

WORK-BASED LEARNING: BENEFITS AND OBSTACLES

A LITERATURE REVIEW FOR POLICY MAKERS AND
SOCIAL PARTNERS IN ETF PARTNER COUNTRIES



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Manuscript completed in July 2012

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ACKNOWLEDGEMENTS

This report reflects ETF's effort to raise awareness in partner countries about the benefits and potential of work-based learning and the obstacles that may have to be overcome when implementing this model. The aim is to support VET reforms undertaken to increase labour market responsiveness as well as overall efficiency and effectiveness. The report forms part of an ETF Innovation and Learning project entitled 'Learning context matters' (2011-13), which promotes learning in different environments in partner countries, with a particular focus on work-based and practical learning.

The report was prepared by an expert team from ICF GHK comprising Anne Mari-Hall (Nevala), Daniela Ulicna and Claire Duchemin. Support and inputs were provided by Manfred Wallenborn, Dagmar Ouzoun and Helmut Zelloth, three ETF experts who also edited the report.

Special thanks are due to ETF colleagues Gérard Mayen, Ian Cumming and Anastasia Fetsi for peer-reviewing the draft report.

EXECUTIVE SUMMARY

CONTEXT

Before delving into particulars, we would like to situate this report within the broader context. In view of the recent international trend towards rediscovery of work-based learning (WBL) and the current situation in partner countries given below, an in-depth examination of the literature on WBL would appear to be necessary at this time. A clearer understanding is needed of the great potential of WBL, the major benefits it can offer, and the obstacles that may hinder its implementation. The aim of this report is to help policy makers and social partners in the partner countries of the European Training Foundation (ETF) to engage with this type of learning for the first time or to improve existing WBL-related policies and practices in vocational education and training (VET).

We have recently witnessed an international trend towards the reappraisal of WBL in VET and even in higher education. EU policy documents (i.e. European Commission, 2012, 2010 and Agenda 2020) increasingly emphasise the importance of apprenticeships, traineeships and other forms of WBL, focussing on the need to foster cooperation between education and business. The Organisation for Economic Cooperation and Development (OECD), in several VET reviews over recent years, has continued to recommend wider use of WBL and has highlighted the need to improve the quality of the current offering. Similarly, the International Labour Organisation (ILO) is promoting the effort to upgrade informal apprenticeships in low- and middle-income countries.

ETF partner countries are not isolated from this trend. On the contrary, it is likely that WBL will play a more prominent role in VET in these countries in the future for several reasons: (a) purely school-based learning has structural limits with respect to the preparation of the workforce, particularly in sectors where content is non-academic (i.e. emerging manufacturing industries and modern crafts); (b) public funding of VET is under pressure in several countries and the contribution of the private sector in the form of WBL can help alleviate this problem; (c) contextualised work-process and business-process knowledge is also becoming more important in partner countries, not least because of globalisation; and (d) there is a huge need to make VET more attractive and relevant to learners and one way to achieve this goal is to place greater emphasis on WBL.

The VET systems in most partner countries are strongly school-based and the lack of WBL (or indeed of any practical training at all) is frequently highlighted in reports (i.e. the Torino Process). However, new policies and practices in WBL are emerging and gaining ground. Some countries have realised the importance of WBL and have already started to modify their VET policies to take this into account (for example, Morocco, Algeria, Ukraine, Turkey and Kazakhstan), while others have at least recognised that VET must pay more attention to the realities of employment and labour market demands.

What partner countries lack is a thorough understanding of what WBL means: the economic, social and educational benefits it can offer, its potential in the context of development, and the obstacles that stand in the way of its implementation. Moreover, partner countries often lack the capacities, methodologies and tools to establish and implement WBL routes and opportunities in VET. In a way, this is reflected in the relative lack of literature and specific research on this topic in these countries.

This aim of this report is, therefore, to help reduce this knowledge gap and to help partner countries to achieve, through improved knowledge, a better balance between school-based learning and WBL in their VET reforms. WBL is not meant to exclude or replace school-based learning in VET. Both modalities are most effective when they complement each other rather than compete. Our hope is that this report will serve as a tool for VET policy makers and social partners, and that it will improve their understanding of the benefits of WBL in VET and the obstacles to its implementation.

While the research findings reported relate mainly to the situation in high-income countries with well-developed VET and WBL systems, they nonetheless represent a large body of information that provides excellent arguments in favour of the WBL model. These arguments are worth extrapolating to other geographical, cultural and socioeconomic contexts.

MAJOR FINDINGS

WBL is frequently described in the literature as a set of learning practices that differs from those of school-based or classroom learning. WBL is learning that takes place in a real working environment through participation in the work process, irrespective of whether the learners are young people, students, unemployed people or employees, or whether they are paid or unpaid. Some definitions go further and also encompass some forms of classroom-based learning (i.e.

simulations, virtual firms) or see WBL as a component of a broader learning programme that also includes theoretical lessons and classroom learning.

WBL is found at all levels of VET—initial, post-secondary and third level—and in continuing vocational education and training (CVT). However, the actual proportion of learning that takes place in a real workplace can vary considerably, ranging from a high-intensity and high frequency of work-based activities (i.e. apprenticeships, in-company training) to a low-intensity and low frequency of work-based activities (i.e. internships, work-life familiarisation).

In all of these cases, research and the literature have identified the many tangible and intangible benefits that WBL can offer. Overall, the literature demonstrates huge actual and potential benefits while at the same time revealing the limitations of WBL and the obstacles that hinder its implementation and proper management.

The following review of the economic, social and learning benefits associated with WBL, is organised around the three actors that most benefit from this model: learners, employers, and society at large.

1. Benefits of WBL for learners

In principle, certain benefits apply to all participants while others more specifically affect a particular group, such as students, trainees, adults, employees, vulnerable young people, or the unemployed. The benefits discussed do not come about automatically but rather only arise when certain conditions are met (i.e. an effective learning environment in the workplace).

A key advantage of WBL for participants is that they develop expertise not only through the acquisition of technical skills and personal and social competences but also through socialisation in the workplace. The extent to which these competences are acquired differs significantly from one workplace to another and depends on the situations that learners are exposed to and the support they receive.

- *Hard skills, technical expertise and tacit knowledge.* WBL is a very effective modality for developing expertise and the kind of skills and competence that are highly relevant to a particular profession and a specific workplace. Because of the close relationship between learning and real-life work processes and the nature of the WBL process (learning by observing and doing), the development of technical skills and disciplinary knowledge goes hand in hand with the acquisition of tacit knowledge (know-how or procedural knowledge) in any job, whether academic or non-academic.
- *Soft skills, other competences and behaviours.* WBL is an excellent way to acquire a broad range of soft skills, competences and behaviours. Many of these are difficult to develop outside of a real workplace, for example, attitudes towards work, including taking responsibility, meeting deadlines, and knowing how to act in a given situation. Key competences (communication, teamwork and customer relations skills) and general competences (project planning and problem-solving skills) are becoming increasingly more important in today's labour market. WBL provides a great opportunity to develop these skills through formal and informal interaction with colleagues, management and customers, and by resolving real-life challenges that occur every day at work. However, there is less consensus on the effectiveness of WBL in developing more academic knowledge and cognitive skills, such as problem solving. Achieving good results in these areas depends largely on the specific conditions of each situation.
- *Socialisation and motivation.* A growing body of research shows that, besides facilitating the acquisition of technical and job- or profession-specific skills, WBL is also effective in providing conditions for socialisation in a workplace environment. WBL helps individuals to gain a better understanding of the workplace culture and its expectations and to acquire good work habits. The effects of WBL on self-confidence, self-efficacy and learner motivation have been well documented. It has also been shown to develop career awareness and career management skills.

Apart from the benefits it clearly offers to all participants, WBL also has specific advantages for young people, particularly when we compare work-based and school-based learning contexts in terms of wages and school-to-work transition outcomes.

- *Smoother school-to-work transitions.* Preparing young people and students for the world of work through real work experience improves their employability. It can be a double asset in the transition from school to work and in competition for a job: on the one hand learners obtain certain skills and competences more effectively through WBL, and on the other they already have one foot in the labour market since employers tend to recruit the best candidates. Apprenticeships in particular are associated with very positive early employment outcomes in both developed and developing countries. In Australia, Germany, Netherlands, Belgium and France, for example, a high percentage of apprentices and trainees find employment immediately after they complete their training: many remain in the company where they trained and others quickly find jobs elsewhere. While the data for ETF partner countries—Morocco, Egypt and Albania, for example—show somewhat lower percentages and sectoral variations, the positive results in those countries are still significant.

- WBL also *fosters entrepreneurship*. Data from the UK show that former apprentices between the ages of 25 and 27 are almost three times more likely to set up their own businesses than their peers who followed other education paths.
- *Impact on wages*. Several studies have identified a positive impact on wages related to apprenticeships in certain contexts. The extent to which wage returns are higher depends on the prestige of the apprenticeship system, its competitiveness, the level of the qualification obtained and such factors as company size and gender. Returns may also decline over time. In some developing countries, the addition of formal or informal training to an apprenticeship has been shown to result in higher wages.

The benefits of WBL for employees are widely recognised in the literature, and adults appear to learn much more effectively through workplace activities than through any other form of training. Studies have shown that employees regard their workplace as the most important venue for learning and believe that practice is the best way to learn. Research has shown that involvement in WBL improves employees' quality of work, professional status, career development, and job satisfaction. Mechanisms that formally recognise workplace learning are important because they facilitate skills portability and worker mobility.

WBL can be an attractive study path and also generate benefits for vulnerable young people and the unemployed. Many reintegration/re-training programmes already use WBL to offer participants from these target groups a route back into formal education or to facilitate their transition to employment.

2. Benefits of WBL for employers

WBL has the potential to offer employers a variety of benefits. These range from financial benefits (i.e. increased productivity) to soft benefits (i.e. increased staff morale), and from immediate benefits (i.e. acquisition of skills needed in the workplace) to medium-term (i.e. lower staff turnover) and long-term benefits (i.e. enhanced profitability and improved business performance). However, many employers are unaware of the potential benefits for their business of providing WBL, and the incidence of WBL also varies by sector and company size. If more employers are to be persuaded to engage in WBL they not only need to be made aware of the benefits of doing so but also convinced.

The following are some of the key business arguments for engaging in WBL that have been highlighted by academic research and employers surveys.

- *Higher productivity*. Most European studies have found that WBL has a significant impact on productivity, although the estimated return on investment varies considerably. In some studies, employers who hired former WBL participants reported that those employees required less training, did better work and had more and broader skills than other new recruits.
- *Recruitment impact*. WBL affords employers insight into whether the participants have the characteristics needed for the job. It also gives them the opportunity to recruit the most talented people, thereby reducing the cost of external recruitment and internal induction. The opportunity to get to know future employees can be an important motivating factor for employers who engage in WBL programmes, even the less intensive forms, such as internships and work-familiarisation schemes.
- *Enhanced corporate image*. According to surveys, employers in some countries believe that participation in WBL enhances the company's reputation, while in others this does not appear to be the case.
- *Staff retention and work satisfaction*. Research indicates that employees who have trained with a company are more likely to stay with that employer because they feel a sense of loyalty or commitment and see better opportunities there for personal and professional development. Companies know that offering learning opportunities is also a way to retain staff.
- *Opportunity to address skills gaps*. Skills shortages and gaps have a range of negative consequences. Companies may lose valuable business or be forced to turn business away, and shortages can also delay the development of new products and services or lead to increased operating costs. WBL can be used as an effective strategy to address the problem of inadequate skills supply and to ensure the availability of skilled workers by investing in the future workforce.

However, WBL also involves costs for companies. These include any wage or allowance paid to trainees as well as costs associated with supervision and mentoring, tools and materials, administration, and other expenses. The key question is whether the benefits outweigh the cost.

- *Benefits vs. costs*. Studies in a number of countries with well-developed WBL programmes have shown that productive returns from apprenticeships outweigh training costs, although net costs are initially higher due to the lower productivity of apprentices in the initial stages of their training. In most cases, apprenticeship is even profitable because companies eventually reap net benefits. The cost-benefit ratio is dependent on several factors, including the share of general and company-specific training, length of training, and the size of the company and sector.

3. Benefits of WBL for society

The impact of WBL even goes beyond the immediate effects on individual learners, employees and employers. The following are a few examples of the benefits for society.

- *Increased employability.* WBL produces a broad range of relevant skills and fosters employability. Studies comparing the performance of WBL and school-based learning indicate that WBL more effectively prepares learners for the labour market and fosters the acquisition of soft and employability skills.
- *Youth employment.* National studies and cross-country comparisons show that countries with strong apprenticeship systems have better youth employment patterns and lower youth unemployment rates.
- *Inclusion in society.* WBL can offer intrinsic benefits in terms of inclusion. It can lay down an important foundation for social integration and participation, particularly for vulnerable groups. It also helps to keep dropout rates low.
- *Economic return.* WBL makes sound economic sense because the costs of achieving learning outcomes are transferred from publicly funded educational institutions to enterprises, thus reducing public expenditure and freeing up funds for other priorities. The results of studies that have compared the lifetime benefits of completing an apprenticeship in terms of employment and wages with the cost of the programmes point to significant surpluses of benefits over costs. Another economic rationale for WBL is the relationship between the technological upgrading of an economy, its potential for innovation and creativity, and the learning needed to foster both.

4. Obstacles to WBL

In general, WBL is more complicated to organise than school-based learning owing to the involvement of a number of actors and, in particular, to the significant roles of the private sector and employer representatives. It is also subject to the regulations governing not only education and training but also employment (i.e. labour law, health and safety). Obstacles to policies supporting WBL often stem from the complex interplay between the state and employers and from the specific nature of this type of learning, often less visible and measurable than formal learning acquired outside of the workplace.

- *Obstacles to optimal public policy support.* As WBL is a very broad concept comprising many different forms and levels, policy makers may find it difficult to decide what types of WBL to support and what form this support should take. They may have concerns about accountability, the deadweight effect associated with the provision of public funds to employers (in particular for CVT), and the effects of candidate creaming. Furthermore, they have to deal with the challenge of how to channel the support to disadvantaged target groups and decide whether to support company-specific skills or only generic and transferable skills.
- *Obstacles to the recognition of WBL.* Two key issues are whether non-formal and informal learning leads to nationally recognised qualifications and whether these certificates have real currency in the labour market and are recognised by other companies. In some cases, qualifications have poor currency due to a lack of confidence in the process.
- *Poaching.* A typical risk in WBL is that some firms will invest in training whilst others spend their money recruiting the trained workers. If competitors do not train but rather invest in higher wages to attract the trained workforce, the firms involved in training lose the full benefit of their investment. Poaching is a very common practice in emerging economies, where there are skills shortages and the mobility of the professionals in demand is very high.
- *Lack of a legal structure and paucity of data.* The lack of a regulatory framework for WBL (i.e. legislation determining the status or insurance of trainees) is often seen as an important barrier to its expansion. Other obstacles to its implementation include the paucity of relevant data and the challenge of measuring learning outcomes, a more difficult task in WBL than in other settings.
- *Obstacles related to ensuring the quality of WBL.* Some authors argue that the apprenticeship model—and WBL in general—is overly romanticised and that its weaknesses in terms of learning quality tend to be underestimated. If workplaces and work practices are not learning-conducive and the potential for learning is low, WBL will obviously be less effective than other modalities, or even ineffective. However, the literature indicates that the outcomes obtained are influenced by diverse factors relating to the learning context and process; the most important of these are the nature and organisation of the work in the company, how the work is structured and allocated to novices, the support and constructive feedback trainees receive from co-workers and mentors, the perception of a job as meaningful, and the complexity of the job. The employer's support for WBL and their commitment to the project also has a direct impact on quality because of the staff time that must be dedicated to planning, learner placement, assessment, workplace supervision and training. The availability of good trainers and mentors is crucial to the overall quality and success of WBL, and finding the right people is particularly difficult in the case of micro- or very small enterprises. Finally, quality will always depend on the use of appropriate quality control mechanisms (i.e. learning plans, counselling support, documentation and assessment of work-site learning activities), and implementing such mechanisms is not always easy.
- *Availability of WBL opportunities and coordination with employers.* The limited availability of places for apprenticeships, internships and other forms of WBL is a key problem. Availability may even change over time as the

provision of places is sensitive to economic cycles, and employers will not always be interested in investing time and resources in WBL. A low level of involvement on the part of social partners and stakeholders and weak links between schools and employers are key challenges to the implementation of a robust WBL system. The literature shows that a strong WBL culture requires the presence of powerful employer and business organisations, the involvement of trade unions, and the familiarity of all parties with the WBL system. The current challenge facing informal WBL arrangements (i.e. informal apprenticeships) is the need to formalise and upgrade their systems.

- *Negative perceptions.* WBL is often seen by parents and learners as a second-best educational alternative, and the same perception has also negatively influenced policy making. Some employers view WBL not so much as an investment in future skills but rather as a way to sustain low-cost production. Another barrier related to the perception of WBL is a lack of familiarity with the different forms of work-based training. Research has shown that it is essential to market the value of WBL.
- *Working conditions and the tendency to reproduce work distribution patterns.* One of the major criticisms levelled against WBL is that it tends to reproduce existing patterns of employment segregation by gender, social class or ethnicity. The status of apprentices and trainees and their working conditions are also important issues. In countries or situations where WBL positions are not regulated by law or where enforcement mechanisms are weak or lacking, learners may end up working long hours for low wages and enjoy little or no social protection.

