structures (UNESCO, 2002). An illustration of this equity can be found in the Danish vocational learning and training systems, which have pioneered concrete learner-centred approaches. Moreover in Sweden, every individual has the right to choose the course of study, its timing and the location (ILO, 2003). In some countries, individualised action plans (IAP) give the learner the opportunity to guide their own vocational path from the moment they start school, but in the majority of countries this does not occur until learners are in the final years of compulsory education (Pohl and Walther, 2007). In Sweden, the meaning of equality has been explored through the innovative approach of giving learners with special educational needs a curricula which is flexible and fully adapted to their needs, alongside the opportunity of being responsible for and autonomous in their own learning progress. Among the challenges encountered in this programme was the need for more personal and varied choices for the group members. The learners were grouped according to their pace of learning, and the in-class gap on progress increased as a result. For learners with special educational needs, working at their own pace was positive, as they had the opportunity to learn and the possibility to maximise the use of resources. While such practices are very effective, government-imposed curricula, accountability and



national examinations make the implementation of this pedagogy at higher educational levels impossible (Ahl, 2007).

High participation in education could also provide an alternative to the high unemployment rate experienced by young people in Eastern Germany, Poland and Slovakia (Pohl and Walther, 2007). Research shows that European countries with coherent, structured and preventive educational policies, such as Denmark, Finland and Slovenia, have a compensatory and individualistic focus with a direct and significant effect on school leaving rates. Their policies are characterised by: an increased number of options and available choices of routes, the design of national qualification frameworks, broad access to educational allowances, personalised counselling for all learners and additional support for those at risk.

A European Council Recommendation has invited Member States to evaluate the factors leading to early school leaving and develop connected evidence-based policies, with regard to particular educational sectors including vocational education and training. The document specifically highlights students with special educational needs as one of the groups at increased risk of early school leaving and recommends that strategies be directed towards prevention, intervention and compensation measures. It also stresses that good practice should be shared and promoted among Member States and stakeholders. These strategies should be implemented by the end of 2012 (Official Journal of the European Union, 2011).

Another important European initiative is the European Qualifications Framework, which aims to define and clarify national skills, qualifications and competences in order to make them more transparent across European countries (European Commission, 2008). The framework requires the inclusion of flexible practices for learners with special educational needs in vocational education and training.

The term 'competences' has been interpreted in different ways and usually includes both subjective and objective meanings. The subjective interpretation of this term is conceptualised as individual intelligence seen as a stable and more or less un-modifiable cognitive resource while an objective view of this term focuses on a more flexible interpretation determined by task resolution and the abilities needed in order to fulfil them (Grollmann, 2007). The acquisition of these competences needs to be considered in situ and through an inquiry-based curriculum as interpretations will often be context dependent and their own experiences need to follow a career dialogue in order for students to highlight their potential (Kuijpers et al., 2011). Innovative policies that focus directly on learning through real work experience are essential, with adapted technology and flexibility included in the conceptualisation of the term. It is further recommended that European policies should indicate how to adapt the concept of competences to all learners. Mulder, Weigel and Collins (2007) have revised the concept of competences in several countries of the European Union and they have highlighted the lack of coherent definition, implementation and evaluation. Accordingly, it is argued that the concept of competences should include the knowledge acquired and whether the individual can perform the job task defined. The one-to-one relationship between competence and performance should also refer to the quality of social interaction in the job setting, consumer satisfaction, economic benefits, the goals and operation of Mulder et al. (2007) suggest that after their training, an individual's competences should match with the organisational level needs for their employment practice. Furthermore Gazzoli et al. (2010) concluded that empowerment and job satisfaction has a direct influence upon eventual customer perception of quality.



6.6 Relationship between VET and the labour market for learners in special needs education

There is a direct relationship between education and employment (ILO, 2000). Optimising work experience for learners with special educational needs through strong school programmes, with personalised and intensive career exploration opportunities and customised support before job transitions will maximise the possibility of entering employment, due to learners' increased vocational knowledge and interest (Nietupski, 2007). Schmidt and Smith (2007), following an investigation involving a group of 60 learners with disabilities, have confirmed that learners who participated in adapted vocational programmes (including employment services and learning skills for independent living), have confidence in their work skills and therefore do not feel any limitations in the work place. The scholars therefore concluded that these programmes promote confidence and encourage learners with disabilities to participate as part of the workforce. 69% of all participants in this research participated in an employment programme and, of them; more than 60% were employed at the time of the study (Schmidt and Smith, 2007).

