

PROCEEDINGS E REPORT

Content Embedded Literacy in the Workplace

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INTRODUCTION

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The topic of *embedded literacy*, closely connected to *embedded learning* on one hand, and *training in the workplace* on the other, is a central theme for reflection on adult education in Europe and around the world. The exponential increase in migration among a large part of the population, the need to raise the schooling levels of the weakest social classes and the requirement/need for adults to return to training to span the technological gap separating many workers from the skills required by the global labour market, are just some of the manifest social transformations that have made it urgent to respond to the demand for basic and initial training.

The category of *literacy* is very complex and it can be given multiple definitions, as the essays in the volume demonstrate. Nevertheless, there seems to be a general agreement between the various areas of study, concerning the notion of *competence*, as shown in the European Parliament and the Council of the European Union documents from the mid-2000s¹. Some parts of the adult population of working age are lacking the basic skills for dealing with the globalised world, technological advancement, or indeed their own personal everyday life as well as life in the workplace. These competences are by no means the ones that should have been learnt during primary school, that is, reading, writing and counting. These competences have not evolved into know-how skills through an initial level of literacy, and do not serve in the evolvment of the personal skills to continue learning in the lifeworld.

The problem is particularly important for democratically developed countries. Here a large number of workers cannot access the labour market due to the radical changes and transformations it has undergone as a result of globalisation in the last ten years in particular. In addition, the economic

¹ Recommendation of the European Parliament and Council, 18 December 2006, (2006/962/CE). The recommendation concerns the key competences for life-long learning.

crisis that has affected all the most industrialised nations has made the need for migrants to learn a language, for people with low levels of schooling to understand new technologies, and for every employed or unemployed adult to know how to transform learning resources into transferable knowledge in the most diverse professional spheres all the more urgent.

What training, for which contexts, with whom and how? This is a quick summary of the questions that the volume we are presenting here attempts to provide with some lines of thought.

The European Commission² indicates *knowledge* as a pivotal element for the economic and social development of the EU countries; knowledge meant as the possibility of training, the need for education, an innovative trend for individual lives and the collective life of its states. The ability to go on creating knowledge is one of the points justifying the diffusion of a type of knowledge that does not remain knowledge alone, but becomes the driving force behind social transformation and the empowerment of every single person.

Knowledge, know-how and learning are part of the first age of human development, but appear as mainstays of adult life whatever condition it evolves into. Besides, ever since Classical Greece man's human formation has developed along and by means of education/schooling on one hand, and, on the other hand, formation of the person, of the self throughout the whole of life. Even then man was seen in his entirety and young people were educated to achieve fullness *through* and *with* knowledge and know-how. Today, every man's active life hinges upon learning. However, not just learning in the contexts set aside for that end, such as schools or evening classes or professional training. Learning *while* at work and *within* the workplace is the way to uphold a tough, high-level fight against primary and secondary illiteracy.

The pledge to achieve higher levels of economic and social development can only come to pass by raising levels of schooling and decreasing relapses into illiteracy among adults both in and out of work. The central problem for the European states that have put the Lisbon indications into practice revolves around both increasing the number of people entering training and diffusing knowledge of new technologies as a way of entering the new labour market in the twenty-first century. Nevertheless, the problem with developing economic and social policies has been how to combine the diffusion of know-how/knowledge/learning with the methods used for this end.

² European Commission, Communication from the Commission, *Adult Learning: It is never too late to learn*, COM(2006) 614 final, 23.10.2006. Cf. European Commission, Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, *Action Plan on Adult learning. It is always a good time to learn*, COM(2007) 558 final, 27.7.2007.

And this is where *embedded literacy* comes in, a topic which the volume tries to deal with from a twofold viewpoint: through theoretical reflection outlining the theme against the development of the European labour market, and reflection on hands-on experiences, resulting from a project financed by the European Community called CELiNE, *Content Embedded Literacy Education for the New Economy*³ which all the authors of the essays actively took part in putting together. Work on the project lasted approximately two years, from the last months of 2007 to October 2009. The project was based upon a methodological structure concerning the construction of a training course *within and in the workplace*. The outcome of the project was a six-module course for the development of *embedded literacy* through an *embedded learning* method. This planning-teaching work has been put into practice and tested in two European countries, Greece and Romania.

So, the central theme of the relationship between work, subject, learning and knowledge has taken shape in terms of teaching and training, in theory and in practice. Hence, what is being offered is not just reflective material, but also reflective practice.

The introduction to the volume suggests keys for looking at the topic in question and puts the problem into context following a pedagogic and andragogical view that is present in the literature but absent from the educational debate in some partner countries. In this sense, the contribution given by Federighi's opening essay focuses on the nexus between implicit education and *embedded learning* as the central key for giving both companies and workers the opportunity for growth. The essay tends to analyse the trends that this nexus prompts within economic production contexts and defines its management mechanisms. The piece is rounded off by proposing an example of a model of *embedded learning* in a company taken from the analysis of a series of experiences carried out in some European firms. Torlone's essay gives a detailed account of the state of the art through the presentation of a series of examples of good practice of *embedded learning* in the workplace. This collection highlights how the process is already underway at least in the companies that are most attentive to their workers' educational conditions and also shows possible ways of proceeding in this direction.

The pedagogic contribution to the debate on the education/work nexus deals with a further viewpoint that needs to be considered so that *embedded literacy* does not become merely a new didactic-methodological form of teaching. The workplace is also a place for formation of the self; the work tools and work context are aspects of the educational activities

³ CELiNE project, *Content Embedded Literacy Education for the New Economy*, (2007 LLP-LdV-TOI-2007-RO-012) in <<http://www.celine-project.eu>> (09/09).

actioned by the subjects. Company organisation educates too. Boffo's essay deals with this additional formative aspect of the problem. The subject who learns is given central importance not only by the care used by the trainers to build the educational activities, but also by the way that the subject is then enabled to take care of himself. In this sense, the motivation to learn, the hinge of life-long learning, will come from personal motivation, which creates wellbeing in the surroundings, in turn also created by the same wellbeing/care that every subject gives and receives in the workplace, as Dârjan also demonstrates.

The didactic/methodological contribution is illustrated in the essays in the second part of the volume which present the teaching that a VET teacher and a VET trainer have to draw up to build *embedded learning* courses. This is the direction taken by Dârjan and Predescu in their essays. Teaching activities are illustrated by Letrud and Sørli, who provide an example of the work carried out in Norway on *embedded literacy*.

Other particular aspects of a VET teacher's methodological/teaching work are presented by Lazăr and Predescu as regards Romania, and by Halatsis as regards Greece.

The volume is rounded off by essays by Radtke and Loble, adding to the understanding of how other European countries are implementing *embedded literacy* courses and illustrating some examples from workplaces in Germany and the United Kingdom.

Those European countries that have been the destination for a large number of immigrants, such as Sweden, Norway, Germany, France and Britain, have been considering the problem of learning the host country's language or raising low-skilled workers' levels of schooling for quite some time, not only with the aim of improving social integration, but also in the awareness that a country cannot achieve a democratic balance without the citizens' wellbeing in their surroundings.

However, *embedded literacy* is not a problem pertaining to the European Union, or not the EU alone anyway. With the fall of communication barriers, the boundaries of knowledge have expanded, but in addition to this so have the problems that a lack of know-how/knowledge involves. So the challenge is not ours alone, in Europe, it is a planetary challenge that concerns the survival of the very democratic states themselves.

Florence, 20 September 2009

PART I
THEORETICAL ISSUES

CHAPTER I
EDUCATION INCORPORATED INTO WORK

Paolo Federighi

Introduction

This essay deals with the knowledge and educational valencies that are generated during work. In particular, it pays attention to how, during work, the acquisition/production of knowledge and behaviour takes place and, above all, how it is possible for both the subject involved in production activities and the company responsible for creating the work context to intentionally manage the relative programmes. The aim is to understand how to reduce the unpredictability that comes with informal education and to increase the possibility of placing educational factors in the various production activities so as to produce specific processes of personal and professional growth amongst the workers.

Therefore, my attention is not directed at training in the workplace as such nor at learning processes that arise merely due to being part of an organisation – informal education. Against this background, I will try to analyse the bases and perspectives that make the intentional management of aspects and moments of the workers' production activity possible for educational ends. The hypothesis is that we can also work towards training goals that can be achieved through work and not just through training.

This reflection is situated in a context of studies and research currently including – regarding informal education in the workplace in particular – specialised educational research programmes, backed up by – also at university level – decades of work (by the Center for Work and Learning at the Northeastern University of Boston, the Department of Psychology and Educational Studies at the University of Roskilde, the MIL Institute in Lund, the Teaching and Learning Research Institute, Ashridge Business School, the London Business School, IMI, IMEDE (now IMD), INSEAD, specialised researcher networks, work promoted by various international organisations (ILO, OECD, the World Bank), contributions from the ministries of some states (on this see the wealth of studies and tools contained in the US Department of Education, web

site <<http://www.work-basedlearning.org/>> (09/09), as well as what has been produced under the policies of the UK Department for Education and Skills and, in particular, the *Skills for Life Strategy*).

Apart from two exceptions, the sources used for this study are based on literature in English.

1. *The Workplace as a Learning Place*

The workplace is a complex location for training since the learning of values, tasks and conduct is imperative for the employees and forms the basis of their performance, and because learning and training make sense as they are a factor for accomplishing the company business and at the same time for the workers' professional and personal growth.

On one hand, company training policies are necessarily connected – directly or indirectly – to implementing the company's plans. And it is in this sense that the demand for training expressed by companies must be considered «a derived demand, one that emanates from the business need to change either the technology or the organisation itself» (Fuller 2002: 38)

However, these policies act on subjects who have their own personal and professional life course (past, present and future) and who, as a result of this, each reinterpret the sense of the learning opportunities present at work in their own way.

The sense attribution process depends in part on where the single workers find themselves in the various phases of their professional life cycle as a result of:

- different ages or phases in life and their growth and ageing process;
- different positions and conditions that can characterise the various moments or stages in the working life, deriving from individual and collective trajectories affecting the individual.

The sense attribution process also depends on the subject's ability to pursue their reasons for development and to check and assess how the company's learning pathways fit in with their own aspirations. «Workers are both part of and separate from their workplace community: they have prior experience, together with lives and identities that far extend beyond it. Analysis of data from the multiple projects suggests several overlapping and inter-linked ways in which biography is relevant to learning at work» (Evans, Kersh 2006: 1).

The training that takes place at work covers all the fundamental types of education on offer (formal, non-formal, incidental and informal). Nevertheless, the fundamental and by far most common training processes

are informal and incidental: two types of educational procedures characterised by precisely the fact that they work by incorporating training into normal work activities. From the andragogical viewpoint, it is on this type of procedure that the content and quality of work-based learning depends.

2. *Some Preliminary Definitions*

From the set of studies carried out on the subject of informal education in the workplace, whose aim is to study learning as an embedded part of the work process, we can pinpoint the – common – meaning of some key concepts used in this essay.

As Garrick also claims, in his *Informal Learning in the Workplace: Unmasking Human Resource Development* (1998: 15), a large number of contemporary definitions of ‘informal learning’ are inspired by Dewey and his vision of the relationship between experience and education, where experience is considered as potentially counter-educational, or able to influence «the formation of aptitudes of desire and purpose» (Dewey 1938: 40).

Informal learning is defined by Marsick and Watkins (1997) as a learning process that takes place in day-to-day experience, often unconsciously and they add that «not only is informal learning unique to the individual, but control of learning rests primarily in the hands of the learner’. Stamps adds that in informal learning ‘the learning process is neither determined nor designed by the organization, regardless of the formality [or] informality of the goals and objectives toward which the learning is directed» (Stamps 1998: 32).

As for the definitions of informal learning in the workplace, for Garrick it «is constituted through and by embedded and discursive influences» (Garrick 1998: 13), therefore, he underlines its non-structured dimension without, however, excluding its intentional side. On the contrary, Billett (1999) maintains that workplace learning is a structured activity insofar as its characteristics are determined by the organisation’s goals and activities. The reason to shift the attention to the structured nature of workplace learning rather than its formal/informal characteristics is also supported by other authors, according to whom «an approach which investigates issues relating to what is hidden, what is explicit and what is contested about learning at work is preferable to one preoccupied with identifying formal and informal attributes of learning» (Fuller 2003: 12).

Marsick and Watkins (1990) identify informal learning as intentional training of an informal nature (which includes self-directed learning and coaching activities) and adopt the category of ‘incidental learning’: «informal learning can be deliberately encouraged by an organization or it can take place despite an environment not highly conducive to learn-

ing. Incidental learning, on the other hand, almost always takes place although people are not always conscious of it» (Marsick, Watkins 1990: 12). Eraut distinguishes between three degrees of intention and introduces – with reference to Reber (1993), Tough (1971) and Dewey (1933) – a distinction between *implicit learning* meant as

[...] the acquisition of knowledge independently of conscious attempts to learn and in the absence of explicit knowledge about what was learned, *reactive or opportunistic learning* that is near-spontaneous and deliberative learning that is more considered. I use the term “reactive learning” because, although it is intentional, it occurs in the middle of the action, when there is little time to think. In contrast, *deliberative learning* includes both “deliberate” learning (Tough 1971), where there is a definite learning goal and time is set aside for acquiring new knowledge, and engagement in deliberative activities such as planning and problem solving, for which there is a clear work-based goal with learning as a probable by-product (Eraut 2004: 250).

Obviously this paragraph gives just a brief summary of the definitions. A closer look would require analysis of the relations with other correlated concepts like in the work carried out by Coombs on the categories of formal, informal, and non-formal learning (Coombs, Ahmed 1974), experiential learning (Kolb 1984), self-directed learning (Knowles 1950; Candy 1991), action learning as a variant of experiential learning (Revans 1982), which then evolved into action reflection learning (Marsick 2002), action science (Argyris, Schön 1974; 1978) and reflection in action (Schön 1983), critical reflection and transformative learning (Mezirow 1991), tacit knowing (Polanyi 1962; 1966; 1967; Nonaka, Takeuchi 1995), situated cognition (Scribner 1986; Lave, Wenger 1991) and communities of practice (Wenger 1998).

Together these definitions provide fundamental concepts for educational activity. However, the border line between the subject’s learning and the actual educational activity put into practice by the company, the trainers or the subject themselves is not clear. Hence, I will now try to analyse the actual conditions in which informal learning takes place within a company.

3. Informal Educational Activities

A Definition

If we are to look at educational activities, we need to concentrate our attention on the educational functions of the context factors that directly and indirectly generate learning processes. To take up Eraut’s analysis (2004: 269), it means concentrating on factors of context and not on factors directly concerning learning. Amongst the latter Eraut includes

trust and commitment, feedback and support, the challenge and the value of the work carried out; while the context factors are given to be as follows: work allocation and structuring, relationships with work colleagues and expectations connected to each person's role, performances and progress. The best expansion on this brief taxonomy can be found in a research report by the Huber Institute (2002), praiseworthy due to its definition of the actual activities, and also its inclusion of relationships with clients and suppliers as well as a new transversal variable: the business cycle. The report comes up with the following classification:

- training incorporated into daily routine work;
- teamwork done both to face up to new challenges and to resolve immediate issues (quality improvement, for example);
- relationships established through the value chain with suppliers and customers.

All these practices are part of the company's day-to-day business. However, their importance and contents vary depending on the business cycles: when the company is committed to achieving the right conditions to generate processes to increase synergy and efficiency, or instead to innovation challenges.

Intentional educational activities not incorporated in the daily routine work can – like the other types of educational activity – be identified by analysing the explicit/implicit rules in force in the work context, which are expressed through formal tools (plans, regulations, projects, etc.) or nevertheless implemented by tacit agreement and are part of the company culture (gender relations or diversity management – especially where the differences are more marked – are never made explicit).

The report mentioned also confirms that each company has its own systems to regulate and accompany what we define educational activities:

They also use protocols, diagnostic tools, and organization development interventions to build infrastructure for learning through work. When companies make sure that the right people meet at predictable times in the business cycle, they put a structure in place that supports getting and using new ideas. People take advantage of learning opportunities created by processes such as goal alignment and planning across levels, mid-year reviews and budget planning, top management meetings and standing committees. Companies also use management retreats to build commitment to change and to create environments of trust where people can connect more easily than back on the job (Huber 2002: 8).

The Company Training Device

The set of measures adopted by a company and the explicit or implicit rules of conduct in force inside it make up what we call the company

training device. They are rules that have accumulated over the years, having undergone continual amendments, but only as a result of binding processes. In every company, whatever type or size it may be, there is a 'company training device' (CTD), that is, a set of norms – formalised and non-formalised – that determine the procedures for accessing, exercising and developing professional and individual knowledge. The CTD does not stop at the actions of the personnel offices and continuous training sections – where they exist. The CTD can be recognised as the set of relationships that come into being between the various components present in a company. First of all, it implies an ability to recognise what today seems natural but is in reality the product of a slow process of sedimentation in the operating procedures, work criteria defined over the years, or even centuries if we are talking about craft companies. It is a question of recognising the apparently natural characteristics of the current working model and assessing their effects on the employees' training.

Taking from the contribution by Bernstein (1990) – the one who first proposed the idea of 'pedagogic device' – we could state that in order not to be condemned to simply reproducing what already exists (in their model), companies have to entrust themselves to the action of precise historical subjects to intervene in organisational and production processes. The organisation's life and development is accompanied and guided by a series of rules that regulate the relationships between the various actors operating inside it, between them and the outside, including relationships with the product and the economic results.

The whole company organisation is involved in managing the system, obviously with different roles according to which part of the system they preside over.

We can boil a CTD down to three basic components:

- Distribution rules
- Contextualisation rules
- Evaluation rules

The distribution rules are the ones that determine who is due what. Their functions are to exclude or include and they allow the various types of agents to come into possession of information and knowledge (the distributive dimension). On the basis of these rules we can determine who has the power to think the unthinkable, that is, to introduce innovations of all types to the company (regarding the product, the process, organisation and trade). They are functions of an immediate importance, both due to their access to information and their possibility to transform the workplace. In other words, what we have to deal with is not only the distributed information or courses, but we need to concentrate our attention on the system regulating the distribution of pro-

fessional and non-professional knowledge so that we give it the power to determine the training processes both for the employees and for the future and quality of the company itself. The figures that preside over these functions are the group of leaders and heads involved in the various sectors of the company, who exercise distributive powers, though to a different extent and with different responsibilities. This is another reason why they are the main actors in the development (or lack of) a culture of security within a company.

The recontextualisation rules are linked to the fact that the knowledge, skill and know-how acquisition process is always prompted by a regulative discourse that dominates and recontextualises it within an order of preset relations and identities (Bernstein 1990).

The distinction between *instructive* discourse – more connected to the issues and subjects that back work-based learning – and *regulative* discourse – the moral order – helps to give a better definition of what makes up a company's training function. If we are to adopt them, we can make a clearer distinction between *arguments* subject to the training relationship and educational valencies that develop in the interaction between the elements at play (subjects and company). The company's educational function is not performed so much through the type of training activities promoted (formal or through shadowing), but through the characteristics of the educational relationships that come into being between the different elements at play. In companies this corresponds to recognising the need for intentional management, the need to control how it relates to the employee's various problems, which it considers most important, what role they are given in their job definition, what conduct is expected of them in production, etc.

The evaluation rules can be identified as the principles that regulate work practice, its codes and its procedures. They carry out two fundamental functions: they build the 'text' that has to be transmitted, that is, the each figure's professional skills, and insert this 'text' in time and space. On the time axis, it determines the professional age and types of acquisitions corresponding, for example, to a new employee after one year. With respect to the space axis, they place the training process within the company, and, more in particular, transform a physical space – the different areas of the company: the office, changing rooms, canteen, work station, etc. – into a place of training. Finally, practice fine tunes the educational relationships, implements the conditions for acquisition and assesses the whole process.

Dynamic Learning Networks

The educational activity created through team work carried out both to face up to new challenges and to resolve immediate issues and through relationships established as a result of the value chain with sup-

pliers and clients can be read by analysing the network of relationships that the company creates, favours and consents. These networks constitute the procedures through which producers, suppliers and clients educate each other reciprocally. Networking, as well as day-to-day relationship management, is a source of reciprocal learning that is difficult to classify in terms of importance: teamwork, cooperation with suppliers and the participation of internal and external clients in improving the quality of products and services.

As I was saying there are some moments in the business cycle in which the function of networks is underlined. When there are challenges for innovation in the organisation, market, process and product is definitely the moment in which the networks' function is used most.

These challenges activate two types of training practices connected to *external innovation* (in which external agents carry out the role of those introducing the types of innovation listed) and *internal innovation* (the innovation processes developed inside every organisation through management of improvements in the quality of the services offered and the goods produced). They are processes that not only involve the departments devoted to research and innovation, but all those operating in an organisation. In general, they explode when an organisation commits itself to dealing with errors and anomalies that appear in its everyday running or in the event of the emergency of new training requirements, or the demand created by new markets and new competitors. *Internal innovation* is strongly nourished by the tacit knowledge that every single organisation possesses and that can give rise to forms of tacit innovation (Tudor 2001), or *soft innovation*, based on intelligent, ingenious and useful ideas that anyone within the organisation can have (Leonard, Sensiper 1998).

A company's growth is determined by its belonging to different social and learning networks. Motivation, information and acquisition of new know-how takes place in a systematic manner within these networks (in this connection also see the concept of communities of practice: cf. Wenger 1998). They are networks between equals, that is, between entrepreneurs and workers of different companies interested in exchanging knowledge and experience, between companies and suppliers usually motivated by the development of the products and services supplied, between companies and institutional actors, and between companies and research centres or experts.

In this sense, the networks are a set of bonds between a group of people whose characteristics can be used to interpret the learning processes of the people involved (Jütte 2007). *Network society*, or rather, the diffusion of reticular structures, emerges as a hallmark of modern societies, increasingly organised in the form of open and horizontal networks (Castells 1996). It is a society in which the growing differentiation and division of work requires new control and coordination mechanisms

between hierarchies and the market that is replacing the classic bureaucratic organisations.

In the *network society*, the benefits vary depending on the variety and intensity of the bonds and the quality of the networks they belong to. According to Schenk (1995, quoted in Jutte), they depend on factors such as:

- personal position in the networks;
- the characteristics of the networks (relational, functional).

Personal position in the networks is mainly connected to access possibilities and the role that the subject manages to take on inside them.

The characteristics of the networks depend on the way in which they came to be built with relation to the two highlighted elements. In particular, as regards the quality of the relations, the important characteristics are: reciprocity, homogeneity and heterogeneity, strong and weak, hidden or evident commitments, intensity (frequency of contact) and duration (stability).

As far as the functional characteristics of the networks are concerned, we need to consider the contents of the relationships: values, exchange of resources, communication, knowledge and type of support.

The bonds existing in the networks provide the members with different types of combined training resources (the relationships' *multiplexity*) such as: exchange of information, acquisition of material and non-material resources, political mobilisation, power sharing, educational and non-educational solidarity, benchmarking and mutual support in critical situations (Jutte 2007).

The strength of the relationships existing between members of a network does not have a single meaning, that is, advantages can also be triggered by belonging to networks with weak bonds (Granovetter 1974). In the case of strong bonds, the use of time, emotional intensity, intimacy, permanence and reciprocity grow.

The rules of the company training device (CTD) determine the conditions under which networking is exercised, insofar as they define who, with regard to what, and in what conditions the company can act inside the formal networks. Nevertheless, the CTD itself is innovated thanks to processes that come into being within the networks, which, when weak, get around the rules.

4. Learning

All the educational activities produce learning which, however, does not necessarily correspond to the expected or foreseeable results. The reasons for the existence of unexpected results reside in the nature of

the subject's response to the educational activity, in how they criticise and transform it.

This brings me to state that while the educational values of the educational activities can – in part – be defined *a priori*, in response to a hypothesis or an organisational expectation, nevertheless the results in terms of learning, changes, improvement or deterioration that can be attributed to the educational activity depend on the ways in which the subject reacts to it (use of the faculty of conscious control and educational powers in general) and how the results of what they have acquired can be dealt with individually and collectively.

To pick up a concept from the work by Candy (1991), we could say that a first type of learning that can develop in informal work-

Tab. 1. What is being learned in the workplace? (Eraut *et al.*, 2004).