In summary, it would appear that the benefits of WBL far outweigh the disadvantages. As recognised by the latest Communications on VET, a properly functioning VET system including both on-the-job and off-the-job learning can make a strong contribution to a country's economic development and social cohesion (European Commission, 2012; 2010). These policy documents also recall that EU countries have committed themselves to maximising WBL and therefore recommend that the use of different forms of WBL be strengthened in order to 'maximise the relevance of VET provision to labour market needs'.

1. INTRODUCTION

1.1 BACKGROUND

There are still many people who regard schools, VET institutes, universities and even kindergartens as important places of learning, but do not view workplaces in the same light. This is the case despite the long history of work-based learning (WBL) stretching back to the Middle Ages, when craft guilds and similar societies set up highly regulated apprenticeship schemes to train novices to become masters in their chosen field.

In fact, the workplace has the potential to provide an excellent learning environment: while it may be true that a school setting is the best place of learn theory, exposure to the workplace is often necessary to 'bring that theory to life' (Field et al., 2009). Moreover, the workplace offers learners the opportunity to develop competence in transversal skills and to acquire vocational and technical skills and expertise. Knowledge and skills are not only acquired through study; they can also be gained through kinaesthetic learning in the context of work and similar settings. Learning in the workplace is to a great extent directly related to the nature of the tasks the learner is required to carry out (professional activities, dealing with problems, coping with new situations, handling social interaction with colleagues and customers). The extent to which learners acquire the necessary competences varies greatly from one workplace to another and depends on the situations they are exposed to and the support they receive.

Today, WBL opportunities are available practically everywhere in the world, although in many countries they are limited to ad-hoc initiatives, informal arrangements (such as informal apprenticeships) and in-company employee training. Many countries do, nevertheless, seek to expand and improve—or at least maintain—existing provisions because they recognise that workplaces, whether offices, factories, shops or building sites, have increasingly become important as venues for learning. Lifelong learning has become a necessity, whether we like it or not, because of new technologies and ways of working, and also due to changing policies and regulations. Constant shifts in customer needs, demands and global markets also drive the demand for continuous training.

Obviously, initial VET (IVET) policies and systems are challenged by these developments. The OECD (2010) clearly recommends that substantial use should be made of workplace training in IVET and specifies that such training must be of good quality and should encourage the participation of both employers and students. The World Bank calls for 'skills, not just diplomas' (Sondergaard et al., 2012) and the European Commission (2010a) suggests that the 'use of different forms of WBL should be strengthened' in order to 'maximise the relevance of VET provision to labour market needs'. This communication goes on to emphasise the role WBL can play in IVET in the drive to reduce dropout rates, improve educational equity and promote the upward social mobility of groups at risk.

1.2 PURPOSE OF THE LITERATURE REVIEW

The aim of this report is to review the evidence relating to the benefits obtained from investment in WBL worldwide. It will also discuss the issues that may reduce or hinder the impact of WBL and which also need to be taken into consideration in the design of new systems and the improvement of existing WBL schemes. The topic is reviewed from three perspectives: that of the individual, the employer and society.

This review has been prepared by ICF GHK within the framework of an ETF Innovation and Learning Project 'Learning context matters' (2011-13). The overall goal of the project is to raise awareness of the importance of WBL and develop methodologies to help VET policy makers and social partners in partner countries achieve a better synergy and a good mix between school-based learning and WBL in their VET reforms. It is conceived of as a tool that can help stakeholders to improve their knowledge and gain a better understanding of the benefits of WBL in VET and the problems that may have to be addressed. It is addressed to policy makers and social partners in VET, as well as the business sector, teachers and trainers, and other stakeholders.

While this report discusses all three levels of VET (initial, continuing and tertiary/post-secondary VET), most of the evidence refers to IVET or CVET and encompasses a broad definition of the different forms of WBL, ranging from apprenticeships and in-company training of employees to company simulations and other working-life familiarisation measures.

However, empirical evidence relating to many forms of WBL is scarce, especially data on simulations and WBL in the context of school workshops compared to the performance of school-based and work-based VET courses. Consequently, this review focuses primarily on the forms of WBL that involve periods of learning in a workplace of varying duration.

The evidence used to compile this review comes from employee, trainee and employer surveys, longitudinal studies of WBL participants, literature reviews, evaluation reports of WBL programmes and policies, self-evaluation tools, and cost-benefit analyses.

1.3 STRUCTURE OF THE REPORT

We begin with a discussion of the different definitions of WBL to familiarise readers with the concepts and terms used in the report (chapter 2). This is followed in chapters 3, 4 and 5 by a discussion of the potential benefits that individuals, employers and society can obtain from greater investment and participation in high quality WBL. Chapter 6 moves on to consider the conditions that need to be met in order to achieve the benefits described in the preceding chapters and also examines the obstacles to further development and expansion of WBL.

2. BACKGROUND TO WORK-BASED LEARNING

2.1 WHAT IS WBL?

Many employers feel that young people leave the education system lacking the practical skills they need for the labour market (Clark and Whitelegg, 1998). Once in employment, people need to continue learning in order to keep up with the changing nature of their jobs. Thus learning is no longer considered a preparatory stage prior to employment, but is increasingly seen as a constituent part of working life (Nijhof and Nieuwenhuis, 2008). These considerations, together with other factors, have led to greater recognition in academic debate of the importance of the learning processes that take place in the workplace. Conventional theories of learning and human capital have been increasingly challenged by the development of 'situated approaches to learning' (Brown et al., 1989; Lave and Wenger, 1990). In simple terms, situated learning is learning that takes place in the same context in which it is applied. Lave and Brown argue that most classroom-based learning involves the acquisition of abstract knowledge out of context, while learning needs to be 'embedded within activity, context and culture'.

Indeed, the traditional view of *learning as acquisition*—a view that still predominates in many education and training systems and many formal learning contexts—is based on the assumption that knowledge exists independently of the learner but can be transmitted to the learner. By contrast, the *learning as participation* approach (to which WBL is related) considers that learning is social, composed of a variety of components, and comes from experiencing and participating in daily life, which includes the relations, content and context of work (Sfard, 1998, quoted in Vaughan et al., 2011)¹. Indeed, social interaction is a critical component of situated learning because learners become involved in a community-of-practice that embodies certain beliefs and behaviours to be acquired (Kearsley, 2011 based on Lave, 1990; Wenger, 1998; Wenger, 2006).

There is no single definition of what WBL entails beyond the notion that it implies two characteristics: learning in a work context and learning through practice. A distinction is typically made, however, between *learning for work* (e.g. during a work placement as part of an IVET curricula) and *learning at work* (e.g. in-house company training) (Gray, 2001, quoted in Nixon et al., 2006). Seufert (2000) further points out that WBL 'differs from conventional training in that it involves deep and conscious reflection on actual experience at the work place'. In addition to the acquisition of specific skills and competences, the learner's ability to developing meta-competence and learning-to-learn skills is becoming even more critical than learning specific tasks. This view is confirmed by Guile and Griffiths (2001), who state that parallel to the learners' vertical development (building the intellectual capacity to complete a VET programme), WBL also supports their horizontal development (building the capacity to integrate into different environments, including the world of work).

A distinction has also been made between narrow and broad interpretations of WBL: the first refers to learning in the workplace driven strictly by employer needs; the second, broader definition denotes work-related learning driven by individual and societal needs (Nixon et al., 2006).

However, the results of research also reveal a growing need for a critical evaluation of the learning potential of the workplace. It is generally recognised that workplace learning has limitations, especially in terms of transferability and innovation. These limitations are not inherent in the concept of WBL; they depend rather on the nature of a given workplace and its learning potential. A workplace is first and foremost a production environment and—even though today in most firms production increasingly requires learning—the extent to which a given workplace can produce changes in behaviour and favour the acquisition of knowledge varies depending on such factors as the support offered by peers and managers, the learning opportunities, and accessibility of information (Nijhof and Nieuwenhuis, 2008). Therefore, the quality of WBL and the opportunities it offers will depend on working processes and how the work is organised.

2.2 TERMINOLOGY

The term WBL cannot be clearly distinguished from other terms used to refer to practice-based learning in a work context; several close (and interchangeable) synonyms are found in the literature, including employment-based learning, on-the-job training, enterprise-based learning and, in some contexts, workplace learning.

¹ The learning as participation approach encompasses several dimensions: learning as belonging (community); learning as doing (practice); learning as becoming (identity); and learning as experience (meaning) (Wenger, 2008, quoted in Vaughan et al., 2011). Workplace learning can be related to several of these dimensions.

The boundaries between these different forms of learning are often blurred and the level of regulation and the extent to which they include a theoretical component varies. For example, the term workplace learning tends to embrace all types of learning related to the needs of the workplace, even learning that occurs away from the work process (including formal on-the-job training and off-the-job education and training), whereas the use of the term work-based learning (WBL) tends to be restricted more to learning through work. The term WBL suggests a greater focus on the actual work-process rather than on the learning venue, whereas the term workplace learning appears to focus more on the venue than on the process. However, even the term WBL is not always defined consistently in the literature. According to the strict definition, WBL is clearly distinct from classroom learning and does not encompass the latter. In the broader definitions, WBL also refers to combinations of classroom-based learning and learning in the workplace, or is seen as one component of a wider learning programme.

BOX 2.1 EXAMPLES OF NARROW AND BROAD DEFINITIONS OF WBL

'WBL refers to learning that occurs through undertaking real work, through the production of real goods and services, whether this work is paid or unpaid. It needs to be clearly distinguished from learning that takes place in enterprise-based training workshops and training classrooms. The latter is not work-based learning, but simply classroom-based learning that takes place in an enterprise rather than in an educational institution.' (Sweet, 2011)

'Acquisition of knowledge and skills through carrying out—and reflecting on—tasks in a vocational context, either at the workplace (such as alternance training) or in a vocational education and training (VET) institution.' (Cedefop, 2011c)

'Programmes for both secondary and post-secondary students that provide opportunities to achieve employment-related competencies in the workplace. Work-based learning is often undertaken in conjunction with classroom or related learning, and may take the form of work placements, work experience, workplace mentoring, instruction in general workplace competencies and broad instruction in all aspects of industry.' (Naidu, 2011)

'A component of a learning programme that focuses on the application of theory in an authentic, work-based context. It addresses specific competences identified for the acquisition of a qualification, which relate to the development of skills that will make the learner employable and will assist in developing his/her personal skills. Employer and professional bodies are involved in the assessment of experiential learning, together with academic staff.' (Harvey, 2004)

A definition of WBL restricted to authentic working situations, involving real workplace relationships and clearly distinct from classroom-based learning may be analytically sharper, but it could also be seen as narrow and likely to make WBL less attractive. A broader definition may better reflect the reality since WBL models targeting young people in IVET usually include some classroom instruction. However, the risk of a less restrictive definition is that it may distort the fundamental concept and render the distinction meaningless since it could then be argued that classroom learning is also encompassed by WBL.

WBL is usually described in the literature as a set of practices that differ from the more widely understood concept of purely school-based learning. The actual proportion of learning in an authentic workplace environment may vary. According to Sweet (2011), borderline cases exist, for example the simulated work environments (e.g. training firms) that are an integral part of vocational education for commercial and business occupations in vocational schools and colleges in Austria and some other countries. These forms of learning fall between WBL and school-based learning as they do not necessarily take place in a real working environment. The importance of such virtual learning environments, which also include simulations of real workplace environments, appears to be on the rise and is challenging classical definitions of WBL².

Other organisations already include forms of practical vocational training that take place in the school context (e.g. in workshops or through simulations, school-based mini-companies or virtual companies) in the broader definition of WBL (i.e. Cedefop, and the ILO definition of 'enterprise-based learning'). This is also the approach we have chosen for the purposes of this literature review.

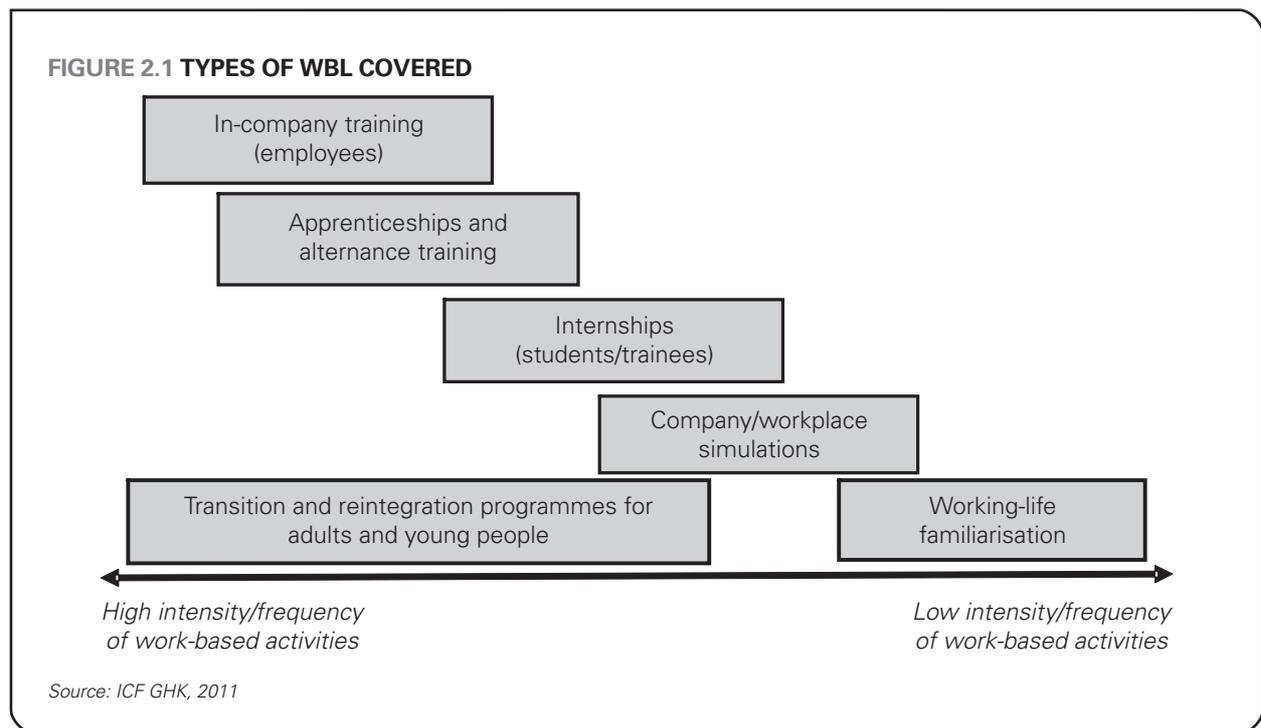
2.3 MAIN FORMS OF WBL COVERED BY THIS REVIEW

The previous section touched upon the fact that WBL programmes come in many forms and sizes. WBL includes a number of different activities that can be situated along a continuum from shorter-term introductory types of experiences in a workplace to longer-term, more intensive placements, including internships, apprenticeships and

² The first construction management simulation training centre for professional occupations, such as project manager, was recently opened in Britain at Coventry University (Abdel-Wahab, 2012).

in-company employee training. Applied learning that takes place through school-based or student-led enterprises, workplace simulations, workshops and even project-based learning in the classroom can also be labelled as WBL. WBL programmes may be designed exclusively for students at different levels of education or for employees. They may be company-specific, school-wide, local, regional or national, or they may include a combination of local and national implementation and oversight (Yasso, 2000).

The present review covers all the main forms of WBL, including apprenticeships, alternance training, work placements, internships, in-company training for employees as well as WBL-focussed reintegration and re-training programmes for the unemployed and for disengaged youth (see **Figure 2.1**). Hence WBL, as covered by this review is not restricted to a specific student or employment status nor is it restricted to a specific share of time spent by learners in a school or an enterprise, although the focus is on models involving more significant periods of learning in the workplace.



2.4 LIMITATIONS

There is a body of evidence on the benefits of WBL. This must however be interpreted with caution given that many of the studies referred to in this review are focussed on either apprenticeships or in-company training (of employees) and they are not always comprehensive. Furthermore, comparisons are hindered by the heterogeneity of VET/WBL systems (Cedefop, 2011) and the diversity of the groups targeted and the methodologies used in each case.

When evaluating the benefits generated by WBL, it is worth noting that they typically extend far beyond what can be quantified in monetary terms (Berger and Pilz, 2009). Furthermore, employment analyses rarely take into account the considerable selection bias (Ryan, 2001); for instance the wages of former apprentices may be explained in part by the socioeconomic characteristics of this group rather than by the net effect of their work-based training. In Germany, for example, apprenticeships are a popular and highly regarded form of training, attracting large numbers of applicants. Consequently, employers are able to choose the most skilled and motivated learners. In many other countries, including most ETF partner countries, WBL does not enjoy the same high status and consequently tends to attract a larger proportion of lower-achieving students, often those who have already dropped out of education. Moreover, the labour market outcomes related to different study routes are not directly comparable due to differences in student populations (Hoeckel, 2008) and the fact that different programmes involve different ratios of on-the-job training vs. classroom-based instruction.

Another obstacle to the formulation of overarching conclusions is that a comprehensive overview of the benefits associated with WBL requires a number of different disciplines and research methods from the fields of economics, employment, sociology, psychology and education. Thus, while this literature review seeks to highlight evidence from a wide range of countries, this report is only able to provide a snapshot of the key issues in play, relying on primary (and secondary) research carried out by others.