It has been confirmed that exploring skills in two or more contexts, such as customer service taught in a classroom and a work placement at a department store, become 'linked with one another' when both the learning and transfer contexts are intentionally framed to create interaction. The 'frameable' aspects of learning situations, proposed by Engle in 2006, were time, location, participants, topics, roles, practices and purposes, and several such programmes have been identified as highly effective (Taylor et al., 2009).

In Europe, people with severe mental illness have the highest rate of unemployment (approximately 95%). However, for this group, the effective implementation of IPS (individual placement and support plans) instead of vocational rehabilitation, can mean an increase in competitive employment compared to those assigned to vocational services, with greater job retention and longer hours worked. The programmes implemented by Burns and colleagues (2007) from the University of Oxford consisted of identifying young learners with special educational needs who were willing to work in the competitive labour market and helping them to develop pragmatic goals and search for appropriate employment directly, without a training phase. During this programme, the counsellor would contact the job companies and support both the learner and the employer with up to 18 months of bilateral counselling. Each counsellor had a small number (maximum 25 learners) to support. However, perhaps due to the learners' lack of training, the jobs found were unskilled and orientated to support services. Scholars from Sweden have implemented a similar programme with a group of 65 men and women below 35 years of age with mental illnesses. After one year, 25% of the participants in the individual placement and support programme were employed and 14% were involved in educational programmes. The satisfaction of the participants who were working or studying was higher than those who remained at home (Nygren et al., 2011).

Although many European educational systems include learners with visual impairments in mainstream education, these learners have often been unable to find employment upon finishing their education. Spain is the exception to this; the majority of people with visual impairments are trained and carry out paid work for ONCE, the Spanish National Organisation for blind people (Gresnigt, 2000).

Art is an area that can bring personal benefits to learners with disabilities whilst also providing paid jobs and a wide array of career possibilities. The VSA arts/Volkswagen programme is a good example of an initiative that matched some of the needs of young artists and effectively supported their career development. Several other disability arts organisations exist in the USA, but still very few exist in Europe (Boeltzig et al., 2009).



Rylance (1998) noted, in an in-depth review of factors in a longitudinal study database, that basic skills competences and graduation with a final diploma were clear positive factors that indicated later job opportunities for children with an emotional disability (Rylance, 1998).

6.7 Role of trainers or mentors in vocational education and training

Mentoring has been recognised as a valuable tool for professionals to use in order to meet the needs of learners in vocational training and job settings. The role of mentorship is typically defined as an adult acting as a guide, role model, teacher and friend, to a less experienced and often younger protégé or mentee (Casey et al., 2000). The use of biographical reports, self-reports, and interviews indicate that mentors exert one of the most significant influences on gifted individuals' personal and vocational success (Daughtry et al., 2009). Mentoring can be undertaken by other learners who can help to promote personal, academic and career development as well as act as role models to assist learners in defining their career paths (Whelley et al., 2003). In 2004, the Council of the European Union underlined the importance of the role of young people in combating all forms of discrimination (Government of the Member States, 2004). Indeed peer mentors have been shown to not be intrusive or stigmatising within the vocational training setting of a beauty course. This mentoring helped to improve work-related learner performance and served school and community needs (Westerlund, 2006). The benefits of the mentoring relationship for learners included experiencing how others live their lives, which motivated them to set themselves high aspirational goals such as being as independent as possible or pursuing educational or vocational goals (Kroll, 2008; Ljungberg et al., 2011)

The ILO has stated that teachers in special vocational training centres normally meet the requirements for teaching learners with SEN (ILO, 1999b). In mainstream vocational education and training, trainers require certain skills and attitudes towards promoting equality (Cedefop, 2001). Professional training in special needs for teachers could have positive effects on the learning of learners with special educational needs. For example, in Estonia, while most teachers in Estonian Vocational Schools demonstrate positive attitudes towards the greater inclusion of learners with special educational needs, concerns remain regarding the readiness of these schools to accept such pupils into existing courses (Rose et al., 2007). A study examined the experiences of a group of 14 teachers working with a group of learners with multiple disabilities and explored the disparity between the new conceptual approach of inclusion and the teachers' use of medical terminology with this group. Further training on contemporary theories of disability and on systemic acknowledgement of further social approaches is therefore recommended (Jones, 2005).