<p>Task Performance</p> <ul style="list-style-type: none"> Speed and fluency Complexity of tasks and problems Range of skills required Communication with a wide range of people Collaborative work 	<p>Role Performance</p> <ul style="list-style-type: none"> Prioritisation Range of responsibility Supporting other people's learning Leadership Accountability Supervisory role Delegation Handling ethical issues Coping with unexpected problems Crisis management Keeping up-to-date
<p>Awareness and Understanding</p> <ul style="list-style-type: none"> Other people: colleagues, customers, managers, etc. Contexts and situations One's own organization Problems and risks Priorities and strategic issues Value issues 	<p>Academic Knowledge and Skills</p> <ul style="list-style-type: none"> Use of evidence and argument Accessing formal knowledge Research-based practice Theoretical thinking Knowing what you might need to know Using knowledge resources (human, paper-based, electronic) Learning how to use relevant theory (in a range of practical situations)
<p>Personal Development</p> <ul style="list-style-type: none"> Self evaluation Self management Handling emotions Building and sustaining relationships Disposition to attend to other perspectives Disposition to consult and work with others Disposition to learn and improve one's practice Accessing relevant knowledge and expertise Ability to learn from experience 	<p>Decision Making and Problem Solving</p> <ul style="list-style-type: none"> When to seek expert help Dealing with complexity Group decision making Problem analysis Generating, formulating and evaluating options Managing the process within an appropriate timescale Decision making under pressurised conditions
<p>Teamwork</p> <ul style="list-style-type: none"> Collaborative work Facilitating social relations Joint planning and problem solving Ability to engage in and promote mutual learning 	<p>Judgement</p> <ul style="list-style-type: none"> Quality of performance, output and outcomes Priorities Value issues Levels of risk

place education consists of developing behaviour used in self-directed learning, that is, the ability to manage and direct one's intellectual development.

Studies and research on the matter have mainly dealt with identifying and measuring the learning produced by informal learning in the workplace while directing their attention towards the acquisition useful for improving production activities. Despite their complexity, the studies have already managed to produce technical applications, tools and ad hoc software. This is the case of the Workplace Informal Learning Matrix (<<http://www.wilm.ca/>>; 09/09), created to measure informal learning in the workplace. WILM consists of a series of specific scales that can be used to single out the opportunities present in a workplace and at the same time to measure the 'essential skills' required for doing a job. These skills are not technical and include the following eight areas: oral communication, problem solving, working with others, decision making, leadership, workplace culture, diversity and training.

Eraut also proposes a classification of the learning produced by informal processes in the workplace. It is a categorisation (cf. Tab. 1) that aims to be a heuristic tool for singling out the possible learning present in a workplace.

With regard to each of these fields of learning, in every workplace it is possible to single out 'codified culture' contents (written material containing specific organisational information, recordings, correspondence, manuals, plans, etc.) and others instead belonging to 'non-codified culture' (that has not yet been given a written definition). In order to highlight non-codified culture while not being limited to representing it through codified culture (centring on its use and not on assessing the truthfulness of what is known), Eraut proposes the concept of *personal knowledge* defined as «what individual persons bring to situations that enables them to think, interact and perform» (Eraut 1997; 1998). For Eraut the concept of personal knowledge includes the following components:

- codified knowledge in the form(s) in which the person uses it;
- know-how in the form of skills and practices;
- personal understandings of people and situations;
- accumulated memories of cases and episodic events (Eraut 2004);
- other aspects of personal expertise, practical wisdom and tacit knowledge;
- self-knowledge, attitudes, values and emotions (Eraut 2007: 2).

Highlighting personal knowledge implies a holistic approach. It cannot be verified through tests, but by directly assessing individual and team performances, and an individual and team's capability to think, interact and perform.

5. Concepts and Operational Implications

Concepts of Workplace Learning

The question we start off from is if it is possible to teach through work and, in particular, through normal production activity.

Our search for an answer has to be based on a perspective of overcoming the split between theory and praxis and the positivist assumption that

[...] knowledge revealed through science (is) superior to that produced from values, feelings, or untested experience because of its adherence to scrupulously objective and unbiased methods' (Realin 2007: 496). Along this road, teaching also comes to be considered as the transferral of information from someone who knows to someone who does not, separated from the learning which, in the positivist approach, would occur when that information is received, stored, and recapitulated (*ibid.*).

In this perspective, the 'true' training only takes place before an activity correlated to it is carried out, and the acquisition of knowledge and the acquisition of skills are considered two separate activities: «knowledge is treated as a collection of immovable, ready-made facts unconnected to activity; and skills are merely motor performances in which knowledge and thought have no part» (Engeström 1994: 11).

Neither does the cognitivist perspective help to focus on the subject of our research since it is characterised by its consideration of the individual undergoing training as an important unit of analysis and as the subject of teaching, and that didactic strategies are designed to make the teaching more effective.

Our question finds answers on condition that we opt for an approach in which knowledge is accessible through day-to-day experience and the emotions (Dewey 1938). Social theories of learning fit into this framework since they regard learning as a process embedded in the relations that develop in social practice, and therefore in work (see, for example, Lave, Wenger 1991; Chaiklin, Lave 1993). In social theories, learning is considered an integral part of all social practices and a dimension of the 'communities of practice' (Lave, Wenger 1991; Fuller 2003: 9).

Realin (2007: 498) offers an effective representation of the concept of knowledge upon which workplace learning is based:

We build knowledge from scratch as new information becomes available and create our own reality through social interactions (Berger, Luckmann 1966). Social constructs are chosen and are attached in time and space to particular cultures, thus are not intrinsic to nature or divine will. [...] Not concerned so much with generalized applications, practical knowledge applies to the specific situation and to the subjective experience of the actor. It is frequently through conversations with other

local practitioners, using detailed language specific to a trade or function, that practitioners develop their understanding of how to engage with the task. Their knowledge is thus inherently social as well as transactional, open-ended, and, of course, prospectively useful (Schön 1983).

This approach allows us to see daily work as the place for learning and producing knowledge, both in its structured and intentional dimensions and in its not explicitly structured and unconscious components.

In many reviews the concepts of workplace learning are placed under two metaphors of learning meant as 'attainment' (product) and as 'participation' (process) (Sfard 1998). In the first case, learning equates to a visible, easily identifiable result, all the better if accompanied by certificates. In the second case, learning is connected to improving individual and collective performances through daily work and that includes interaction with others, using tools and materials and ways of thinking. A third current of thought, belonging to the 'activity theory' tradition (Engeström 2001) features the notion of learning 'as construction', since it focuses on the transformational potential of workplace learning (Unwin 2005: 5).

None of the three models is unrelated to workplace learning, although learning as participation and construction adapts better to workplace learning. As I underlined earlier, education whose aim is to merely transfer knowledge is part of the range of training processes activated in the workplace and part of the workers' professional biographies.

The Subject's Role

The dynamics of workplace learning depend on the relationship between context and subject. With respect to the need to include the subject's role in informal learning processes, Evans and Kersh (2006) propose a critical overview of the studies carried out in the last decade, casting light on the contributions they have made, but also their limits.

While Wenger (1998) is primarily concerned with the ways in which participation in communities of practice helps construct the identity of the learners concerned, Hodkinson and Bloomer (2002) focus upon the ways in which prior biography constructs dispositions that influence an individual's learning. Evans (2002) has developed the concept of «bounded agency» as a conceptual tool, while Billett examines the ways in which different workers react to the «affordances» for learning that the workplace offers. In Scandinavia, there is a tradition of life history work in relation to workplace learning, which emphasizes the ways in which individual life histories of workers illuminate and represent deeper structural issues which interpenetrate their lives (e.g. Salling Olesen 2001; Jorgenson and Warring, 2002; Antikainen *et al.* 1996). While these and other studies have illuminated aspects of the problem, each offers only a partial response.

The thesis that Evans and Kersh (2006) uphold regarding the role of workers is that:

By deploying their personal competences or tacit skills that were acquired from their previous (or current non-work) experiences, individuals influence and contribute to “shaping” the culture of their workplace and learning environments.

- individuals bring prior abilities and experiences to the workplace;
- individual dispositions influence the use of workplace learning affordances;
- individuals personalize their workplace environments, and thus contribute to workplace cultures and practices which influence learning.

On the basis of these conclusions, the authors claim that the «recognition and self-recognition of tacit skills and personal competences could encourage learners to deploy and develop them further within a learning environment».

The Contextualised Dimension of Learning

If we are to recognise informal workplace learning and learning through day-to-day work, we are stating that it is during working activity that we are educated. It is in this moment that the subject – in relation to the set of elements present in the context – produces knowledge and learning. The primary product of working activity is constituted by non-explicit (tacit) knowledge and change in the subject’s behaviour. They are results closely linked to the context in which they were produced and, as a rule, not made explicit or the subject of generalised awareness. The solution at the basis of full acquisition of awareness and building a ‘discourse’ that becomes the subject of communication between the actors present in the context is to make them explicit.

The synchronic nature of the acquisition/production of knowledge in informal learning is described by Raelin in the following terms:

The critical issue for an epistemology of practice seems to be not whether but *when* to introduce explicit instructions and reflection into the field to yield optimal performance (Howard and Ballas 1980; Lewicki 1986). The construction of theory in this setting might be more apt *during* or *after* rather than before the experience. Hence, theory is not preordained but constituted as a living construction to capture the useful ingredients of the performance (Raelin, 2007: 500).

This statement is based on the situated learning theory according to which learning is connected to and incorporated in social situations and forms of joint participation (Lave, Wenger 1991) and therefore «the individual makes sense of and masters skills and knowledge in the context in

which they are practised». As a result, doubt is cast on the transferability of what has been learnt in a context: every acquisition is closely connected to the setting in which it was produced. The trainee «is not gaining a discrete body of abstract knowledge which she/he will then transport and reapply in later contexts» (Hanks 1991: 14). This does not only concern new employees, but also workers with a great deal of work experience, as shown by the results of numerous research projects (Eraut 2000).

What puts a subject in the condition to work is their capacity to combine tacit (practical) and explicit (codified) knowledge, two categories whose borders are not well marked and which, when combined, put man in the condition to operate (Polanyi 1962; 1966; 1967). As Raelin adds (2007: 500) «tacit knowledge is thus not necessarily mediated by conscious knowledge, but it may serve as the base for conscious operations». In short, every type of knowledge is valid in the context in which it is produced (thanks to the combination of tacit and explicit knowledge) and, therefore, it cannot be transferred as such to other contexts (what we learn at school is only valid there, and the same goes for every single company). In order for knowledge to be transformed into action, tacit knowledge is needed, and this is only acquired in each specific context. This process is made easier by acquiring awareness of the tacit knowledge used, also to guarantee that the knowledge created is coherent with the goals of the action and to understand the ‘sense of the practice’.

The Critical-Reflective Dimension

The solution that allows us to place workplace informal learning under conscious and intentional management is to go from participation in an activity to discovering the sense of the praxis underway, of every individual’s contribution and of the changes that this praxis produces in each of the actors involved. The goal is twofold: to uncover and put the educational values present in work under control (De Sanctis 1976) in order to guide them back to a framework of self-directed learning (Candy 1991), and to increase the baggage of explicit knowledge built from the heritage of tacit knowledge present in the workplace. Recognising the educational power of work is not an end unto itself. Indeed, ‘action learning’ (Revans 1978; 1982) then evolves into ‘action reflection learning’ (Marsick 2002). Starting from experience, it is a matter of going back to the educational components of the context in order to put the all the factors and educational valencies to criticism both from the subject’s perspective and from the collective, ethical and social as well as organisational perspective.

Donald Schön (1983) coined the term ‘reflection-in-action’ to define the mental process that leads us to discover how an individual’s action has helped reach an expected or unexpected result, taking into consideration the factors that come into play in the relationship between the subjects involved in the action and the context in which they operate,

as well as the relationship between theory and practice. The process of critical self-reflection has, in substance, an emancipatory goal as regards the assumptions we take for granted and our feelings (Habermas 1971).

Raelin (2007: 501) proposes a definition of ‘reflective practitioners’: they

[...] are known to (a) question why things are done in a certain way; (b) accredit local and informal knowledge that has been acquired on the subject at hand; (c) consider the historical and social processes that affect their decision making; (d) admit non-traditional forms of knowledge, such as emotions, sensory perception, and aesthetics, into the inquiry; (e) question the questions that they tend to resort to; (f) look for discrepancies between what they and others say they do and what they actually do; and (g) try to become aware of how their reasoning may at times become self-referential and self-confirming.

The critical-reflective process also needs to take place in the collective dimension. The collective dimension of every action gives the action itself sense; it allows us to define and share a common base of understanding with the other actors (Goffman 1974).

Bateson (1972) considers learning connected to critical-reflective behaviour as a category unto itself (‘third-order’), in which the subject becomes aware of the fact that all forms of perceiving the world are based on debatable premises. It is a type of learning that – focussing on the ‘context of contexts’ – casts doubt on the whole framework of reference behind our assumptions (in learning we *first of all* pass from using habitual pre-existing answers to learning from them; and *secondly* the object is constituted by the contexts until doubt is cast on the meanings that accompany our habitual answers).

6. From Embedded Learning to Embedded Training

The aim of this analysis of the foundations and properties of embedded learning is to define how to manage embedded training – or teaching – activities (both outside and during work) insofar as it constitutes a point of reference. Besides, it is a type of educational activity already practised in Europe in work policies aimed at young people and adults and in flexibility policies in general. In the United Kingdom, for example, the *Skills for Life Strategy Unit – DfES, 2003* – states that «Embedded teaching and learning combines the development of literacy, language and numeracy with vocational and other skills. The skills acquired provide learners with the confidence, competence and motivation necessary for them to succeed in qualifications, in life and in work» (quoted at the London Centre for Leadership in Learning at the Institute of Education, 2007).

The main subject of my conclusions are the educational activities that can be implemented inside the workplace.

On the basis of the analysis just carried out, it appears we can conclude that managing embedded training in the workplace can be based on a strategy that relies on various factors relative both to the availability of favourable contexts and the subject's behaviour.

As far as the subject's role is concerned, the action needs to be aimed at their taking responsibility and educational powers. This is possible by giving them an active role and enhancing the educational functions of their activities as a builder of knowledge in the operational context.

Here the crucial question regards the possibility of easing the passage from tacit to explicit. This can be done starting from the subject's role as the 'builder of their own work' and the corporate culture. This involves developing a critical-reflective attitude.

As far as the company is concerned, it can fulfil the role of creating favourable contexts through the Company training device.

If we are to go on to describe workplace learning-based action, which can be seen in current training practices in Europe as well as other parts of the world, it seems we can highlight four types:

- integrating informal education within formal education;
- acknowledging knowledge acquired in the workplace through the attribution of credits that can be spent in order to obtain qualifications;
- alternating training and work, widespread in work policies, but also increasingly present in study courses in the school and university system;
- models centred around embedded learning.

In conclusion, I will also provide some basic information on the latter model, making reference to experiences that combine embedded learning and teaching and workers' general basic skills training with the need to develop professionalism linked to actual, specific production processes.

This model is based on the existence of a company policy aimed at developing basic skills in order to maintain the employability of workers with low levels of schooling. From the case studies analysed, what also appears equally necessary is a public policy for direct and indirect support, also financial, for companies involved in training workers with low levels of schooling directly in the workplace.

There are two key actors: the company and an outside support organism.

The company takes on multiple functions. First of all, it has the role of promoting the training activity. Furthermore, through the human re-

sources department it decides which workers will take part in the training and identifies the educational valencies – for the company context in particular – that will be included in the training activities. Furthermore, it is also up to the company to take up measures such as shift models that make it possible for workers to take part in activities taking place outside working hours.

The external organism is responsible for functions such as:

- context analysis – that is, analysis of the specific production processes concerning the workers who will take part in the training activity;
- educational content analysis – that is, identification of the specific linguistic requirements the participants need to carry out their work activities and for the development of communication in the workplace;
- management of the needs assessment process, starting by analysing individual life stories, levels of schooling possessed, the workers' learning styles;
- placement of specialised trainers;
- preparation of teaching plans and specific didactic modules using the results of the participants' training and linguistic needs analysis. It is a function carried out specifically for every company interested and as a result, these modules are tailor-made. This function also includes the production of specialised teaching material;
- overall process and results analysis.

Having analysed the processes in the action procedure, the organisational model is based on the following components:

- the company, whose goal is to increase the key skills of part of its employees and which singles out the target of reference;
- an external service centre with resources available to carry out the functions indicated above;
- creating a mixed team – company/external specialised organism – which analyses the specific context in which the workers involved work so as to single out topics, contents, concepts and the terms under which the teaching action needs to be developed;
- putting together a team of trainers who will lead the activities;
- possible intervention on work shifts so that the training activities do not take place during work hours, allowing the managers to remodel the shifts so that the workers can go to courses without losing out on work time;
- producing ad hoc materials (texts to create contextualised training for the particular production process and centred around the workers' needs), with effective methods that can be adapted to the specific training requirements.

The activation of this embedded learning model is based on three types of financial measures.

First of all, it presumes the existence of public finance measures for the services on offer. This is in order to guarantee the availability of specialised organisms with specialised personnel to carry out context analysis consultancy in companies and adapt materials to the contexts where they will be used.

Secondly, the company must have the financial means to cover the direct costs for providing the training activity. At the same time, the company must bear the – low – indirect costs of adapting work shifts, where required.

Thirdly, the model in which the training activities are carried out outside work hours assumes that the workers are willing to take on the costs of the opportunity deriving from the time devoted to training. These costs are borne with a high probability of a return due to the close connection between training activities and the workers' professional growth.

The method used in this model first of all includes carrying out preliminary analysis work so that the training on offer can be contextualised. In one of the cases analysed – linked to the linguistic training of immigrant workers – a method was formalised called TSA (topics, sceneries, assignments). This method is based on the preliminary analysis of topics, sceneries and assignments which are correlated to teaching modules. The external support organism has the task of selecting the teaching material and the most suitable teaching methods adapted to the beneficiaries' specific educational needs. The specific use of language in the workplace is documented, with reference to the vocabulary pertaining to the work activity carried out, grammar structures, how conflicts arise and how to deal with them.

As regards analysis of the company's requirements, information was gathered on the following aspects:

- the communication methods used by the employees in the workplace;
- which company sectors need qualified workers;
- where difficulties are met, as regards the sphere of communication in particular.

As far as the workers were concerned, the information gathered concerning linguistic training included the following aspects:

- abilities to describe problems with the machinery;
- overcoming uncertainties and possible nervousness during conversations;
- learning writing skills;
- ability to deal with unusual situations using verbal language, such as industrial machinery breakdowns, injuries, use of new machinery, presence in a new workplace;

- acquisition of familiarity with the machinery (technical terminology, abbreviations, acronyms, etc.);
- ability to deal with personal issues, such as communicating with a doctor, understanding an official letter, etc.

As far as the heads and workers' council are concerned, the information gathered included their opinions relating to training goals such as:

- developing communication skills;
- achieving a good level of self-confidence, to the extent of asking questions several times;
- working on developing a mental flexibility useful for understanding new machinery that they have to work with and communicating any problems with it;
- conflict management skills;
- ability to express opinions;
- knowing how to make proposals;
- being informed as to rights and duties.

In the case relating to immigrants' language training, the contents that can be seen in the modules are characterised by the fact that they aim to combine the technical and language dimensions along with identity, company democracy and creating self-direction and participation skills.

The topics taken from the modules can be summed up as follows:

- self-awareness, of their social condition and role inside the company;
- planning own work and social life;
- importance and benefits of lifelong learning;
- awareness of own training needs;
- how the company employing them works;
- ability to communicate with personnel in different situations (informing colleagues and superiors of a problem with machinery, problem analysis, conflict management, etc.);
- knowledge and awareness of own rights and duties within the work context where they operate;
- cognitive flexibility towards industrial innovations.

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CHAPTER II

WORKPLACE LEARNING PRACTICES IN EUROPE

Francesca Torlone

1. The Company as a Place of Learning

What has been described in-depth in the previous pages introduces us to the analysis of some practices implemented within European organisations in which the worker and their learning needs (both regarding contents and ways of satisfying them) are at the basis of company schemes that are the expression of a flexible and cooperative economic and organisational model. Therefore, we are a long way off a production process in which the worker, the mere executor of rapid and repetitive tasks and orders, has no idea of the business cycle in which they are employed and the company's manner of organisation. In the post-Fordist model we could say we are in the presence of a 'new model of worker' (Beckett, Hager 2002: 75) who takes part in learning networks in which challenges are faced in a consensual, shared and participative manner. The subject's learning needs and the challenges to the organisation are no longer only linked to the sector of production in which each worker is employed, but they cover various spheres and necessarily require an all-round and holistic approach, in which joinery and mechanics become mathematics, which becomes economics, which becomes language, etc. And with respect to these needs the worker is called upon to take on a participative attitude, with the aim of building their own professional identity and acquiring knowledge to be used in the company context where it is produced. They must also be capable of learning (sufficient initial training, experience and learning capacity) and have the will to do it (motivation and willingness).

On its part, the company cannot – on one hand – not take into account the learning gaps that need to be filled so that its workers can be more productive, – and on the other – not take action to create a favourable work context for the acquisition and development of knowledge through 'activity and experience-based learning'. That is, the work setting must offer the possibility to learn.

Learning during work time and at the workplace where the workers carry out their tasks and duties therefore becomes an integral (*embedded*)

part of the production process (Fuller, Ashton, Falstead, Unwin, Walters, Quinn 2003: 11).

2. *Learning Language at Work*

During a comparative study conducted at European level (2009)¹ we were able to investigate all the measures, programmes, initiatives, procedures and schemes (at local, national and sectoral level) to help qualify low-skilled workers, also within organisational contexts. Case analysis highlighted the diversity of the formulations adopted concerning learning content, subjects involved, methods used, and results obtained. In some countries we came across experiences that promoted language learning in the workplace (e.g. Belgium and Germany), while in others the attention was placed on the company's contribution to qualification programmes and acquiring qualifications while carrying out tasks and duties (e.g. France and Romania). I will give a brief account of these experiences in the following pages. In both cases, we saw interventions on the technical and organisational structure of the production process that enabled the workplace to become an effective place of learning.

The Belgian and German experiences concern language learning in particular – Dutch in one case and German in the other – while the workers carry out the tasks, duties and functions assigned to them. In these cases, the workplace learning management is entrusted in part to the learners themselves who must recognise, choose and decide if and how to use the moments of learning. This is what happens at *Passage gGmbH in Hamburg*³. Here the high level of motivation among the learners for the whole duration of the learning course (which takes place outside work hours)⁴ and the awareness of the individual language learning needs managed to guarantee the success of the programme and the ac-

¹ The study, entitled *Inventory of outreach strategies to enable people to go one step up (i.e. to obtain a qualification at least one step above their present qualification level)*, made investigations in 33 countries and concerned the topic of adult literacy and raising qualifications, with reference to the levels laid out in the European Qualifications Framework for Lifelong Learning (Recommendation of the European Parliament and Council 2008).

² gGmbH means a non-profit limited liability company. Since 2007 it has been delivering in-house training for German language in the workplace in businesses.

³ The project was supported within the framework of the North German Network for the Professional Integration of Immigrants development partnership (NOBI) from 2005–2007 during the EQUAL Initiative and funded with resources from the Ministry for Labour and Social Affairs (BMAS). It is part of the *Integration durch Qualifikation* Federal Network. From 2008–2010 the project will be funded exclusively by the BMAS.

⁴ The course comprised two weekly sessions of 45 minutes each, either before the late shift or after the early shift.

accomplishment of corporate and professional growth goals. In learning combined directly (embedded) with the work context and job roles, the willingness to learn is strengthened by the learners sharing their personal expertise in work processes with the trainers, who are language experts in reading, writing and communication. This is because workplace-related language skills training can only be developed by taking into account particular work processes and contexts. The main objective is not just to offer German courses, but within this process, to support learners to identify the specific language needed for their work and, thus, in the end to improve all work communication and work processes.

Both skills (language and work processes) blend to form *ad hoc* materials, which are strongly contextualised with respect to the production process and centred around the workers' training needs, as thoroughly investigated by an external service centre, Passage gGmbH.

The learners are subjects – mainly men – who have been employed in the company for a minimum of 5 to a maximum of 15 years, and are, in particular, refugees and foreign workers. They come from different countries and have different levels of knowledge of German. Most of them had learnt German, as an additional language informally in the workplace through communication with colleagues. In many cases these were learners with little experience of formal education, and with a limited knowledge of grammar, sentence structures, parts of speech and so on.

Initiated in 2007 and still underway, the German experience features great attention to language abilities and skills on one hand, and the workers' relational and communication skills (soft skills) on the other. Both types of skills are essential tools for obtaining goals in both individual and professional ambitions. From the organisation's point of view, communication skills and managing relational dynamics play a key role in internal and external relations (with clients, suppliers, etc.).

The programmes set up in the company to favour German language learning by foreign workers and the consequent development of their relational skills involve human resource management, have an impact on change management processes and on knowledge management and, not least, contribute to implementing business strategies to the extent that they back up members of the organisation in carrying out their assigned tasks. Therefore, the company itself decides who to invest in with a view of the resource's professional growth and corporate return for the organisation. As a result, learning is no longer an autonomous and distinctive process from work, but tends to blend in with it in a sort of dynamic interaction between individual and organisational know-how. The roles of those involved in the language learning process (members of the organisation, company and teachers) tend to integrate and work together in the development and activation of new knowledge. And all this happens within the one work context.

In setting up and guiding this model, the more the organisation is involved in giving a detailed description of the indicators (e.g. goals, time schedules and results), the greater the level of efficiency and benefit it gains in terms of prompting and sharing new experiences and new know-how. In this case, alongside language skills, the members of the organisation also acquire, mature and develop transversal skills – in first place communication skills – that can strengthen team spirit, sense of belonging, flexibility in the face of change, creative talent, ability to relate with the work group (and with the outside) and the desire for professional growth. Similarly to what happens in the French organisational context (see later), the German case also casts light on the organisation's role in defining each worker's language gaps. As a result, they can draw up a personalised course meaning that achievement of the individual's goal is guaranteed (improvement of performances and the work environment).