3. POTENTIAL BENEFITS OF WORK-BASED LEARNING FOR PARTICIPANTS

The rationale for promoting WBL is that it offers many advantages over school-based or classroom-based learning, especially in developing professional competence. These advantages are not, however, automatic, occurring only when certain conditions are met (not all workplaces are effective learning environments). The prerequisites for successful outcomes are discussed in greater detail in chapter 6, which deals with the obstacles to the implementation of WBL. Before discussing the advantages for employers and society as a whole (chapters 4 and 5), in this chapter we discuss the benefits to the individuals who participate in (good quality) WBL.

WBL has the potential to offer many advantages; these may be experienced differently by different participants depending on whether they are students/trainees, employees or individual currently not in the labour market, such as the unemployed. Benefits may be tangible (a new qualification, promotion or salary increase) or intangible (improved self-esteem, greater career awareness). The aim of this chapter is to explore the potential individual benefits of WBL, starting with the potential benefits for all participants (regardless of their background) and going on to examine benefits related to specific target groups.

The reader should bear in mind the evolving context of school-based education and the fact that the difference between school education and WBL is no longer black and white; in fact, a significant amount of work is being undertaken to move away from the traditional *chalk and talk* model of education towards a more participatory model. Various programmes at primary, secondary and tertiary levels give students in (mainly) school-based programmes the opportunity to familiarise themselves with the world of work and take part in practical, project-based learning activities that closely resemble real-life situations.

3.1 ALL PARTICIPANTS

Developing expertise and craftsmanship

One of the key strengths of WBL is that it is a very effective way to develop expertise and the kind of skills and competence that are highly relevant to a given profession and, even more so, to a specific workplace³. This is demonstrated by the long history of this model, which stretches back to the Middle Ages, when it was the main form of training for craftsmen. The advantages for developing technical skills and acquiring disciplinary knowledge have also been demonstrated by a number of studies, including Billett (2001), Darche (2009), Fuller and Unwin (2008), and Field et al. (2009). The skills generated through WBL are enhanced by the greater proximity of learning to production compared to school-based VET programmes because the learners are exposed to both the production methods and the work requirements of actual—and normally economically viable—workplaces' (Ryan, 2011, pp. 2-3). The nature of the WBL process (learning by observing and doing) supports the development of tacit knowledge (know-how and procedural knowledge) for any job—whether academic or non-academic (see for example Raelin, 1997)—but not only tacit knowledge, as will be shown below.

Indeed, Brennan (2009) has stressed that there is a growing expectation that workers will require a higher level of technical skills to work with the advanced technology that is a feature of the modern workplace. Owing to the pace of technological change, increasing specialisation, and the use of outsourcing, it is argued that the training of (certain) higher level technical skills can be more effectively done in the workplace itself, rather than in the classroom.

The growing body of research on learning theory (see, for example, Poortman, Illeris and Nieuwenhuis, 2011) shows that apart from its effectiveness in the content dimension of learning, that is, the acquisition of technical job-specific or profession-specific skills—sometimes referred to as vocational competences—WBL is also an effective model for providing the necessary conditions for the other two dimensions, namely:

- socialisation in a workplace environment through interaction in the workplace (interaction dimensions of WBL);
- motivation (emotional dimension of learning)—a very important aspect of the learning process that is often neglected and by no means a given.

³ The fact WBL can be highly company specific (although not always the case) also lies at the core of many of the obstacles related to the WBL model, which are discussed later in the paper.

With regard to the last point, it is also interesting to note that WBL has the potential to motivate learners to remain in education and complete their studies. This claim is supported by evidence from research on US school-to-work programmes summarised in Hughes et al. (2001). This aspect is also further discussed below.

Developing other knowledge, skills and competences

Technical skills alone are no longer considered enough in today's labour market. Personal and social competences (communication, teamwork and customer relations skills), general competences (project planning and problem-solving skills) and qualities such as being enterprising, highly motivated and prepared to take risks (Brennan, 2009) are more important today than ever before. WBL learners have an opportunity to develop such skills through their involvement in actual production, their informal and formal interaction with colleagues, management and customers, and through resolving the real-life challenges they encounter every day at work. Thus, work experience can also help young people to develop self-evaluation skills and build the confidence they need to reflect on and learn from experience.

People typically become aware of the need to develop soft skills and competences when they use them in practice, and such skills are hard to develop away from the concrete demands of a real workplace (Darche et al., 2005; Darche et al., 2009; Fuller and Unwin, 2008; Lasonen, 2005; Oberth et al., 2006; Field et al., 2009). They can also benefit employees outside of their working life, although the return on investment may not be as immediate or explicit as the return on vocational or job-specific skills. Transversal skills are, however, especially important in the context of lifelong learning since people do not remain in one job tend to but change employers and occupations several times over the course of their working careers (Smits, 2008).

Thus, WBL can be an opportunity for the learner to acquire a broad range of competences and behaviours but, as shown by Stasz and Kaganoff (1997) (and also others), the extent to which these competences can be acquired varies considerably from one workplace to another depending on the situations learners are exposed to and the support they receive. WBL can develop expected work behaviours, such as taking responsibility, meeting deadlines, and knowing how to act in a given situation. It helps learners to develop career management skills (see below). However, the premise that WBL improves academic knowledge and cognitive abilities, such as problem solving, has been challenged (see, for example, Hughes et al., 1999) and appears to depend strongly on specific conditions. In these areas, WBL does not perform better (and in fact possibly performs worse) than school-based learning (see also Nijhof and Nieuwenhuis, 2008). For this reason, most WBL programmes for young people in IVET combine periods of on-the-job learning with classroom-based theoretical tuition.

Improving career management skills and career awareness

The term career management skills refers to a broader view of the learner's development: 'to the development of "meta-competences" that are not occupation-specific but are transferable, thus helping individuals to better manage their learning and work' (Cedefop, 2011f p. 31). Each individual has a unique set of career aspirations, skills, competences, strengths and weaknesses. Career management skills can help individuals to navigate through complex study paths and an increasingly complex and changeable labour market characterised by fewer and fewer jobs-for-life; a growing number of people have many careers throughout their working lives. In this context, becoming and remaining 'employable' requires determination, continuing learning and development, as well as a good knowledge and understanding of career choices.

A number of authors have concluded that WBL can make an important contribution to enhancing the learner's career progression and can help develop career management skills (Brennan, 2009; Cedefop, 2010; Darche et al., 2009; European Commission, 2010; Field et al., 2009). For example, WBL helps individuals to gain a better understanding of workplace culture and expectations (Darche et al., 2009) and to develop good work habits (Luecking and Gramlich, 2003) because it gives them the opportunity to carry out real production-related assignments and to interact with peers and customers.

For example, the majority of apprentices surveyed in a **German** study said that their apprenticeship helped to them to mature and to develop their career choices (Pilz, 2008). In a **US** study of an initiative supporting virtual firms for students, 79% of respondents reported that their participation in a virtual firm helped them to develop realistic expectations of employment and the workplace (Hughes and Golann, 2007). Overall, company simulations have been found to have the potential to help young people take responsibility for their own careers and personal development as they gain experience of doing things by themselves under the guidance of teachers and professionals rather than being told to do certain tasks and assignments (Cedefop, 2011f).

Evidence also shows that WBL programmes tend to achieve better results than student jobs in developing young people's career skills. Reasons for the better outcomes include the fact that students in WBL programmes work with a mentor or trainer and also because they have access to workplaces and activities they would be unable to access in

direct employment. A **US** review of research on school-to-work programmes (including WBL) reveals that students who take part in WBL are better prepared for choosing their future career directions and are also likely to perceive of working as a way to learn new things (Hughes et al., 2001).

Improved self-confidence and motivation

WBL has the potential to develop the learner's self-esteem and self-efficacy when trainees are given the opportunity to demonstrate their capabilities and to accomplish tasks and resolve problems in a work context (Darche et al., 2009; European Commission, 2010; Fuller and Unwin, 2008; Luecking and Gramlich, 2003; National Research Council, 2004; Oberth et al., 2006). For example, many evaluations of in-company training programmes have concluded that such training improves the quality of learners' work as well as their self-confidence, attitudes, and self-esteem (for example, the evaluations of the Chances through Education programme in Austria, Noste in Finland, Train to Gain in the UK).

Furthermore, as noted above, evaluations of workplace and company simulations implemented in secondary schools across Europe have shown that these activities stimulate enthusiasm and motivation among students, broadening their horizons and allowing them to develop skills and knowledge they might not otherwise have acquired. The reason for this is that some students learn better when learning is contextualised and they have the opportunity to carry out real practical tasks rather than studying abstract or theoretical tasks. This is particularly important for students who lack motivation in other, more traditional, subjects: 'participation in student companies has allowed such students to regain a sense of enthusiasm for learning and self-development' (Cedefop, 2011f).

Many WBL trainees/apprentices also report a higher level of satisfaction with their training than learners in school-based programmes (see **BOX 3.1**).

BOX 3.1 EXAMPLES OF RESEARCH EVIDENCE ON SATISFACTION OF WBL LEARNERS WITH THEIR TRAINING

In **Australia**, a study on completed traineeships found that the trainees viewed the system very positively, with 91% of trainees 'somewhat agreeing' or 'strongly agreeing' that the traineeship was valuable (Cully, 2000). A study that compared the views of trainees and apprentices (who had shorter and longer contracts, respectively) showed that apprentices were generally more satisfied than trainees and more likely to have participated in structured training (Cully and Curtain, 2001).

In **Germany**, as part of a case study on apprenticeships at Audi, questionnaires were used to determine apprentices' degree of learning motivation (Seifried and Sembill, 2005, quoted in Berger and Pilz, 2009). The findings showed that apprentices rated the practical atmosphere of the workplace considerably more positively than the training centre environment because they tended to have more opportunities to contribute actively in the workplace, to work autonomously and feel socially integrated. The study concluded that the degree of responsibility enjoyed by apprentices at work is also an important condition for the success of teaching and learning processes.

Furthermore, a survey conducted among German apprentices in commercial occupations indicated that apprentices feel integrated into the community at the workplace and revealed a high degree of self-efficacy and motivation to learn (Müller, 2009).

3.2 POTENTIAL BENEFITS FOR STUDENTS AND TRAINEES

In addition to the benefits of WBL described above, which apply to most or all beneficiaries whether adults or young people), there are some advantages of WBL specific to young people, especially when work-based and school-based learning contexts are compared in terms of the outcomes achieved relating to school-to-work transition and wages.

Smoother school-to-work transitions

To facilitate the transition from education to employment, young people need to develop workplace-relevant skills and competences and understand how the working world differs from the education and training environment. WBL and working-life familiarisation measures, such as work placements, internships and mentoring schemes, all help to prepare young people for the world of work. Real work experience provides students with an opportunity not only to develop work skills but also to gain an understanding of the workplace and the occupational implications of their educational choices (Cedefop, 2010; Yasso, 2000).

WBL programmes—apprenticeships in particular—are a recognised way to prepare young people for specific occupations, and therefore the ‘learning outcomes of such schemes... are favourable for the transition to the world of work’ (Wallenborn, 2011, p. 2). On one hand, this is because WBL is a particularly effective way to develop certain skills and competences (see above) but it is also due to the fact that employers seek characteristics that distinguish one candidate from another and consider prior work experience to be an asset. Furthermore, in many cases, WBL is seen as an opportunity to identify, train and subsequently recruit the best candidates.

Apprenticeships in particular are often related to positive early employment outcomes: a relatively large proportion of apprentices are taken on by the company where they have been trained (Bartlett, 2008; Quintini et al., 2007) (see **BOX 3.2**).

BOX 3.2 EXAMPLES OF RESEARCH EVIDENCE ON (POSITIVE) EARLY EMPLOYMENT OUTCOMES

An analysis of a student outcomes survey in 2003 showed that 89% of all apprentices and trainees in **Australia** were employed after completing their training (Bowman, 2005). In **Germany**, 50% of former apprentices are taken on as employees by the firm where they trained (Berger and Pilz, 2009) whilst in **Belgium** (Flanders), 75% of apprentices (in the lowest track of VET) are hired by their host company and half of them remain with the company for more than three years (De Rick, 2008). In the **Netherlands**, around 70% of apprentices are offered a job by their host company and around half of all apprentices are still with the firm one and half years after graduation (Smits and Stromback, 2001).

The results of a small-scale survey carried out in **Morocco** in 2001 of students in an alternance vocational training scheme reveal a very high completion rate (92%), while the percentage of trainees immediately hired by host enterprises varied from sector to sector (between 44% and 57% in the textile sector, 43% in the tourism sector, and 31% in the industrial sector) (Institut allemand de développement, 2001). The same study also reported that trainees who were not directly hired by hosting enterprises did not find it very difficult to find a job elsewhere.

In **Albania**, a dual system of education and training at tertiary level was introduced in 2008 by the Aleksander Moisiu Durres University. The university offers three bachelor degree courses based on 50% school-based learning and 50% WBL: bank management, small and medium-sized enterprise (SME) management, and tourism and hospitality management. The first 17 students have now graduated from the bank management course and all of them were employed immediately after graduation by the firms where they trained. Employers report being highly satisfied with these recruits because the graduates are already familiar with the company and the way it functions and can take on positions of responsibility without a settling-in period. The other two courses have not been as successful, mainly because appropriate employers have not committed to the programme due to their concern about poaching. The university is, therefore, planning new courses in sectors where there is a demand and employers have already indicated an interest.

The Mubarak-Kohl Initiative-Dual System in **Egypt** is based on a partnership between schools and employers aimed at improving students’ employment-related skills. Learners are expected to spend two days a week in a secondary technical school, mainly acquiring theoretical knowledge, and four days a week in a workplace developing practical skills and learning workplace behaviours. According to a survey conducted in 2002, 86% of host companies offered employment contracts to graduates. On completion of the programme, 30% of graduates took up employment, 40% continued to higher education, and 26% were searching for work (example summarised from Adams, 2010).

In the state of Wisconsin (**US**), nine out of ten Youth Apprenticeship graduates receive offers of part- or full-time employment from their employers on completion of the programme (Darche et al., 2004). In total, over 85% of apprentices who graduate are employed on leaving high school (Symonds et al., 2006).

In **France**, apprentices, males in particular, have a better chance of finding a job on first entry to the labour market than students from VET schools because host companies often hire apprentices. The effect is even stronger when the results are adjusted to take into account the selection bias associated with apprenticeships (Bonnal et al., 2002, quoted in Hoeckel, 2008).

Apprenticeships can also foster self-employment among young people. In the **UK**, for instance, evidence from the Labour Force Survey (LFS) shows that former apprentices between the ages of 25 and 27 are almost three times more likely to set up their own business compared to peers from other education paths: 18.3% of former apprentices set up businesses compared to only 6.3% of young people with other education backgrounds (Perez-del-Aguila et al. 2006).

While most of the examples cited above relate to apprenticeships, there is also evidence that programmes with less intensive WBL components also have a positive impact on career transition. For example, a survey of 281 former participants in Junior Achievement Worldwide entrepreneurial activities, such as business simulations, revealed that 18% of respondents owned their own business at the time the survey was carried out, compared to the national average of 9.6% of the US population (as recorded by the Global Entrepreneurship Monitor, 2006-07) (JA Worldwide, 2009). Moreover, the majority of respondents 'strongly agreed' or 'agreed' that their participation in JA activities had strengthened the following skills: teamwork (89%), problem-solving (87%), decision-making (88%), critical thinking (83%), budgeting (71%), interpersonal communication (84%), and job interviewing (55%) (Cedefop, 2011f).

Even if some of the employability benefits decline over time, there is evidence at the macro level of better employment prospects for participants. A discussion of the impact of WBL on youth employment rates can be found in section 5.2 of this report.

In some contexts, former apprentices enjoy wage returns

In addition to the positive correlation between apprenticeship and school-to-work transitions, several studies have identified positive impacts on wages (see **BOX 3.3**), although, these have not been observed by all researchers. The extent to which apprentices earn better wages than other comparable groups appears to vary depending on the prestige of the apprenticeship system relative to other pathways (whether it attracts low or high achievers and the perceptions of employers), its competitiveness (whether employers can choose from a pool of potential candidates), the level of the qualification earned. Other aspects that influence eventual wages include the size of the host company, the economic sector, and personal characteristics such as gender.

BOX 3.3 EXAMPLES OF WBL PROGRAMMES HAVING A POSITIVE IMPACT ON WAGES

In **Germany**, apprentices who stay with their training firms after completing their training tend to achieve higher wages than their peers (Bougheas and Georgellis, 2004; Euwals and Winkelmann, 2002, quoted in Hoeckel, 2008). Furthermore, a study on wage growth between 1984 and 1997 showed that, while former apprentices and non-apprentices had similar starting wages, former apprentices enjoyed faster wage growth than non-apprentices (Cooke, 2003).

In the **UK**, several studies—including an evaluation of the Modern Apprenticeships scheme—have identified substantial wage returns for apprenticeships. In 2004-05, wage returns for former apprentices were estimated at around 18% at Level 3 compared to individuals whose highest qualification was Level 2, and 16% at Level 2 compared to individuals whose highest qualification was Level 1 or 2 (McIntosh, 2007). Furthermore, individuals who obtained a middle or higher level vocational qualification through WBL received salary returns of between 5% and 10% from participation in WBL (Blundell et al., 1996, quoted in Glass et al., 2002, and also confirmed by Perez-del-Aguila et al., 2006). Outcomes were particularly positive when WBL was employer-led and resulted in a qualification.