In the majority of cases, as for careers in technical education, teachers need to be aware of the new technological instruments which can be adapted to meet their learners' needs. Lifelong learning for teachers should therefore be highly promoted (Haber and Sutherland, 2008). It is also recommended that the ability of future teachers to guide learners with special educational needs is developed, together with flexible training to suit the needs of learners (UNESCO, 2004b). Pedagogical strategies used by instructors should include peer assessments, co-teaching and reflective practice (Tchibozo, 2011). For example, it is suggested that a trainer should only accompany the worker to a work placement depending on their individual needs and not with regard to the worker's particular type of disability (Vila et al., 2007). Moreover, coordination of sectors and services can be arranged between schools and other external institutions (Lovitt and Cushing, 1999). This co-operation should focus on gradually reducing learner support until it becomes obsolete or when the natural support provided by increased integration with co-workers has been



established, instead of coaching, which usually fosters a dependency culture (Stevens et al., 1999).

Learner identity is made up of the conclusions they draw about themselves as individuals, as a result of what they have learned through their experiences. Learner training could include the use of portfolios in which learners create auto-biographies covering their past and present learning processes and in which they focus on the effective pedagogy that has a direct influence on their training during learning practices in the work place. As a result, participants are more engaged in their work, are aware about their own learning experiences and can help to redesign their own adapted programs. Educators can also learn about different pedagogical tools and feel more engaged with their students (Wojecki, 2007). An integrated curriculum would include vocational content, general work related skills and knowledge, learning and working with academic principles and real work practice with learner engagement in applied activities which require problem-solving. Teachers would spend more time guiding learners than teaching and would provide teamwork activities. Literature reviews of integrated curricular models have shown that although there is no data demonstrating the effects, there are descriptive analyses that show meaningful engagement of learners with disabilities in classes or programmes based on this integrated curriculum that may have contributed to the learners' persistence, academic achievement and post-secondary engagement (Eisenman, 2000).

6.8 Role of career counsellors and implementation of transition plans

Human resources development and training improve human potential (ILO, 2000). It is important that counselling and guidance more effectively focus on matching learners with training opportunities that reflect current market demands and facilitate steps for a transition into employment (UNESCO, 2002). A career counsellor should help learners to choose the programmes best suited to their needs and, in terms of choices, give them a realistic view of the opportunities available (UNESCO, 2004b). Counsellors should be mindful that learners may experience negative thoughts about making a career decision, which could result in he/she avoiding the process and thereby making it more challenging. This concept is known as 'dysfunctional career thoughts' and should be explored by the counsellor. With this in mind, the counsellor should consider in their evaluation that learners with a higher level of achievement may well need additional individual sessions than those with a lower level. There is also a need for further research that explores which strategies are the most effective for different learners (Lustig and Strauser, 2003). Among the counselling models, it seems that 'INCOME' is designed to be inclusive and easily adapted to all clients and it is effective in guiding towards choosing a future career (Hershenston, 2005).

It is particularly necessary to improve access for women with disabilities, with open minded counselling which looks beyond their disability, considers technological adaptations and is conscious of gender stereotypes (ILO, 1999b). This process needs to start at an early age and learners should have a key role in selecting and deciding on their vocational path (European Commission and US Office for disability and employment, 2009).