In terms of results, to date the experience has involved 20 workers. It has been given a positive appraisal by the various stakeholders, such as the works council, heads of department and shift leaders, participants and personnel development staff. The key factors influencing success were:

- involving the participants in designing the course wherever possible;
- specific reference to the work contexts in the course.

Participants gained a sense of empowerment on completion of their course. This suggests that self-empowerment and increased self-confidence leads to increased autonomy of the workers and, ultimately, to a more positive working atmosphere.

As proof of the programme's effectiveness, it is worth mentioning that the model of work-related German language courses as developed by the Coordination Centre, *German in the Workplace*, was included as an integral component of the national European Social Fund (ESF) programme in the work-related second language support programme in Germany.

The experience of the *VOCB-Vlaams Ondersteuningscentrum voor de Basiseducatie vzw*⁵ in Belgium (Flemish support and development agency for adult basic education)⁶ (January 2006–October 2007) promoted learning Dutch among immigrant adults and was limited to the cleaning sector. Thanks to the embedded approach combining language with vocational contents it was possible to come up with targeted and successful programmes for improvement of the language and relational skills of low-skilled workers with poor mastery of key skills such as

⁵ Founded by the Flemish Ministry of Education.

⁶ *Analfabeten ingeburgerd aan het werk* (Literacy integrated into the job).

problem solving, making choices and self-assessment. Active and authentic learning in a real-life setting creates many opportunities to work on these key skills.

In addition to the VOCCB – which provided the Dutch language courses – the other people taking part in the training activities were responsible for:

- career guidance, the introductory course into Flemish society, initially in the mother tongue of the participants and later in the Dutch language (Prisma-Integration Centre for New Immigrants in Mechelen);
- personal coaching, guidance and part of the Dutch language course (Levanto-Non-Profit Organisation for Vocational Training);
- vocational training (VDAB Mechelen – *Vlaamse Dienst voor Arbeidsbemiddeling en Beroepsopleiding*, the Government Agency for Employment and Vocational Training).

Moreover, Karel de Grote-Hogeschool coordinated the whole project and gave the teachers methodological support.

The main objective was to raise the participation rate of non-literate Dutch language learners in educational and vocational programmes in Flanders. In this case too, analysis of the target group's needs turned out to be of crucial importance in preparing contents and training materials closely connected to the learners' needs, practical experiences and knowledge. The Belgian experience also cast light on the need for self-assessment and career coaching guidance in order to increase learners' self-esteem.

In terms of results, the programme was a big success as:

- it helped participants to overcome reluctance towards working;
- it gradually enabled the participants to become more self-reliant;
- it brought the real world into the classroom: apprenticeships are an important additional context (for content-based language learning);
- it contributed to the positive perception of literacy learners by employers;
- it bridged the gap between learning and the job situation;
- the vocational skills were easily acquired;
- the motivation and dedication and class attendance rate was high;
- the participants' acquisition of reading and speaking skills was varied and unpredictable.

Furthermore, all the participants managed to find a job in cleaning: four participants in regular economy, and five participants in the subsidised economy after training of 14 months.

3. On-the-job Schooling

The *Evoluance* (Evolution) programme of the *French group Danone*, worldwide producer and supplier of foodstuffs, is a qualification programme begun in 2004 – and still underway – with the aim of helping the company’s unqualified employees access a national diploma or enter a VAE-*Validation des acquis de l’expérience* (certification of skills no matter how and where they are acquired) programme. The experience takes place in a context, France, that has always shown – beginning with the 1971 law – great attention to drawing up and developing lifelong professional training policies for employees. These policies:

- come about from negotiation with the social parties (the results of which are as a rule transformed into state law);
- are based on contributions paid by companies for the purpose of training;⁷
- are managed by bilateral organisms (OPCA-*Organismes Paritaires Collecteurs Agrées*, similar to the *Fondi Paritetici Interprofessionali* joint funds for lifelong training in the Italian system), the voice of the social parties, authorised by the state and employed with collecting and managing the resources from the companies’ contributions and financing the training plans agreed upon between the parties.

Part of the training on offer for adults promoted by the Ministry of Education is finalised – *de facto*, though not exclusively – to workers’ lifelong training.

From a historical point of view, we must remember that in 2004 (the same year the Danone group’s *Evoluance* started up), the French lifelong professional training system underwent substantial changes following an inter-trade agreement signed unanimously by entrepreneurial associations and trade union organisations in September 2003, then made into a national law (Fillon law- no. 391 of 4 May 2001, relating to lifelong professional training and social dialogue). As a result of the new legislative set-up (which streamlines existent programmes and introduces new elements), workers’ access to training initiatives takes place exclusively:

⁷ In the French system the social parties play a central role and the public powers have an important regulative role. They impose a legal obligation upon companies (dating from the Delors law of 1971) to make a financial contribution to the system in proportion to the total salaries paid by each company. Companies can fulfil this obligation by making a contribution towards financing the training plan of a bilateral organism (OPCA) with joint social party membership. OPCA’s decisions on training and resource distribution priorities make the result of the negotiation process that takes place at sectoral level concrete and transparent. The 2004 reform was a further boost to their prerogatives.

- upon the company's initiative, in the sphere of a Training Plan (Plan de formation) that can be programmed and drawn up independently by the company or with OPCA's assistance and backing (scheme already in place before the reform);
- upon the worker's own initiative, as part of training leave, which all workers have the right to (CIF-Congé Individuel de Formation),⁸ skills assessment leave (CBC-Congé bilan de compétences) and leave for validation of acquired experience (CVAE-Congé pour Validation des Acquis de l'Expérience). These schemes were already existent;
- upon the employee's initiative in agreement with the employer, using the individual training right (DIF-Droit Individuel à la Formation)⁹ or through the professionalisation schemes (professionalisation contracts¹⁰ or periods¹¹), both introduced by the 2004 reform.

As far as this system – presently undergoing further revision¹² – is concerned, the Danone group experience is part of a set of training programmes initiated by the company using Training Plans. The goal of the corporate training policy was to increase acknowledgement of the educational value of activities planned not just for managers but also for the rest of the workforce employed in the various production units located around the world. The goals for the latter category of employees are to raise their basic skills levels and formal qualifications. The group therefore set up an initiative in the French headquarters re-

⁸ Right allowing individuals to follow training courses of up to one year (workers with a full-time contract) and 1,200 hours (workers with part-time contracts). With the DIF the worker can put together and follow an individual professionalisation plan. During the leave, pay is suspended and the course costs are at the worker's expense. Only in the event that the worker's choice of training is agreed by the OPCA that the company is affiliated to does this organism pay the worker (80-90% of their normal pay) and bear the costs of the training course.

⁹ The worker has the right to use 20 hours per year to increase their professional standing, which can be accumulated over a period of six years.

¹⁰ Available to young people aged between 16 and 25, as well as to adults seeking employment, professionalisation contracts provide obligatory training of not less than 150 hours and no more than 25% of the overall duration of the contract (minimum duration between 6 and 12 months).

¹¹ The goal is to put together training programmes of a duration of not less than 150 hours, for a period of work for workers with low/inadequate qualifications, the over-45s, or people who have worked for over 20 years, the disabled, women returning from maternity leave, and aspiring entrepreneurs.

¹² On 29 April 2009 a draft bill with the following objectives was presented to the Council of Ministers: 1) To target training funds to those who need them most (the unemployed and low-skilled workers). 2) To develop training in small and medium-sized companies. 3) To introduce young people to the labour market through work-experience contracts. 4) To improve the transparency and systems of financing, to over-estimate professional training policies. 5) To simplify and improve information, career guidance and assistance for workers and those seeking employment.

served for less qualified workers that was aimed at updating their basic and professional skills according to the needs of the company's production processes. It is therefore the workers who learn and try to increase their ability to obtain the results that the company aspires to, but it is also the organisation that learns by acquiring awareness of the bond between improvement, change and learning. Thanks to this combination of learning it is possible to build environments in which all the members are encouraged to evolve and the organisation is prompted to dynamically reshape itself as a result of the internal (and external) stimuli it receives (Senge 1990).

As for the training programmes' organisational and development methods, in line with a system that has been experimenting forms of involvement of various actors for some time (central administration and territorial institutions, trade unions and entrepreneurial organisations, companies, training institutions, individuals and budget experts), in Danone's experience various subjects participate in the phases of promotion, planning, implementation and financing the operation. They are:

- the group and production units' human resources management;
- representatives of the sector social parties;
- operators and technicians of the sector OPCA (Agefaforia);
- members of the Comité d'Entreprise, representing the workers and the company;
- national Agency against Illiteracy (ANLCI-*Agence Nationale de Lutte contre l'Illetrisme*);
- management personnel in contact with the workers;
- operators active in the acquired skills certification procedures.

Teamwork proved to be fundamental in defining the overall rules and system choices, while the company maintained a role of crucial importance in identifying qualification needs and strategies, as well as in analysing the personnel's characteristics and training gaps. Through this process it was possible to plan and implement measures, in the group's plants, with the aim to help regain basic skills and obtain a certificate (basic or specialisation diploma) through internal or external courses (lasting 23 hours a year), skills assessment systems and acquired skills validation. This could be done thanks to the involvement of the central levels of administration with whom the framework agreements were signed.

The learning process put into practice combines moments for regaining basic skills, assessment phases – with personal development interviews, career guidance and the definition of action plans – and validation procedures (*Passeport de Compétences*).

At the end of the learning, assessment is carried out under the national education and work systems (for the VAE). In particular the assessment takes place:

- with examinations to obtain the diploma issued by the Ministry of Education (CFG-*Certificat de formation générale*);
- through acquired skills validation procedures (assessment and certification) for the awarding of professional qualifications (CAP-*Certificat d'Aptitudes Professionnelles*/BTS-*Brevet de techniciens supérieur*).

In terms of the results obtained from the Evoluance programme since it was begun in 2004, 670 workers have been involved and obtained a diploma, while training courses are still underway for an additional 250.

Therefore, what we see is a work-based learning model (FWBL) where learning outcomes are assessed in order to earn a national certificate. In this way, synergy is created between knowledge, work and learning, and application of that knowledge is promoted in the practical work situation (Fink *et al.* 2007). The learning objectives are defined to match the strategy for basic skills in the company.

A similar experience was begun in 2007 by the *Romanian frozen cakes company Fornetti* (Timisoara). The training and consequent qualification, recognised at national level, involves low-skilled workers, aged between 19 and 55, with no more than lower secondary schooling.

From a financial point of view, the company covers the direct costs for the actual training activity and, where this is necessary, bears the costs for adapting the work organisation.

The process includes the following phases:

- one-week trial to see if the person is able to learn and meets the work requirements;
- learning in the workplace period which lasts two weeks during which the employee goes through all the stages of production;
- after 3 months the employee's work is assessed and then they receive the vocational certification.

In the assessment process the following competence units are taken into consideration:

- fundamental Units: interactive communication and teamwork;
- general Units: application of the rules of health and safety at work and prevention of accidents and fire fighting; organising their own work and applying hygiene rules;
- specific Units: preparation of raw and auxiliary materials, dough preparation, pastry preparation, fillings preparation, and end product preparation and processing.

The evaluation process consists of:

- a written and oral test;
- observation in the workplace;
- and a report on the employee by the head of production.

In order to gain the *Operator in the Production of Frozen Pastry and Bakery* qualification within the company, the scheme refers to a competence assessment centre. This guarantees that the programmes follow and correspond to the Territorial Institute of Labour and the Classification of Occupation in Romania. After Fornetti trains their staff they are therefore able to assess them and then offer them a vocational qualification certificate.

In terms of the results obtained, 130 low-skilled workers have gained a professional qualification since December 2007. Currently the company employs almost 300 people and, by the end of 2009, all will have received a vocational qualification certificate. Besides providing jobs, in the measure the employees receive a vocational qualification certificate which is recognised at national level.

4. *Brief Conclusions*

The cases illustrated in this paper represent organisational trends and methods of significance due to the variety of ingredients used. Nevertheless, they do not cover the whole variety of experiences underway in the different European countries.

For a wider view, below are examples of some informative resources that can be useful for finding information, documents and data relating to workplace learning experiences:

<<http://www.excellencegateway.org.uk/>> (09/09) – *Skills for Life* is the UK government's strategy for improving adult literacy and numeracy skills for those groups where literacy and numeracy needs are greatest, particularly: unemployed people and benefit claimants; prisoners and those supervised in the community; public sector employees; low-skilled people in employment; and other groups at risk of exclusion. The new strategy, which builds upon the Skills for Life strategy launched in 2001, will also look at what is being done to enable people to do Skills for Life training whilst learning other vocational training and to make Skills for Life training more flexible.

<<http://www.northeastern.edu/>> (09/09) – Northeastern University conducts research on practice-oriented education and methods of

learning that integrate experience in the world with experience in the classroom.

<<http://www.sflip.org.uk/>> (09/09) – The Skills for Life Improvement Programme aims to help organisations improve learner success through a whole organisation approach to embedding literacy, language and numeracy.

<<http://www.traintogain.gov.uk/>> (09/09) – Train to Gain is the government's flagship service to support employers in England to invest in the skills of their employees.

<<http://www.vox.no/>> (09/09) – Vox-Norwegian Institute for Adult Learning acts as an agency of the Norwegian Ministry for Education and Research and is responsible for networking, advising and financing, evaluating and implementing projects in the field of both Norwegian and international adult education as well as for the initiative called the Competence Development Programme through which workplaces and providers of education cooperate to develop workplace learning.

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CHAPTER III

LITERACY ON THE WORKPLACE AND IN THE VET TRAINING PROCESSES

Ioana Dârjan, Mihai Predescu

Literacy and workplace are two changing concepts in today economy and education. The relation between the two concepts is crucial for both education and economical development. In the last decades, the two concepts became more and more interlinked.

Literacy is the marker of modern education and modernity. Even if it is hard to decide when the Modern Era starts, one of the main characteristics was the opening of education and its generalisation to all people. Literacy, meaning basic reading and writing training became available for a growing number of children.

The development of education in the Modern Era was fuelled by the Industrial revolution that required more and more trained workers. Since then, the workplace requirements became more and more complicated.

Technological advancement, workplace requirements and literacy training became the engine of social and economical development. Even today, the European statements in the education area emphasise the need for a training that fulfils the industrial and economical needs of the labour market. Of course, this brings about a requirement for a higher form of qualifications.

Nowadays, experts state in cultural studies that humanity lives in a post-modern, post-industrial era. The trigger for the cultural era is the explosion of global communication that affects people's thinking, the way they change ideas, the way they work. Computer development and mobile technology are widespread because people are literate and are able to use them.

Has the post-literacy era already begun or has literacy still an important role to play?

In this chapter, the changing nature of literacy is to be analysed, together with the new literacy requirement on the workplace in the New Economy and the way literacy has an influence on the workplace. Also, the role of VET training in developing the workers' level of literacy will be looked into.

1. *The Changing Meaning of Literacy*

One trait of literacy is that it is generally accepted that there is no universal, unchallenging truth. This simple observation led to a redefinition of most of the modern era concepts such as progress, development and so on. Literacy is one of the concepts that needed a redefinition.

Forty years ago the literacy was conceptualised as the ability of reading and writing texts. This level of literacy was the focus of all programs designed to eradicate the illiteracy and still is in some developing countries. Two aspects have to be stressed about this conceptualisation of literacy: literacy was perceived as a *threshold performance* (he/she can or cannot read and write) and also as a *definitive skill acquiring* (once he/she is literate he/she cannot become illiterate again). Literacy, one may say, was perceived as the token of education.

Today's conceptualisation of literacy differs fundamentally in terms of structure and focus from what it used to be perceived as. Usually the term functional literacy is used in order to distinguish this approach from the classical view.

In 2001, in the report of IALS project, Kirsch (2001) stated that definitions of reading and literacy have changed over the time in parallel with the changes in society, economy and culture and also due to the growing acceptance of the importance of lifelong learning which has expanded the views and demands of reading and literacy. «Literacy is no longer seen as an ability that is developed during the early school years, but is instead viewed as an advancing set of skills, knowledge and strategies that individuals build on throughout their lives in various contexts and through interaction with their peers and with the larger communities in which they participate» (Kirsch 2001).

Illustrative is the evolution of literacy skills required for economic participation, citizenship, parenting and individual advancement in 1800, 1900, 2000 and onward. The evolution and development of human knowledge and technology are not just easing individual work and improving life quality, but are also imposing the necessity for an increasing number of citizens to acquire a greater capacity of mastering different types of information by using key competencies, mainly literacy competencies in newer and more complex ways.

The functional literacy considers that literacy encompasses all forms of human communication, from oral communication to written communication, usage of computers and mobile technology and numeracy. In fact, literacy could be defined as the competency to use efficiently any form of language. From this perspective, everybody has a certain level of literacy development but higher levels could be acquired by training. There are no thresholds that assess the level of literacy; it is more important how people use it. The concept of literacy and the levels of this

competency are modifying according to the human society progress and, hence, to the newer demands. For example, several decades ago, the ability to use computers was not a requirement on every workplace, but today it is almost compulsory to have ICT competencies.

Another major change in the understanding of the literacy is the shifting from perceiving it as an ability or a skill to considering it a key competency. Literacy is no longer defined as mere skill nor is it just an individual ability, but a fluid, trainable cluster of knowledge, skills and attitudes. This means that literacy can be described in terms of observable behaviours. Hence, literacy is not just a cognitive, predetermined, permanent skill, it also requires active participation of the individual as a person, involving his motivation, needs and attitudes, in order to constantly develop and enhance.

2. The Pervasiveness of Literacy in Contemporary Society

Literacy is so ubiquitous in our world that people don't even perceive it. Books and verbal communication cease to be the only source of literacy. Almost every item in the house, any article of food, and any purchased product has instructions that must be read. All media is literacy based. Newspapers, TV shows, internet require not only reading, but also interpreting texts, taking into consideration different points of view, deciding what is true, what is important and what is not, constructing knowledge. Even a walk on a street requires the use of literacy: advertisements are informing on different products or services, the street signs orient one through the cityscape (Barton *et al.* 2007).

The workplace literacy requirements are even higher. If the environmental literacy does not demand a very high level of literacy, the workplace literacy requires better understanding of larger texts and more specialized information. Failure in understanding such type of information could have important and serious consequences.

The contemporary society has changed from production to information production. This change was facilitated by the raising level of literacy competencies of the labour force. It can be stated that this was a literacy based economical turn. The importance of a text as a communication form in today contemporary economy led to a simple conclusion: if humanity wants to progress, it has to develop and permanently refine its ability to use information and, though, implicitly, its level of literacy.

In the context of the New Economy, the field of education, economy, workplace requirements and scientific and social advancements are interlinked in an interdependent network of synergic efforts towards development.

The second part of the 20th century faced the reality of gradual changes in concept and characteristics of economy, culture, society and education. The social and cultural scientists have named this change *the post-modern turn*, this meaning that people are now living in a new type of society, based on different cultural assumptions. The impact of postmodernism is pervasive. The clearest effects are as follows:

- from the cultural point of view, people live now in a global world, that shares some general (universal) values and principles;
- from the economic point of view, people switched to a post-industrial economy, the New Economy;
- from the industrial point of view, the role of production of goods became subsidiary to the production of knowledge and information;
- from the educational point of view, people approach an era of life-long and life-wide learning, an education-based society.

The New Economy is a term coined by Newsweek magazine in the 90' to describe the changing of industrialized countries from production of goods to services and production of knowledge. Even if some of the predictions about the New Economy have been proved to be too optimistic, the trend towards a knowledge based economy and industry is still confirmable. Production and use of information is not only a requirement but also a competitive advantage for every business.

3. Literacy on the Workplace and in the VET Training Processes

Literacy is not a competency relevant just for academic purposes. In the context of the New Economy, literacy competencies are vital in every occupation and they are considered key competencies or basic, transversal competencies in every country (European Commission Framework 2006). However, work-embedded literacy competencies, though ubiquitous and unavoidable, may often seem invisible and, thus, difficult to identify and reflect on by non-literacy specialists (McLeod 2003). In this chapter, the aim is to explore literacy on the workplace, its characteristics and influences.

There is a need to stress the necessity and the relevance of good literacy competencies for work efficiency and organizational profits. The role of VET trainers is *to raise VET teachers' awareness regarding the functions of reading and writing in workplace and in work contexts* (Southwood 2008; QIA 2009).

The literacy function could be highlighted by making a reflexive exercise, in order to identify and understand what literacy skills are needed for performing different workings/job tasks.

An instrumental aim of any training that teaches about literacy at the workplace and of a possible didactical approach should be the guidance for the potential trainees through the process of identification, explanation of literacy competencies involved in the working place during production processes due to the multiple and diverse interrelations and communications characterizing the work environment. Attaining this aim constitutes a step further in the process of adopting the practice of embedding literacy education into workplace provisions and, in the same time, a guide for efficient ways to implement this practice.

To understand the opportunity of continuous development and enhancement of literacy education, even for individuals who choose a VET path, the identification of literacy behaviours / components in everyday work, of key texts in a given occupation, the explanation of different functions and roles connected to different texts, mapping embedded literacy skills in work requirements are each a necessity, e.g. in occupational standards and to reinterpret occupational competencies in terms of literacy skills (Billington 1988).

4. Workplace Literacy Requirements in the New Economy

The New Economy is a knowledge economy and the result of a text-based society. The changing face of industry and economy is driven by the advancement in communicational technology, computer development and rising levels of digital literacy. As a consequence, there are new requirements for employees, including working and communicating at distance, interpreting digital texts, reacting in real time to decisions by the mean of reading and writing messages and so on (European Commission 2006; 2007).

The New Economy determines literacy to acquire three different ways of expression:

1. As context requirements that target the continuous adaptation of persons.

The psychological theories demonstrated that intelligence is a result of the interaction of a person with the environment. Usually there are three ways to deal with this relation: the adaptation to the environment, the changing of a person so as to comply with the requirements, the accommodation of the environment to a person's needs or the selection of a different environment. The New Economy is a type of environment that requires a high level literacy competency. Any VET program should take into consideration this fact and prepare the students to successfully manage to adapt to this environment. The environment accommodation solution does not seem to be a credible approach any more, since the New Economy became

- a global environment and the range of different environments requesting lower levels of literacy are limited niches at most.
2. *As professional requirements that are compulsory for fulfilling the work tasks.* At a less general level, literacy proves to be the main prerequisite of any job description. Though the level of literacy grows higher as the occupational fields become more and more specialized, literacy could not be overlooked even in the context of a most simple job. Interpreting rules and procedures, counting, adding, measuring, reading or writing instructions, communicating with co-workers and authorities are requirements that could be found in any job description and these requirements are fraught in literacy components. That implies that VET training cannot overlook the literacy development of the students.
 3. *As personal assets that raise the market value of the employee and the human resource of the organisation.* From the organizational point of view, literacy is not just a requirement, but also an investment and an asset. It is in the interest of the organisation, as well as in the interest of the employee, that the organizational staff becomes highly literate. The effects of good literacy competency at the staff level are not only better results in fulfilling the job, but also more adaptable human resources. The human capital is the organisational most reliable and valuable resource.
 4. *As educational requirement that compels the individual to continuously learn and update.* Contemporary society and economy are defined by the rapid pace of change. The life long and life wide learning is necessary in order to have a stable professional career. Literacy helps by providing the backbone of this form of self-education.

5. Conclusions

In this chapter we tried to highlight the fact that literacy is an inescapable necessity for contemporary society and economy. The links between literacy and all the aspects of professional work are expressed not only at the strict level of functionality, but, in a larger perspective, it affects the way we adapt to professional environments.

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CHAPTER IV
EMBEDDED LITERACY AND CARE OF THE SELF
IN THE WORKPLACE

Vanna Boffo

In order for the character of a human being to reveal truly exceptional qualities, we must have the good fortune to observe its action over a long period of years. If this action is devoid of all selfishness, if the idea that directs it is one of unqualified generosity, if it is absolutely certain that it has not sought recompense anywhere [...], then we are [...] dealing with an unforgettable character.
Jean Giono, *The Man Who Planted Trees*

1. Literacy and Work Contexts

The topic of this contribution, included among the essays in the volume providing a summary, reflection and overview of the essentially didactic work put together under the European Project CELiNE, *Content Embedded Literacy for the New Economy*, may seem to diverge greatly from the project's aims. Nevertheless, no sooner do we adopt a change in perspective, which at times can be very difficult to do due to the big political and social issues, the pertinence of the topic of care, and care of the self in the workplace in particular, forcefully emerges. As a result, we have at least three reasons for speaking of care: considered as content and at the same time, as methodology; with the meaning of the care that needs to be given to every human being so that they may regard the same object and the same events according to alternative points of view; and seeing diversity as denoting cultural wealth and providing a source for new experiences.