A study on apprenticeships in **Tanzania** showed that in certain occupations (in this case those of car mechanic or electrician) employees trained through informal apprenticeships earn higher wages than skilled workers trained through other pathways. However, this is not the case in some other professions (tailoring or plumbing) where the wages of those trained through informal apprenticeships are lower. In general, the individuals who receive the highest wages are those who combined informal apprenticeships with other formal or non-formal training (Nübler, 2009).

A comparative study of enterprise-based training for non-college graduates in the **UK** and the **US** (based on representative samples of employees aged 23-25 years) showed that WBL—and apprenticeships in particular—generates pay increases for participants, particularly when they earn recognised vocational qualifications (Blanchflower and Lynch, 1994, quoted in Axmann, 2004).

Overall, however, these studies do note that salary increases can be partly explained by the fact that the non-apprentices may have spent longer in full-time education and therefore are at an earlier stage in their career. Furthermore, a proportion of this higher wage return may be due to a selection bias rather than the impact of the apprenticeship training itself (when the demand for apprenticeship places exceeds supply, employers can cherry pick the most able applicants).

Moreover, not all WBL participants obtain wage returns, and apprenticeships may even lead to lower pay than full-time vocational education (Ryan, 2001, quoted in Bartlett, 2008)⁴. In **Austria** for instance, the starting wages of high school graduates and former apprentices are similar, but the lifetime earnings of former apprentices are lower. On the other hand, Hofer and Lietz (2004) found that former apprentices earned 10%-12% more than unskilled workers and Steiner et al (2007) estimated the difference between the earning of former apprentices and workers without formal qualifications to be 12%-14%. However, the same studies show that the comparative advantage is even greater for other groups than for apprentices: the wages of low-qualified workers are 30% less than those of lower level VET schools graduates, 40%-45% less than upper secondary school graduates, and 65%-70% less than graduates of third-level education. The more modest returns for apprentices compared to other graduates can be partly explained by the fact that apprenticeship programmes in Austria tend to attract a larger share of lower-achieving students than school-based programmes.

Longitudinal studies in **France** and the **UK** have shown that the wage returns of apprenticeships vary according to the level of education, with higher level apprenticeships bringing the greatest return. Apprentices with at least an upper secondary level qualification earn a little more than other groups of workers but the differences at tertiary level are more pronounced: the average net salary of a former tertiary level apprentice is EUR 110 higher than that of a person trained to tertiary level in a school-based system (Arrighi and Brochier, 2009; Arrighi and Joseph, 2005).

At the same time, the salaries of former apprentices with qualifications below the upper secondary level are similar (or even lower in some occupations) to those of other groups of young workers. This is largely due to the characteristics of the jobs typically held by this group of former apprentices: they are often hired by SMEs and therefore have access to less diverse employment opportunities than young people trained in the school-based system. They are also overrepresented in certain occupations, such as industrial worker, personal service jobs, and the trades.

In the **UK**, the wage return for men who hold a qualification at Level 3 or above in addition to an apprenticeship is on average twice that of apprentices in general. However, for an apprenticeship to increase the earning power of low-qualified individuals, it must give them access to a qualification of at least Level 3 (McIntosh, 2004).

In several countries, women who complete apprenticeships do not obtain the same levels of wage returns. In the **UK**, an analysis of the LFS data for the period 1996-2002 shows that while an apprenticeship increases men's wages by around 5-7%, women obtained no wage return (McIntosh, 2007). Similarly, a study of individuals who completed an apprenticeship in **Germany** between 1984 and 2000 showed that former male apprentices earn more than their female peers (Bougheas and Georgellis, 2004).

In the **German** context, it has also been argued that some apprenticeship schemes lock women into low-wage careers with low job mobility, while men are selected by firms offering better training opportunities and higher wage growth (Fitzenberger and Kunze, 2005). Analysis of data on apprenticeship training recorded by the Federal Bureau of Labour between 1975 to 2001 shows that male and female apprentices are trained and work in quite different occupations. This leads to occupational segregation and a gender wage gap that widens with the length of job tenure; lock-in effects are seen to work even more strongly at the bottom of the wage distribution scale (Fitzenberger and Kunze, 2005).

In addition to gender differences in salary outcomes for apprentices, a range of other variables also influence wages, making it difficult to identify the net impact of apprenticeship training.

- *Company size.* There is a correlation between company size and wages: wage returns tend to increase with the size of the firm. In **Germany**, former apprentices hired by firms employing over 2000 workers earn 9% more than their peers who train in smaller companies and, even when they move to other firms, they continue to earn 6.4% more (Bougheas and Georgellis, 2004, confirmed by research carried out by Euwals and Winkelmann, 2004). Researchers have come to the same conclusion in **Austria** (Fersterer et al., 2008).
- *Duration of apprenticeship training.* Longer training tends to lead to higher wages (Euwals and Winkelmann, 2004).
- *Job mobility.* While there is mixed evidence about the impact of firm-to-firm mobility on the wages of former apprentices, remaining in the same occupation correlates with higher wages. Of the former apprentices who leave the training firm, those who stay in the occupation in which they were trained earn 8% more than those who change occupation (Bougheas and Georgellis, 2004).
- *Economic sector.* Important cross-sector variations have been identified in the **UK**. Analysis shows that wage returns are higher in manufacturing industries (especially food manufacture, machinery manufacture, construction, basic metal manufacture and fabricated metal manufacture) than in service industries. For example, an

⁴ However, the same literature review notes that many studies are unreliable as they often fail to take into account selection bias.

apprenticeship increases the average wage of an individual working in the construction sector by 32% (compared to a worker whose highest qualification is at Level 2). However, significant wage returns are also found in some service industries, including the recreation, culture and sport sector, the retail trade, and car sales (McIntosh, 2004; MacIntosh, 2007).

3.3 BENEFITS SPECIFIC TO EMPLOYEES

The benefits of WBL for employees are widely recognised in the economic literature, although the magnitude of some of these is still being debated (e.g. Cedefop, 2011d; 2011e). For many workers, the importance of WBL is growing because skill development is often a factor in maintaining employability in the long term (Brown et al., 2010). Brennan (2009) has noted that ‘workers are expected to be more flexible, to have a wide range of skills, and to be able to take on responsibilities previously undertaken by managers and supervisors’. At the same time, participation in WBL is unevenly and unequally distributed among different groups of workers. Low-skilled workers tend to have fewer opportunities to take part in WBL than their higher skilled colleagues (Brown et al., 2010; European Commission, 2009). In generic terms, however, studies show that participation in WBL can improve earnings, professional status and career development as well as job satisfaction. These effects are examined below.

WBL as an effective way to acquire expertise

Adults appear to learn much more effectively through workplace activities than through any other forms of training. Based on empirical evidence from interviews with managers, professionals and technicians, Eraut (2007a; 2007b) found that formal training provides only a small part of what is learned at work. Most of the learning that takes place within companies is informal; it is rarely planned or explicitly specified as learning. Workplace learning is to a great extent directly related to the nature of the tasks the employee or learner is required to carry out: solving problems, coping with change, and handling social interaction with colleagues. Even when people learn through formal learning, this is often accompanied by informal learning that makes the formal learning process more effective. The information acquired through formal learning becomes meaningful and useful for learners when they interact with the knowledge, and this happens in the context of informal learning. For Eraut (2007a), WBL is a crucial element in the process of professionalisation. This is confirmed by other authors such as Felstead et al. (2009).

Supporting this argument on professionalisation, a survey of **Irish** workers taking part in sector- or industry-specific training courses indicates that most of them feel—to a greater or lesser degree—that they are dealing with aspects of their jobs differently as a result of taking part in WBL. This is particularly clear in sectors where many workers have a low basic skills level. Many of these trainees have commented that they now feel that they can have a career in their chosen sector rather than simply a job (Exodea Europe, 2009). A survey in **Norway** found that employees regard their workplace as the most important venue for learning and believe that practice is the best way to learn (OECD, 2006b).

Improved quality of work and career progression

Opportunities to further develop and update their vocational skills can provide individuals an important chance to improve the quality of their work and enhance career progression. For example, most evaluations of in-company training programmes have concluded that learners benefit from training in terms of improved quality of work, self-confidence, attitude, and self-esteem. For instance, in an employee survey in the **UK** the main reasons respondents cited for taking part in WBL were the opportunity to improve their work (51%), to get motivated (52%) and to take on new tasks (59%) (Glass et al., 2002).

However, positive attitudes and motivation are not necessarily a direct result of undergoing WBL. Research also shows that they are a precondition for effective learning. Eraut and Hirsch (2007) identified a series of factors that influence whether people learn on the workplace: motivation, confidence, commitment, challenge (at the appropriate level), feedback, support, and trust.

While the expectation is that WBL will have a positive effect on learners’ careers, there is no evidence demonstrating the correlation between the amount of training and career advancement. Most surveys show that career progression is one of the aspirations people have when they are motivated and participate in WBL (in particular the formal or non-formal forms). For example, an **English** employee survey showed that employees expect WBL to have a positive effect on their employment situation: 37% believed that WBL would help them to gain promotion within the organisation while 54% thought that the training they were doing would help them get a better job with another employer (Glass et al., 2002). These findings were confirmed by the **European** Adult Education Survey, which shows that the primary reason for learning among adults is the desire to do their job better and improve their career prospects (European Commission, 2011).

Some evidence on the influence of training on career progression can be found in the results of the **Finnish Noste** programme based on vocationally-orientated workplace training⁵. An evaluation shows that participants in (work-based) training can earn the respect of management; in many cases employees achieved a higher standing in the company hierarchy (in the eyes of managers) even though they did not receive immediate promotion. Some Noste participants obtained permanent employment contracts after completing the WBL programme, with positive implications for their job security.

By contrast, research shows that a lack of engagement in learning increases the likelihood of a downward career drift (Brown et al., 2010).

Recognition of learning gained in the workplace

Individuals can gain a wide range of skills and competences from their work and professional experience (Souto Otero et al., 2007) and through training organised by their employers. Such learning benefits both the employee and the firm (see next chapter) by improving the quality of outputs and developing the employee's professional pathway in the company. However, if the employees are to benefit fully from this learning, especially when they change employer or occupation, more or less formal mechanisms are needed to recognise WBL. As will be discussed below, one obstacle to WBL is the potential difficulties it creates with respect to the portability of the knowledge and skills acquired because what a person has learned is often not visible or is only apparent to colleagues. Therefore, qualification mechanisms are needed to ensure that the learning gained in the work context (and associated learning outcomes) is recognised and validated at least by the employer and, ideally, by society as a whole.

Certification is perhaps the most formal mechanism of recognition. Indeed, certification of learning gained through experience in a workplace can motivate employees because it is something they can show to future employers as proof of their skills. It may also lead to a promotion or pay rise, or raise the self-esteem of workers who do not have a high level of education (Cedefop, 2011e). Recognising skills gained through work can also enhance employee participation in continuing training and even reduce the cost of such training (for example as a result of the exemptions that may be acquired).

BOW 3.4 EXAMPLES OF SYSTEMS FOR RECOGNISING WBL

In **Finland**, some 5% of competence-based qualifications (VET qualification system for adults) are obtained without the learner undertaking any type of formal instruction; instead, workers obtain these qualifications through validation of learning acquired through work experience and other non-formal means (Nevala, 2010). Many other adults obtain partial competence-based qualifications by validating the learning they have gained at work.

Joint Qualification Certificates (JQCs) are pivotal to vocational qualification in **France**. A JQC is a document issued by professionals certifying that the holder has mastered the set of skills required for a particular activity. JQCs reflect the qualification needs of the corresponding sector and are developed for specific activities for which there is no equivalent degree or professional title. They enjoy sector-wide recognition and are typically proposed by one or more sectoral unions. Their content is developed by joint technical groups composed of social partner representatives. The final decision to create a certificate is taken by the national joint employment committee of the sector, a body responsible for promoting vocational training to meet the needs of changing labour markets. The advantage of JQCs is the speed of the system. It takes three to six months to create a new JQC compared to three to five years to create a new degree with the Ministry of Education. The specifications for a newly created JQC include an updating process to ensure that certificates always reflect the current reality of the activity in the workplace (Cedefop, 2009a).

3.4 BENEFITS FOR VULNERABLE YOUNG PEOPLE AND THE UNEMPLOYED

WBL can be an attractive study path for the unemployed and young people at risk of disengagement (e.g. Darche et al., 2009; Nevala and Hawley, 2011; Oberth et al., 2006). It can offer them more flexibility and a more appropriate pedagogic approach than school-based learning: unemployed individuals who have experienced failure in classroom-based education often thrive in a more practically orientated programme (Nevala and Hawley, 2011). WBL is also more closely linked to the labour market aspirations of young people.

⁵ Noste was a mainstream national adult education programme implemented in Finland between 2003 and 2009. The aim of the initiative was to increase the qualification levels of low-qualified workers.

Indeed, many reintegration/re-training programmes for vulnerable young people and unemployed adults use WBL and such courses can offer a route back into formal education or facilitate the learner's transition to employment. **BOX 3.5** includes examples from Norway and Portugal.

BOX 3.5 EXAMPLES OF SUCCESSFUL WBL PROGRAMMES FOR VULNERABLE YOUNG PEOPLE

In **Norway**, a Practice Certificate—a two-year pilot work-based training programme—has been trialled among young people interested in practically-orientated learning who have problems following ordinary school-based VET programmes or lack the motivation to commit to the standard four-year course. The programme has been piloted since the 2007/08 academic year, and the initial results are promising: 41 out of 51 students completed the programme, seven left to take up other types of training, and only three dropped out. These results (though based on a small sample) contrast sharply with the dropout rates in mainstream IVET, where only 55% of the students who start graduate within five years. Dropout rates in the mainstream programme are 27% and the remaining 18% are still studying after five years or have completed their studies without passing all the exams (example from Hawley et al., 2012, forthcoming).

The Professional Traineeship Programme for Young Adults in **Portugal** is a consolidated programme focussed on the integration of highly qualified young people into the labour market by complementing their basic pre-existing qualifications with practical on-the-job experience in a company for a maximum period of 12 months. The traineeships allow young people to get their first experience of the labour market and, at the same time, help companies, particularly SMEs, to increase their awareness of new knowledge and competences. Over the last 12 years, over 170 000 young unemployed individuals aged under 30 years (who have completed a minimum of six years of formal education) have benefitted from the programme. The vast majority of the participants have managed to get jobs upon completing the traineeship (72.5%); of these, 76% took up jobs in the organisation that provided the traineeship (example summarised from Ramos, 2009).

4. THE BUSINESS CASE FOR WORK-BASED LEARNING: POTENTIAL BENEFITS FOR EMPLOYERS

WBL has the potential to generate a variety of benefits for employers. These range from financial benefits, such as increased productivity, to soft benefits like increased staff morale and from immediate benefits, such as the acquisition of required skills, to medium-term (for example, lower staff turnover and fewer absences) and long-term benefits (for example, enhanced profitability and improved business performance).

However, not all employers are aware of the potential benefits of providing WBL and the investment the employer has to make is not risk free. Unsurprisingly therefore, we see marked disparities between countries in the number of companies involved in the provision of WBL opportunities for students and in the incidence of organised WBL for employees. For instance, according to the third Eurostat Continuing Vocational Training Survey, only 31% of EU enterprises were engaged in the provision of IVET and only three out of five companies provided any type of CVT to their employees in 2005, with the share of employers engaged in WBL ranging from 90% of employers in the UK to just 21% in Greece. In most ETF partner countries, the rate is even lower. For example, only 7% of companies in Ukraine spend as much as 2% of their human resource costs on vocational training for their employees, while most employers spend between 0.02% and 0.4%⁶.

In addition to the geographical dimension, the incidence of WBL also varies across sectors and according to company size. For example, close to nine out of every ten companies in the financial services sector in Europe offer WBL to employees as compared to only half of all manufacturing companies (data from the European Continuing Vocational Training Survey [CVTS3]). Human resource management strategies, the speed of technological change, labour and skill shortages and government policies are some of the factors that contribute to the decision to offer training. Furthermore, companies facing fierce competition (Skule and Reichborn, 2002) and firms that encourage innovation, quality management, and employee autonomy, tend to provide more training opportunities for their staff (Cedefop, 2011e). This can be explained in part by the fact that in companies facing the keenest competition the customers and management are more demanding and technology tends to change more frequently, obliging employees to constantly update their knowledge and skills (Skule and Reichborn, 2002). Structured WBL models, such as apprenticeships, are also more established in certain sectors.

Company size is another determining factor; SMEs are less likely to engage in WBL than larger businesses. SMEs are less likely to offer training (training incidence) than large companies. They involve a smaller percentage of employees in training (training access), devote fewer working hours to training (training intensity) and spend a smaller proportion of their total labour costs on training (training costs) (Hefler, 2010, p. 123). For example, while 91% of enterprises with more than 250 employees in Europe provided CVT to their employees in 2005, the share of enterprises with less than 49 employees providing such training was less than 55% (based on CVTS3 data).

It is clear that if more employers are to be persuaded to engage in WBL, they need not only to be made aware of the benefits of doing so but also convinced (Hogarth et al., 2005). For this reason, the aim of this chapter is to highlight some of the key business reasons for getting involved in the provision of WBL that have been identified through academic research and employer surveys.

4.1 WHAT ARE THE POTENTIAL BENEFITS OF WBL FOR EMPLOYERS?

Higher productivity

Unsurprisingly, many studies of WBL in Europe and across the world have sought to measure the impact of such training on the company's productivity; employers want to understand the potential and actual impact of their investment on their productivity. The exact findings of the studies are not easy to compare because of the wide range of indicators and methods used, but common conclusions can be identified.