According to some scholars, the lack of knowledge on the part of vocational rehabilitation workers and career counsellors on the needs and the nature of some disabilities can be more problematic than the disability itself. Some learners diagnosed with Asperger Syndrome, also known as the hidden disability, are working to educate professionals about the disability (Fast, 2004). Learners with intellectual disabilities are more likely not to display anti-social behaviour when they like job activities that match their preferences. Learners therefore need the chance to be exposed to different options (Stevens et al., 1999). In the case of learners with chronic conditions such as spina bifida, counsellors



should be aware that many relevant variables must be taken into account, as they can impact upon how each individual adapts to life with the disability and familiar and social reactions (Brislin, 2008). It is interesting to note however, that innovative research on transition among a group of young learners with visual impairments indicated that, among the different variables considered effective in the transition to employment (work experience, academic competence, self determination, use of assistive technology and locus control), the participants of this research do not consider the contribution of a counsellor to be effective (Capella et al., 2009). It is essential that learners with disabilities are part of the Individual Transition Plan (ITP) meeting and it is valuable that they learn the skills involved in leading meetings and discussing interests, skills and options. An adaptation of a multimedia package, such as the Self-Directed Individual Education Plan (IEP), has been found, in a small scale survey, to be useful in increasing the participation of learners with moderate learning difficulties in their ITP meetings (Allen et al., 2001). Learners' self esteem and involvement with the counsellor were not associated with employment after the transition stage for learners with visual impairments (Capella et al., 2009).

Even though many education policies have been developed with a view to inclusion, careers service organisations external to the education system are still common (Howieson and Semple, 2006) In most of Europe, consultants are still working externally to the educational system which makes it difficult for them to recognise learners' needs. In Sweden, individual educational plans in compulsory education have been obligatory since 1995 and it can be presumed that schools have a long history in preparing and improving them. Indeed, Swedish Researchers, through an in-depth review of a representative sample, have indicated that most of the information considered relevant in terms of difficulties and possible measures focuses on the pupil's individual characteristics and challenges, rather than on information about external and organisational factors. It is important to take this information into account and avoid the stigmatisation of learners by considering their environment and moving towards an inclusive and mainstreaming ideology (Isaksson et al., 2007). In the United States, integrated academic and occupational learning has been developed over the last 10 years, which is different from individual adaptation and instead involves the whole organisational system.

Considering the multidisciplinary nature of vocational assessment, the integration of people with disabilities should be carried out by multidisciplinary teams including specialists from a wide variety of fields such as rehabilitation medicine, ergonomics, psychology, vocational guidance, education, social sciences, occupational medicine, occupational health and the safety and technical fields, together with expertise on different occupations (Council of Europe, 1995). Studies have identified that interrelationships between psychological and pedagogical techniques could benefit learners with disabilities in vocational education and training, especially through the use of innovative tools improving the generalisation of skills (Cobb et al. 2009; Akcamete, 1999). Although very few studies are present in the literature, one case study does demonstrate that by using a photo activity schedule book implemented by teachers, learners in vocational training increased their independent transitioning between vocational tasks inside a school cafeteria and at a community job site (Carson et al., 2008).

Various models have been developed that focus on improving careers assistance to learners with disabilities. This assistance is essential for the self determination skills of learners and helps them to develop their self identity and feel like full participants in their lives and in their community (Soresi et al., 2008) Scholars have highlighted that young people with disabilities display a broad range of interests and self-estimated job-relevant abilities that are similar to those held by the wider population. This research also reveals



that less than half of the study's participants' jobs relate to their own areas of interest. It is therefore recommended that employers and counsellors have regard to these areas of interest in order to help young people feel fulfilled while they are working (Turner et al., 2011).

Hagner et al. (2001) developed a project that advised young people with severe disabilities on career planning and job search strategies. They concluded that the services that the project provided were the same as those usually offered (companion in job search and ongoing contact with employer), but that they had a more intensive approach. Hershenson (2005) introduced the INCOME model for organising, selecting and implementing concepts from career theories and career intervention practice. This tool helps consultants to categorise the trainee challenges in relation to career interventions within the 6 different career statuses (imagining, informing, choosing, obtaining, maintaining and existing) and guide the person through the strategy for the category or categories in which they fall.