First of all, the human subject is a person in his entirety, in everyday life, both in and out of work time. Every occurrence or action that is experienced, every setting that changes under the influence of internal or external events brings about a change in the person experiencing them. It is not possible to plan training without the awareness, as planners, that the subjects to whom the teaching will be addressed come *before* and *beyond* the project itself. In the case of the project under consideration, that is, putting together a curriculum for training in the workplace and within professional contexts to combat the problem of relapses into illiteracy, what we need to consider, first of all, is that the subjects we are looking at come from various social and cultural backgrounds: they may be adult immi-

grants seeking employment or retraining, people from other cultures, but also forced to change their work at not so young an age. The problem of adapting new learning contents to situations of social and cultural hardship cannot only be dealt with by 'thinking' of how to put together curricula, by thinking of which disciplines – a bit of language, new technological information, some technical notions – to teach to enable the learners to acquire new notions/ information for new work contexts. What is important is to change the point of observation: to 'think' of new teaching and training strategies for the wellbeing of the trainees in their surroundings, which does not mean the wellbeing of the workplace, but the wellbeing of the individual so he may lead his life with wisdom and awareness. This is the first aim of training; it is always human and cultural.

Before we think of what the best content and also the best container is, we need to reflect as to which subjects the contents and the containers will be aimed at, since this will also alter the method used to 'think up' the curricula to follow.

The second reason for dealing with care of the self concerns the change in perspective concerning the *New Economy* which was considered in the project the driving force behind the new forms of literacy *within* and *in* the workplace. The forecast upon which the project was basing its curriculum outlines was that the advent of globalisation and the collapse of all the economic and financial borders would bring about new professions in the European labour market. Therefore, this would require a change in training in order to deal in a dynamic manner with new employment, new scenarios and new outlooks and to fully enter a future that had already arrived in democratically advanced countries. Instead, the recession that struck the world of finance and the economy, now global in scale, in spring 2008 has totally subverted all images of a new world. Now it almost seems out of place to hear talk of the advent of knowledge society, new forms of wealth, and an endless extension of work possibilities in the very sectors where a cultural change-round was strategically necessary. Since the end of 2008 the market crisis has swept away all hope of a 'new world'. The financial crisis has highlighted how many empty words were uttered without knowing how great a precipice every single citizen in the world was teetering along. To put it better, it is precisely the richest states that felt the economic crisis, which then transformed into a social and cultural crisis of immense size. We have not yet seen the end of it, and it may be that the politicians and finance and economic leaders cannot see what will come of it yet. The recession has forced the world to stop and think. Those for whom illiteracy was a barrier to changing career are those worst hit by a recession that has affected all developed countries.

In this changed scenario, the sense of training in the workplace acquires a new value: it imposes a critical awareness of a different type, that is not aimed at profit or improving production, but at boosting personal wisdom

for a reflective knowledge of the work contexts and professions. Care of the self is the tool, indeed the only tool, without which we will continue to produce not wellbeing, but cultural and human divides and separation.

Not the notions, but the capacity to reflect on them is the only route for reading, writing, mathematics and new technologies to truly become a factor of change for every single person living on planet earth, whether immigrant or migrant, staying put or forced by hunger and poverty to leave their country of origin and own traditions.

Finally, the third reason for associating the topic of care with literacy concerns method. Morin¹ (Morin 2003) showed the way to make us understand that a method is needed so that we can exist in the ambiguity, uncertainty and complexity of the human condition. No matter where our reflection starts off from, be it the condition of the businessman who sees his business fail, or the condition of the migrant turned back at the borders of the country where he wants to legitimately go to seek work, or the condition of the banker who does not act ethically in the workplace, the human condition has proved to be so precarious – and presently even more so – that it cannot not be educated or taught. We need to learn to exist in this precarious state, and training and education are the lines of this new knowledge that man, accustomed by the media to powerful, infinitely far-reaching technological progress, has completely forgotten. We need to re-learn to understand the world and its transformations, so as not to succumb under the burden of human disadvantage, and the disadvantage of those not able to adapt to its sudden changes.

Care of the self is a powerful tool for doing this. The care that the company director gives to his employees, the care of the awareness that workers' rights are the foundation of every democratic state, the care that the right to education and training are the bread of life and not just an accessory to it.

These are valid reasons for dealing with the necessary, indispensable and innovative relationship between literacy programmes and care of the self. Without profound reflection on this topic, we will go on not giving training the vital importance that many inhabitants of Western countries have to re-learn to consider and to take *care* of.

2. *Care, Empowerment and Literacy*

It is difficult to find exact equivalents in Italian of both the terms *literacy* and *embedded literacy*, due to the lack of importance given in our country's education policies to the problem concerning literacy in adults. If we are

¹ Morin went into the topic of ambiguity and uncertainty at a public conference held at the 'Educational Sciences' postgraduate school at the University of Florence, in Florence, on 24 October 2007.

to take the translation of the term provided on the site of the structure that deals with monitoring and assessing all the formal and non-formal training processes in Italy, INVALSI², we find that the term *literacy* is difficult to translate due to the different meaning given to it in the countries of the European Union. In Italy, adult literacy is perceived as achieving a middle school or secondary school diploma, not as an important and determining problem for the social progress of the young generations or even more for the effective integration of immigrant workers in our country. In English-speaking countries there is agreement over the term *literacy*, however, upon closer analysis, we discover that other European states also find themselves in the same position as we do³.

² INVALSI: National Institute for the Evaluation of the Education and Training System in <<http://www.invalsi.it/invalsi/index.php>> (08/09).

³ The quotes shown below have been taken from the site of INVALSI, the most important government organisation in Italy for monitoring and assessing the training systems in our national territory. The problems of translating the term *literacy* are countless and also involve the other countries that are part of united Europe and not in the English-speaking area. Indeed, the problems arise from its inclusion not only of reading skills, but also mathematics, science and technology skills: «Translation of the English term *literacy* is complex. The Italian term “*alfabetizzazione*” on one hand indicates the process through which illiterate people become literate, and it is therefore closely linked to the notion of the inability to read, and on the other hand points to a set of knowledges and basic skills, that is, a minimum level of ability that neither fulfils nor constitutes the PISA project’s assessment goal. In order to overcome these restrictions, on other occasions the English term *literacy* has been translated using the neologism “*letteratismo*”, in turn paraphrased using the expression “*competenze alfabetiche funzionali*” (translator’s note: functional alphabetical competences) [...] Nevertheless, the term “*letteratismo*” does not adapt well to defining the other two spheres of the PISA assessment, mathematics and sciences, since there is the risk that the expressions “*letteratismo matematico*” and “*letteratismo scientifico*” may not be very clear. In relation to these difficulties, the decision was made to ask the other PISA National Project Managers how they would translate the term “*literacy*” and the expressions “*reading literacy*”, “*mathematical literacy*” and “*scientific literacy*”. After considering the various possibilities, the choice was made to translate the term *literacy* with the expression “*competenza*” (translator’s note: literally competence) and the expressions “*reading literacy*”, “*mathematical literacy*” and “*scientific literacy*” with “*competenza di lettura*”, “*competenza matematica*” and “*competenza scientifica*” respectively. The term “*competenza*” includes a component of “knowledge” and a component of “know-how”, therefore reflecting the PISA definition of *literacy* that refers to the ability to look for, identify, process and get across information. It is useful to repeat that in the case of a term like *literacy*, all translations have limits and advantages, and, like our choice, are motivated by the need to translate in a comprehensible and at the same time faithful manner an expression and concept that has been conceived of in a different language. Besides, the difficulty encountered in translating the term *literacy* in Italian is shared by most of the other non-English-speaking countries taking part in PISA [...] which in many cases have made similar terminological choices to what is proposed here». Cf. <<http://archivio.invalsi.it/ri2003/pisa2003/cosa/literacy.htm>> (08/09); Cf. Gallina V. 2000, *Le competenze alfabetiche funzionali (letteratismo) e la ricerca Ials-Sials*, in V. Gallina (ed.), *La competenza alfabetica in Italia. Una ricerca sulla cultura della popolazione*, Milan, Franco Angeli-CEDE: 29-56; Vertecchi B. 2000, *Letteratismo e democrazia*, in V. Gallina (ed.), *La competenza alfabetica in Italia. Una ricerca sulla cultura della popolazione*, Milano, Franco Angeli: 15-28.

Nevertheless, in the face of terminological problems, we are currently witnessing the expansion, important in cultural terms, of the problem of the relapse into illiteracy of those generations at present most affected by the crisis in the labour markets. We are talking about the middle-aged who finished their schooling ten, twenty or thirty years ago, who have lost their job in the wave of redundancies and closures of small and medium-sized companies making up the Italian market's production structure – suffice it to think of the production sectors in the north-east and north-west, or in Tuscany and Emilia Romagna. These are the people who most need to learn a new condition of life together with new skills to return to a flexible, precarious, unstable labour market that is profoundly different from the production system in Italy twenty or thirty years ago. In addition to this type of worker, those from other cultures, immigrants, refugees or people forced to emigrate by adverse social, economic and political conditions in their country of origin, find themselves faced with new social and work contexts where new skills are necessary in order to find a place in the changed production contexts. The public institutions should carry out shrewd work to improve literacy amongst the young adults who make up the labour force of the Mafia system in the south of Italy which recruits those who either through desperation or background no longer believe in a country that can offer serious possibilities to break out and create a future and concrete hope of a job.

In the face of this new human condition, it is necessary to acquire skills linked to the changed technical and technological contexts, but it is above all important to acquire critical and reflective skills to provide comprehension of the new condition.

This is also needed in the face of lower levels of acquisition of professional skills. The problem is urgent for the wellbeing of the adult population and the future of our country. Every social class, as well as those quoted in particular, is involved in the epoch-making changes that have been disrupting the Western world since the end of the 1990s. With all the technological transformations, and the economic and financial disaster that has annihilated thousands of jobs in every country in the world, forcing millions of people to make a massive, radical change to their working life, it is necessary to start providing more training to teach skills, comprising knowledge and abilities, but also to raise the ethical and critical awareness of the individual responsibility that each subject has towards the other and towards their community.

The workplace is the favoured means for training people to acquire professional skills, but as well as this, for acquiring a sense of personal and collective responsibility.

In order to face up to the change and technologisation of modern societies Luhmann proposed a formula, «learning for learning's sake», which became the watchword for the new knowledge society. In one

of his most famous texts, *Problems of Reflection in the System of Education* (Luhmann, Schörr 2000) he underlined the importance for young generations of learning to learn, but the same formula was applicable to learning contexts where the aim was to achieve the possibility to instruct and teach children as well as adults about notions, disciplines and knowledge in a new technological environment. Central to this approach that has and still dominates every form of teaching, whether face-to-face or on-line, is education, the gathering of knowledge, speed of learning, transferral of skills and the automatising of learning, that is, the surrender to the technologisation of knowledge. In every context and with every type of student. The controversy initiated by the spokesman for a different form of learning and education, Habermas, was very tense. Habermas (1984) is the last representative of the Frankfurt School, he is the philosopher who, more than anyone else, at the end of the 20th century defended the category of *man's human formation* against the notion of *learning for learning's sake*. It is not a matter of establishing who is right, but understanding that prior to being given know-how and knowledge, man, every man, as well as every adolescent and every child, must be given the possibility to be motivated to learn.

Deep motivation for learning is the first form of care of the self that every person must be oriented and educated towards. The need to learn new ways of working and professional procedures must not damage the faith and self-confidence that every person struggles to find as an adult.

The need to train in the workplace arises from care itself, which is important to get over as a primary professional given. Upholding training means, first of all, upholding man's human formation, in his globality, in his complexity, and also in the uncertainties and multiple differences of every different working or professional condition. Simply giving every person of working age the possibility to understand that training does not only concern the workplace, but vision itself, will make it possible to give them the empowerment needed to believe in their own possibilities. Thus the motivation for learning will also arise in the workplace, as the motivation to comprehend and understand new professional contexts, new worlds, new cultures. Therefore, the training will not just be training to learn, but will be directed at a global change by which we are all affected during our lifespan and which everyone of adult age has to face up to. After obtaining suitable working conditions, where the right to a decent job is pursued and constantly accomplished, the other, more important right to achieve is the right to training in the workplace to shape the people and allow them to continue to learn the critical and reflective capacity that all jobs give. What will be difficult is establishing who has to bear the expense of what has been said up to now: the employer, the institution or the subject/person?

3. *Care of the Self in the Workplace*

The category of care has recently become part of the pedagogic debate in Italy, after having been at the centre of attention in France thanks to the studies of Foucault⁴, above all after the success and extension of the volume *The Care of the Self* (Foucault 1984), third in *The History of Sexuality*, published after the author's death by Gallimard in 1984. This category had always been emblematically placed by Heidegger as the foundation of being. Care of the form of being is indeed the mainstay of the meaning of human existence.

Nevertheless, care as the pedagogic matrix of man, an unavoidable fact of his existence, had long been thought and set forth by Stoic philosophers and Sceptics throughout the Classic Greek and Roman eras. In this sense, we have to thank Hadot for rereading the category in terms of man's human formation. Indeed, maybe he was the one, in his passionate and meticulous research into the greatest Stoic classics, who gave an operational framework of the most profound meaning of care of the self and the direction to take in order to implement it.

Added to this, pedagogic care is never just *cura sui*, but above all care of the other and the world. Care of the other *for* the care of the world. Care of the other *for* care of the actions, facts and events that condition and guide daily life. Care of the self, meant as care of the depths of the human person's psyche, physique, emotions, affections and body is the art of living, but above all it is a concrete, vivid, day-to-day attitude that appears in the conduction of one's existence day after day. Through care man prepares for life by means of thought and reflection. The art of living (Hadot 2002), or rather philosophy⁵, can be considered as exercising thought, exercising the critical and reflective activity that must always guide life. This exercise is, however, the very care that each person has towards himself, not with the aim of caring for oneself, or oneself alone, but with the higher aim of taking care of moral good and evil, the only spheres dependent on man's freedom (Ivi: 82-83). With the aim, therefore, of taking care of the other, the other person to oneself, towards whom

⁴ Michel Foucault, above all in the latter part of his scientific works, carefully researched the topic of the birth of modern individuality with great perspicacity. No longer only exposed to the public, in the first centuries of the Christian era man began to consider and manage his intimate personal sphere as private. Together with care of the self, we thus get the moral subject.

⁵ As Hadot remembers in one of his most famous texts *Exercices spirituels et philosophie antique*, for the Hellenistic schools philosophy is exercise, spiritual exercise, guiding the art of living. Philosophy acts as a guide for living as it is a constant and continual exercise. Cf. Hadot P. 2002, *Exercices spirituels et philosophie antique*, Paris, Editions Albin Michel (Eng. trans. Hadot P. 1995, *Philosophy as a Way of Life: Spiritual Exercises from Socrates to Foucault*, Oxford, Blackwell).

the good and evil are directed. Then, beyond the other, there is also the world: the third target towards which care of the self can be aimed.

We can see that here we are not discussing abstract spheres of human life, but we are interested in the very wellbeing of life. Where wellbeing derives from doing, from the constant and continual exercise busying existence, all the time. So we need to make a change in how we see the sense of life. Only through education and training for critical thought, care of the self, will it be possible to take the reins of our own wellbeing in our surroundings and to direct it, even in the cases in which the surrounding conditions may be adverse or hostile. The principle of care is expressed in all the situations in which we are capable of taking care of ourselves and of others; this principle is intrinsically linked to relationships. The care to bring to the world is not guided by the emotions, it is a tendency of the subject that becomes the paradigm of a different way of living existence. Care concerns a new culture of educational and informative intentionality that leads to a transformation of man and the human person in whichever condition he finds himself. It is at the basis of the act of education.

The action of care concerns some distinctive traits of personal formation that are also fundamental traits for all dispositions for learning. The first of these traits is attention, an external vigilance and

[...] a continuous vigilance and presence of mind, self consciousness which never sleeps, and a constant tension of the spirit. [...] Thanks to his spiritual vigilance, the Stoic always has “at hand” (*procheiron*) the fundamental rule of life: that is, the distinction between what depends on us and what does not (Ivi: 84).

Vigilance that is always present, in every moment of life, is concentration on the moment to be lived.

Attention to the present moment is, in a sense, the key to [...] exercises. It frees us from the passions, which are always caused by the past or the future [...] which do *not* depend on us. By encouraging concentration on the minuscule present moment, which, in its exiguity, is always bearable and controllable, attention increases our vigilance. Finally, attention to the present moment allows us to accede to cosmic consciousness, by making us attentive to the infinite value of each instant, and causing us to accept each moment of existence from the viewpoint of the universal law of the *cosmos* (Ivi: 84–85).

The attention that every subject gives to the things in the world allows us to respond to events that happen «as if they were questions asked of us all of a sudden» (Ivi: 85). This concentration and this attention involve a transformation where the imagination, emotion and affection are always associated with the exercise of thought. As Noddings (1992)

reminds us, however, this exercise of thought also has other distinctive traits which, regarded closely, stem from the first acts analysed. They are: 1) openness towards the other; 2) receptiveness; 3) thinking using the emotions/feelings; 4) feeling and 5) reciprocity. The means for getting to these ethical dimensions is through cognitive learning. As the Stoics also believed, nowadays the cognitive exercises of reading, writing, dialogue, listening and meditation are the means for caring for and taking care of the other. We cannot manage to transform our personal awareness, nor learn to think, without suitable exercise of cognition and the emotions/feelings. It may also be added that *cura sui* is also always care for relationships, communication, dialogue and conversation, shaping the subjects through words.

Learning is mediated by care and care is achieved through learning. With adults in particular it is fundamentally important to understand the links with their present and past life, with their life story past and present. Learning is life and life is learning new knowledge. But where can lifelong education for knowledge be sited so that it also backs up lifelong self-knowledge? Might it not be difficult to see the workplace as a place of reflection and learning? In the end, work tacitly shapes the subjects, that is, what emblematically happens today is what technology was supposed to avoid: it is work that guides man and not vice-versa.

So care of the self and others is a condition that also precedes training *at* work and *in* the workplace. Might this combination not seem a little tricky? Indeed, it has not yet been attempted by those concerned with the big current political issues and work policies. But as soon as we stray from the usual way of thinking of production, consumption, the market, economy and work, we realise that we cannot avoid reflecting on the fact that man's wellbeing depends on to what extent every subject manages to perceive the importance of respect for oneself and being respected, with care, *in* the workplace. Whereas once the exercise of self-care concerned subjects whose primary interest was not in the world of work, today we know that work is an integral part of human life, a fundamental and necessary part.

Today care in the workplace means continuing to be trained. Not to improve production, to increase capital or to 'make the wheel of the world economy turn'. Care in the workplace is training to be men in a changing world. This can only take place in the awareness that people's knowledge is the driving force behind a growth in critical and reflective ability. Only by seeing learning in these terms will it be possible to sustain the motivation to learn and will it be possible to continue to educate subjects when adults. We cannot take what has been said above for granted, especially in the present day.

Learning in order to exist in the present day's ambiguity, complexity and uncertainty means learning from know-how in the workplace,

it means learning to transfer knowledge from work to life and from life to work. It means understanding that work is life and that improving working conditions through work means improving the conditions of one's own life and the lives of the others alongside us.

4. *Embedded Literacy, Care of the Self and the Workplace*

In his day Dewey had already claimed that learning has to originate from the place in which the learner finds himself living. As a result, it would seem that the idea that literacy for adult subjects has to lead from and be upheld by the subjects' contexts of interest and life is not new. The reference to Dewey is important on one hand at least because it unfolds the reasons and need to build curricula for linguistic, scientific, mathematical and technological learning from the workplaces of the subjects that have to be taught, while on the other it reminds us that every piece of learning is first and foremost the subjects' education and training as well as communication. Indeed, in the very first pages of *Democracy and Education*, Dewey places communication between the place and the subjects at the centre of the educational process.

An *embedded* learning process, connected to the objects, the machines and the tools of the profession, must be built up starting from the workplace, or rather, *in* the workplace. By taking a closer look at these pages, we can see Dewey is also telling us something more. He is stating that a virtuous cycle of communication has to come into being between the subjects who live and learn and the other members of the community and the place of living, which in our case is the workplace. The training that every profession requires can and must be built starting from the work and the subjects' cultural roots. From this encounter, we can achieve the right motivation for the subjects to continue training and for the employer or the company to head towards accomplishing a good atmosphere in the company and workplace.

Nevertheless, it is not immediately evident that procedures, processes and curricula connected, intrinsically connected, to the production model or the type of task carried out can come out of every profession. And yet, only by managing to come up with the tools for a critical look at reality will it be possible to continue to train people in the workplace. With every profession comes widespread knowledge and know-how, it is up to the human person to take care of it. Dewey underlined this several times and claimed: doing and knowing how to do things arises from a skill that can only be pointed in the best direction by a strict and coherent logical ability. Without logical ability, there will only be the reproduction of knowledge, and the worker will not have any precise perception of this.

It is not a matter of learning from experience, but learning *through* experience and *beyond* the experience itself (Eraut 1997; 2000).

Perhaps an example could explain what I mean better. An apprentice hairdresser from a different cultural background to the place where they are working may have problems with the language connected to the qualifications gained in their country of origin or connected to the fact that they cannot frequent a suitable language course outside working hours. If they are helped by a colleague with a suitable education and training, they can learn the meaning of the terms from the objects used, and with the colleague's help can benefit from intensive linguistic training without interfering with the agreed working hours and without taking part in courses in schools which could never have provided the possibility to look at topics and problems linked to carrying out that particular profession. Reading labels, instructions, but also constant dialogue will give them things to think over and reflect on and therefore they will (re) learn the linguistic knowledge that had vanished since leaving school.

Let me conclude this reflection by placing attention on a problem involved in building a learning method and training in the workplace: the trainer, who must be a suitably 'developed' figure to transfer their learning, and to transform the professional content into learning procedures for language, mathematics, general culture, logics and technology. However, more research will be needed on the building of a professional figure who can be part of the work context in every workplace and at the same time a guide in the application of suitable *training processes* for *embedded literacy*.

There is still a long way to go. There needs to be a significant change in how the adult subject's work culture and development is seen, through and beyond gaining skills and capabilities.

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CHAPTER V

MOTIVATION FOR ENHANCING LITERACY COMPETENCIES (KEY-COMPETENCES) THE IMPACT OF LITERACY ON QUALITY OF LIFE

Ioana Dârjan

Why literacy?

Literacy is an indispensable means for effective social and economic participation, contributing to human development and poverty reduction. Literacy empowers and nurtures inclusive societies and contributes to the fair implementation of human rights. (...)

Nevertheless literacy remains a low priority for national governments and the donor community.

Worldwide, 774 million adults are illiterate and approximately 80 million children are out of school. A large number of those who enroll drop out before attaining literacy skills and some of those who complete primary education remain illiterate
UNESCO's LIFE initiative¹, 2007

1. Literacy as a Key Competency

1.1. What is a Competency? What does Key Competency Mean?

The efforts of improving education and instruction for the members of society are driven by the need to efficiently respond to the complex, rapidly changing characteristics of today's life. At the very beginning of a good educational plan stand the objectives of the learning process and the methods / means through which the objectives could be attained. Also, for every learning stage, there are some necessary, compulsory prerequisites needed. Without these prior acquired knowledge and skills the next step, the progress will be difficult, if not impossible. For the learning process, there is a class of core, ubiquitous, transversal knowledge and skills that possess a *sine qua non* character for almost all human learning processes. These are the so-called key competencies.

In order to adequately stimulate and sustain their development and to assess step-by-step their level according to the human development milestones, their clear identification and definition is needed.

¹ LIFE is a key strategic framework for the implementation of the United Nations Literacy Decade (UNLD), which is led and coordinated by UNESCO. LIFE is an initiative to facilitate and promote the achievement of the Education for All (EFA) and UNLD goals.

Important definitions and clarifications have emerged from the DeSeCo Project² of OECD's³; it provides a framework that can guide the longer-term extension of assessments into new competency domains. This project aimed to provide a conceptual framework to facilitate the identification of key competencies and of methods of measuring the competence level of young people and adults, by identifying universal challenges of the global economy and culture, as well as common values that inform the selection of the most important competencies, yet also acknowledging diversity in values and priorities across countries and cultures. This project's objectives are linked with the OECD's Programme for International Student Assessment (PISA).

Acknowledging that a competency is more than just knowledge and skills, that a competency «involves the ability to meet complex demands, by drawing on and mobilising psychosocial resources (including skills and attitudes) in a particular context» (DeSeCo 1997), we could use the next definition criteria in order to identify the ideal amount of key competencies relevant for many / most part of our life.

The same project stipulates that each key competency must:

- contribute to valued outcomes for societies and individuals;
- help individuals meet important demands in a wide variety of contexts;
- be important not just for specialists but for all individuals.

Thus, the transversal key competencies are to be grouped into three broad categories, each with a specific focus, but at the same time inter-related and collectively forming a basis for identifying and mapping key competencies:

- Key competencies which guarantee the interactive use of tools (interactions with physical environment, through information technology and interactions with socio-cultural environment, through language):
 - a. use language, symbols and texts interactively;
 - b. use knowledge and information interactively;
 - c. use technology interactively;
- Key competencies which guarantee the interaction in heterogeneous groups (larger range of backgrounds):
 - a. relate well to others;

² Definition and Selection of Competencies: Theoretical and Conceptual Foundations, OECD Project, 1997.