⁶ Based on information provided by Gennadiy Rusanov during his presentation 'Current state and outlook of practical and on-the-job training in Ukraine' at the ETF expert seminar on work-based learning, November 2011.

Reviews by Smits (2008) and Hansson (Cedefop, 2004) of the literature relating to the link between training and productivity concluded that investment in training generates substantial gains for the training company irrespective of whether the training is useful in other companies. Smits also highlighted that most European studies have found that training has a significant impact on productivity while the results of US studies are more mixed, with some authors finding no relationship or only weak links between training and productivity, and the rest concluding that training has a considerable positive impact on productivity. A recent research paper (Cedefop, 2011g) concluded that the average overall effect of continuous training (of which large part is in-company and WBL) on the economic performance of companies is positive. Further examples of research evidence concerning the impact of WBL on company performance can be found in **BOX 4.1**.

BOX 4.1 EXAMPLES OF NATIONAL STUDIES ON THE IMPACT OF WBL ON COMPANY PERFORMANCE

Almeida and Carneiro (2006) calculated the rate of return to investment of formal job training in **Portugal** using data from a national survey of large manufacturing firms collected between 1995 and 1999. They found that an annual increase in the amount of training per employee of ten hours led to a 0.6% increase in productivity.

In the **UK**, Dearden et al. (2000) reported that an increase of five percentage points in the proportion of employees receiving training led to a 4% increase in productivity. They also found the effect of training on productivity to be about double its impact on wages (Smits, 2008).

A 2004 survey of 97 large **Italian** enterprises concluded that a 10% increase in the average number of hours training received per employee increased productivity in the sample by 1.32% (Brunello and Topo, 2005; Bassanini et al. 2005).

Another study comparing **German** and **British** companies in four sectors (hotels, construction, furniture-making and metal-working) concluded that productivity was higher in the German firms than in the British firms because a larger proportion of the German employees had trained as apprentices; the broad range of skills of former apprentices had a beneficial effect on productivity and facilitated greater flexibility in the use of labour. Former apprentices also had lower breakage and wastage rates (Prais, 1989).

With regard to workplace training programmes, four out of five employers (82%) in **Ireland** delivering training to their workers through the national in-company training programme Skillnets stated that the training had a positive impact on the competitiveness of their business (Skillnets Ltd, 2008). Furthermore, 87% felt that participation led to an improvement in quality while around 78% stated that participation in WBL also had a positive impact on customer satisfaction. All these outcomes translate into greater productivity.

A positive correlation between WBL and productivity was noted by a company survey in North Carolina (**US**), which showed that employers who hired participants in WBL programmes reported that they required less training and had better teamwork skills and a better work ethic than other new recruits (Darche et al., 2005).

While employees and employers alike agree that WBL benefits the company, employees tend to be more optimistic on this point. Findings from a survey carried out in the **UK** suggest that employees identify higher levels of benefits from WBL for their company than employers: while 30% of employers feel that participation in WBL results in higher quality products and services, almost nine out of ten employees hold this view (Glass et al., 2002). This difference can be attributed to the fact that employers see training as one way of addressing skills needs—the other being recruitment (provided there is sufficient supply of candidates with the appropriate skills in the labour market); employees, however, see learning (and in particular WBL) as the only way they can enhance their skills and keep pace with changing needs.

There is also research evidence indicating that the quality of work of apprentices tends to be better than that of non-apprentices in the same position. From the start, apprentices are given the correct tools and training to do the job and are closely monitored and supervised. As a result, they tend to be more attentive than non-apprentices to the quality of the work they perform (Hogarth et al., 2005). For example, a review at BAE Systems—a large international company operating in the defence, security and aerospace sector—concluded that apprentices who have completed their training programme fulfil tasks correctly first time at a rate 25% higher than non-apprentices (Kenyon, 2005; Wainer, 2006).

Recruitment impact

A company's clear commitment to developing its workforce through an apprenticeship programme or employee training programme can deliver a range of intangible business benefits, including the potential positive impact on recruitment.

WBL has the potential to make employment with a particular company more attractive than it otherwise might be, thereby enabling employers to recruit from a wider pool of applicants. In fact, a WBL programme can give employers the point of difference they need in the recruitment market, especially in strong labour markets where employers feel they have to offer potential recruits an incentive to ensure that they choose their company (Hogarth et al., 2005; Wainer,

2006). The fact that companies offering learning opportunities are more attractive to candidates also shows that employees understand the beneficial effect WBL can have on their future careers and expect greater advancement in a company that offers such possibilities.

Besides improving the company's prospects of recruiting the most talented candidates, the training period gives the employer an opportunity to gain an insight into the characteristics of the potential employees that are critical to job performance, such as their attitudes and soft skills (Field et al., 2009; Wenzelmann et al., 2009). In this way employers avoid the risk of hiring a person who is not known to the company and also save on external recruitment and induction costs. According to an employer survey carried out by the **German** Federal Ministry of Education and Research in 2003, about three-quarters of companies reported that apprenticeship schemes afforded them an opportunity to pick and choose the best apprentices and to avoid bad hiring decisions. In the same survey, nearly 60% mentioned that these schemes also contributed to reducing the costs involved in the induction of new (more experienced) employees (Axmann, 2004). Other recent studies have found that German companies using the apprenticeship system are less likely to make errors of judgement when recruiting staff than companies who do not hire from a pool of apprentices (Ebbinghaus and Ulmer, 2009).

Other less intensive WBL programmes, such as those providing work placements, working-life familiarisation opportunities and internships for students or the unemployed, also give employers an opportunity to familiarise themselves with the local pool of candidates while contributing to their corporate social responsibility goals. For example, a survey of **Finnish** employers who provided internship places for students of applied sciences from universities discovered that the most important motivating factor for employers is the opportunity to get to know their future workforce. In total, 55% of employers felt that this was a 'significant' or a 'very significant' advantage (Virolainen et al., 2011). Other important factors included the opportunity to bring new viewpoints and the latest research knowledge into the workplace.

Better image

Providing workplace training can also enhance a company's image (Berger and Pilz, 2009; Wenzelmann et al., 2009). This is considered an important motive for companies in **Germany**, for example, where the Federal Ministry of Education and Research found that 57% of employers believe that participation in enterprise-based training enhances the company's reputation (Axmann, 2004). This is especially true for larger firms, which consider that apprenticeships improve their corporate image in the eyes of the public, customers and suppliers, thereby making the company more attractive to potential high-achieving employees (Ebbinghaus and Ulmer, 2009). In **Scotland** the potential of WBL for improving company image is not regarded as highly by employers, with only some one in ten (11%) considering that participation in WBL raises the image of their organisation with customers (Glass et al., 2002).

Increased staff retention and work satisfaction

Research evidence indicates that workers/trainees are more likely to stay with the company where they trained due to a sense of loyalty and commitment and because they enjoy better opportunities there for personal and professional development. In this way, WBL can also improve staff morale, motivation and retention (Dawe, 2003).

For example, employees participating in job mentoring programmes have reported diverse benefits including greater job satisfaction, better personal relationships, enhanced managerial skills and improved understanding of the company's operations (Holland, 1999). Nearly half (46%) of employees surveyed in the **UK** stated that training opportunities would make them more likely to stay with a company, and four out of ten employers who train their staff reported an increase in staff retention (Hogarth et al., 2005). Furthermore, 88% believe that apprenticeships lead to a more motivated and satisfied workforce.

In some companies, the apprenticeship teams report the highest level of employee satisfaction out of all employees. For example, the employee satisfaction rate of apprentices at the **British** telecommunications company BT currently runs at 85%, which is higher than the rate for any other team (Hogarth et al., 2005).

Opportunity to address skills gaps

Addressing skill gaps in the workforce can improve a firm's chances of business survival. Independent of the general economic climate, even in depressed economies there are sectors or businesses where growth is hindered due to skills shortages. According to the Manpower 2011 talent shortage survey (ManpowerGroup, 2011) covering 39 countries, one in three companies face difficulties in filling positions due to lack of talent (employees with the right skills sets, competences and attitudes). This represents an increase over 2010. The countries surveyed where more than half of the respondents reported such gaps were Japan, India, Brazil, Australia, Taiwan, Romania, United States, and Argentina.

Another study (Sondergaard et al., 2012), which focussed on Europe and Central Asia, reported that more than 60% of employers in Belarus are severely constrained by the lack of a well trained workforce. Similarly, in Kazakhstan and Russia the share of such employers is between 50% and 60%, and the same problem is reported by employers in Ukraine, Moldova, Tajikistan and Uzbekistan. According to the information provided by the ManpowerGroup, the professions where most gaps arise are typically those related to vocational qualifications: technicians, sales persons and representatives as well as skilled trade workers, engineers and labourers.

Skills shortages can have a range of negative consequences on enterprises: a survey of **UK** companies found that 20% of employers with skills gaps had lost or turned away business, one in six employers with skills gaps had delayed developing new products or services, and over 25% of employers with skills gaps reported increased operating costs as a result (Train to Gain, www.gov.uk/find-business-training-courses).

Skills gaps can be resolved by increasing the provision of IVET, but it takes several years before graduates enter the labour market and by that time the situation may have changed. Furthermore, new graduates enter the labour market as novices, while many employers require more mature staff: most cite lack of experience as the most common obstacle to performance and productivity. Lack of hard job or technical skills is the third most frequently cited problem (22% of firms).

Consequently, a company that requires a supply of skills faces a choice: they must either recruit from the external labour market, paying whatever wage premium is required, or train their own staff internally (Hogarth et al., 2005). Effective continuing learning (and in particular WBL) can address the issue of inadequate skills supply. In fact, in certain countries WBL (whether in IVET or for adults) is the only way to address the drastic skills gaps that exist because there is no adequate provision of formal training outside companies through VET schools or CVET providers (Sondergaard et al., 2012; Wallenborn and Heyneman, 2009). Wallenborn and Heyneman (2009) argue that WBL is particularly necessary in production sectors such as manufacturing, where school-based VET would require major investment in infrastructure, equipment and maintenance. As such facilities would be extremely expensive to set up and would quickly become outdated, the state would not consider such investment. According to Wallenborn and Heyneman, the investment required in the service sector is less problematic because the training set-up costs are lower and a great deal can be learned through classroom simulations.

As the content is directly relevant to the trainee's or employee's eventual job, WBL can be used as an effective strategy to address future skilled workforce needs, particularly when high demand is anticipated. In fact, significant numbers of employers regard apprenticeships and other WBL opportunities as a way to address skills gaps, rather than using higher education graduates or temporary workers for example (Berger and Pilz, 2009). In **Germany**, a survey of 15 000 companies revealed that apprenticeships are a very important means of satisfying future staffing needs for six out of ten employers (Ebbinghaus and Ulmer, 2009). This is because apprenticeships allow trainees to develop skills to deal with unpredictable problems and real-life work situations (Rauner, 2005).

With respect to regular staff (not apprentices), a survey of **German** employers showed that 84% were willing to provide training in 2007 as a way to train up junior employees to meet the company's specific skill requirements (Bundesinstitut für Berufsbildung, 2009). On a more global level, the ManpowerGroup survey (2011) cited above shows that training and staff development programmes for existing employees are the strategies most often used to address skills shortages (21% of respondents), a far more prevalent solution than improving recruitment channels.

Sectors facing the problem of an ageing workforce see WBL as a cost-effective way of ensuring effective knowledge transfer from older to younger workers (Hogarth et al., 2005).

4.2 CAN THE BENEFITS OF WBL OUTWEIGH THE COSTS FOR EMPLOYERS?

The previous section showed that WBL has the potential to provide a range of short- and long- term as well as hard and soft benefits for companies. However, there are also costs involved in the provision of WBL. These include the wages or allowances sometimes paid to trainees, supervision/mentoring costs, tools and materials, administration costs and, in some cases, fees for off-the-job training. The costs vary according to the sector, country, company size, target group and type of WBL (e.g. work placements vs. apprenticeships), but there are always costs involved. The main question therefore is whether the benefits can outweigh the costs.

The benefits of WBL can outweigh the costs

While empirical studies on the cost-effectiveness of WBL are scarce, studies carried out in recent decades in countries with well-established WBL systems have shown that the financial benefits of apprenticeships (the apprentice's productive contribution) often at least equal the financial costs of training (lost output plus the management and

administration of training), and that in many cases the financial benefits of WBL outweigh the training cost, even during the training programme. The reasons include (Hasluck et al., 2008, p. 10; Berger and Pilz, 2009; Hogarth et al., 2005):

- the higher productivity of fully experienced workers trained within the organisation compared to those recruited externally;
- the better organisational fit between employees trained in-house and the organisation's working practices;
- improved staff retention of apprentices trained within the organisation;
- external funding of up-front costs of apprenticeships in some countries (e.g. diverse financial incentives);
- avoidance of the difficulties associated with recruiting suitable fully experienced workers in the labour market.

Importantly, the evidence also suggests that the productivity benefits generated typically increase as the apprentices gain experience (Field et al., 2009). **BOX 4.2** includes evidence from Austria, Belgium (Flanders), Germany, Switzerland and the UK.

BOX 4.2 EXAMPLES OF PRODUCTIVE RETURNS FROM APPRENTICES

A survey of employers in **Belgium** has shown that, despite initial net costs due to the low productivity of novice apprentices, by the end of the training period, productive returns from apprentices outweigh training costs (De Rick, 2008).

In the **UK**, four out of five employers taking part in the apprenticeship programme in 2009 were of the opinion that apprenticeships help companies to improve productivity and become more competitive (BusinessLink, 2011; Kenyon, 2005; McIntosh, 2007; Wainer, 2006). For instance, BT, a large British telecommunications company, estimated that their annual net gain per apprentice as compared to non-apprentices in the same position was GBP 1 300 (EUR 1 490) (Hogarth et al., 2005; Kenyon, 2005). This means that the apprentices' rate of productivity is 7.5% higher than that of non-apprentices (Hogarth et al., 2005).

There are some differences in the cost-benefit situation of companies that train apprentices in countries where the dual VET system is very important and has a long tradition (Dionisius et al., 2008). Field et al (2009) concluded that apprentices and trainees in **Switzerland** and **Germany** undertake useful work generating a productive benefit for the employer. Cost-benefit analyses of apprenticeships in **Switzerland** have shown that, on average, apprenticeship training is profitable even during the training period⁷. For example, a survey carried out in 2000-04 showed that two-thirds of companies obtained a net benefit from taking apprentices (Volter and Schweri, 2002). Another two surveys of Swiss firms confirm these findings, with 60% of participant companies reporting financial gains (Mühlemann et al., 2007). Volter and Schweri (2002) also showed that most of the firms that did not derive a net benefit at the end of the apprenticeship period benefited eventually because of the recruitment benefit when they were able to keep the VET graduates they had trained.

Compared to Switzerland, a smaller percentage of Austrian and German companies report net benefits during training programmes, but they do also recoup the cost in the longer term. In **Austria**, about 33%-40% of enterprises hosting apprentices find evidence of net benefits (Lassnigg, 2008). In **Germany**, a 2007 survey found that companies achieved net returns during the training period from approximately a third of apprentices (Wenzelmann et al., 2009). In a local survey in the Bremen area, 55% of companies hosting apprentices reported net returns during training, with some companies reporting a gain of up to EUR 10 000 annually per apprentice (Rauner and Heinemann, 2008).

These differences between countries in costs and benefits can be explained largely by the type of tasks assigned to apprentices. Swiss apprentices are more often engaged in productive work than their German counterparts: German apprentices spend 57% of their working time in companies doing productive tasks, while Swiss apprentices spend over 83% of their time carrying out such tasks (Dionisius et al., 2008). In fact, Swiss companies have more incentives than German firms to apply a production-orientated rather than an investment-orientated WBL training strategy for the following reasons:

- relative difference in wages between apprentices and skilled professionals (greater in Switzerland than in Germany);
- differences in employment protection legislation (apprentices enjoy greater protection in Switzerland);
- reluctance in Germany to use apprentices to as a substitute for workers (in part due to strong unions and works councils);
- staff retention rates (e.g. only 36% of Swiss apprentices remain with the host company the year after graduation as compared to over 50% in Germany (Dionisius et al., 2008).

Even though the training schemes are more investment-orientated in Germany than in Switzerland, German enterprises are fairly satisfied with the cost-benefit ratio. A national survey documented that 60% of employers were either 'satisfied' or 'very satisfied' with the ratio and only 11% said they were 'dissatisfied' (Wenzelmann et al., 2009). The companies accept the cost of training because they regard the balance to be positive in terms of a broad and long-term view of benefits taking into account positive external effects (Beicht et al., 2004).

⁷ The benefits are fairly well known because many companies use evaluation tools; by 2004 half of Swiss companies with apprentices either had formal mechanisms to monitor the cost-benefit ratio of their training or were about to introduce such mechanisms (OECD, Hoeckel et al., 2009b).

Finally, employer surveys have shown that many companies value the apprenticeship system. For instance, in the state of Wisconsin in the **US**, 98% of employers participating in the apprenticeship programme say they would recommend it to others (Symonds et al., 2011). In **Australia**, just under a third of employers employ apprentices and most of them have expressed satisfaction with the system, 83% in 2009 (Steedman, 2011).

The cost-benefit ratio is dependent on several factors

General versus specific training

The economic literature on the benefits of WBL usually starts with a discussion on the relative benefits of general versus firm-specific training⁸. Smits (2008) argues that most training, especially vocational training, is neither completely general nor completely firm-specific. Barrett and O'Connell (2001) researched the relationship between the effect of general and specific training by calculating the returns to each type separately. Using **Irish** data to estimate the productivity effects of training, they found that general training had a statistically significantly positive effect while specific training did not. Increasing the number of general training days by 1% leads to a productivity increase of 3%.