7. KEY CHALLENGES FOR VET AND THE RELATIONSHIP WITH THE LABOUR MARKET

7.1 Drop out from VET and possible solutions

A high number of learners with special educational needs do not complete their programmes and leave vocational education and training. This is arguably due, at least in part, to the possibility that programmes offered do not suit their needs (Cedefop, 2001). This experience is shared worldwide by groups of learners with disabilities (Jahnukainen and Helander, 2007). Learners with emotional disabilities or behaviour disorders are those with the highest rates of dropout, the lowest grades, the most course failures and a higher grade retention/repetition rate than any other group of learners.

Barnado's, an English association working with young people, has published research on the causes of drop-out among a group of 110 young (below 18 years of age) learners from United Kingdom (England) at risk of disengagement, among whom were learners with disabilities. The main causes cited by participants were: poor experiences in school (teachers, other pupils and not being able to keep up with academic work), personal difficulties and life circumstances (no special support working in their individual cases) and structural barriers (the economic context as a result of the crisis means there are fewer opportunities for work and training) (House of Commons Education Committee, 2011).

In response to this situation, researchers have highlighted the need for vocational and professional programmes to link with learners' preferences in their compulsory education curricula. This would be complemented by support in completing their education and attaining a diploma that could increase learners' chances of being socially integrated (Wood and Cronin, 1999; Jahnukainen, 2001). It has also been reported that effective relationship programmes, such as mentoring or small group classes, could engage learners more and effectively avoid them dropping out (Wagner and Davis, 2006).

Other studies have confirmed that learners with learning disabilities and psychiatric illness face many barriers that could contribute to their exclusion from compulsory education and hinder their success both in school and at work (Cook, 2006). Policies around the inclusion of learners with special educational needs can encounter challenges if school arrangements are not accommodating; this results in further learner dropouts and more learners being transferred to individual programmes. In Sweden, legislation implementing a compulsory three-year inclusive programme was introduced in 2000 for all learners. The programme mixed vocational and theoretical subjects, but the policy implementation has still not met expectations – in particular for schools continuing with inflexible teaching methods instead of developing pedagogy which could be adapted to the needs of the learners. Therefore although policies are inclusive, schools have not been enabled to adapt to learners' needs. It has been suggested that schools should listen to learners' voices and adapt the school to their needs, simultaneously motivating and stimulating the learners (Fischbein and Folkander, 2000) As learners' voices are connected with their own experiences and their own history, self-advocacy and career exploration, taking account of a learner's voice should be compulsory for every education professional (Hitchings, Luzzo et al., 2001).

Where learners have already been excluded from the education system, research suggests that such learners could, with a supportive programme, be motivated to complete vocational training. This has been illustrated in Finish vocational schools. In Finland, it is rare for learners to leave compulsory schooling, however many learners with special educational needs drop out at secondary level. Considering that in Finland, the majority of learners are enrolled in further education, being part of the dropout group leads to future



unemployment and social exclusion. Therefore it is important to note the existence of several effective programmes developed to prevent social exclusion of young people with disabilities. These programmes' main objective is to work as a prevention model. The 'Creating Your Own Career programme' assists learners during work-based learning workshops. A second programme, entitled 'The 10th form', provides an opportunity for an extra year of experience using non-traditional learning methods. This programme is not restricted to the school setting. With flexible solutions based on individual guidance, learners completed secondary school and their unemployment rate did not differ from the average for their age group (Jahnukainen, 2001). After the success of these programmes in Finland, the 'Activity School of East Finland' was developed over a period of three years. It is based on an alternative pedagogical model of 'social pedagogy' for all learners studying vocational education and focuses on individualised guidance and improving the quality of the relationship between learner and teacher. This course includes up to 80% on-the-job learning (from mainstream vocational education). There are higher satisfaction levels here than among the control group (learners in regular vocational training addressed to learners with special educational needs who have not taken part in the vocational education experiences in this programme). The application of the programme to learners' life situations has also been confirmed (Jahnukainen and Helander, 2007).

The American 'expanding horizon program' is an example of an effective, two year programme of vocational classes combined with a focus on job-seeking skills and training for maintaining jobs where needed. During this programme, learners were encouraged to complete their vocational training within adapted programmes which provided academic and career assessment, skill training and employment opportunities (Lemaire, Mallik and Stoll, 2002).