³ Organization for Economic Co-operation and Development.

- b. co-operate, work in teams;
- c. manage and resolve conflicts;
- Key competencies which guarantee the autonomous act of the individual (managing the own life, living in broader social context, acting autonomously):
 - a. act within the big picture;
 - b. form and conduct life plans and personal projects;
 - c. defend and assert rights, interests, limits and needs.

The European Commission had provided another definition of key competencies, along with a reference framework with 8 key competencies.

From EC's perspective, the competencies are defined as a «combination of knowledge, skills and attitudes appropriate to the context. Key competencies are those which all individuals need for personal fulfilment and development, active citizenship, social inclusion and employment» (2006).

The European Reference Framework sets out eight key competencies:

- communication in the mother tongue;
- communication in foreign languages;
- mathematical competency and basic competencies in science and technology;
- digital competency;
- learning to learn;
- social and civic competencies;
- sense of initiative and entrepreneurship;
- cultural awareness and expression.

1.2. The Status of Literacy Education: Literacy Competencies and Basic Skills Competencies

Literacy stands at the hardcore of learning and teaching. No one can conceive a teaching sequence without using some kind of literacy skills including the communication skills, reading, writing, numeracy or Information and Communication Technology (ICT). So, every trainer, for children or adults, uses literacy in training, implicitly or explicitly (Barton *et al.* 2007).

The UNESCO's LIFE initiative (2007) is a framework for implementing some of the recommendations highlighted in the UNLD⁴ action plan, whose vision of Literacy for All stresses that:

Literacy for All has to address the literacy needs of the individual as well as the family, literacy in the workplace and in the community, as

⁴ United Nations Literacy Decade (UNLD) 2003-2012.

well as in society and in the nation, in tune with the goals of economic, social and cultural development of all people in all countries. Literacy for All will be effectively achieved only when it is planned and implemented in local contexts of language and culture, ensuring gender equity and equality, fulfilling learning aspirations of local communities and groups of people. Literacy must be related to various dimensions of personal and social life, as well as to development. Thus, literacy efforts must be related to a comprehensive package of economic, social and cultural policies cutting across multiple sectors (UNESCO 2006).

Embedded literacy refers to a particular kind of teaching that focuses not only on a certain specific subject, but also, explicitly, is concerned with developing literacy skills (QIA 2009). The reasons to impose and utilize embedded literacy are well documented in educational literature and include the following motives:

- literacy covers several key competencies, including communication in the mother tongue and the use of ICT;
- literacy has a strong impact not only on academic performance, but also on everyday actions;
- the development of literacy competencies boosts the acquisition in subject areas;
- literacy development has a positive impact on cognition and metacognition;
- the development of literacy has an empowering effect on persons with or without poor literacy skills and allows them to participate effectively and actively to the social-communicational life.

The development of literacy competencies is often regarded as a main reason for education and usually takes place in the elementary school. But two major aspects of literacy that are extremely important from the adult education and professionalisation point of view are to be underlined:

- as any other competency, literacy could be developed from a basic level to more advanced ones, so that everybody is suitable for further development of literacy skills and competencies;
- the literacy competencies have to be reinforced by literacy action and the basic literacy skills, once acquired, can be forgotten by a person that didn't exercise them.

1.3. Levels of Literacy Competency

Between 1994 and 1997, approximate 25 countries fielded the world's first large-scale, comparative assessment of adult literacy in the first

International Adult Literacy Survey (IALS), that employed a sophisticated methodology developed and applied by the Educational Testing Service to measure literacy proficiency for each domain on a scale ranging from 0 to 500 points. Literacy ability in each domain is expressed by a score, defined as the point at which a person has an 80 per cent chance of successful performance from the set of tasks of varying difficulty included in the assessment. Five levels of literacy that correspond to measured ranges of scores have emerged during the third report for analytical purposes:

- Level 1 indicates persons with very poor skills, where the individual may, for example, be unable to determine the correct amount of medicine to be given to a child from information printed on the package.
- Level 2 respondents can deal only with the material that is simple, clearly laid out and in which the tasks involved are not too complex. It denotes a weak level of skill, but more hidden than Level 1. It identifies people who can read, but test poorly. They may have developed coping skills to manage everyday literacy demands, but their low level of proficiency makes it difficult for them to face novel demands, such as learning new job skills.
- Level 3 is considered a suitable minimum for coping with the demands of everyday life and work in a complex, advanced society. It denotes roughly the skill level required for successful secondary school completion and college entry. Like higher levels, it requires the ability to integrate several sources of information and solve more complex problems.
- Levels 4 and 5 describe respondents who demonstrate command of higher-order information processing skills.

2. Who Needs Literacy? The Individual, Social and Professional Demands

2.1. Motivating the Learners at Personal/Individual Level

Except for extreme cases, when content embedded literacy education, literacy education at workplace is discussed, the subject of illiteracy does only occur in the form of low level literacy competency. In that case, there is no harm done to the self/image, the self-esteem of the potential beneficiaries by offering them a basic skill, but by motivating them to improve the skills already acquired and though enhancing their chances of self-fulfilment, self-actualization at all the significant levels of their lives. These ways of motivating an adult learner to step further in his/her education boost by focussing on the prior knowledge instead of the lack of knowledge and abilities, focussing on strengths not weaknesses,

on the bigger image of potential future opportunities (either personal/familial, professional/organizational, or social ones), respect the main principles of adult education and, more than that, preserve the healthy self-image and self-respect of the learners.

There are some general rules/qualities of any efficient motivation:

- the motives should be relevant for the actual needs/preoccupations/interests/ideals of the student/learner;
- the motives must have connexion with the reality;
- the motives should be congruent with the voice/the desire of the person to be empowered; before deciding what the learner needs, one should really listen to his/her own, genuine answers to the following questions related with his/her literacy education and his/her literacy competencies improvement: Do I need literacy competencies improvement? What kind? Why? How much? When?
- the learning results have to be labelled by the learner as a gain, a benefit, a worthy product;
- these potential benefits have to represent reasonable, realistic, realisable and reachable objectives;
- the pursuit of benefits should be evident and in reasonable temporal/spatial proximity;
- the benefit/cost balance should be positive;
- inconveniences (time/energy consuming, struggles, undesirable feelings – incompetency, inappropriateness etc) should be bearable and should be surmounted by the predictable sense of success, self-fulfilment and self-actualization.

In order to identify the individual motives for developing and improving literacy competency, this investigation should begin with analyzing the main situations which persuade the human individual into action. An emphatic and insightful, yet scientifically accurate way of doing that is relying on the well-known Maslow's theory of motivation. This psychological theory presents the human needs and, thereby, motives, as a pyramid consisting of five universal, hierarchical, predetermined levels. Going from simple to complex, from biological to spiritual determinants, this pyramid begins with the level of physiological needs, while the uppermost level is associated with self-actualization needs, particularly those related to identity and purpose.

Physiological needs must be met first, as the lack of satisfying them is often incompatible with life. Only when lower needs are met, the human individual could orientate and attain for the higher ones. Once an individual has moved upward to the next level, needs in the lower level will no longer be prioritized, but the lower levels will gain priority again if they are not longer satisfied.

The Maslow's hierarchy of needs is composed from the following needs: physiological, safety and security, love and belonging, esteem (known as the *deficiency needs*), self-actualization, self-transcendence.

In the case of the «deficiency needs», if they are not met, the body gives physical (especially in the case of the physiological needs) alerts or the individual experiences anxiety and tension.

If physiological and safety needs are mainly individual necessities, the third layer of human needs expresses the social nature of the human, involving emotionally-based relationships.

Being a socially orientated organism, a human values the opinions and the views of others about him; this information represents an important source for the construction of self-concept and of (self)/esteem (the fourth category of deficiency needs).

Except for physiological needs, all other deficiency needs are *literacy sensitive*: this means that they are influenced by the individual's literacy competency and levels of literacy competency. The literacy competency and, especially, the literacy levels of competency determine the ways individuals appraise themselves and are perceived and appraised by the others.

The esteem need expresses the normal human desire to be accepted and valued by the other members of the community. When, due to different situations, the result of self-evaluation is negative, the probability to experience low self-esteem or an inferiority complex occurs. The information on a person's literacy competencies are very important criteria for the ways the others categorize him, especially because of the deeper significance of this competency and of what other personal, social, cultural data it implies. The level of literacy competency could be determined by a wide range of variables: socio-cultural conditions, economical and educational status and, more important, intellectual/cognitive level of development, expression of personal aptitudes, attitudes and values.

All this variables are very intimate and vulnerable; they are located in the privacy zone of the individual and accessing them, even for motivational purposes, has to be done carefully, empathetically, with respect. Any wrong accent or formulation of the motives out of which an individual has to improve some competency (in this case the literacy one), could succumb in rejection of the idea, the person's withdrawal, in order to defense his/her self-esteem. In many cases, acknowledgment of own low ability or of a bad personal characteristic that menace the self-esteem could generate defence mechanisms, like negation or overcompensation, weakness and helplessness.

A person could prefer not to improve his/her literacy competency if this means that he has to confront the idea of his/her misfit, inappropriateness, unpreparedness. Especially in the case of adult education, which is also the case of workplace learning and of content embedded literacy education, the approach of the potential learner should respect the adult learning's principles, using the actual level of knowledge and abilities

and valuing his/her genuine qualities. The stress of strengths instead of weaknesses is always more considerate, less aggressive, more activating, less counterattack prone!

At educational level, it is more efficient to demonstrate the benefits of a learning process, than to highlight the lacks of keeping the same level of competency, of self-complacency.

When motivating a person to improve his/her literacy competency or any other competency, for that matter, it is important, also, to understand the gradeness of the source underlying a person's self-esteem: it's more healthy and confident to base your self-esteem on your inner feeling of self-competency, than on the external factors such as fame and outer recognition.

The *need of self-actualization*, that is the motivation to realize one's own maximum potential and possibilities, is considered to be the master motive or the only real motive, all other motives being various forms of the aforementioned.

Of course, as the final need in Maslow's hierarchy of needs, it could be accessed only if and when lower level needs have been satisfied.

But when a person has to be determined to enhance his/her literacy competency, this level should be used to illustrate how tacking a step further can improve all the aspects of his/her life. This stage is a stage of self-development, of fulfilment, aiming to strengthen and to consolidate.

It's obvious that the motivating efforts and arguments a trainer/teacher uses will have to differentiate according to the level of unsolved need of every learner. So, the motives can range from gaining more money to supply food and material resources for himself/ herself and family, to having the sense of security, of worthiness, of belonging and being loved and appreciated by the others (mainly external source of satisfaction – extrinsic motivations) all along to the attaining of the feeling of self-fulfilment, of development and full actualization that generate pride, self-respect and self-confidence (intrinsic motivation).

- a. *The impact of levels of literacy competencies on individual level:*
 - important source for self-appraisal, self-competency, hence self-esteem, self-confidence;
 - important source for the appraisals of the person by his/her family/ community members;
 - prerequisite, transversal/key competency, significant variable for educational, professional path.

- b. *How can low literacy competency affect a person at individual level?*
 - generating feelings of inadequacy, incompetency, worthiness, determine the development of low self-esteem, emotional and behavioural disorders, learning difficulties;

- developing negative attitude towards writing/reading, learning, school, education;
- rising drop-out school rate, shortening the educational path;
- low level of school acquisitions, lower school achievements;
- restraining the range of occupations attainable;
- lower rate of employability,
- lower paid jobs, lower incomes, poverty;
- tendency for unhealthy, risky behaviours: unhealthy eating behaviours, substance misuse and abuse;
- lower abilities and skills in nurturing and educating the offspring (the interrelations between the parents' level of education, in general, and of literacy, in particular, and their children's education).

c. What gains, benefits improved/enhanced literacy could generate at individual level?

- better adaptation to different environments (social, professional);
- enhanced key competencies that are necessary for the development of higher order competencies;
- the development of self (self-image, self-esteem, self-concept, self-presentation).

2.2. Motivating the Learners at Social Level

Beyond the individual characteristics, any human individual is defined through his/her belonging to a family, to a community and to a larger society. Every society possesses some prescribed norms and rules of acting and interrelating for its members. The belonging to any kind of human organizations provides a status and a set of roles for every constituent member.

Paulo Freire, one of the most influential thinkers about education in the late twentieth century, has been extremely preoccupied by the particular situation in which illiteracy represents an expression of human lower condition, due to different arbitrary, discriminatory criteria, such as social class, economical and financial challenges, national, ethnic, cultural, religious, sexual or any other minority appurtenance. Paulo Freire had a strong confidence in the emancipator power of education, especially of literacy (in this case, literacy being used as the clear antonymous of illiteracy), by connecting into his theoretical framework the education practice with liberation. Hence, he became particularly popular with informal educators due to his emphasis on dialogue and his concern for the oppressed.

His work and legacy present a number of important theoretical innovations that have had a considerable impact on the development of educational practice, especially on informal and popular education.

There are five aspects of Paulo Freire's work that contributed to the changing of educational practices.

These most innovative views of education and of its roles in the Freire's theory are the emphasis on the importance of dialogical, conversational aspects of education, in opposition with just teaching curricula; the preoccupation for praxis, that is action informed (and linked to certain values); the insistence on situating educational activity in the living experience of participants and the idea of building a 'pedagogy of the oppressed' or a 'pedagogy of hope' by developing consciousness, but consciousness that is understood to have the power to transform reality (Taylor 1993).

The process of education is seen as enhancing community life and building social capital.

- a. *The impact of levels of literacy competencies on the social level:*
 - important criteria of assessment and hierarchical ordination of society's members;
 - influence the status and roles ascribed and achieved in society.
- b. *What can low literacy competency do on a social level?*
 - discrimination, exclusion, isolation;
 - social withdrawal from social and work groups;
 - blaming, ignoring, overruling, patronizing, exploitation.
- c. *What gains, benefits improved / enhanced literacy generate at social level?*
 - active, autonomous citizens;
 - empower the oppressed and minority groups.

2.3. *Motivating the Learners at Professional/Organizational Level*

The New Economy is a term coined in Newsweek magazine in the 90' to describe the changing nature of industrialized countries from production of goods to services and production of knowledge. Even if some of the prediction about the New Economy have been proved to be too optimistic, it still demonstrate the trend toward knowledge based economy and industry. Production and use of information is not only a requirement but also a competitive advantage for every business.

In this context, the meaning of literacy is changing dramatically under the influence of economic requirements for another type of professional development, the changing nature of work and work relationships and the growing dependence on information exchange in real time. The context generated in the New Economy influence the organizations' types and characteristics.

There are a lot of theories who circumscribe these changes. One of the most famous theoretician is Peter Senge. Describing himself as an

“idealistic pragmatist”, he has explored and advocated some quite “utopian” and abstract ideas (especially around systems theory and the necessity of bringing human values to the workplace). At the same time, he has been able to mediate these so that they can be worked on and applied by people in very different forms of organization (Smith 2001).

According to Peter Senge (1990: 3, apud. Smith 2001), learning organizations are «[...] organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together».

Another comprehensive definition of a learning organization is that given by Farago and Skyrme (1995): «Learning organizations are those that have in place systems, mechanisms and processes, that are used to continually enhance their capabilities and those who work with it or for it, to achieve sustainable objectives – for themselves and the communities in which they participate».

The important points to note about this definition are that learning organizations:

- are adaptive to their external environment;
- continually enhance their capability to change/adapt;
- develop collective as well as individual learning;
- use the results of learning to achieve better results (Farago, Skyrme 1995).

The same authors consider that a learning organization is not just about ‘more training’, but involves the development of higher levels of knowledge and skill. Farago and Skyrme (1995) have developed a 4-level model of learning who could developed through an organization: Level 1 – Learning facts, knowledge, processes and procedures (Applies to known situations where changes are minor), Level 2 – Learning new job skills that are transferable to other situations (Applies to new situations where existing responses need to be changed. Bringing in outside expertise is a useful tool here), Level 3 – Learning to adapt (Applies to more dynamic situations where the solutions need developing. Experimentation, and deriving lessons from success and failure is the mode of learning here) and Level 4 – Learning to learn (this level is about innovation and creativity; designing the future rather than merely adapting to it. This is where assumptions are challenged and knowledge is reframed).

All this level of learning could be applied to at three levels – to the learning of individuals, of teams and of organizations.

In this light, the roles and importance of the human resources has a very large acceptance in today’s economy. The main interests the organization has in developing human resources are the desirable consequent

effects on productivity and on profits, hence on further organizational development. That's why the investment in human resource is always a profitable one. The main effects of human resources' continuing education and specialization at the workplace are the lowering costs of productions, as the losses decline and the work accuracy and precision grow, the raising of work efficiency, the increase of employees' performance etc.

That is the motive that both an organisation and an individual should share in their raised and constant interest in developing literacy levels.

From the organisation's point of view, a more literacy-competent employee could use more easily the available resources. So, the communication in the organisation is more efficient, based on effective real time interactions and feedbacks.

The gains for the management are even clearer. As the employees acquire better literacy competencies, the level of decision could be lowered to the employee and the decision making process becomes easier and faster, without errors. In this situation, the balance between responsibility and decision making at the employees level improves, effacing a good amount of stress and discontent.

From an individual point of view, the need for workplace literacy development is even higher and more desirable. For the employee, not only the need to comply workplace literacy demands is important, but also the gain of competitive advantages obtained through literacy competency improvement in contrast with less literacy-competent opponents on the labour market.

a. The Impact of Levels of Literacy Competencies on Organizational Level:

- determining levels of work competency and of work efficiency;
- the type of access to the learning opportunities from the workplace, hence the modality of taking the (further) professionalization, professional reconversion paths;
- rate of employability.

b. What can low literacy competency produce on organizational level?

- hazards, accidents;
- higher production costs, low job efficiency, production scraps, losses;
- organizational failure.

c. What do gains, benefits improved / enhanced literacy generate at organizational level?

- higher levels of work competency and of work efficiency will determine;
- more direct and easy access to professionalization, professional reconversion paths;
- higher levels of employability, lower level of unemployment;

- raised job satisfaction, clearer employees' commitment to the organizational interests;
- reduction of work stress, job-related discontent;
- reductions in job-related accidents.

At the professional/organizational level, the motivation for improving literacy competencies emerged from the growing need for adaptability and flexibility of the workers in the context of rapidly changing characteristics on the labour market. At the same time, the new workplace demands from the workers higher competencies and permanent development of theoretical knowledge and practical skills. This kind of individual development has a direct impact on organizational success, but demands a satisfactory level of transversal, key competencies and literacy is among the most important key competencies.

3. Conclusions

As stated in UNESCO's LIFE initiative, any project or strategy which aim to improve the quality of life by enhancing the literacy competencies are empowering, having very positive and constructive, long-term and long-lasting effects on the society's members, at first, but, nevertheless, they reflect upon society as a whole, as a complex eco-system, at every level: individual, social, professional, economic and so on. The type of strategy sustained by this UNESCO project is the one focussing on learning-how-to-learn competencies and approaches.

The UNESCO's opinion about literacy is made clear, by considering this competency as the prerequisite for almost all learning processes, «a human right, a tool of personal empowerment and a means for social and human development. Educational opportunities depend on literacy. Literacy is at the heart of basic education for all, and essential for eradicating poverty, reducing child mortality, curbing population growth, achieving gender equality and ensuring sustainable development, peace and democracy. There are good reasons why literacy is at the core of Education for All (EFA)» (EFA Global Monitoring Report 2006).

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PART II
TRAINING PROCESSES

CHAPTER VI

ADAPTING LITERACY COURSES
TO THE NEEDS OF THE WORKPLACE
THE NORWEGIAN PROGRAMME
FOR BASIC COMPETENCE IN WORKING LIFE

Kari H.A. Letrud, Jan Sørli

In part 1 of this article we present some of the background for this Norwegian initiative of developing basic skills, among them literacy skills, in the workplace. The obvious goal, of course, is to improve basic skills in the part of the Norwegian population that lacks such skills at a desired level, i.e. a level that can make them autonomous learners, active citizens and attractive employees.

In part 2 we illustrate how courses may be organised in the workplace in such a way that they promote learning and increase chances of success for the participants. Included in this is the explanation of how the text material pertaining to the individual enterprise can be used to make meaningful courses for the employees.

In part 3 we give some general recommendations about organising basic skills training in the workplace.

1. Background

The Government programme and measures we present here are closely linked with the results of the International Adult Literacy Survey, IALS¹, which Norway took part in together with 20 other countries. The Adult Literacy and Life Skills Survey, ALL², confirmed the result of the IALS survey, revealing that a considerable percentage of Norwegian adults did not have functional literacy skills as defined by the OECD. Although the results showed Norway was doing very well compared to many other countries, it was quite a shock to our authorities to discover that around 430.000 Norwegian adults, around 15% of the adult population, did not have sufficient literacy skills to func-

¹ OECD (ed) 1995, *Literacy, Economy and Society, Results of the First International Adult Literacy Survey*.

² See <<http://nces.ed.gov/Surveys/ALL/>> (09/09).

tion well in modern society³. In this group there are, of course, many old people, but what caused the greatest worry was the fact that 1/6 of those who had reading skills at level 1 of the five levels, were young people between 16 and 22. (Level 3 is what the OECD, ideally speaking, considers to be functional literacy.) Another cause for concern was the fact that between 200 000 and 300 000 of those who have jobs were considered to be very weak readers.

In many branches of industry and commerce there is an obvious lack of qualified labour. This is brought out all the more clearly when enterprises go through major reorganisations. The changes implied often lead to new and different task for the individual employee. Not least, the demand for efficiency will require a mastery of basic skills. In a society under economic pressure there is simply less room for errors. If there are deviations, written reports or logs are required for the sake of documentation.

Measures

The Programme for Basic Competence in Working Life is a Government programme that was introduced in 2006. It is partly the successor to *the Competence Development Programme*, which was introduced during the comprehensive Competence Reform (1999). The workplace was a central learning arena for the previous programme and still is for the present programme. The present programme, however, has a clearer direction towards improving basic skills. Vox has the administrative responsibility for the programme. The idea is to fund and monitor basic learning projects in enterprises. Projects organized outside workplaces can also receive funding, but the objective will still be to prepare people for working life. The aim of this program is to give adults the opportunity to get the basic skills they need to keep up with the demands and changes in modern working life and civil society. The program concentrates on reading, writing, numeracy, and digital skills. Any enterprise in Norway, private or public, can apply for funding from the program.

The following criteria for support have been emphasised:

- the learning activity should be combined with work and basic skills training should preferably be linked to other job-relevant learning;
- the courses should strengthen the participants' motivation to learn;
- the courses have to relate to the competence goals expressed in our Framework for Basic Skills.

³ The OECD Programme for the International Assessment of Adult Competencies (PIAAC) will be launched in 2011. Norway participates in the piloting phase and is likely to participate in the survey itself, in order to monitor international development and check whether we keep pace with the development of reading skills in other countries.

Framework for Basic Skills for Adults

The Norwegian Ministry of Education and Research assigned to Vox the responsibility to develop a *Framework for Basic Skills for Adults*, i.e. descriptions of levels of competence for each of the basic skills that the programme comprises. All the sets of competence goals, i.e. for literacy, numeracy, ICT skills and oral communication, have now been approved by the Ministry of Education and Research. The competence goals, described at three levels, do not exactly correspond to the OECD levels, but there is an obvious kinship.

Courses for Teachers of Basic Skills

Vox has developed guidelines for providers, mapping tools, tests and didactic models related to the Framework for Basic Skills. In order to improve basic skills training, particularly related to the Programme for Basic Competence in Working Life, Vox is offering a number of courses for teachers. The aim is to show how the competence goals can be used in practice. The subjects involved are reading and writing, numeracy and basic ICT. «Oral communication in the workplace» is the latest addition to the range of courses.

Vox has been involved in the adaptation of international literacy and numeracy tests to a Norwegian setting and in the development of a digital test. The teachers and trainers who want to use these tests have to attend courses in order to be certified as test administrators.

From the autumn term 2009 onwards courses for teachers of basic skills are offered at university level in Norway. The studies are closely connected with the competence goals established by the Framework for Basic Skills for Adults. Each of these studies extends over two terms and yields 30 ECTS.

2. Organising Learning in the Workplace

Many adults who have weak reading and writing skills will avoid applying for literacy courses. They may have left obligatory school with poor reading and writing skills, since the Norwegian system does not allow for course repetition at primary school level. Many of these adults have bad memories of their schooling situation.

Traditional reading and writing courses for adults in Norway have often been planned and realised as a continuation of the type of learning situation designed for children and young persons. Participants have been called pupils and the teaching has taken place in a classroom in a school. It is therefore understandable that not all of those who might profit from a literacy course have avidly sought participation. A good deal of self-confidence and determination is required to register for a course where you

have to meet in a classroom and where you may possibly meet a teacher who will bring out your memory of your school failure.

In order to achieve success with in-service literacy courses a different and more comfortable learning environment has to be provided. In the following we want to show alternative settings for this type of learning by accounting for how it can be moved into the workplace, by giving examples from actual enterprises and, in part 3, trying to sum up certain success criteria.