Sector

The sector can be predictive of the level of expected net return. In the **UK**, for some employers, particularly those in the services sector (e.g. hospitality, retail and IT), the net benefit of apprenticeship training is substantial, while the costs—once the productive contribution of the apprentice is factored in—are sometimes quite modest. Other employers, especially those providing apprenticeship training in engineering or construction, incur a substantial net cost over the training period. The latter group tend to view the benefits of apprenticeships over the longer rather than the shorter term, and the cost of training in those sectors is recouped two to three years after completion (Hasluck et al., 2008).

Studies in **Germany** report similar conclusions, with the net cost of apprenticeships being relatively high in the civil service, industry and commerce, and relatively low in sectors such as agriculture and hospitality (Wenzelmann et al., 2009). Another survey found that the benefits of a substitution strategy (taking on apprentices instead of employees) vary according to the sector: employing more apprentices in trade, commerce, craft, and construction occupations has a positive impact on gross profits, while the opposite occurs in manufacturing occupations (Mohrenweiser and Zwick, 2009).

Company size

Evidence from a 2007 survey in **Germany** suggests that the net cost per apprentice rises with company size and that the cost-benefit ratio is particularly favourable in large companies of over 500 employees; 77% of large companies reported being 'very satisfied' or 'satisfied' with the cost-benefit ratio, compared to 60% of all companies (Wenzelmann et al., 2009).

Duration of WBL

The length of the training period also has an impact. It has been argued that shortening the apprenticeship period decreases benefits to employers because apprentices only contribute to the firm after their third year of training (Rauner, 2008).

Company influence

It has also been argued that companies themselves can influence the value of their apprenticeships (Rauner and Heinemann, 2008). Indeed, considerable differences in the returns perceived by companies suggest that the way the apprenticeship is organised is an important factor influencing costs and benefits. There is a positive correlation between the quality of the apprenticeship scheme and its cost-effectiveness: in purely economic terms only high quality apprenticeships are worthwhile for companies. This is demonstrated for example by evidence that smaller enterprises are capable of providing quality apprenticeships in a cost-effective manner. For instance, a study focussing on an SME employing seven apprentices in the North-Rhine/Westphalia region of **Germany** indicated that the company generates an annual profit of EUR 2 000 per apprentice over the entire duration of the apprenticeship (Haasler, 2008).

Supply and demand

Where there is a long tradition of apprenticeship training, such as in engineering and construction, and where recruitment of skilled adult workers may be difficult, the investing for the future argument provides a convincing business case. However this is not the case for areas where the tradition of apprenticeships is weaker (Hogarth et al., 2005).

Finally, it is also worth noting that the net benefits might not be quite so substantial if apprenticeships were less selective and undertaken by a larger number of young people.

⁸ General training is defined as training that is of value in many firms while firm-specific training is of value only in the training firm. The benefits of general training fully accrue to the worker whereas the benefits of firm-specific training are shared between the employer and the worker.

5. LOOKING AT THE BIGGER PICTURE: THE BENEFITS OF WORK-BASED LEARNING FOR SOCIETY

The impact of WBL can go beyond its immediate effects on learners, employees and employers. The aim of this chapter is to summarise some of the most important benefits for society as a whole.

5.1 WBL PRODUCES A BROAD RANGE OF HIGH QUALITY, RELEVANT SKILLS (FOSTERING EMPLOYABILITY)

Although economic theory predicts that much apprenticeship training is highly firm-specific (Korpi and Mertens, 2003), some studies assert that WBL provides participants with a relatively broad combination of job skills, general education and personal development—especially when the on-the-job training period is complemented with classroom-based learning opportunities. For example, a **German** study suggests that knowledge obtained during an apprenticeship is transferable between firms even though the skills obtained by apprentices are less general than those acquired in vocational schooling (Korpi and Mertens, 2003).

In a number of countries around the world, large sections of the economy face difficulties in recruiting workers having appropriate skills. As highlighted by the World Bank report, ‘Skills not just diplomas’ (Sondergaard et al., 2012), such shortages are detrimental not only to the employers concerned but to the economy as a whole. Shortages do not necessarily correlate with low levels of educational attainment. In fact, they are also observed in many countries where candidates have the required qualifications, but where the content of the qualifications (the knowledge, skills and competence acquired) are not sufficiently relevant to the economies. Some countries need to reform not only their VET systems, but also their general and higher education systems⁹. Many ETF partner countries suffer from a lack of candidates with technical skills because young people tend to opt for general and higher education pathways instead of VET. This situation is partly due to the differing social perceptions of VET and higher education and of the jobs that these pathways lead to, but it is also a result of the fact that the VET systems, which are too often school-based and ill-equipped, fail to establish a link with the labour markets and the economy. Strengthening work-based VET provision is a valid option for these countries, particularly in fields where the required material equipment (such as machinery and tools) is very costly.

There are, however, reasons other than the investment cost that favour the provision of work-based rather than school-based programmes (Wallenborn and Heyneman, 2009).

- *Flexibility.* Changes to a WBL curriculum can be made relatively easily and can reflect the evolution of materials, processes and workplace organisations in the economy.
- *Direct contact between learners and the workplace.* Direct contact favours the acquisition of the tacit knowledge that schools are ill-equipped to impart and the development of attitudes and behaviours that employers seek at recruitment (see also chapter 3).

When the performance of WBL and school-based learning are compared, the findings support the above arguments (see **BOX 5.1**).

⁹ Countries that face severe skills shortages generally report gaps in the supply of candidates with basic skills (numeracy and literacy) and also of people with problem solving capability, a skill increasingly required by employers.

BOX 5.1 EXAMPLES OF STUDIES COMPARING THE PERFORMANCE OF WBL AND SCHOOL-BASED LEARNING

In the **UK**, individuals taking Modern Apprenticeships generally felt better prepared for the labour market than their peers who had gone to college or university because they had acquired more skills relevant to the labour market (Unwin and Wellington, 2001).

A study carried out in **Denmark** looking at the training of sales assistants suggested that students did not perceive practice through simulations at school (for instance role play) as very useful and considered that soft skills were best acquired on the job (Aarkrog, 2005).

In **Australia**, participants asked about the main employability skills developed through WBL cited communication skills (53% of surveyed participants) followed by the ability to work in a team (15%) and to take initiative (10%) (Smith and Green, 2005).

Findings from learner surveys also suggest that part of the value of WBL for skills development arises from the fact that they are structured programmes, which appear to have a more positive impact on participants than professional experience alone. For instance, 70% of participants in school-based New Apprenticeships in **Australia** and 57% of participants undertaking work placements as part of VET reported that their employability skills improved a great deal, compared to 53% of those who had a part-time job and only 22% of those who had some other type of work experience (Smith and Green, 2005).

Furthermore, requiring formal VET to include a WBL component is one way of more closely involving employers in the system, thus increasing their confidence in it and helping to ensure close alignment of course content with labour market demands (Sweet, 2011, p. 2). Indeed, the combination of theoretical input and on-the-job assessment of competence, gives employers greater confidence in the qualifications and their fit with the needs of the company.

5.2 WBL CAN MAKE A POSITIVE CONTRIBUTION TO YOUTH EMPLOYMENT RATES

A common observation in the literature is that youth employment patterns tend to be better in countries with developed apprenticeship systems than in countries with an inadequate or no apprenticeship system. Austria, Denmark, Germany and Switzerland have proven quite successful in giving young people a good start in the labour market, and these countries have low youth unemployment rates. In 2010, when 20.9% of 15-24 year olds were unemployed in the European Union overall, youth unemployment in Austria and Germany was under 10% (Eurostat LFS, accessed in 2012). Austria, Denmark and Germany also have low percentages of young people who experience multiple spells of unemployment (Quintini et al., 2007).

A comparative study of labour market outcomes for different types of qualifications in 12 European countries found that apprenticeships perform rather favourably compared to school-based education at the same level of training and across different qualification levels (also confirmed by Wallenborn, 2011). Gangl (2003) argues that, after controlling for institutional and structural factors, apprenticeships produce a significant reduction in early career unemployment rates.

Several national studies also show improved employment prospects for WBL participants (see **BOX 5.2**).

BOX 5.2 EXAMPLES OF NATIONAL STUDIES ASSESSING EMPLOYMENT OUTCOMES OF WBL

In **France**, apprenticeships generally facilitate access to employment. In sectors where apprenticeships are relatively well developed, 81% of former apprentices hold a job three years after completing their training, compared to 67% of other types of graduates (Arrighi and Brochier, 2009). The comparative advantage of a trained apprentice in the labour market is particularly noticeable in certain sectors (construction, accounting, metalwork, agro food and transport) but less obvious in others (hotels, catering, trade and mechanics) (Arrighi and Brochier, 2009).

In the **UK**, completing a Level 3 Modern Apprenticeship increases the probability of being in a full-time employment by 16 percentage points for women and 10 for men (McIntosh, 2007). In addition, former apprentices are more likely to hold management, foreman or supervisory positions than their non-apprenticeship peers (Perez-del-Aguila et al., 2006).

In **Algeria**, apprenticeship training has been found to be less costly than school-based VET and it achieves a higher employment insertion rate (60%)¹⁰. Furthermore, transition to employment is also much faster as many apprentices are recruited immediately upon completion of their training, while it is not unusual for school-based VET graduates to spend a year or two searching for a first job.

5.3 WBL HAS THE POTENTIAL TO PRODUCE INTRINSIC BENEFITS FOR SOCIETY IN TERMS OF INCLUSION

WBL can offer people from all walks of life and from all social groups an attractive entry route into training and employment, thus laying down an important foundation for social integration and participation (Berger and Pilz, 2009). We have seen that it can act as a route to a formal qualification that may increase the learner's chance of finding employment. At the same time, it can be an effective method for reintegrating unemployed individuals and disenfranchised young people, many of whom prefer a hands-on approach to learning.

BOX 5.3 EXAMPLES OF WBL PROVISIONS FOR VULNERABLE GROUPS

In **Belgium**, *Individuele beroepsopleiding in de onderneming* (IBO) is an on-the-job vocational training programme for unemployed individuals that lasts between one and six months. The employer selects the unemployed individual and provides the training. During the entire training period, the employer receives the equivalent of the unemployment benefit and the trainee receives a wage that combines the unemployment benefit with a supplementary productivity premium that increases as the training progresses. The IBO agreement obliges the employer to offer the former trainee a job at the end of the training period. Analysis of all the IBO-agreements concluded between January 2000 and October 2008 (97 942) revealed that more than 55% of the trainees were aged 25 or younger and that nearly 50% of the participants had been continually employed since starting the programme (example summarised from Bollens, 2011).

The aim of youth workshops (*nuorten työpajat*) in **Finland** is to address social and personal problems, support young people's social growth, and reinforce their life skills (e.g. learning a daily training/work routine) with a view to preventing exclusion and guiding young people into education and the labour market. The workshops are a place where unemployed and disengaged young people can review their options for the future and make plans for reaching their goals. Workshops have different vocational orientations, allowing young people to learn practical skills in diverse fields, including graphic design, metalwork, carpentry, textiles and catering. In 2008, the workshops supported just under 9 000 young people, reaching nearly one-third of all unemployed youth (Nevala and Hawley, 2011). A solution is usually found for around two-thirds of beneficiaries. Similar workshops are available for unemployed adults in Finland. Likewise, WBL-focussed reintegration programmes with similar success rates are also found in **Denmark** (production schools) and **Ireland** (Youthreach).

In **Denmark**, population data taken from the national employment service (arbejdsmarkedstyrelsen, 2004 in Paparella and Savino, 2008) shows that 55% of the former clients had found employment through contacts made during an internship.

As many WBL-focussed interventions targeting vulnerable groups are designed to address the needs of the target group, they often achieve low dropout rates (relative to the target group in question). In the **US**, for example, participation in the School-to-Work WBL programme improved attendance and graduation rates compared to other groups of students; moreover, the students participating in these programmes were less likely to drop out of school,

¹⁰ Algerian Ministry in charge of VET, quoted in press release on the results of the German-Algerian cooperation project, March 2011.

especially those who were considered at high risk. In one case, participation in a WBL career academy reduced the dropout rate for high-risk students by 34% as compared to other students in a randomly selected control group (Hughes et al., 2001).

In **Germany**, it is estimated that less than 5% of those who begin an apprenticeship drop out prematurely without identifying an alternative option, such as moving to another employer or changing to another type of training (Field et al., 2009). In **Austria**, the completion rate stands at around 85% (Steedman, 2011).

5.4 WBL MAKES ECONOMIC SENSE

Transferring the cost of achieving learning outcomes from publicly funded educational institutions to enterprises can reduce public expenditure, freeing up funds for use on other priorities, including those linked to widening participation (Sweet, 2011, p. 2). It is therefore unsurprising that some authors have argued that WBL can generate significant economic returns for the State when it is used as a substitute for conventional education (Wolter and Weber, 2005). There have been attempts in some countries, for example Australia, Germany, Morocco and the UK, to compare the lifetime benefits of completing an apprenticeship (employment and wages) with the cost of such schemes; the findings indicate some significant surpluses of benefits over costs (see **BOX 5.4**).

BOX 5.4 EXAMPLES OF THE BENEFITS OF APPRENTICESHIPS

According to a **UK** study on Modern Apprenticeships, net present value of benefit over costs is estimated to be around GBP 105 000 for higher level apprenticeships (Level 3) and around GBP 73 000 for advanced apprenticeships (Level 2), respectively 17 and 16 times the amount of state funding spent per individual (McIntosh, 2007)¹¹.

In **Morocco**, apprenticeship training ranges from 1/5 to 1/14 of the cost of a full-time school-based programme (Beringer, 2007).

In **Germany**, the return of one year spent on an apprenticeship is estimated at 8.2%, close to the estimated return of a year of general education (Clark and Fahr, 2002), while in **Australia** the social rate of return to male apprentices is estimated to be 12.8% (Dockery et al.1998).

Another economic rationale for WBL is the relationship between the technological upgrading of an economy, its potential for innovation and creativity, and the learning needed to foster these aspects. In a report on growth, employment and decent work in Africa, the ILO (2011a) describes the relationship between the extent to which a country produces predominantly low-tech or high-tech goods and the added value produced. In this context, the report indicates that countries where economic activity is concentrated on low-tech goods tend to be locked into a vicious circle in which low-tech production leads to low level learning opportunities. This leads to a lack of innovation, scant added value production and the persistence of a low-tech economy. The lack of WBL in these economies is due to the fact that they compete on costs rather than on quality.

¹¹ Further information about the levels of apprenticeships in the UK can be found at: www.apprenticeships.org.uk/Parents/Levels-of-Apprenticeships.aspx

6. OBSTACLES FACED BY POLICIES AIMED AT SUPPORTING WORK-BASED LEARNING

Compared to WBL, the school-based learning model is relatively simple. It is based on the principle that the State regulates, funds (wholly or partly), and often also provides education as a service to citizens (either for free or by raising fees). The rationale for the model is that the market fails to provide certain types of educational services (especially those relating to basic and generic skills and competences) in addition to related positive externalities and the fact that education (which cannot be considered fully as a public good, see, for example, Stiglitz, 2000) is considered a citizen's right in many countries (e.g. UNESCO, 2007). However, the market failure argument is not obvious in WBL because the market does in fact provide WBL opportunities in most countries in the form of informal apprenticeships (ILO, 2011b) and in-company training, for example. Therefore, the rationale for regulating WBL more often relates to equity, based on a twofold objective: to guarantee the minimum quality of training and the learner's working and learning conditions; and to extend access to unemployed people who wish to acquire the skills and experience that constitute the minimum requirements for recruitment.

Furthermore, governance and funding are generally more complex for WBL provision than for school-based systems because of the role of the private sector, the involvement of employers' representatives and the application of regulations governing employment (labour law, health and safety). Employers play an important role in the provision of WBL. They provide the opportunities for learning in enterprises while the role of the State is to regulate and/or co-fund the scheme. Since learners in WBL are not only receiving training but also working in the enterprise, they typically receive some remuneration from employers. Consequently, all relevant labour and health and safety regulations are applicable. Employers are also direct beneficiaries of WBL as they make use of the skills and competences developed. At the same time, they assume a number of risks related to the integration of novice and unskilled learners into their production process, particularly risks related to health and safety hazards but also those associated with the quality of production. Some businesses may also have to deal with issues relating to intellectual property. None of these considerations have to be tackled in a school-based learning model.

The obstacles to policies that support WBL often stem from this complex interplay between the role of the State and that of the employers. A further reason why public interventions in WBL face certain obstacles is the nature of WBL learning; as Gruber et al. (2009) put it, externally provided formal learning (the model that receives most public support in many countries) 'is more visible, measurable and therefore controllable than (informal) workplace learning from a policy point of view'.

Some of the key obstacles in the development of WBL relate to the same issues as those that affect school-based systems, although the details may differ in WBL. For example, the quality of the learning experience and the qualifications of teachers and trainers are also issues in school-based learning, although the core problems and solutions differ. Other issues are unique to WBL; for example, defining the extent to which WBL should be publicly funded or co-funded to avoid deadweight, displacement or substitution effects (particularly when WBL forms part of active labour market policies), and ensuring the sensitivity of WBL provision to the economic cycle.