In conclusion, further research is needed in order to promote preventive responses. It is also very important to measure the dropout predictions among learners and give consideration to this serious problem, which necessitates preventive measures and a coordinated solution on a political level (Kemp, 2006). Programmes that focus on secondary and tertiary prevention can be effective, but individualised dropout prevention programmes for all will always be a better alternative.

7.2 Limited implementation of measures and co-ordination of services

Education and training systems in developed countries tend to be fragmented and inflexible because they have generally been built up over many decades (ILO, 2000). In England for example, men and women with learning disabilities may seek 'supported employment' where they can expect to receive specialist training and practical support for their special needs along with transport to and from work. These employment opportunities are provided directly by local authorities or commissioned by local authorities from private or third sector organisations. In addition, there is a small number of social firms that operate specifically to employ people with learning disabilities. There are no reliable national figures regarding the number of organisations offering supported employment or the numbers of people with learning disabilities employed in them and the government does not participate in this process (Redley, 2009).

Inequalities exist because the world of work is not open to everyone. Wider socio-economic factors, such as work placement availability and the employer support offered to schools are significant excluding mechanisms, together with the negative attitudes of professionals looking at the appropriateness of placements (Mitchell, 1999). To act effectively it is necessary to have information and co-ordinated data regarding the employment outcomes of young adults with SEN, along with essential information on their learning and post-secondary outcomes (Izzo et al., 2000). In 2006, the World Bank



instigated an e-discussion to hear the views of stakeholders on the question of young people with disabilities and employment. The roles of intermediaries and mediators operating between the work place and disabled people are essential in order to link their needs. In many cases learners are decisively involved in finding solutions to the challenges they are experiencing and it would perhaps be better for them to play a leading role in the design of plans (Roggero et al., 2006).

It has been suggested that research centres providing direct access to national, regional and local information are urgently required in order to facilitate the dissemination of knowledge across European countries. Future policies should consider the evaluation and follow up of national practices and for this purpose, the information collected by research centres will be essential (Baye and Demeuse, 2008).

7.3 Limited career assessment tools

For people with disabilities, vocational assessment is one of the major obstacles to employment. So long as it continues to concentrate on deficiencies and weaknesses it will inevitably lead to exclusion. Resolution AP (1995) 3 of the Charter on the vocational assessment of people with disabilities (Committee of Ministers, 1995) appeals for a transfer of focus from disability to ability. On this basis, the learner's vocational abilities and not disabilities, should be assessed and linked to specific job requirements. Comparison and alignment of vocational aptitudes and specific job requirements should facilitate employment (Council of Europe, 2009). This assessment needs to be based on empirical evidence, be standardised (Dipeolu, 2007) and individually accommodate by not being based on beliefs, tradition and assumptions (Jones, 2006). Negative attitudes focus on the limitations of learner deficits, as clearly shown in an Italian study; the teachers of children with Down syndrome in the north eastern region of Italy predicted that only a few children would eventually work in a inclusive setting (Nora and Soresi, 2009). The main problem with most assessments is that they are not individually adapted to the learners' personal needs. In the majority of cases, assessments are carried out in the group setting, resulting in ineffective provision and a limited future for learners with disabilities due to these erroneous evaluations.

Although vocational assessment should be an important element both prior to and during the vocational training course, most of the research is based on the transition process and focuses purely on future employment while ignoring the training process (Sitlington and Clark, 2001). There is a need to differentiate the vocational assessment from the transition assessment. There is also a need for more correlation with global needs during the transition stage and a career assessment that looks for broader choices in the whole lifespan of learners. It has been emphasised that the applicability of curriculum-based vocational assessment in vocational education should be uniquely tailored to each individual's particular circumstances. This could guide instructional requirements with natural class activities considering essential and ongoing student-centred processes together with the assessment for all learners (Rojewski, 2002). More research is needed in order to adapt tools for learners with non-verbal communication and poor social understanding (e.g. children with autistic spectrum disorder) as very few assessments are standardised for English speaking countries (Jones, 2006).