Project New Possibilities

The project *New possibilities* illustrates the challenges and possibilities for young adults against the backdrop of high drop-out rates in upper secondary education. Receiving funding from the Programme for Basic Competence in Working Life in 2007-2008, the project aimed at facilitating access to working life for young adults who had dropped out or failed in upper secondary education.

The main goal of the project was to motivate and recruit young adults with insufficient educational background and low basic skills to enter working life. After having finished basic skills education in literacy, numeracy and ICT, combined with vocational training and general life skills training in the workplace, the participants were intended to be able to enter into an apprenticeship agreement.

The group of participants in *New possibilities* consisted of young adults aged 20-25 with very varied qualifications and backgrounds. More than 50% of them belonged to ethnic minority groups. Many had had a negative experience at school, and some of the immigrant participants had been subject to traumatic incidents in their home countries.

Working effectively with this group of young adults demands cooperation on various levels and among many stakeholders. *New possibilities* was initiated by a large industrial processing enterprise (Xstrata Nikkelverk AS), and the work was carried out in cooperation with the regional vocational training office for technological subjects in the county and a pedagogical consultant. The local labour and welfare administration office took an active part in the process, especially in recruiting participants and in financing the participants' subsistence during the project.

The education was organised as a full-time provision over 12 weeks in spring 2008. Four days a week the participants were out working in local enterprises, combined with vocational and general life skills training; on the fifth day they gathered in a course room at Xstrata Nikkelverk AS for basic skills education built on their work experience.

In 2009, one year after the project's end, two thirds of the participants have signed apprenticeship contracts. These are outstanding project results for a group of people who saw little or no hope to begin with.

Attaching great importance to the combination of basic skills education and vocational training in an enterprise, the project *New possibilities* is a good example of measures that work for this group of young adults. According to the project report, there are four critical factors behind the success of the initiative:

- the network of cooperating stakeholders;
- the motivation of the participants;
- thorough screening of each participant's skills, in order to tailor the ensuing education to individual needs and wishes;
- cooperating closely with each participant throughout the project.

Drawing on the experience from the project *New possibilities*, Vox has now initiated 9 new projects in 8 different counties and allocated 1.7 mill NOK in project funding over the Basic Competence in Working Life programme. The new projects combine practical work training with basic skills education in literacy, numeracy and ICT. The participants are young adults aged 19–30 who are not in education or employment. The aim is that participants will be able to sign apprenticeships contracts or other work contracts at the end of the project period. The projects started on 15 June 2009 with a seminar organised by Vox.

Draka Comteq

Draka Comteq, Norway is a modern enterprise with 160 employees. A few years ago the company was reorganized into a flatter leadership structure. The change demanded among other things that employees that had previously only been involved in manual work had to start writing daily activity reports. The management noticed an increased absenteeism in the reorganization period. Earlier it had been 5 % and it increased to 11 %. The reasons for this non-attendance were analyzed, and it was discovered that the reorganization and the new challenges connected with this were felt to be too demanding for some of the employees. They felt they did not have or they were uncertain whether they had a sufficient level of literacy to cope with the new demands and responsibilities.

A project called «SOS Kunnskap» (SOS Knowledge) was established. Draka Comteq applied for money through the Programme for Basic Competence in Working Life.

In Draka Comteq the enterprise renovated a room centrally located in the factory and this was the room where the literacy courses were held. The participants were given laptops to use in the course, and the intention behind giving them laptops rather than using stationary computers was to provide them with the possibility of continuing their learning process at home.

The management tried to make course participation attractive. The employees who were on the night shift could quit one hour earlier the day they had courses. There were also other benefits that obviously gave the course participants and the course itself a certain status. And other employees tended to say that they envied their colleagues and that they would join the course at the next possibility.

During the project period of SOS Kunnskap, Draka Comteq had 40 employees through courses of 62 hours, basic computer courses and literacy courses. There were eight people in each course. Of these 40 employees 12 were in the literacy course. Only one person dropped out. More than half of the participants continued in follow-up courses 2 and 3.

After the introduction of SOS Knowledge, absenteeism due to illness has been reduced and is now at around eight – nine per cent. But it has not been examined whether the reduction is in those who have been involved in the training. The management claims that starting the training was very demanding for many of the participants, but the fact that they might borrow a laptop has given status to the course. This made the participants feel that going back to organised training was something attractive.

Through informal conversation with the participants after the course, the union representatives and the management have received positive feedback. The management has observed that within the group that attended the courses there is no resistance any more against taking on new tasks. The experience so far has motivated the management to continue with this type of training courses.

3. Success Criteria

On the basis of our experience from a number of projects funded by the Programme for Basic Competence in Working Life, we think we may claim that there are certain aspects that have to be considered in order to achieve success. We will look at some of the criteria we think should be a foundation in order to get positive results from the training initiatives.

Cooperation between the Various Stakeholders

As an initial observation we have to note that courses in basic skills affect the whole of the organisation that initiates the training and the training provider as well. It may be illustrated in this way.

The figure shows that cooperation about training can involve a number of stakeholders, to some degree depending on whether the training goes on in a small or big enterprise. Who cooperates and about what will vary from one place to another. The participant's immediate superior, for example, is an important contact for the teacher/trainer when it comes to the general design of the course with its content and goals.



A leader at a higher level will often be involved when it comes to the practical organisation of the training, e.g. as for providing facilities.

A cooperative team may serve a useful function in identifying the most important texts used in the enterprise, and the reading and writing routines in the workplace. This cooperation between the enterprise and the teacher is of great importance to get a common understanding of what the basic literacy needs really are. When the needs are identified, enterprise representatives may start to collect authentic texts and the teacher can start planning how to use them. Such a cooperative approach was successfully used in the Draka Comteq project.

Information and Screening Period

When a literacy course is announced in an enterprise for the first time, people may not eagerly sign up for it. They may be ashamed of their lack of skills or they may think they are the only ones having this problem, or they may be afraid of not being taken seriously or being ridiculed by their peers. Perhaps they even think they are not able to improve their reading or writing skills.

It may therefore be necessary to invest time and effort in internal information campaigns. In big enterprises such a phase may take as long as six months. As a part of such campaigns, some enterprises may ask

their employees to go through a screening test. Such a test will give the employers a basic idea of the level of literacy competence in their enterprises. They will then have a possibility to give extra motivational input to employees who should definitely attend a course but who still feel uncertain about it. Forcing somebody to attend a literacy course against their will is not recommended, and it has not yet been seen to happen in this programme. In order for people to succeed in raising their level of literacy, they have to be personally motivated.

If a meeting is organized in connection with the campaign and a possible screening, this opportunity may also be used to inform about the details of a literacy course, and time should be set aside for possible questions to be raised. The topic of reading and writing challenges should be presented as something perfectly ordinary. In working life in general, the demand for reading and writing efficiency has become keener. This means that everybody has to improve their skills, but some will obviously need this more than others.

It may be an idea to let people who have acceptable literacy skills, and who are more eager participants, attend the course first. Once the pioneers have been through the course the people who perhaps need it more will be more willing to attend.

Room, Equipment and Various Agreements

There are many ways of dealing with the financial challenges related to a course. Within the BCWL programme the enterprise covers the costs of the facilities, while the cost of the teacher is covered by the grant from the program. It is also a common trend to let the enterprise and the participants share the cost of the working hours employed in the learning process on a 50-50 basis, i.e. the enterprise pays half of the time employed and the other half takes place after working hours.

One success criterion of implementing courses in basic skills in the workplace is the tight connection between the course (room and participants) and the enterprise as such. In Draka Comteq the course took place in the central building. Then it was easy for the employees to remain in contact with their colleagues. One teacher said that it was of great value for the participants' motivation that the director or others from the management once in a while paid the course participants a visit either to give a message or to ask them how they were getting on.

Course Content

The content of reading and writing courses for adults has often had the same characteristics as the school subject, i.e. the participants have been working with reading and writing tasks, much in the same way as they did during the whole of their time in compulsory school. The texts may have been taken from literary fiction and among the exercises there

have been examples of literary analysis. Although this may be important knowledge, literacy courses for adults have to include texts that the participants find immediately useful. A short story by one of our classical writers may not have this effect.

As literacy courses to a very limited extent have used texts that deal with the everyday and job situations of adults, many people have felt that literacy courses are of no interest to them. They want to learn something that is useful to them in their actual job situation.

One of the success criteria of implementing courses in basic skills in the workplace is viewing the learning process in a way that is different from that of the classroom. The main objective is to ensure that individuals can get training adapted to their needs, so that every adult can attain the level of basic competence that enables him/her to meet the increased demands of today's occupational and everyday life.

Course Planning

The first thing to take into consideration when designing a course is allowing all participants the possibility to attend without hindrance. This will for example mean that the course hours have to be during the less stressful periods of the day, e.g. avoiding the morning routines in health and care related work places, and during the time of the year when the enterprise does not have its high season, e.g. avoiding spring and summer for an ice-cream factory.

The course must be organized in such a way that it will be possible to link the everyday reading and writing of the workplace directly to the training situation. Experience has shown the value of:

- teachers visiting the workplace prior to the course to plan how to guide the participants in the use of their own text universe;
- teachers cooperating with the immediate superior of the participants in planning the course content;
- the course being held at the workplace premises.

There may be considerable variations as to how the individual enterprise can or wishes to organize courses for its employees. In developing the course design, it may be useful for the provider and the enterprise to assess the possibilities of:

- running the course within working hours;
- finding workplace premises for the course;
- using topics from the job in the training;
- using texts from work in the training;
- having the teacher visit the workplace in the planning period;
- setting goals for the training that can be related to the job situation;

- making the management and other employees contribute to the course;
- making colleagues support those who undergo training;
- appointing a specific workplace contact for the teacher;
- assuring genuine cooperation about the training between the enterprise and the teacher;
- making sure that the colleagues have a positive attitude to the training so that the course participants do not feel that they are letting their colleagues down when they leave to go to the course.

Conclusion

In this article we have tried to show how Norway is working with further training in basic skills at the work place. Even though the needs of the work force may vary in the different European countries, the challenge is to a large extent common to all, and it is obvious we can learn and be inspired from examples of good practice in a variety of different settings. International cooperation and national/local initiative must go hand in hand in the near future so that Europe can come closer to solving a problem that, if not addressed, will efficiently keep us from fulfilling the objectives of the European Action Plan for Adult Learning.

CHAPTER VII

TEACHING LITERACY:
LITERACY COURSES AND
CONTENT EMBEDDED LITERACY EDUCATION

Ioana Dârjan, Mihai Predescu

Teaching literacy for adults is a specialized form of teaching. During years of development, many breakthroughs have taken place, one of them being the content embedded literacy. The main advantage of content embedded literacy is that it does not require a high specialization in the field, being easy to use by regular teachers and trainers.

This chapter will describe several models of teaching content embedded literacy; several principles of teaching content embedded literacy will be presented and some basic strategies for teaching will be analyzed.

1. Characteristics of Content Embedded Literacy Teaching

The pedagogical theory analyzes an educational process from several points of view: the objectives, curriculum, strategy of teaching, assessment of learning and the management of the process.

VET trainers tend to overlook the importance of literacy not only at the workplace but also in everyday life, maybe because they are focused on training a highly specific body of knowledge.

Embedded literacy is perceived only as an instrument to develop professional skills but not as a competency with a great impact on all activities.

Training VET trainers in content embedded literacy is a way to hit some targets simultaneously, from raising the level of worker performance to the development of training competencies of VET trainers.

Content embedding is a process of changing the educational activities in order to reach some literacy teaching objectives. But that doesn't mean that the initial objectives of activities are discarded. In fact the main trait of content embedded literacy is the use of two distinct sets of educational objectives.

The first order or main objectives are designed to assure the students' activities relevant for their professional training. These objectives are established by the trainer based on specific methodologies.

The second order objectives or the secondary objectives are the literacy ones. Due to the fact that literacy is a key competency, the objectives are somehow larger. In most of the cases the objectives are to exercise a specific form of literacy or numeracy or specific operations. The introduction to new forms of literacy or the acquisition of new literacy skills are used rarely.

In both cases teachers have to design activities that are completing both types of objectives.

Usually VET teachers identify literacy in their educational activities but almost all have difficulties in designing literacy objectives.

The content of teaching is the one that allows students to develop professional competencies and skills. Content embedded literacy requires some curricular adaptations in terms of curricular supports and focus. For example, if we are teaching students the essential of brickwork, we have to use handouts that both adapt to students literacy skills and train or develop them. Maybe we would use diagrams or figures and exercises that require them to write on the figures the main elements.

Most of VET teachers use some form of adapted materials and use activities that train some form of literacy but this is not done explicitly, following an objective; they use content embedded literacy.

Teaching strategies for content embedded literacy are not different from regular teaching strategies. They rather need to be flexibly used in the context of adult education. For example, a lecture is less appropriate to embed literacy than an unequal pairing strategy.

The results of content embedded literacy are difficult to assess because the educational assessment is focused on professional knowledge and skill assessment.

There are two possible targets to assess:

- *the development of the literacy competency* that is made by traditional educational initial, formative and final assessment using objective criteria;
- *the experience of literacy training* that is accomplished through reflective practice, actions and self reports of the students.

Finally, the relations between the Vet trainers and students do change mostly because there is another level of interaction. The VET teacher is not only a professional mentor but also a provider of skills for life.

2. Ways to Teach Literacy. Models for Embedding Basic Skills

There are two major ways in which the teachers could improve the students' literacy competencies: in the literacy courses, reading and writ-

ing classes, where the teachers are literacy experts or through any other kind of academic, vocational or professional course, when non-literacy teachers/trainers use this opportunity to enhance their students/trainees literacy competencies by embedding them in the content (Barton *et al.* 2007). This applies for a teacher in elementary school or when teaching in adult education. Of course, there are some principles that should be respected especially when working with adult learners and one of the most important sustains that the abilities that will be developed and the activities used to do so should be based/inspired on the prior identified needs of the learners.

To embed basic skills means to contextualize some significant abilities, to adapt them to the specific of some particular content/context and to teach them not separately, but integrated, included into this content. These activities or experiences used to embed basic skills should not be directly related with the education or with the training, but could be designated for another type of participants' needs (vocational education, education for health, for democracy, Parents School etc.).

In the context of the «Skills for Life» strategy, the Adult Basic Skills Strategy Unit (ABSSU) states:

- embedded teaching and learning combines the development of literacy, language and numeracy with vocational and other skills;
- the skills acquired provide learners with the confidence, competency and motivation necessary for them to succeed in qualifications, in life and at work (ABSSU 2004).

There are some models to embed literacy education: the fully integrated model, the sandwich model and overlapping circles model (Southwood 2008).

- *the fully integrated model.* Basic Skills are integrated fully into the learning and in the activity or subject matter, being interwoven with the subject, delivered through the whole activity and being integral to it. Here, the persons delivering the subject or main activity will also take on the Basic Skills work;
- *the sandwich model.* Here, the Basic Skills are delivered in a calculated and discrete part of the time allowed for the whole activity or course, but are contextualized to the main subject area. This may work, for example, where specialized facilities, such as photographic dark rooms are only available to learners in a 'rationalized' amount. Often, the basic skills inputs are delivered by staff other than those teaching the rest of the course;
- *the overlapping circles model.* In this model, models 1 and 2 are combined and delivered, potentially, in a range of different ways. It may be that

some of the basic skills work is not contextualized to the subject, so arguably is not «embedded», but, where the circles overlap, it will be.

3. *Effective Ways of Teaching Embedded Literacy in VET Training*

The instructional strategy for effectively embed literacy in the VET training has to fulfil two conditions:

- to respect the major principles of adult learning;
- to offer the best chance to interact with the text in a given, particular condition (Seaman, Fellenz 1989).

3.1. *Teachers/Trainers as Adult Learners*

All the studies in adult education confirm that the professional development could be efficient only if it fulfils some essential conditions:

- the process of development should be generated by a real, intrinsic motivation for personal and professional development;
- the learning has to have a practical applicability, has to be contextually efficient;
- professional development could have diverse forms, but, normally, it should be performed in the direction of specializations or reorientation.

The adult learners are responsible and rational; their development is subsequent to a process of self-evaluation and reflection.

Knowles, considered to be the father of the learning at adulthood, presents some important assumptions referring to the adult education, which should be taken into account in the program for continuing specialization of the teachers (Beerens 2000):

- the processes involved should respect the autonomy and self-determination of the adults;
- the teachers' background and experiences could/should be valorised in the learning process;
- the readiness for learning is determined by the unique circumstances of every person's practical activities;
- the implication of the adults in the learning process depends by the applicable character of the new abilities and solutions obtained.

In conclusion, the adults could flourish in some settings, while in

others they could stagnate or even regress, if the learning environment is not stimulated for adult development (Billington 1988).

Most strategy classifications are focusing on the type of purposes of the instruction.

Next, we present the most appropriate strategies that could be used efficiently to embed literacy in the VET training.

3.2. *Teaching Strategies*

3.2.1. *Whole Class Strategies*

Discussion is a guided interaction that allows students to express their knowledge, understanding and opinions regarding the topic. Discussion is a student-focused strategy that promotes active learning and sharing of knowledge. The strategy consists of providing a topic of discussion and encouraging students to express their opinions, respecting several rules of communication. At the end of the activity, the trainer should provide a summary of the discussion.

There are some possible disadvantages that must be taken into account by the trainer, such as difficulties regarding full students' participation, difficulties in keeping students focused on the topic, difficulties regarding equal involvement of students in discussions and students' lack of prior knowledge or genuine understanding of the topic.

Some situations are more suitable for the use of this strategy in VET training. This is the case of finding solutions to open-ended problems, sharing personal opinion about a specific operation, sharing the results of a new procedure and discussing the best ways to make it effective for other settings. Less appropriate applications of discussion in VET training are: learning a new mathematical procedure, answering questions to specific issues (no point for discussions), learning parts of a new instrument (other methods are more effective, e.g. textbooks).

Teacher demonstration is a practical activity. The teacher acts as an expert who demonstrates a practical pattern of completing a specific task, using a step by step activity. Teacher demonstration is appropriate when the teacher has limited resources or dangerous materials. The strategy requires two stages, preparation by developing a plan and gathering information and a practical step by step demonstration. The main limitations come from the limited access of students to resources and the subsequent low involvement of them and also the time consuming activities. In VET training, demonstration is usual because it offers the students an example of action. Usually the demonstration is practiced to solve difficult problems using manipulative, making charts to show relations or steps of activities, demonstrating the efficiency of a specific

method and so on. Examples of less appropriate applications would be: demonstrating operations that students already have mastery of (no time efficiency), introductory activities, operations that exceed the students' level of understanding.

3.2.2. *Small Group Instructional Strategies*

Cooperative learning is a strategy based on group solving of a task. The main characteristics of cooperative learning are the grouping of students with different expertise, non-competitive environment and individual assessment of performance. The idea is to teach students to pursue individually a group goal.

The main stages and activities used in this type of strategy are the selection of each group's members, the definition of the task. The next stage of the strategy is teaching the skills requested for cooperative learning, offering the necessary resources and establishing the assessment procedures.

Possible disadvantages that could appear are as follows: difficulties related with group dynamics, the burden of excessive social interactions, the failure to learn the material or the lack of control of the group.

The best situations where this strategy proves appropriate in VET training are the operation of learning and applying, the situation of learning a list of rules, an algorithmic procedure or the learning of a list of necessary materials.

Less appropriate applications for this strategy are the solving of an open-ended problem (this is better solved by collaborative learning), the recording of definitions (best as individual activity) and matching results on a worksheet.

Project grouping is a small group type of strategy, a strategy employed when the purpose is to have a group that completes a specific task resulting in a product. Even if it is time consuming, *project grouping* is an efficient strategy that can assure the students' understanding of a topic by the result.

Stages and activities of project grouping are the selection of the groups according to the task needs, the definition of the task and the dissemination of responsibilities in the group, delivering and accessing materials and, finally, the assessment plan.

Possible disadvantages of project grouping are the difficulty of management of materials, the possible unequal responsibility and involvement of group members with effect on the project score, the potential slowing down of the process by the overachievers or excessive social interactions.

Appropriate applications in VET training are to demonstrate mas-

tery of a process, doing experiments and demonstrations, demonstrate complex activities.

Less appropriate applications of this strategy are reviewing textbooks, completing a project from textbooks with expected results, task that can be completed individually in shorter time.

3.2.3. *Pairing Strategies*

Student Mentoring (Unequal Pairing)

Student mentoring is a pairing type of strategy. *Student mentoring* means to pair a more able student (the mentor) with a novice in order to transfer knowledge from mentor to novice. The mentor is available for guiding and assessing.

Stages and activities in this strategy are the matching of a workable pair according with the students' personalities and skills, giving a statement of expectations by the trainers, providing necessary didactical materials and providing a guide for assessment.

Possible disadvantages of the mentoring are the inexplicable increasing of responsibilities by the mentor, the excessive reliability of the tutored on mentor or the lack of necessary didactical and counselling skills and abilities at the mentor's level.

Examples of an appropriate application in VET training of this strategy are in the case of working on a task for the purpose of reinforcing mastery already acquired, in providing reading help for work instructions, in providing help for acquiring new working skills.

The less appropriate applications are in the case of the new assignments even to the mentors, in completion of an assessment on comprehension.

Student Partnership (Equal Pairing)

Student pairing is based on the idea that learning occurs in a task-oriented, equal responsibility pairing activity. The students share the same goal and responsibilities.

Its stages and activities are matching pairs according to the task specificity, gathering appropriate information and materials, providing guidance as needed and planning the assessment procedure.

This strategy's possible disadvantages are the greater responsibility in pairing and the need for greater classroom management.

The appropriate application in VET training of this strategy is in the case of skills practice, for the study in assessment sessions and in development of practical projects.

The less appropriate application is when the activities are better set for partnerships.

3.2.4. Individual Instructional Strategies

Computer Assisted Instruction (CAI) is an individual type of strategy based on training software designed for specific instructional purpose. CAI is an excellent way to practice skills and to acquire new ones in human-computer interaction. CAI offers immediate feedback regarding the performance level and could be designed to provide instant tutorship.

The stages and activities of this strategy are to establish computer rules, scheduling computer availability and providing licensed programs.

The possible disadvantages could be the limited number of computers, the use of *bargain* programs that are flawed, the possibility of initial negative attitude regarding computers for persons that are computer illiterate and the existence of programs that provide only one test to assess mastery.

Examples of appropriate application in VET training of this strategy are the following: practice operation, safety measure learning, practice math, spelling etc.

The less appropriate application is using software that doesn't meet student's needs and the curriculum.

Working with manipulatives is an individual type of strategy. *Manipulative* may be designed or purchased in order to meet specific needs of a student. Working with manipulatives is an efficient strategy in teaching students with poor literacy skills, with language disadvantages (such as immigrants) or with specific learning styles.

Working with manipulatives implies the following stages and activities: creating or obtaining manipulatives, providing guidelines or instructions for using manipulatives and establish performance criteria and assessment plans.

Some possible disadvantages of this strategy are the fact that it is time consuming, the fact that manipulatives may be difficult to create or expensive to purchase and, also, the potential increasing demand for teacher supervision.

Some examples of appropriate application in VET training is in the case of working with puzzle cards or with grids and checklists when using blocks or other specific instruments and materials.

There are no inappropriate applications of this strategy, because any manipulative that fits the student's need and curricular requirements is appropriate.

4. Conclusions

Mainly, there are two important aspects in learning to embed literacy in professional training:

First of all, embedded literacy requires two different goals of instruction:

- the specific training objectives (that have to be reached in order to develop professional skills and competencies);
- the literacy objectives (that have to be tailored to respond to the literacy needs of the trainees).

The second important aspect is that the didactical approach and strategy has to match both sets of activities and objectives.

The most difficult task for VET trainers was to conceive literacy objectives. The difficulties arose in deciding what type of literacy activities or component had to be trained. Also, a major difficulty was to adapt to different types of didactical strategies. It seems that VET trainers tend to favour strategies that they are used to such as demonstration and lecture. The cooperative learning and pairings are not very usual. Even if they succeeded in designing instruction in a professional area they had difficulties in designing literacy ones.

In order to become more proficient in designing teaching sequences that use content embedded literacy, all trainees received a booklet of activities that contained suggested activities and models. After a period of two weeks, all respondents reported an improvement in their understanding not only of literacy, but also of professional requirements.

When required to describe how literacy could help workers to overcome risk factors, the trainees considered that literacy would help workers to cope with stress and professional demands.

Concluding, there are three main points that have to be emphasized:

- most of the VET trainers perceive literacy from a narrow perspective, as a professional requirement. Most of them did not take into consideration the impact of literacy in everyday life;
- the participants to the testing session tend to approach literacy as a professional competency rather than as a key competency (transversal);
- most of the VET trainers conceive literacy mostly in terms of written communication and computing perspective (numeracy) and seldom as ICT skill and oral communication.

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CHAPTER VIII

TESTING CONTENT EMBEDDED LITERACY EDUCATION IN ROMANIA

Mihai Predescu, Dan Ionel Lazăr

This chapter makes an overview of the testing of content embedded literacy education practice during the session held in March 2009 in Timisoara, Romania, as part of piloting the CELiNE project products. The model used for training VET trainers in the field of content embedded literacy education for the New Economy will be presented, as well as the results and the conclusions of that training, with a special focus on the perspectives of Romanian VET trainers on this topic.