6.1 WHAT TYPE OF WBL SHOULD BE PUBLICLY SUPPORTED AND HOW?

As WBL is a very broad concept comprising different levels, types (initial, continuing and higher level VET), and forms of learning (formal, non-formal and informal), deciding what types of WBL to support and what form this support should take can pose a dilemma for policy makers. This section discusses some of the relevant issues.

6.1.1 Defining the optimum type of public support

Chapters 3, 4 and 5 of this review discuss the benefits to the different actors of WBL. There are clearly diverse private returns (to individuals and businesses) and also returns to society. Individuals can gain a broad range of skills and competences through WBL, some generic and more company-specific. Some authors have suggested that public support should concentrate on generic and transferable training and that firm-specific training should be funded by employers; this is the rationale embedded in the European Commission guidelines for State aid for training (European

Commission, 2009). However, as Smits (2008) has pointed out, most vocational training is neither completely general nor completely firm-specific, although company-based training tends to be more firm-specific. The same author also makes the point that the difference between generic and firm-specific skills is not only related to the nature of the skills themselves but also to market conditions in each case (for example, whether certain skills are of value in other firms in the same labour market). The visibility of the skills acquired is also a factor.

Another problem that undermines public support for WBL is the concern about the sub-optimal nature of such interventions—in particular in the area of continuing training. Several evaluations have raised concerns about the deadweight associated with public funding to employers and individuals in the area of CVET. Abramovsky et al. (2005) evaluated the **UK** Employer Training Pilots, a programme that provided financial incentives to employers to support investment in staff training in the area of basic skills. They found that a large proportion (between 85% and 90% subject to sampling error) of the intervention was deadweight, meaning that employers would have funded the training without the public support. Significant levels of deadweight have also been associated with measures supporting individuals (rather than employers); see, for example, the discussion of individual learning accounts in Falch and Oosterbeek (2011).

Smits' (2008) model of optimal public interventions in WBL is based on the hypothesis that if training is to be successful there have to be perceived returns to both employers (productivity) and employees (typically measured in terms of wage progression). Low returns to employers or employees have a negative impact on quality of training as employers do not invest the necessary resources and employees are not sufficiently motivated and committed. However, the returns differ depending on various factors.

- *Type of learning.* IVET is geared more strongly towards general and transferable skills than CVET, and the certificates gained through IVET have national validity and are therefore more portable.
- *Country.* Labour turnover and workers' bargaining power are features of labour markets that affect returns to both individuals and employers: a lower turnover implies a higher return to the employer.
- *Industry.* The features noted above may vary across sectors within a country.

Smits (2008) suggests that public policies should take into account the division of benefits from training and the factors influencing them (level of firm specificity, competition for trained workers, retention rates of training programmes, and the role of bargaining). Furthermore, policies should consider sector-specific interventions because of the cross-sectoral variation in these characteristics.

The fact that WBL leads to the acquisition of a relatively high proportion of company specific-skills is associated with good labour-market transition outcomes. Countries with developed apprenticeship systems have relatively low youth unemployment rates. At the same time, these countries have a relatively high rate of unemployment among older people who have previously been through the apprenticeship system (e.g. Woessmann, 2006). This appears to be associated with a lack of more generic and transferable competences. Policy efforts are therefore being developed to strengthen the generic skills component of apprenticeship programmes.

6.1.2 What form of public support?

Financial support is not the only way policy initiatives can influence WBL; regulation, information and guidance (including matching services) are other examples. Different forms of support are associated with different obstacles.

Obstacles associated with financing measures

Financing measures through which the state can support WBL include tax incentives to employers, reimbursement of training costs to employers, wage subsidies or fixing apprentices' wage levels below the levels of workers' wages. Financial support to individuals (such as vouchers or learning accounts) is often used in the case of externally provided training. Deadweight is a problem always associated with public funding of WBL, irrespective of the form of financial support used. Accountability is another issue. In most cases, countries find it difficult to properly monitor and verify internally provided WBL to make it eligible for financial support. The main reason is that while externally provided training can be easily certified/validated and documented in a verifiable manner (such as through invoices from suppliers), high levels of uncertainty may exist with respect to the reliability of information on internally supplied training. Nevertheless, in certain countries internally provided training is also eligible for financial support—for example the **Austrian** training tax allowance and the **Dutch** payment reduction for education (Cedefop, 2009b).

Some active labour market policy measures for training unemployed people, such as traineeships or subsidised placements, are used to fund internally provided WBL. These are typically based on the use of an individual training plan and a lump sum monthly allocation that partly compensates employers' for wage and/or training costs (Ramos, 2009). In addition to deadweight, another issue is creaming; in other words, the candidates selected in many cases are the individuals who already have a better chance of finding employment (for example, individuals with higher qualifications or younger people) (Bonaiti, 2006).

In apprenticeship systems, apprentices' wages are typically lower than those of workers. This is an incentive for employers to take on apprentices because they are cheaper than regular workers; the employer benefits from the apprentices' labour but at the same time they have to invest in training. However, this form of incentive is also associated with certain issues, particularly the risk of displacement and the need to ensure the quality of the learning experience. Apprentices are learners and need to be put in situations that enable them to develop; they must receive the support necessary to progress in their learning. In other words, employers should not treat them simply as cheap manpower, with the undesirable displacement effect this would imply.

Obstacles affecting the take-up of WBL

Employer-supported training tends to be selective and focussed primarily on people who have higher initial qualifications, occupy mid-level or managerial positions, are young, or work in large enterprises. This bias towards certain groups of employees is clearly seen in Europe (see **BOX 6.1**) but is also found in the **US** (see, for example, the summary in Woessmann, 2006). Therefore, one of the challenges facing public policies aimed at supporting WBL is how to channel the support to disadvantaged target groups.

BOX 6.1 RESULTS OF PAN-EUROPEAN STUDIES INTO PARTICIPATION IN LEARNING AT WORK

The Eurostat Adult Education Survey shows that the probability of participating in learning at work increases with skill and occupation levels, with highly qualified employees and those higher up in the status and management hierarchy getting more and better opportunities for learning than those towards the bottom of the hierarchy (Colley et al., 2002). In contrast, low-qualified employees, migrant workers and those who undertake repetitive working tasks are less likely to receive continuing training (Cedefop, 2011e). This is also demonstrated by the results of the fifth European Working Conditions Survey, which found significant differences between employee participation rates by type of employment position; 21.7% of workers in low-skilled manual occupations participated in employer-paid training, while this percentage reached 47% in the case of workers in high-skilled clerical occupations.

Opportunities for learning at work also decrease with age (Cedefop, 2010). The fifth European Working Conditions Survey in the European Union revealed that the participation of older workers in employer-paid training in the 12 months prior to the survey was 29.7%, compared to 36% for prime-age workers (OECD, 2006a).

While selection is a typical problem for continuing training in the workplace, it is also seen in IVET. For example, one of the challenges facing the German dual system is the lack of options for those who are unable to secure an apprenticeship contract with a company. The number of unplaced apprenticeship applicants doubled between 2001 and 2006 (Walden and Trotsch, 2011); around four-fifths of these students enter the so-called transition system, where the goal is to help young people to achieve apprenticeship-readiness.

Obstacles associated with the recognition of WBL

The acquisition of transferable skills and competences entails higher returns for individuals because they can make use these skills when they change jobs and can bargain for better wages and positions. Since public support for WBL should benefit employers and individuals, there are sound reasons for encouraging investment in training that leads to portable skills and competences. Such training should entail documentation, thereby ensuring that individuals have visible evidence attesting to their skills and competences. Such evidence can be produced in different ways: through a regulated certification system, procedures for recognition of non-formal and informal learning leading to nationally recognised qualifications (Duchemin and Hawley, 2010), certificates awarded by the employer or a training provider. In this respect, Bassanini et al (2005) discuss the issues related to the currency of such certificates in the labour market. They note that apprentices in **Germany** have strong incentives to remain in training and accept relatively low wages because the certificates they receive upon completion of their apprenticeship are recognised by other companies. In other countries (**Spain**, for example) they note that such recognition is not ensured due to a lack of confidence in the certificates awarded.

Poaching, or the risk that some firms will invest in training whilst others invest in recruiting the trained workers

Another problem specific to WBL is the risk that the firms investing in training will fail to retain the trained workers because competitors who do not train will invest in higher wages to attract the trained workforce away from them. As a result, the firms providing training fail to fully benefit from their investment while the firms poaching the trained workforce avoid training costs and benefit from the other firms' investment. This phenomenon is also referred to as poaching (see Moen and Rosen 2002 for the theoretical model).

Some poaching occurs in the **German** apprenticeship system (see Mohrenweiser et al., 2011 for an empirical analysis), where a small number of firms routinely train more apprentices than they are able to retain even though they want to retain them. Poaching is also a common problem in emerging economies, which are characterised by skills shortages and a very high degree of mobility among professionals who are in high demand in the labour market. Companies are willing to invest in training if they have a reasonable prospect of retaining the trained staff. In economies where there is high competition for certain skills, poaching can have a negative effect on the willingness of firms to invest in training. In **China**, for example, where talent shortages are acute, staff retention is a major issue. Some employers rely on recruitment and poaching to address the problem; Manpower (2011) reports that 'companies poaching talent with attractive remuneration should be wary of finding themselves stuck in a vicious cycle as other companies poach their talent with even higher wages'. There is, however, a growing awareness among companies that offering learning opportunities is also a good way to retain staff even in a competitive market because employees value having learning opportunities. Moreover, measures aimed at minimising the risks of poaching can be put in place, such as contract clauses that require staff to reimburse the cost of their training if they leave within a given period or that oblige them to pay a premium if they go to work for the competition. However, such clauses typically only apply to workers (not young people in initial training) and the compensation required should be proportional to the training received and the time worked.

Lack of a legal framework and paucity of data about WBL

The above discussion shows that policy makers face certain choices when deciding what kind of support should be provided to WBL. These choices can lead to the establishment of a legal basis defining the status of WBL. In **France**, for instance, legislation recognises WBL as a parallel and equivalent pathway to nationally recognised qualifications. This concept is inherent in the alternance system and was supported by recent legislation (2002) that grants everyone the right to have their learning recognised, irrespective of how it was acquired, provided they can produce evidence that they have acquired the required knowledge, skills and competence. Similar rights can be found in other countries, including **Finland**, where this applies to all VET qualifications.

In some countries, the lack of legislation regulating WBL is seen as an obstacle to public support in this area. In **Mexico**, the lack of a legal framework for WBL in VET (in particular with respect to the insurance of trainees) is seen as an important barrier to its expansion (Field et al., 2010). In the **Western Balkans** and **Turkey**, better regulation of the status of interns and apprentices is needed; the internship infrastructure that connects universities and vocational schools with public and private sector companies and entities is either lacking or in need of reinforcement (ETF, 2011).

The lack of evidence on the effectiveness of WBL is another factor preventing its broader development. In the US for example, data on the extent of WBL are scant, and these schemes are not subject to reporting requirements. Some authors have noted that the measurement of learning outcomes in WBL is challenging. Indeed, the current emphasis on standardised testing as the foundation of educational accountability has a negative impact on activities like WBL that may in fact be rigorous but are more difficult or less efficient to measure (Grubb and Oakes, 2007).

Many countries have no mechanisms in place to identify, share, sustain and mainstream WBL practice through appropriate legal, policy or institutional assessment (ETF, 2011). What are needed are professional networks and communities as well as other frameworks to facilitate the exchange of experience and mutual learning.

Some countries suffer from a limited domestic capacity for scaling-up and mainstreaming good practice. For example, in the **Western Balkans**, new developments are often donor driven, with pilot measures prevailing over systemic programmes (ETF, 2009).

6.2 ENSURING THE QUALITY OF WBL

Chapter 2 has already made clear that the benefits of WBL for individuals are conditioned by the quality of WBL opportunities. In other words, if learners are to fully develop their potential through participation in WBL, a number of conditions need to be met. These relate to both the environment and the individual, and include learner motivation, the support provided, and the extent to which learners are put in situations where the bar (expectation) is neither too high nor too low. The question is, as stated by Nijhof and Nieuwenhuis (2008), 'whether the workplace is designed for learning'. Those authors stress that the conditions for effective and efficient learning in the workplace differ from the conditions for efficient work organisation: 'work experience as such does not automatically lead to profound expertise but on the other hand, school-based trajectories are not good learning environments for all kinds of competencies either' (Nijhof and Nieuwenhuis, 2007, p. 7).

It has been argued by some authors that the apprenticeship model has been overly romanticised and that it has a number of weaknesses related to the quality of the learning (Grubb and Lazerson, 2007). The following are just some of the criticisms made.

- Apprentices can end up working in routine production (rather than learning through production).

- Apprenticeships require stable conditions of skill and employment, and often deteriorate under changing conditions.
- The WBL model is not a good setting for teaching abstract and theoretical material (although, as noted by Fuller and Unwin, apprenticeships can also encompass complementary training).
- Apprenticeships often replicate the gender divisions of the workplace, the class biases of family selection, and the discriminatory patterns of employers.

There is also wide recognition that WBL brings benefits when combined with off-the-job training. Certain types of general skills, including numeracy and literacy skills, but also vocational knowledge, are acquired more easily in a classroom environment, which also operates at a slower pace (Field et al., 2009).

In other words the quality of WBL is not a given and needs to be regulated.

6.2.1 What work-based practices are conducive to learning?

Several models are used to analyse and illustrate the learning potential of different workplaces and workplace situations. Markowitsch and Hefler (2007) differentiate between processes that are specific to carrying out a given job (e.g. definition of tasks), processes created through supportive human resource management measures (e.g. structured feedback, structured exchange), and those imported from outside the workplace (e.g. civic engagement, participation in leisure activities). Eraut (2007a) identified three key factors conducive to learning in the WBL context and three factors that are important on a personal level for the learner (**TABLE 6.1**). These aspects relate to how the work is organised in the workplace, the relationships between people in the workplace, and the decisions made by managers and co-workers; in other words, the learning potential of a workplace is a result of many different factors that reflect the quality of the workplace.

TABLE 6.1 FACTORS AFFECTING LEARNING AT WORK

Learning factors (personal level)	Challenge and value of the work	If people are over-challenged (physically, mentally or emotionally) or if they are under-challenged the learning process is not effective.
	Feedback and support	Constructive feedback from co-workers, mentors and line-managers and support in answering questions are important in the learning process.
	Confidence and commitment, motivation (which is conducive to learning and is also results from the above)	The extent to which individuals perceive their job to be meaningful influences further learning and their perception of whether they can make choices. A sense of progress and accomplishment also affect when and how people learn through work.
Context factors	Allocation and structuring of work	The allocation of work is central in stimulating learning. The learning process is affected by the way work is organised (job descriptions and task allocation) and the decisions taken by managers or co-workers on what work is allocated to novices.
	Encounters and relationships with people	This aspect includes working with, meeting and observing the different people from whom the learner can learn and also the difficulty of the work. Mutual respect and the attitude of all concerned to collaboration are also crucial.
	Individual participation and expectation of progress and performance (which is conducive to learning as such but also results from the above)	Progress in WBL can mean doing things better, doing things differently or doing different things. Encouraging progress, but also recognising it, stimulates more learning.

Source: Created on the basis of the factors outlined by Eraut (2007a)

Combining a theoretical model with empirical research Eraut (2007a) presents a typology of early career learning that distinguishes between:

- work-processes with learning as by-product;
- learning activities located within work or learning processes;
- learning processes at or near the workplace.

The list of activities under each category is presented in **Table 6.2**.

TABLE 6.2 A TYPOLOGY OF EARLY CAREER LEARNING

Work-processes with learning as by-product	Learning activities located within work or learning processes	Learning processes at or near the workplace
Participation in group processes	Asking questions	Being supervised
Working alongside others	Getting information	Being coached
Consultation	Locating resource people	Being mentored
Tackling challenging tasks and roles	Listening and observing	Shadowing
Problem solving	Reflecting	Visiting other sites
Trying things out	Learning from mistakes	Conferences
Consolidating, extending and refining skills	Giving and receiving feedback	Short courses
Working with clients	Use of mediating artefacts	Working for a qualification
		Independent study

Source: Eraut (2007a)

As discussed above, these practices are very much related to the organisation of work within the company. Aspects such as autonomy to make decisions reflect the learning/development potential of the workplace. Unfortunately, these aspects are also closely related to the each company's workforce hierarchy. As shown by the European Survey of Workplace Conditions (Eurofound, 2012), there are major differences in the levels of autonomy accorded to workers depending on their categories. Highly skilled clerical workers enjoy high levels of autonomy (over 85% can change the speed, the method and the order of the tasks they undertake), while low-skilled manual workers have significantly less (only 52% have the autonomy described above). Consequently, the learning potential of jobs occupied by low-skilled manual workers is often lower than that of other types of jobs.

The complexity of the job is another factor that influences the learning potential, and major differences exists across countries in the complexity of the jobs in their economies. Within Europe, countries like Denmark, Sweden, Finland and the Netherlands have significantly higher proportions of complex jobs compared to countries like Spain, Slovakia, Greece, Bulgaria, Romania and Lithuania (Greenan et al., 2007). Consequently, there are more workplaces with high learning potential in these countries than in the others. Note that this does not mean that the more routine jobs have no learning potential (something that also depends on the level of learners' skills at entry level), but once learners have mastered the tasks, they have few opportunities to progress.