7.4 Relationship of VET to job practices and accessibility to the job market

The importance of equity and efficiency, and how to make them work together, needs increased attention in the European public sphere – especially while rates of basic patterns of return are lower for disadvantaged people than those of people with advanced educational backgrounds. Skill needs are demand driven and dependent on local socio-economic contexts, which are continuously changing; vocational training is often not related to real employment practices. Training is frequently provided in a segregated way and not oriented towards complex professions, but to broad and general specialisations (Cedefop, 2003). It is therefore very difficult to cope with these demands and more support services are necessary, alongside improved skill training (UNESCO, 2002). In light of the on-going crisis in Europe, it is clear that services that only seek unskilled jobs are not effective. Scholars have analysed the United Kingdom government's Entry to Employment (E2E) programme discussed above and concluded that counselling alone does not help. Instead, they recommended programmes that up-skill learners (Russell, Simmons and Thompson, 2011). In line with this, scholars have found that the skills taught need to be coordinated with the skills needed in the workplace. Little (2011) has discovered that the majority of learners with foundation degrees do not know how to apply their skills in an actual job. It is therefore suggested that transferability should be explicitly covered in their training.

When learners with special educational needs complete their training, they often return to passive assistance programs or receive disability benefits or pensions (ILO, 2008; OECD, 2009). Changes in policies, in order to motivate improved training and tailor qualifications to the needs of the market, could therefore be effective, particularly for jobs that are not too closely linked with new technological changes, which rapidly make skills obsolete. Efficiency could be achieved by adapting to the requirements of the private sector and the certification of the public education system. On the other hand, greater equity could also be accomplished if learners obtain general knowledge of and access to jobs, and then gain vocational specialisation through the labour market (Woessmann, 2008).

A Finnish study has explored the situation of ten learners with learning disabilities 10 years on from completing their compulsory education. Although the group had not lost their high motivation to find a job, their external opportunities had not been too favourable. Half of the group participated in vocational education and business school, and although they remember it as a great experience, none of them actually completed it. Nevertheless, during this period, the group did gain useful competences that motivated them to seek jobs. This study reveals the main challenges in the process which lead, ten years on, to 50% of the learners being unemployed and one being in prison, despite the fact that they were all willing to work and were actively seeking paid employment. Even taking into account the fact that the unemployment rate for the national working population in that year was particularly high (20%), this group experienced very high rates of unemployment. This key example acknowledges that, despite Finland having one of the highest rates of people finishing higher education of all European countries, people with special educational needs are still in need of support in terms of their labour possibilities and individualised follow-ups are required to monitor learners' vocational futures (Kivirauma, 1997). Academics consider it significant that in systems where learners enter the labour market early (e.g. aged 16) and have early exposure to a high minimum wage, they will actually experience low earnings in the long-term. This can have negative long term effects on learners such as reduced labour market experience and accumulation of tenure, a decrease in training and skills formation, as well as creating a reduced labour supply on the market generally (Neumark and Nizalova, 2007). Discrimination on the part of



employers results in people with disabilities receiving lower wages during and after placements and being at high risk of lifelong work dependence (Gill, 2005).

In conclusion, vocational education has often not been effective in encouraging employability skills due to poor links with industry and delays and shortcomings in adapting programmes to the rapidly changing needs of enterprises (ILO, 2000). As stated at the outset of this review, the relevance of training in special vocational schools is poorest and the quality of training lowest where traditional curricula are used, which in the majority of cases are poorly matched with labour needs (Freedman, 2008; ILO, 2008).



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The evidence suggests that several factors are essential in order to improve the quality of Vocational Education and Training services offered for learners with special educational needs. This document focuses on the needs of this group in different contexts and the factors that play a critical role in their vocational education and training and their future working conditions. These factors have been analysed through different examples from academic research, implemented by different European countries.

This report contains a critical review of the literature on field studies of Vocational Education and Training related issues for learners with special educational needs, covering two priority areas: the key factors that facilitate vocational educational and training for learners with special education needs, and the relationship with the labour market and key challenges. The report has been conducted within the Agency's approved Multi-annual Work Programme (2007–2013), and the review is intended to complement the Vocational Education and Training – Policy and Practice in the field of Special Needs Education (VET) project. It is hoped that the emerging key issues will inform policy makers, practitioners, researchers and others that play an essential role in the provision of quality VET services to this group of learners.