1. Assumptions of the Training Model

The testing session was planned in the context of the CELiNE project that is a transfer of innovation project. The testing of the curriculum, training material and booklet of activity developed for sustaining the content embedded literacy education within vocational and educational training had to meet several requirements and to take into consideration some important aspects that influence the training:

The national specific context was the first aspect. The transfer of innovation is a process of diffusing successfully good practices across different contexts. Romanian context on VET training and literacy requirements at workplace had to be the starting points for a successful transfer, hence the necessity to prepare the training session accordingly. So, the first requirement was to prepare a training session adapted to the Romanian specific context.

VET training culture and habits was another important aspect. The embedding of literacy instruction takes place in a specific teaching and training culture, following some habits and patterns of instruction. The specific of Romanian VET training has to be taken into consideration because the literacy training will have to accommodate it. For that matter, the second necessary prior step was the designing of a training session that meets the culture and instructional patterns and demands of Romanian VET trainers.

The VET trainers' profiles represented another key aspect. Undoubtedly, the VET trainers already possess knowledge, experience and pedagogical competencies in teaching and training for a specific profession. But, this new experience, teaching content embedded literacy, requires knowledge about literacy and literacy development, skills to embed literacy into professional instruction and, last but not least, it implies developing a positive attitude and expectations towards it. In the same time, it is necessary to militate for active and reflective practices on behalf of the trainers in order to assure the further use and development of the materials offered to them in an innovative way.

2. Assumption Concerning VET Trainers

The training has to rely on trainers' experience. VET trainers are professionals which have expertise in their field. Their view on VET training is not to be contradicted whereas a major change of their teaching habits is not intended. Nevertheless, their teaching repertoire will be completed with effective methods and strategies to embed literacy in VET teaching.

The training has to offer a valuable insight on literacy. It is accustomed that VET trainers are not literacy experts. The training intends to offer them a perspective on literacy and its implication in workplace requirements. It is also considered that VET teachers/trainers need an insight on difficulties encountered by workers with low developed literacy skills.

The training has to present a solid added value to teaching/training practice of VET trainers. The effort of embedding literacy in VET teaching must have a clear outcome. Embedding literacy in VET teaching does have a real impact on the professional development of their students, considering that they are adapting better to changing working environments.

3. Assumption Concerning VET Students

VET students are the final and most important beneficiaries of content embedded literacy. In designing the training session the following assumptions were taken into consideration.

VET students have the right to the best training that can be provided. The right to quality education is part of any type of education. For VET students the best training they can get is the one that offers the necessary competencies for their profession. But specific competencies are not enough; every person must develop key competencies as prerequisites for professional development. The new economy changed the perspective

of literacy from stable and once only acquired skills to a continuing developing competency. Quality VET training means to develop literacy skills as well as professional skills.

Content embedded literacy raises VET students' chances on a changing labour market. The labour market is changing to accommodate the shift from production to knowledge production. New professions developed and the traditional ones adapted to an information based production. The development of literacy skills provides students with additional chances to adapt to changing work requirements in different workplaces.

Training activities must be relevant for the VET students' professional development. The literacy programs cover three types of literacy training. The initial basic literacy training for children and the literacy programs for illiterate adults approach literacy as a standalone subject. Content embedded literacy has a different approach; the focus is not on training literacy, but on professional development. If there is a vocabulary exercise, its relevance is that it exercises usual professional terms and their usage. The exercising of reading is only subsidiary.

4. General Framework of the Training

The main aim of CELiNE project is to develop a training curriculum and a training manual for VET trainers in order to implement embedded literacy education in professional training (Boffo, Dârjan 2009). Explicitly, the focus is set on the way in which embedded literacy affects the performance at the workplace and also facilitates the further developing of new professional skills.

The aim is to reach two types of people with different targets:

1. The VET teacher trainers, which will be the main users of the training materials. The target to be reached in this case is to raise awareness about the importance of embedded literacy in the New Economy and to develop their training skills.
2. The VET teachers are the first group of beneficiaries. They will receive training in designing embedded literacy activities and in including those activities in their regular teaching.
3. The VET students are the end-users and main beneficiaries of this project's work. The goal is to develop the professional skills of workers by embedded literacy. *The improvement of the professionals' students' literacy competencies is not an objective per se, but is the efficient way in which they could become more competent at their workplace as they possess better literacy skills.* These basic competencies assure a better employability, efficiency in work, flexibility and adaptability in the context of rapidly changing workplace market in the New Economy and, also, permit

a *re-orientation* and *further specialization* of the workers (Sørli, Letrud 2009).

The training session was attended by VET teachers and trainers with experience in training for several different occupations such as brickwork, woodwork, plumbing and steelwork. The session was divided in three modules (days), each module having a different focus:

- day 1 (module 1) Raising awareness about literacy at the workplace;
- day 2 (module 2) Effective ways of teaching embedded literacy in VET training;
- day 3 (module 3) Self analysis and reflection on autobiographical data concerning literacy in professionalization.

For each module, the training materials and activities designed or adapted by the CELiNE project consortium were used, These materials will soon be printed and distributed in the partner countries (see <http://www.celine-project.eu/> (09/09)).

4.1 The Training Model

Based on all the assumptions mentioned above, a training model has been designed. This training model covers a three day training module that could be delivered alone or as a part included in a more extended, comprehensive training such as training of trainers programs. Like any model, this training has to be adapted to specific time limits, training objectives and approaches and audience. Its structure and instructions allows this flexible adaptation according to different variables, as a measure of trainers' versatility and creativity.

4.2 The Training Structure

The training proposed by CELiNE project covers three days; each one has a different objective.

The first day focuses on offering to trainees an insight on literacy at the workplace. There are two different types of insights advocated through the training proposal. The first one consists of experiencing possible feelings that could be generated at subjective level by poor literacy competencies and, by contrast, the second one offers the opportunity to experience feelings correlated with the success in acquiring literacy skills and the implication of these feelings on literacy competency development (Barton *et al.* 2007).

The second day/module demonstrates and assesses the pervasiveness of literacy at the workplace and in work requirements. This day is intended to change VET trainers' perspective on workplace literacy and to form positive attitudes towards it.

The second day focuses on the pedagogical approaches of content embedded literacy education. The day/module allows trainees to gain the necessary didactical tools for content embedded literacy, but also allows them to explore effective ways to include content embedded literacy in their teaching practices (Southwood 2008; Seaman, Fellenz 1989).

The third day is not following the same face-to-face interaction pattern of the first two days. It focuses on the assessment of learning results from the first two days and on active reflection on content embedded literacy education topics. The reflection is supposed to come after the experience of practical exercise of embedding literacy during VET training. The results of the third day could be used as an assessment of the whole training, as well.

4.3 First Training Day

First training day has several characteristics. From the trainer's point of view, this first day raises supplementary difficulties. In this first day the training group is just forming, the dynamic of the group is not well established yet, and the trainer has to present the objectives of the training. Also, two objectives have to be reached.

The first objective of this day is to offer to VET trainers an insight about the ways poor literacy skills affect both performance and self-esteem of workers. Three activities were undertaken in order to achieve this goal, all based on situating the VET trainers in a position of low performance on easy tasks.

The visual icebreaking covers the initial steps of training, in which students exchange relevant information about them. The visual icebreaking requires the use of drawing in sharing personal information. The biases in the interpretation of provided information and written language deprivation replicate the situation of illiteracy.

The Stroop effect is a relatively simple test. Students are presented some words and they have to name the colour of the ink they are printed in, not to read them (the words are names of colours!). The difficulty is to name the colour of the ink (e.g. red) when the word is designated to another colour (e.g. green). In this situation, there is a contradiction between the visual code of the representation and the linguistic one. The situation is somehow the opposite of the poor literacy situation, because the students cannot ignore reading the word and the meaning of it, they have to deny and not use their literacy competency in order to fulfil this task.

Some simple *tracing tests* were also used. These tests require students to trace a geometric figure contour. The difficulty consists in the fact that they must use a mirror to have access to the image of geometric figure, hand and pencil. It takes between 10 and 20 tries to rearrange mentally the spatial coordinates and hand-eye coordination.

All these tasks made VET trainers to understand the barriers set by poor literacy levels in everyday tasks like sharing personal information or interpreting easy materials. Also they realized that even simple tasks are not taken for granted because they could be extremely difficult for some persons.

Another important achievement is the insight about the emotional effects of poor literacy. Low levels of literacy lead to negative feelings, social withdrawal from social as well as from working groups, lowering of self-esteem, self-confidence and developing of learned helplessness. Some of the major blockage in the motivation to involve in developing literacy skills is the absence / the lack of any previous successful experience related with literacy tasks. That is one of the reasons why content embedded literacy has success in developing literacy skills, because it is focusing primarily on professional development, the literacy tasks are perceived as part of the professional training. The focus is on what the workers could develop, could add to his/her actual knowledge and skills, not in his/her weak, insufficient literacy competency.

In order to experience this type of literacy-related success, at the end of the day VET trainers were involved in a task that assures success in a field that most of them had never thought to succeed. A web 2.0 application called bomomo (<<http://www.bomomo.com/>> (09/09)) was used to help them to draw abstract art. The program doesn't require ICT skills or abstract art knowledge, but produces patterns of forms and colours at the movement of the mouse. So, every VET trainer had the chance to have an insight of the boost in the motivation a successful task could provide.

Another objective of the day was to demonstrate the pervasiveness of literacy in workplace requirements. To analyze the work requirements as presented in occupational standards, to identify work operations that require literacy from a wide selection were activities that took place.

The first activity consists in *sorting* 20 cards in three piles: operation that requires only literacy skills, operation that requires only professional skills, operation that requires both professional and literacy skills. The sorting was also used as an evaluation tool for the level of perceived literacy in working context.

The second activity was *the analysis of different occupational standards* from different working fields. The analysis was conducted using content analysis of each type of competency from occupational standards, inspecting the knowledge and skills criteria that fulfil the competencies description.

Overall, the main objective of the first training day was to raise VET teachers' awareness about embedded literacy at the workplace in order to persuade them to adopt content embedded literacy in their regular didactic approach.

The results show that VET trainers only perceive literacy at the most basic level and only if there are specific explicit hints that prompt the existence of a literacy aspect of the work.

For example, when trainers had to sort 20 definitions on three different piles (requires literacy, requires professional competencies and requires both), the trainers failed to observe that all the cards referring to professional competencies are, in different measures, doubled by literacy competencies. As a rule of the thumb, they sort into the literacy pile those cards that contained a literacy specific verb like *read* instruction or *write* a report or *compute* the necessary amount of material. When those verbs were not present, they analyzed the content of the card and observed only the professional aspects.

When VET trainers analyzed occupational standards in order to find literacy aspects involved in it, they easily spotted literacy in fundamental and general competencies such as *communication in mother tongue* or *basic math and physics knowledge*, but again, they didn't identify literacy aspects in specific skills.

4.4 Second Training Day

The main focus of the second day of training was developing didactical approaches to embed literacy in professional training. At the end of the second day, VET trainers were expected to have the skills of adapting their teaching practice in order to embed literacy training. No trials to change Vet trainers' teaching style or teaching approach were intended, but offering them practical means of embedding literacy.

Two main activities were carried out during the second day of training.

The first activity was a *pedagogical exercise on teaching strategies*. VET trainers worked in groups trying to find practical ways to embed literacy using one of the eight teaching strategies provided by the trainer (2 group strategies, 2 small group strategies, 2 pairing and 2 individual work strategies). The group shared their results in a whole group session.

The second activity intended to help VET trainers to approach literacy from five different communicational points of view using the traditional model of communication. Literacy, perceived as general as the ability to communicate effectively, offers to the trainer the opportunity to change the focus of communication from communicator to message, to context, to code and so on. VET trainers should use different communication techniques in order to embed literacy effectively.

4.5 Third Training Day

The most important feature of the third training day is the fact that it consists mainly of individual activities. The third day is dedicated to reflection and assessment. The third day is not successive with the first two days, but it comes after two weeks. There are two reasons for this delay in training. First, the VET trainers have the time to apply content embedded literacy and to assess the effectiveness of their training. Another important aspect is that they have time to reflect on the subject, to analyse and review their teaching practice and to assess the suitability of newly acquired teaching models for their professional trainings.

Two important processes are to be underlined as outcomes of the third day of training:

The assessment of any training is a crucial point for the training success. In this case, there are two types of assessments, one is the assessment of the training *per se* and the other is the assessment of practical implementation of content embedded activities during professional training. Both of them offer relevant information and feedback for further development.

The reflective practice is important for two reasons:

- The adoption of such innovative practice cannot be realized mechanical, using recipes; it has to suit different contexts, contents and teaching approaches and styles. The success of adopting content embedded literacy depends on the efforts to adapt this practice to particular situations. Only an insider, in this case the VET trainers, could find the best appropriate, practical way to do it.
- If the content embedded literacy teaching is considered a professional competency, one should notice that it requires not only knowledge about literacy and skills about practical way to use it, but, at the same time, it requires positive attitudes about it and about developing new ways to applying it. The positive attitudes do not come for granted, even if the VET trainers have an initial openness towards the subject. The positive attitudes occur only when and if VET trainers use content embedded literacy and have success with it and perceive the benefits of it for their students. All this progressive development requires critical reflection and time.

5. Results and Conclusions of the Training Session

There were three sources of data concerning the results of the training session.

The *trainees* provided feedback by completing two questionnaires about the training session and training materials and two written reflections

on the impact of literacy on the quality of work and further professional development. The questionnaires assessed the way that participants appreciate each element of the products and training in terms of structure, relevance and pedagogical approach. The reflection tasks were aimed to assess the level of understanding and awareness of literacy's relevance in the context of the new workplace requirements. Specifically, the trainees were asked to write down in ten lines how relevant literacy is for different aspects of job requirements and in eliminating some risk factors.

The *trainer* gives his own feedback and completes a half SWOT analysis method to highlight the strong points and the weak points of each module, identifying the main difficulties and challenges in training embedded literacy for VET training.

There members of the consortium that participated in designing the training materials acted as *silent observants* providing feedback based on a few observation criteria concerning the way that trainees act and involve in training activities (level of involvement, task completion rate, number of comments, number of questions).

When analyzing the results of the training session, one must note that the focus is on Romanian VET trainers, with their particularities and characteristics. The training group consisted in 24 VET trainers from different professional areas.

The results showed several key conclusions:

- the VET trainers are not accustomed with literacy issues. This conclusion has two determinants. Literacy was perceived in terms of basic reading and writing training, a level of literacy development usual for most of their students. Because basic literacy is acquired in primary schools and because they teach adults, VET trainers are taking for granted the literacy development of their students. Another determinant is the limited view on literacy that excludes numeracy, ICT usage or advanced forms of communication;
- the VET trainers considered as very important the effects of poor literacy skills on the development of the job performance as a result of awareness exercises;
- VET trainers identify easily the literacy when they have clues like the verbs read, write, compute, but they had difficulties to identify the literacy requirements in strictly professional activities (for example in preparing a mixture for brickwork they didn't account that the mixture requires computing proportions of materials);
- VET trainers spotted very easy literacy requirements of general competencies but not of specific competencies.

From the pedagogical point of view the most challenging fact was to design activities that fulfil two sets of objectives (professional teaching

objectives and literacy objectives). Once they understood that literacy is required in almost all sequences of a job, they started to design activities that fit their specific training objectives. They didn't plan literacy objectives but tried to find literacy aspects in the activities already designed and then to formulate objectives that match the activity.

There are several conclusions regarding the pedagogical approach of content embedded literacy by VET teachers.

VET teachers have difficulties in designing literacy learning objectives and planning literacy outcomes. Apart from the novelty factor, the lack of sufficient knowledge about literacy is the main barrier in successful planning. After reflection time and piloting content embedded literacy educational activities VET trainers reported an improvement of this aspect.

VET teachers tend to use only a limited number of teaching strategies such as lecture and demonstration. The strategies used frequently by VET teachers are not the most suitable for content embedded literacy. Learning and experiencing new strategies helped them to perform better both in literacy and professional teaching.

VET teachers use a single perspective of the communication and teaching. This conclusion is somehow related with the previous one. VET teachers tend to be directive and focused on the exact transmission of the specific skills and knowledge and are not used with more collaborative, student focused strategies.

The results of the assessment stressed the VET trainers' points of view concerning the importance of literacy in working context and in personal development. The results showed that they easily recognised the importance of literacy for job success and professional performance. But, on the other hand, they overlooked some key aspects.

- the relation of workplace literacy with everyday life (the role of literacy in improving the quality of life);
- security of the workplace and the safety at the workplace;
- the relation between qualification and literacy, with an impact on job opportunities and decent salary.

6. Lessons Learned During the Testing Session

The training session was a test of CELiNE's products but also a learning experience, both for trainees (VET teachers) and for trainers. An assessment of what could be learned from this educational experience shows a gain of better understanding both about content embedded literacy and how it works in professional training and about the training and educational practice, stereotypes, beliefs and habits.

Not surprisingly the most important and clear benefits of the training sessions reported by the VET trainers were:

- a better understanding of the workplace that now includes not only professional requirements but also key competencies, in general, and more specific literacy;
- a more flexible approach of training;
- a better understanding of difficulties of persons with poor literacy and the challenges that they are facing;
- a better understanding of the fact that it is impossible to reach high level of professional qualification when the literacy competencies are poor.

From the trainers point of view, the main observation to be made is that content embedded literacy is truly an innovative practice in Romanian VET teaching system. Like every innovation, it was received with enthusiasm due to the new approach and the possible benefits. But, in the same time the general perceiving was that concerned the way in which these perspectives, approaches, beliefs and practices could undermine such an effort. It takes time and experience in order to make content embedded literacy a mainstream practice.

In the end, the content embedded literacy is not only a challenge for the future VET education, but also for the professionalisation of everyone. Content embedded literacy teaching is not just teaching, but also a competency that must be acquired.

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CHAPTER IX
THE TEACHING CURRICULUM, TEACHING MATERIALS
AND RESOURCE PACK FOR VET TEACHERS.
TESTING AND EVALUATION

Xenofon Halatsis

Introduction

The following chapter examines the implementation of Working Packages 3 (Teaching curriculum and teaching materials) and 4 (Resource pack for VET teachers) as developed by the Celine project in Athens, Greece. The training programme was therefore a way to test in practice what had already been achieved in theory. More specifically, the objectives of the programme were the evaluation of the quality of the Celine's products and the assessment of the feasibility of the proposed training structure.

This chapter can be juxtaposed with the previous chapter regarding the implementation in Romania. Similarities and differences can be found, especially regarding the practical aspects of the two cases, so that readers can realize the plurality of approaches on the same issue. Studying both cases and testing experiences would contribute to a better understanding of the goals, achievements and outcomes of the Celine project and give guidelines for future practices.

The training programme was a three day course, with 4 hours each day, covering 12 hours of training in total and it was implemented in March and April 2009. The organization of the programme (basic structure, applications, selection of trainees, timetable, etc.) was done by ER-GON KEK, which is one of the partners of the Celine project.

1. Description of the Pilot Training Programme

Trainer

The trainer of the programme was an accredited trainer with many years of experience in adult education and lifelong learning. The trainer was selected because of his educational background (University degree as a teacher of Greek language and literature, post graduate degrees in teaching Greek as a foreign language and in Educational Studies) as well as his teaching experience with adult learners (10- year experience)

and his publications. He had also worked with immigrants and minority groups on literacy.

Trainees

Before the implementation of the programme, most of the trainers that had cooperated with ERGON KEK in previous training programmes were contacted and informed about the project and the specific forthcoming seminar. Forty VET teachers applied for the seminar and their applications were reviewed and assessed on the basis of their experience and involvement in such issues. Twenty people were selected to participate in the specific course. All of them were VET teachers and the majority has been accredited by The National Accreditation Centre for Continuing Vocational Training (EKEPIS)¹. The subjects they teach varied: Economics and Human Recourses, Special Education, Computer Science, Pedagogy, Business Administration, Architecture, Mechanical Engineering, Greek Language for foreigners, Business development, Job Searching Techniques and Human Relations. The specific participants were selected because of their interest in the subject of literacy and because of their experience in working with adult learners.

2. Structure-Methodology

First Training Session

In the beginning, the CELINE project was presented, its purpose, goals, and outcomes were outlined and the involvement of ERGON KEK was explained.

Then, as a *group activity*, in order to ‘break the ice’, the participants had to introduce themselves to two people from the group and have a small discussion with them on issues concerning literacy at their work, or literacy issues that were brought up during their teaching experience. Following this, everyone introduced the people they had met to the whole group.

Then, the trainer made a brief introduction and presentation of the concept of literacy, a term which was fairly new to some of the participants. Literacy skills and embedded literacy education were also outlined.

As a *next activity*, the participants were divided into two groups and each group had the same assignment: they had to discuss and divide a series of cards describing actions and tasks into three piles. The piles were: «actions that involve only literacy skills», «actions involving other kind

¹ For information on the Greek system for the accreditation of trainers you could visit the following site: <<http://www.ekepis.gr/>> (09/09).

of skills» and «actions involving both types of skills». Both groups concluded that one cannot separate actions as dealing solely with a specific kind of skill whereas almost all actions were thought to combine literacy skills as well as other types of skills, for example, skills of memory, critical thinking and communication skills.

The discussion that followed the activity was guided towards a definition of literacy. *Small groups* were formed and definitions of literacy were given. Other definitions were also presented by the trainer when the groups concluded the activity. A comparison between the definitions was carried out highlighting common or different points.

The *next activity* was a dictation. The trainer read a text which consisted of a mixture of known, unknown and made-up words, with little or no coherence. He read it quite quickly pressing everyone to write faster. Most of the participants gave up writing because they felt that they could not follow the flow of meaning and because they felt helpless in writing something that they could not comprehend. These points were brought up during the plenary discussion that followed the activity. Both previous activities aimed at the understanding of the concept of literacy and the elements that it is consisted of.

Following this discussion, a *small group activity* took place. The members of each group had to discuss the way that literacy could be embedded in their teaching, as well as to present situations and circumstances where they felt that they lacked the necessary literacy skills to deal with certain everyday challenges. One of the basic points that aroused was that literacy education and the embedment of literacy in the teaching process varies depending on whether literacy is viewed as skills, as tasks, as social and cultural practices, or as critical reflection and action. A plenary discussion took place afterwards, focusing on personal experience on literacy issues.

The *discussion* was led to the communication in the workplace. The types of communication were mentioned briefly and then focus was given to the communication from real work situations. The trainer showed some written materials and some signs taken from real workplaces and the group discussed the specific literacy skills that were involved in them (reading, critical thinking, numeracy, memory, etc). The work- embedded literacy skills were identified linking literacy as a theoretical concept with actual situations or events.

At the end of the meeting an *exercise* was handed to the participants as homework. The participants were asked to write a small text concerning an event from their teaching experience which highlighted the lack of literacy among their trainees. They were asked to explain the reasons, their reaction and suggest which would have been the best way to deal with such incidents. Moreover, they were asked to think of the ways that they could embed literacy issues in the next training programme that

they are going to teach (lesson plan, goals, resources, possible difficulties, solutions). The exercise was a way to personalize the concept of literacy.

Second Training Session

After an overview of the issues that were discussed in the previous meeting, the definition of literacy was brought up again after some questions that were posed. In a plenary discussion it was concluded that literacy is not a single competence or skill, as it has already been accepted by various studies (Street, 2001). It was also pointed out that literacy skills change through time and the fact that someone has developed literacy skills for one vocation this does not mean that he/she has adequate literacy skills for other occupations, or even for the same occupation after some years, or finally, for other aspects of his/her everyday life.

A *small group activity* took place at first. A work sheet was handed out to the five small groups that were formed. They were asked to think and write down the types of 'difficult' texts that they come across in their work environment and everyday life and assess the difficulty that they have in dealing with the texts. The groups were asked to write down the reasons why they have difficulties as well as the possible ways to reduce those difficulties. In the plenary discussion that followed the aspect of motivation was pointed out, as well as the possible psychological factors that can influence the understanding of a text (e.g. stress, pressure, willingness or unwillingness to learn, etc).

One *group activity* that took place was a discussion about the side-effects of a pill which were presented by the trainer. Everyone thought that the pill would be given for a serious illness since the side effects were severe. The trainer revealed that the pill was the aspirin and conclusions were drawn about the factors that can influence literacy skills, namely, the environment, the circumstances and the purpose. The same conclusions were drawn with another *group exercise*. The trainer asked the group to read and understand a text that was handed out and was consisted of words with anagrammatization (the first and the last letters were in the right place while the middle ones were mixed). The group discussion which followed focused on the importance of meaning and memory in literacy skills.

Before finishing the meeting several case studies were commented on. The case studies were the ones that the trainer had received as homework from the previous session and the discussion focused on the ways that events involving lack of literacy skills could be dealt. To finish with this section, the trainer divided the trainees into groups of two and gave each pair a work sheet with the case study of Pauline (Work Package 3, Module 5, activity 1). In the plenary discussion that followed participants realized that training basic computer skills can be a way of training reading and writing skills.