The learning potential of a workplace is influenced by both the internal organisation and also the nature of jobs in the economy. In a report entitled *Efficient Growth, Employment and Decent Work in Africa* (2011), the ILO notes that 'what you produce matters for the nature of knowledge, technology and of capabilities that can be acquired in industries'. Nübler (2011) highlights the concept of collective capabilities (tacit know-how in organisations and societies) that lies at the heart of economic development. This author discusses how these capabilities can be developed through dynamic processes of organisational learning, especially in catch-up countries. This model places particular emphasis on the need for businesses (and supporting policies) to move from low to high quality activities, and on productive transformation as well as learning networks and smarter routines in enterprises. While this economic development aspect is not the focus of the present review, it is relevant here as it is likely that this kind of economic approach will also favour the emergence of workplaces that are more conducive to learning than those often associated with economic strategies focussed primarily on production rationalisation.

6.2.2 Obstacles to quality in WBL

Insufficient resources committed by employers to ensure that quality training is provided

The role of employers in WBL is crucial as they must devote staff time to planning, placement, assessment and review, as well as workplace supervision and training. For example, poor support and commitment on the part of the employer is one of the main reasons cited by apprentices and trainees in **Australia** for not completing a programme, especially in cases where most of the learning takes place on the job. The lack of a training plan and the absence of discussion with the employer to monitor progress are also reported as obstacles (Bowman et al., 2005).

To ensure that employers provide an optimal environment for learning, many countries with developed apprenticeship systems have put in place a process that regulates the resources companies must have to support apprentices. Sweet (ETF, 2009) indicates that such screening mechanisms tend to be missing in many EU neighbourhood countries in the Mediterranean region.

Availability and quality of trainers and mentors

If participants are to learn through work or while working, the work environment must be organised in such a way as to encourage them to take some degree of responsibility and to resolve problems by themselves. This assumes that the context of the enterprise—including the position of mentors and management—favours learning. Furthermore, companies have to train the trainers by working with education partners to help employees understand best practices for interacting with and managing the students under their supervision (Darche et al., 2009). For example, in **Korean chaebol** (large enterprises), training is largely seen as the responsibility of special training departments. Consequently, shop-floor supervisors focus largely on production problems and do not see the development of skills in apprentices as part of their normal role (Jeong, 1995).

In the Mediterranean region, several countries (**Turkey, Morocco** and the **occupied Palestinian territory**) have put in place measures to ensure that in-company trainers have the required pedagogical or personal development skills to support WBL. However, this is proving particularly difficult to implement in countries where the economy is dominated by SMEs (micro-businesses in particular), which are too small to employ a special trainer or to ensure that an existing member of staff acquires the required qualifications (Sweet, 2009).

Complementarity between on-the-job and off-the-job training

Combining on-the-job training with days of classroom-based education is practically standard practice today in countries such as **Germany** and **Switzerland**, but apprentices in **Italy** and the **UK**, especially those in service occupations, receive no off-the-job training (Ryan, 2011). The absence of classroom instruction also tends to apply to informal apprenticeships. Fuller and Unwin (2008) have pointed out that restricting apprenticeship entirely to the workplace can be risky for learners because, while the workplace and everyday workplace activity are important for meaningful learning, apprentices also need time to reflect and transcend their workplace concerns. Ryan (2011, p. 8) agrees, arguing that 'in treating the classroom as a selectively redundant source of learning, this view rejects the apprenticeship ideal outright'. Interestingly, a study of informal apprenticeships in **Tanzania** shows that the workers who reached the highest wage levels in the professions studied are those who combined informal apprenticeship learning with other off-the-job training (formal or non-formal). Their wages are higher than those who only took part in formal or non-formal learning or only informal apprenticeships (Nübler et al., 2009).

Quality control

A related challenge for the development of WBL is the need to standardise and institutionalise WBL practices to ensure consistent quality. The aim of quality control is to ensure a common core of learning for students (Darche et al., 2009) because WBL is not effective without quality learning in the workplace.

Many strategies can be employed to accomplish this aim. Yasso, 2000 defined a number of them, as follows:

- a learning plan that lays out what the student should learn in the workplace;
- a counselling support programme to help students cope with problems they encounter at work;
- documentation and evaluation of workplace learning activities;
- consensus between the school or training provider, the employer and the student on WBL goals and how they can be achieved;
- careful selection and planning of workplace learning activities;
- an orientation programme to prepare students socially, practically and psychologically for their role in the workplace.

6.3 THE AVAILABILITY OF WBL OPPORTUNITIES AND COORDINATION WITH EMPLOYERS

Employers may not always want to invest time and resources in certain forms of WBL. Furthermore, the provision of WBL is sensitive to economic cycles. In depressed labour markets, the number of apprenticeship placements tends to decrease and public authorities need to cater for the demand for learning through other, often school-based, forms of instruction. The authorities may also choose to stimulate the demand for apprentices through subsidies, bearing in mind the risks outlined above. However, the lack of apprenticeship places is even more worrying if we consider that a large proportion of those not finding a place in the dual system are young people belonging to disadvantaged groups—individuals who have failed to meet the requirements of the apprenticeship contract because of learning difficulties, and low levels of qualification (Quintini et al., 2007). In such cases, special measures are needed to support these young people in need of additional support to access or remain in WBL.

The following section examines the obstacles to WBL caused by a shortage of WBL places and, in general, related to cooperation with employers.

6.3.1 Low level of involvement of social partners and stakeholders

A strong WBL culture requires the presence of powerful employer and business associations, the full involvement of unions, and a long familiarity of all parties with the WBL system (Quintini et al., 2007). Strong stakeholder involvement and ownership is the key factor, for example, in the strength of the **German** dual system.

Indeed, the exclusive role adopted by government and the minimal role of social partners has resulted in a failure to develop similar dual systems in many other countries, including Korea (ETF, Sweet, 2009) and the US (OECD, 1999). For instance, in the **US**, the School-to-Work Opportunities Act of the 1990s failed to develop a wide system of youth apprenticeship partly due to the lack of a coherent structure of employer and employee organisations to support the initiative (Symonds et al., 2011).

Governments planning to introduce vocational training systems focussed on WBL must develop a common understanding and ensure the willingness of all social partners to support such a comprehensive system. Axmann (2004) has stated that employers' organisations, SME associations and chambers of craftsmen and commerce must mobilise the owners of enterprises to accept the model of WBL combined with theoretical instruction. Unions are asked to collaborate, for example, through tripartite bodies that prepare the minimum requirements of the curricula, elaborate the qualification standards, and supervise the functioning of the centres or schools that provide theoretical instruction (Axmann, 2004). For example, employers in the **Western Balkans** are often perceived as being quick to criticise the education sector for failing to deliver the skills needed by the labour market, but reluctant to support its reform because they believe that this responsibility lies almost exclusively with the state (ETF, 2011).

Employers' organisations and business associations also play a critical role in efforts to upgrade informal apprenticeships because their recognition of skills acquired through WBL can enhance the credibility of such apprenticeships. For example, craftworkers' associations in Cameroon are very keen to reform the traditional apprenticeship structure, and the chamber of commerce and crafts is very involved in turning apprenticeship into a dual training system. However, the country lacks a national federation of craftworkers' associations that could centralise innovative approaches and disseminate them nationwide (Walther and Filipiak, 2007 p. 173).

6.3.2 Conditions regulating apprenticeships can be seen by employers as unattractive

Certain conditions may make apprenticeships and other forms of WBL an unattractive option for employers. Some companies have a short-term view of their future and find it difficult to adopt a long-term view with respect to skills and training requirements (Axmann, 2006). Given the need to respond quickly to changing market conditions, an apprenticeship lasting three or more years can be seen as too long. This is particularly true for SMEs, which are typically harder to motivate to engage in training young people. As a result, many employers prefer to recruit skilled workers on the labour market than to train them through an apprenticeship (Quintini et al., 2007)

One solution put forward to address this challenge, for example in **Australia**, is the accelerated apprenticeship model (Callan, 2009). Shorter apprenticeships have been developed to provide fast-track training but the development has not been well received by all. For example, there is a belief among employers that the traditional apprenticeships should remain unchanged despite the shortcomings identified (ibid).

In other countries, such as **Montenegro**, unsuccessful attempts to mainstream the apprenticeship model have been the result of the heavy administrative and financial overheads related to the dual system (ETF, 2011). In **Korea**, there have been attempts to promote WBL by way of a regulation obliging larger companies (those with more than 300 employees) to contribute to vocational schools by conducting in-house training or through payroll taxes (Gropello, 2006).

6.3.3 Formalising informal WBL

WBL exists and takes place to some extent in all countries and companies worldwide. The policy concern is to support the forms of WBL that are beneficial to society and the economy, to maximise its potential beyond what is already taking place in a given economy, and to broaden access to WBL programmes. Informal apprenticeships exist in many countries, often modelled around craft and guild organisations that have existed for decades and even centuries. They are considered to be the most important form of skills training in most parts of **Africa** and **South Asia** (ILO, 2011b) and also in many ETF partner countries, including **Albania**, **Azerbaijan** and **Egypt**. There are concerns in **Turkey** about the quality of both internships and apprenticeships, and many employers prefer to employ young trainees informally. According to some estimates, the number of informal, unregistered apprentices in Istanbul, for example, is ten times higher than that of formal or registered ones (Vos and Unluhisarcikli, 2009). In countries like **Senegal** and **Cameroon**, informal apprenticeships account for nearly all (90%) trades-related training (ibid.). Similarly in **Ghana**, informal apprenticeship training is responsible for some 80%-90% of all basic skills training, compared to 5-10% from public training institutions and 10-15% from for-profit and non-profit providers (Palmer, 2008).

Policy makers and donor agencies are keen to move informal training activities into the economic and social mainstream. Formalisation of informal apprenticeship systems is not easy, but if the upgrade process is managed effectively, it can bring benefits to all parties involved, from young people and micro and small businesses to whole economies. **BOX 6.2** highlights some of the key issues that need to be taken into consideration in the formalisation process.

BOX 6.2 EXAMPLES OF ISSUES THAT NEED TO BE TAKEN INTO CONSIDERATION WHEN FORMALISING/UPGRADING INFORMAL WBL ARRANGEMENTS

- Informal apprenticeships are embedded in local traditions and customs and are more organised than might first appear. Any intervention should be based on a solid understanding of customs and the reasons why the existing informal system works. International donors should avoid a ‘we know how to do this better than you’ approach/attitude.
- Whenever possible, build on existing arrangements, rather than creating a completely new system from scratch.
- Involve a range of different stakeholders in the development process, including youth and parents associations and, importantly, improve the capacity of existing business associations so that they can play a leading role in the WBL system.
- Enhance recognition of the skills acquired through credible organisations, such as business associations, and improve the quality of training by upskilling master craftsmen as well.
- Enhance links with the formal education sector and the formal labour market.
- Improve the reputation and public perception of WBL, for example, by linking it to the national training system.

Source: ILO (2011b)

Benin stands out as an example of good practice. Since 2006, the systems and diplomas created following the reorganisation of informal sector apprenticeships have become an integral part of the national training policy, and are the component most appreciated by economic and social partners.

BOX 6.3 EXAMPLE OF GOOD PRACTICE

Benin has built an exemplary system for vocational training in the informal sector (the Vocational Skills Certificate—CQP), which is based on the recognition of the role and contribution of the traditional apprenticeship system and in particular the practical skills it transmits. There has been a gradual evolution towards a policy that acknowledges the value of the existing set-up (the apprentice receives training from a master craftworker, which is recognised and assessed as part of a national certificate) and a shift away from repetitive tasks, thanks to the addition of practical and/or theoretical training adapted to new technological, managerial and sales requirements. One of the reasons behind the success is that the country's craftworkers are organised at local, county and national levels and have recognised that training for apprentices and owner/managers is a vital prerequisite for the adaptation of their products and services to changing markets. The National Federation of Craftworkers (FENAB) has become a key partner in the current reform of the entire national vocational training system.

Source: Walther and Filipiak (2007)

6.4 PERCEPTION OF WBL**6.4.1 Perception of learners and parents**

In many countries, there is still a need to develop a 'widespread conviction that WBL has significant educational value for a large number of students' (Bailey et al., 2004). WBL is seen as second-best educational alternative by many—a perception that has negatively influenced policy making favouring cooperation in VET. In these countries, apprenticeships face serious problems in attracting students. The lack of pathways to higher education from apprenticeships further contributes to the unattractive image and limited coverage of such training (ETF, 2011; Sweet, 2009).

6.4.2 Perception of employers

The employers' perception of WBL can be a barrier to its development. Some employers, for example, offer traineeships and apprenticeships as a source 'not so much of future skills (investment-orientated training) as of low-cost production labour in the present (production-orientated training)' (Ryan, 2011, p. 3). This is a problem shared by many ETF partner countries, and in such cases the closeness of WBL to production becomes a weakness rather than a strength.

Perception-related barriers also include a lack of awareness of the apprenticeship system among employers. Research in the US has shown that marketing the value of WBL is required to expand the system, particularly marketing that includes bottom-line arguments to attract the participation of employers.

The connection between schools and employers is another problematic area. In many countries, enterprises seem to have abandoned the notion that joint collaborative programmes are feasible (Axmann, 2006). In **Eastern Europe** cooperation is generally sporadic, with only isolated examples of systematic cooperation in IVET leading to the creation of WBL opportunities (ETF, 2011). In the **Balkan** countries, with the transition to a market economy, VET schools lost their traditional partners for WBL. For a while, formal education systems were left without any kind of support from the business sector. Putting this cooperation into practice is still new and represents a challenge (ETF, 2011).

In **Kosovo**¹², as in some other countries, small company size and the lack of representation are also obstacles to cooperation that hinder the development of apprenticeships and on-the-job training. Employers' organisations are usually based in capitals and larger cities, representing businesses operating in rural areas to a much lesser extent (ETF, 2011).

The low participation of older workers in WBL can also be partially explained by employers' attitudes. Some employers hold stereotypical views about the productivity potential of older workers compared to their younger counterparts (European Commission, 2007). However, the relatively disadvantaged position of older workers in terms of access to workplace training may be further aggravated by the attitudes of workers themselves. Some older workers are less confident about their potential during and after the training period or fail to see the advantages of training (European Commission, 2007).

The development of learning-rich workplaces requires mutual learning between different categories of staff. This means not only learning from above (inexperienced worker learning from a master/expert acting as a role model), but also learning from the person next to the learner and from below (with experienced workers learning from less experienced workers) and from the outside (Nielsen and Kvale, 2005). Employees in such environments are more likely to have a positive attitude towards training (Brown et al., 2010).

¹² So-called without prejudice to position on status, and in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence.

6.5 THE LIMITATIONS OF WBL

The discussions earlier in this text have already revealed some of the limitations of WBL, such as the weakness of the model for developing basic skills or imparting theoretical or academic knowledge and issues concerning the portability of skills. However, there are two additional issues that have not yet been fully discussed: the reproduction of social and gender segregation patterns; and working conditions.

6.5.1 WBL reproduces the patterns of work distribution in the workplace

One of the limitations of WBL is that it tends to reproduce existing workplace patterns of segregation—according to gender, social class and ethnicity. As described above, the high learning potential of WBL derives from the fact that it takes place through socialisation with professionals in a given field. However, learners not only pick up the good habits and codes, they also adopt many other preconceptions present in the workplace. Consequently, WBL is typically not particularly well-suited to breaking down the barriers of segregation.

For example, Nübler et al. (2009), in their study of informal apprenticeships in **Tanzania**, demonstrate a clear gender bias in all the occupations studied. Even in tailoring, an occupation with many female workers, the proportion of men increases at higher levels (there are many more men among master craftworkers than among unskilled workers in the sector). This tradition is perpetuated by the informal apprenticeship system, and interviews with master craftworkers reveal that many of them exhibit a gender bias in their selection of apprentices.

6.5.2 Working conditions

Another issue specifically related to WBL concerns the working conditions of apprentices and trainees. These learners work in particularly precarious situations in countries where their status is not regulated and there are no reliable mechanisms to enforce the regulations that do exist.

The ILO review of informal apprenticeships shows that apprentices work long hours, receive little or no wages, lack social protection, or have scant protection when a master craftsperson breaches the agreement. These findings are also reflected in the study of informal apprenticeships in Tanzania.

However, these problems are not exclusive to developing countries; they are also found in industrialised economies. A survey of UK graduates in 2011 showed that 17% of graduates gained work experience through unpaid internships and only 23% were paid, demonstrating that unpaid work experience is nearly as common as paid¹³ (Graduate Prospects Ltd., 2011). Unpaid internships can provide learners with relevant experience, but students in such situations should make sure they are really in positions where they are learning and benefitting from the placement; otherwise, the situation could be characterised as abusive.

¹³ Most students (43%) gained experience via casual paid work (not traineeship schemes), 16% via voluntary work, 14% did a sandwich year as part of their study – i.e. full time work while 28% have not gained any work experience while at university.

ACRONYMS

CVET	Continuing vocational education and training
CVT	Continuing vocational training
ETF	European Training Foundation
EU	European Union
ILO	International Labour Organisation
IT	Information technology
IVET	Initial vocational education and training
JQC	Joint Qualification Certificate
OECD	Organisation for Economic Cooperation and Development
SME	Small and medium-sized enterprise
UK	United Kingdom
US	United States of America
VET	Vocational education and training
WBL	Work-based learning

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CONTACT US

Further information can be found on the ETF website:
www.etf.europa.eu

For any additional information please contact:

European Training Foundation
Communication Department
Villa Gualino
Viale Settimio Severo 65
I – 10133 Torino

E info@etf.europa.eu
F +39 011 630 2200
T +39 011 630 2222