As *homework* for the next meeting the trainees had to go through Work Packages 3 and 4 in order to discuss them in class. Another *exercise* that was also given was the activity “motivation and auto-biography” (Work Package 3, Module 3, activity 1).

Third Training Session

Firstly, an overview of the points and the conclusions from the previous meeting took place. Then, because some of the trainees teach Job Searching Techniques, the literacy skills that are important when looking for a job were *discussed in small groups*. Skills were identified, the variety of ‘literacies’ was again revealed and some ways to improve them were suggested.

After this, the *activity «motivation and auto-biography»* was done. The importance of the auto-biography was discussed and everybody recognized the way that a daily living skill can be seen as a literacy skill. As an example, parts of the autobiographies were described in terms of literacy skills by two participants, while everybody felt quite comfortably to share this kind of information, which is considered as “personal”.

The *next exercise* dealt with numeracy. After forming small groups, the trainer gave a worksheet that included part of the legislation on social security receipt for teachers. The question involved the calculation of the amount of money that is held from the salary of a teacher in different cases of working hours. It took more time than expected basically due to the perplexed way that the legislation was written. This was an example of an ‘authentic’ text that almost every employee comes across and gave ideas on other ‘authentic’ texts which can be used for embedding literacy in the teaching/ learning process.

This exercise led to another *activity* involving resources and media which could be used to embed literacy in the teaching process. The authentic text used in the previous exercise was an example; others were also mentioned such as legislations, public documents, articles from newspapers and magazines, pictures, videos and computers. The trainees were asked to reflect on the ways that could embed literacy in their teaching using those types of resources and gave ideas about the opportunities provided by such materials.

The *next exercise* involved filling in an application form for a teaching position. Again in small groups, trainees tried to understand the way that they were supposed to fill in information regarding previous teaching experience. In the specific application, the lack of necessary extra information was pointed out since it made the task difficult, bringing up again the matter of environmental factors that can influence literacy skills.

Before finishing the last training session, an *overview/ reflection* of the seminar was carried out in terms of what everyone had learned from it, reflecting on their own learning process and finding their own learn-

ing strategies and barriers. In a short discussion everyone presented their knowledge and awareness on literacy issues at the beginning of the seminar and compared it with their advancements at the end (it was similar to the activities of Work Package 3, Module 6: reflective practice and critical thinking). The importance of keeping a record of the teaching or learning process was pointed out, especially with the help of learning materials and documents. The last session finished with the participants answering assessment forms (Work Package 5).

3. Materials

The following materials were given to all the participants of the training programme:

- the book *Literacy practices: Investigating literacy in social contexts* by Mike Baynham (2002);
- an article: *Literacy and the literacy myth: from Plato to Freire* by J.P.Gee (1996);
- a Greek translation of CELINE's Work Packages 3 and 4.

3.1 Assessment

At the last day of the training programme, all participants were asked to fill in the assessment forms of Work Package 5. The evaluation process was divided in three questionnaires aiming at different aspects of the three-day training session, testing the *Teacher Curriculum* and *Teacher Materials* produced by the CELINE project.

First Section

The first questionnaire regarded the teaching curriculum. The majority of the participants thought that the type of curriculum tested was «very useful» and only few of them considered it as being «useful». They all thought that the aims, the activities and the general scheme of the modules were fairly clear, interesting and of high quality and none of them suggested any changes in the contents of the modules.

The second part of the questionnaire was about the teaching curriculum materials. The training material of each module was thought to be interesting, helpful, adequate and of high quality, and the steps of the activities were judged as being clear and well structured. In the question on whether the training materials comply with the level of the trainees, the majority of the participants thought that the materials were appropriate for different groups of trainees, and that, depending on the gen-

eral vocational training curriculum, the materials can be easily adjusted or adapted to comply with the level of trainees. One of the participants pointed out that she would like the material to be more focused on the Greek training reality, taking into account the particularities of the groups of trainees that usually participate in training programmes (ethnic minorities, immigrants, unemployed for a long period of time, etc).

As far as the questions regarding the relationship between Literacy Education and Teaching Curriculum were concerned, all participants thought that the relationship was clear, whereas the knowledge and information given were appropriate to make VET teachers aware of the literacy issues involved in their teaching and to raise their capability to embed literacy in the education process. Everyone thought that a VET teacher after attending the seminar and after reading the materials will become aware not only about the literacy issues that are involved in his/her everyday life, but also about the literacy practices that can be integrated into vocational contents. The connection between literacy and real workplace situations was highly valued too.

The final part of the first questionnaire regarding the innovation of the curriculum/ project also received very good comments. Most of the trainees thought that the materials and the exercises were quite innovative. The only suggestions that were made in order to improve the materials were the adjustment to the Greek standards, and the need for further practice and activities, since it was felt that the 12 hour training programme was sufficient to throw light on the literacy issues involved in the teaching process, but more time would be needed in order to fully develop practical skills to embed such issues in teaching.

Second Section

The second section dealt with the Work Learning Outcomes and the ability of the trainers to balance those outcomes and the educational process.

The indicators involved in the work culture of an employee that were discussed by the participants in this section were the following: *Employment opportunities*, *Stability and security at work*, *Combining work and family life*, *Fair treatment in employment*, *Safe work environment* and *Decent hours*.

Firstly, about the *employment opportunities*, participants thought that the development of literacy skills will multiply the job opportunities of an employee, since he/she will realize the variety of ways to search for a new or better job, he/she will create an efficient and competitive "portfolio" when applying for a job, he/she will feel more comfortable and self-confident in a case of an interview, therefore raising the possibilities of acquiring a desired working position. A person who has taken part in literacy activities will have a better chance of developing his self respect and so he/she will be more respected by others too. An employee who

wishes to upgrade his/her current working position will likely feel more confident, will have an indisputable advantage in comparison to his/her fellow workers and therefore will probably succeed in attaining another position and develop his/her career. Overall, this employee will be more competitive in the job market.

Concerning *Stability and security at work*, it was thought that literacy education would minimize the danger of losing one's job. Literacy skills can be transferred from one job to another, in the case of change of profession. Literacy skills are also necessary in order to follow the changes and the development of a constantly changing job market and they allow workers to feel better adjusted in a specific workplace. The realization of a possible lack of literacy skills will encourage the worker to gain and develop them, in order to feel safe and secure at the workplace.

About the *combination of work and family life*, the participants thought that people taking part in literacy activities will more likely combine the two aspects of their lives quite effortlessly. Literacy as a combination of skills is involved in both working and family life, and in this way a person can set and divide his/her priorities in a better way in order to avoid conflicts with himself and with others, either co-workers or family members. Focus was given to the gender equity issue, and it was pointed out that it is especially the women who need the development of literacy skills, since most probably it is them who have been away from working life due to family obligations.

As far as the indicator «*Fair treatment in employment*» was concerned, it was mentioned that a worker that has been educated in literacy issues has more possibilities to be aware of his rights, to make use of them and to fight for them than a worker with no such education. In this way he/she will feel more that he/she will no longer be a victim of discrimination or exclusion, he/she will have a sense of equality in employment issues, gaining work culture and awareness. Furthermore, he/she will be able to support and help others who lack literacy skills to understand issues such as equality and discrimination. In other words, fair treatment involves workers, employers and fellow workers creating or modifying their work culture.

«*Decent hours*» and «*Safe work environment*» were also mentioned and discussed as elements of the work culture which can be influenced by literacy education.

Third Section

The third section of the evaluation process dealt with informal learning at the workplace according to certain indicators. The participants made comments on most of the indicators, especially on *the workload*, *the emotional load*, while *the social support*, *the skill task variety* and *the job autonomy* indicators were also mentioned and briefly discussed.

Those who commented on the *workload* suggested that education on literacy issues will be beneficial for workers because it will help them in various aspects of their working life. Their performance will be better both from quantitative and qualitative point of view. They will be able to fully understand the demands and the responsibilities involved in their work, and, as a result, they will be more productive, they will manage their time better, they will eventually have less workload to deal with. It was also mentioned that literacy education will help workers develop other skills, such as creativity and crisis/ stress management, a fact that will have positive effects both on the worker himself and the job/ task involved. This kind of education will help workers realize and use the learning opportunities existing in their workplace, so that the workload gradually becomes less and less.

A few participants discussed the way literacy education could reduce the *emotional load* of workers. It was thought that workers receiving such education will develop a whole range of skills that will help them deal with problems which involve contact with other people. For example, they will develop communication skills, skills that involve adjustment to different environments, cooperation and team building, resulting in a work environment with no or little emotional load. Emotional load was regarded as a potential risk factor involving stress and time management. Literacy education can prevent such problems because through it the worker will develop a self assuring behavior, in other words, he/she will be aware of his/her rights but also, he/she recognize other people's rights as well.

4. *Conclusions*

1. Regarding the pilot training programme in Greece, a mixed teaching methodology was used. Lecture, class and small group discussion, brainstorming, case studies, worksheets were combined in order to achieve the best possible result.
2. Focus was given to the past experiences of the trainees as VET teachers and as people in their everyday life. They were given texts or situations that they come across in their life, they were asked to deal with them, and this brought up the relation between life and the teaching process of the subject that they teach.
3. Through the analysis of personal experiences, when trainees faced difficulties regarding lack of literacy skills, everyone was made aware of the fact that literacy problems can be traced in all occupations and in all people at some point of their lives regardless their educational level. Empathy is a key capability when teaching literacy skills.
4. Key issues in embedding literacy in teaching curriculums were: «active listening» for diagnosing and understanding possible deficiencies

in literacy skills, and a teaching methodology based on communication, facilitation and empowerment of the students.

5. Motive and motivation for both teachers and students were regarded as being of great importance when dealing with literacy issues. This finding is supported by numerous studies as well. For example, Wagner (2000: 24) suggests that «the motivation of adult learners is a key dimension that can either promote participation and retention or, when lacking, lead to poor take-up and retention of literacy and adult education programmes».
6. The fact that the sessions were on a weekly basis gave everybody the opportunity to go through the materials that they were given and reflect on their own practices or problems regarding literacy. It was important that sessions began with comments and questions that stemmed from the previous sessions or from the materials. As a result, the training process was more interesting and people were more involved.
7. According to both trainer and trainees, the duration of such training programmes, where a fairly new concept is presented, should be longer because questions and misunderstandings always arise and have to be dealt with and clarified. Some of trainees also said that they would have liked to present one mini presentation, as an assimilation of a real teaching procedure, in order to check their own capability of embedding literacy in their subject, so that they could evaluate themselves in practice and let the other trainees evaluate them and comment on their performance.
8. One of the basic strong points of the pilot training programme was the level of participation of the trainees and it is believed that they gained knowledge (on the nature, levels and variety of literacy), skills (in order to embed literacy in their teaching) and attitudes (concerning their responsibilities as VET teachers and their awareness that other skills depend on the development of literacy skills).
9. Another basic point which contributed to the success of the programme was the variety of the educational and occupational background of the trainees. Each one who participated in the programme provided enlightening comments, ideas, and resources, bringing up the issue of plurality in such programmes, a factor which contributes to the best knowledge and awareness of concepts such as literacy and its embedment in the teaching process.
10. For future training programmes on literacy more focus should be given to their practical orientation. In this way more practical suggestions on the embedment of literacy could be made, so that the teachers feel more comfortable in actually using the knowledge and the skills they gained.
11. Working packages 3 and 4 were used as a basis and as a reference, since the active participation of the trainees influenced and changed

- the contents of each session. Therefore it is very important that the trainer who takes the responsibility to teach such training programmes should be fully aware of the changes in the row of activities that might occur, as well as be prepared to flexibly adjust the programme or the curriculum according to the needs, wishes and level of understanding of the participants. Moreover he/she should be able to create his/her own material (exercises, resources, tasks, etc). In other words, his/her role is crucial for the success of such training programmes. This is one of the basic findings from the pilot programme as it was implemented in Greece. Trainees will obtain knowledge and skills to embed literacy issues in their lesson planning and their teaching when their trainer sets the example and becomes a role model. As Alan Rogers (2005) puts it, those trainers will be «well-trained, well-supported and innovative/creative, having access to a range of relevant materials relating to the trade or skills which form the basis of the training».
12. Concerns were expressed by few VET teachers regarding future training programmes on the embedment of literacy. They focused on their need for a mentoring system for trainers, regular provision of information and training relating specific needs (culture, language, disability) and literacy and the possibility of distance learning for trainers who work in the province. Such suggestions were also mentioned by Derbyshire, O'Riordan, Philips (2005: 28).
 13. Due to the specific period of the year, there were no vocational training programmes organized, implemented or delivered in Greece. Therefore, the VET teachers who participated in the specific trainers training programme did not have the opportunity to actually put into practice the knowledge and the skills gained, the way that the Romanian VET teachers did. It would have been very enlightening to implement what they had gained, because more comments would have been created and more opportunities to creatively and critically think about the embedment of literacy in teaching. Therefore, it can be suggested that although the trainers' understanding of literacy was quite high (as concluded by the assessment), their newly acquired skills were not assessed or evaluated practically.
 14. The pilot training programme met the needs of VET teachers so as to improve their educational work and to become more sufficient in it, keeping into account the changes occurring in the job market and their connection with the new economy. All participants believed that such training programmes are necessary for everybody who is involved in employment in one way or the other. The final beneficiaries, namely the employees, will find the content and the outcomes of such programmes as being very valuable because in a constantly changing job market, as the one we experience nowadays, the skills involved in literacy are getting increasingly important. Employees who want to

maintain or achieve mobility in their workplace will appreciate such training, as it is a way to accomplish their wishes. The multiple roles that they have to take in their everyday lives can be managed successfully when they realize the importance of literacy and make the effort to obtain the highest possible level of it. Therefore, such training programmes should not be one-off initiative for either trainers or trainees; as for the current situation in Greece, formal provision should be made by the State and the Ministries involved in adult education and employment so as to secure the inclusion of literacy issues in future training programmes. Embedding literacy in the curriculums of future training programmes is the key to their success.

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CHAPTER X

WORKPLACE LITERACY IN GERMANY

Miriam Radtke

Vocational training in Germany mainly takes place in the internationally known VET 'Dual System'. This VET training provides more than 350 formal occupational trainings, which are divided in the two, dual sections – on the job (by employment at a respective company) and at the vocational training school. Two-thirds of young people in Germany start a vocational training after graduation, whereas one third attends college or university (Bundesagentur für Arbeit 2009).

During vocational training of the dual system, trainees acquire specific job-related skills and knowledge by performing on the job at the company, instructed and monitored by a selected member of the staff that acts as the training supervisor. At the vocational training school teachers impart the theoretical knowledge related to the occupational field as well as general-educational subjects, such as languages like German and English or social studies and sports. On average 3–4 lessons are allocated to the subject German language (<<http://www.bildungserver.de/>>; 09/09).

First of all, it does not seem to make sense to discuss issues like basic education, literacy or teaching the so-called 'cultural techniques' (reading, writing, arithmetic, communication) in Germany, for the major problem of lacking basic skills should not even exist in among workers of the 'New Economy'¹ for every job is an occupation requiring formal training that contents the mandatory general education subjects like e.g. German language. Regarding the scope of formal occupational training in Germany, it appears like there is no vocational field unskilled workers can enter without difficulty. At times several approaches appear achieving implementation of modular occupational trainings through which a

¹ The term 'New Economy' includes not only the emerging trendsetting industries of technology and digital information and communication, but also the structural change of the whole national economics in each country. There are modified forms of organisation and an internationalisation of markets, which constitute new forms of utilising the human resources for reformative offers of service and technical occupations (see <<http://www.celine-project.eu/>>; 09/09).

simple, tailored vocational training could be established (Bensel, 2001), but still the dual system and the certificates testimonialized by the chamber of crafts or the chamber of commerce are determining in Germany. The individual employability increases with the proof of a successfully completed formal occupational training. The German VET dual system meets international approval (Deissinger 2001) and is finally accountable for the fact that – according to recent surveys – vocational and linguistic competences of German employers are higher than US American employers' competences in these fields, even though the number of university graduates in the USA is higher than it is in Germany (Institut der deutschen Wirtschaft 2009).

At first sight, regarding these facts and preconditions the impression is given that, lacking literacy skills in vocational contexts need not be discussed in detail when it comes to the German perspective. Indeed, the quality of the general school system in Germany has been challenged in terms of the PISA survey some years ago, but the question of lacking basic skills in terms of occupation and vocational training is not arising yet. The possible reason is by no means the non-existence of this major problem in Germany. At least four million people in Germany are functional illiterates, which means that the ability to read and write is this low that that activities functionally linked with these abilities (reading display panels, filling out forms, etc.) cannot be accomplished by a person (cf. Kleint 2009). It can now be assumed that several of these functionally illiterate persons are gainfully employed and inwardly struggle with their lacking literacy skills in their everyday work life. Furthermore this could draw to the conclusion that another indefinite number of persons on the German labor market show – although not identified as complete functional illiterates – substantial difficulties in reading and writing. It can be stated that the previously endorsed dual system does not entirely prevent lacking literacy skills of employees in Germany.

In the first instance a short illustration is necessary why this major problem is given less attention in Germany, in vocational educational practice, as well as regards educational research. The subliminal conviction in German politics and society *not* to have a problem with illiteracy or lacking basic skills among the working population, is turning the matter into a taboo and impedes the promotion of basic research and the implementation of respective measures in the field of vocational educational practice (cf. Tröster 2005a). Still in most cases, the providers of respective adult education trainings and courses for basic skills are with a percentage of 90% the *Volkshochschulen*² (Tröster 2005b). Integrated

² Volkshochschule – Nationwide prevalent non-profit adult education centres in Germany.

qualification measures on basic skills level and in the field of professional or even in-firm training is not supposable yet to an extent transcending the level of some exemplary pilot projects.

Moreover, in this regard, basic skills – in this text determined as the cultural techniques reading, writing, arithmetic and ICT³ competences – are exclusively considered and limited to reading and writing skills. There is no common comprehension of the lack of qualification measures on basic skills level in professional training. The *Volkshochschulen* cover almost the whole evident need of basic skills training offers for adults in Germany and it seems there is no end of basic skills being a ‘niche’ of vocational training in sight (Kohl, Kramer 2008). Considered reasons and consequences in terms of limitation of measures in basic skills could be concluded at this stage, for illiteracy and lacking basic skills are obviously conceived as a marginal phenomenon, that pretended disappears among the bulk of successful occupational training graduates. How controversial the topic really is, occurs when the factor migration is included.

For a long time in Germany the conception prevailed that, despite the considerable job migration starting in the 1960’s mainly from Southern European countries to Germany, Germany should not necessarily be considered as immigration country (Hafez 2002). Nowadays there is already the second or even third generation of migrants born and raised in Germany. In cases of the next generation of people living in Germany whose parents or grandparents once immigrated, this is in German determined as ‘migration background’. Since that time one third of young graduates in Germany feature migration background. A common term allocated to all persons of this third, regardless they possess the German citizenship or not.

Results of current studies show that the factor *migration background* shows an adverse effect on graduation, acquiring occupational training positions and certifications and not least on the individual literacy skills. According to evaluation of the Federal Institute for Vocational Education and Training (2005) the rate of apprenticeship of foreigners underlies with 24,5% female and 29,7% male, notably the rate of German apprentices with 49,7% female and 69,9% male. Several potential reasons for this mismatch are considered. Starting with the school graduation where it is shown that a higher number of foreign young applicants only show a certificate of the *Hauptschule*⁴ (49% foreigners compared to 38% Germans) (Engelbrech, Ebner 2006), whereas more German school leavers

³ ICT – Information Communication Technologies.

⁴ Form of general school comparable to the CSE (Certificate of Secondary Education) of the UK.

applying for a training position show a certificate from the *Realschule*⁵ or even *Abitur*⁶. In relation to this, it is assumed that there is also a kind of 'institutional discrimination' existing when 41% Germans with only a *Hauptschul*- certificate successfully apply for apprenticeship in contrast to only 31% foreign applicant with *Hauptschul*- certificate (*ibid.*).

Regarding these numbers it seems obvious that systematical discrimination of migrants in Germany is probably already institutional positioned. Granato (2003) quotes in this context that discrimination already starts at school where teachers tend to interpret and assess for instance a lack of German language skills as weak performance in general. The mostly bi- or multilingual competences, these young people show in most cases, stay unconsidered and not appreciated.

Back to the topic of Literacy now the question is raised in what way the dual system in Germany prevents the lack of basic skills among workers in the New Economy? Where do these young people, who have not been accepted for apprenticeship, go? Where do their parents or grandparents work, whose German language skills are maybe not sufficient? And not least – relating to German employees who show weak literacy skills – where and under what circumstances do they work?

As a matter of course there are jobs and occupation vacancies in Germany that are filled with unskilled workers. The workers are briefly trained and mostly carrying out the same, monotonous operations from the time when they are able to do their work processes independently. These jobs often consist of work at assembly lines, at the cleaning sector or in some parts of the service branch. These jobs have some fundamental criteria in common: They are in most cases low-paid, they are not eminently respectable and, however, hide in some parts the requirement of advanced literacy skills that challenges the workers, who are possibly not able to meet these demands.

Also the rate of vocational training opportunities and promotion in this area drops enormously and employees in these jobs have only rarely the possibility to undertake further vocational and possibly even internal training. Further education takes place preferably at higher levels and also here excluding impacts on employees with a limited literacy level occur.

Referring to this topic, Grünhage-Monetti (2009) has contributed to the research project «German at the work place», which points out and focuses problematic issues of the situation. The employees are given a voice in the form of a narrative interview, so that they can report on the situations in their job in which they meet direct requirements on their

⁵ Form of general school on level higher than the *Hauptschule*, comparable to GCSE (General Certificate of Secondary Education) of the UK.

⁶ General qualification for university entrance, comparable to the A-levels in UK.

literacy skills, to what extent language plays any role at all and where these skills are important and where maybe not.

Moreover, the point of view of employers is focused, who also report in interviews on the role of language skills of their employees for their company, the staff and the work flows. The research project explores small, medium-sized and large companies, in which a large part of employees have a migration background. Based on the insights gained from this project, concepts are being developed on how internal training programs in the field of literacy can have desired impacts on employees of companies of this type (see also the initiative and further training concepts of the coordination centre for «German at the work place»⁷). Thus, it can be observed that there is absolutely a demand for training and further education programs directed to improvement of literacy skills in Germany. Particularly training concepts tying up to the workplace and vocational contents are to be developed and implemented. With these measures, improvement can be effected at various workplaces.

Regarding once more the definitely unedifying number of four million functional illiterates in Germany, the workplace based approach possibly offers solutions and the slight chance to successively reduce the number of illiterates in the long-term. Besides this strong argument arguing for the workplace based training of literacy skills, it could furthermore be advisable to release the general education systems and institutions and to take over some part of the basic educational mandate directly at the workplaces. Thus, the deficiencies, learning needs and vocational competences as well can be identified, reduced or fostered locally.

Although the view existing that such trainings solely aims to upgrade the 'usability' of these skills in vocational combination and neglects the emancipatory meaning of individual education (cf. Kohl, Kramer 2008), the benefit from connecting basic skills training with workplace contexts cannot be denied.

In this regard, trainers and some avant-gardists conceptualizing literacy workplace based trainings in Germany, can profit from the training materials developed by the CELiNE project consortium. The modules offers several incentives and basic knowledge for coordinating staff such as members of the coordination centre «German at the workplace», who train the teachers and trainers and compile methods, procedures and exercises together with trainers individually for each in-firm training. The modules provide a useful basic structure, trainers can resort to. The

⁷ The project «Koordinierungsstelle Berufsbezogenes Deutsch» is funded by the German Federal Ministry of Labour and Social Affairs. This project aims to support the participation of migrant workers in the labour market and is developing and monitoring second language trainings that help migrants to respond to the communicative needs connected to their workplaces (see: <<http://www.deutsch-am-arbeitsplatz.de/>>; 09/09).

VET teacher booklet would – accurately translated and transformed to German language and perception – be considered as a guideline and handbook for teachers at vocational training schools, which on the one hand would not make sense in this context for these teachers have their predetermined curricula and methods. On the other hand the booklet is universally applicable and can therefore be used by teachers of workplace based literacy training.

For the future it is furthermore a crucial point in Germany to continue promotion of workplace based trainings on the basic skills level. The various opportunities to qualify workers of the New Economy and to reduce functional illiteracy have to be recognized and exploited. Moreover, in terms of German educational policy the ‘basic education’ topic has to gain in importance and responsibility must not exclusively be left to the general schooling system. Considering these issues, the CELiNE project partners are committed to disseminate the CELiNE products, to provide access to the materials in different channels and not least to raise awareness relating to chances and benefit from workplace based literacy training. These are intentions vitally important and relevant for the vocational training and the continuing educational system in the partner country Germany.

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CHAPTER XI

EVERYONE'S A WINNER: THE CASE FOR EMBEDDED LITERACY

Gay Loblely

Introduction

There is a strong case to be made for embedding literacy, language and numeracy [LLN]¹ into vocational programmes. We know that many adults and young people are motivated to study for a vocational qualification to get a job or succeed at work, but are not willing to develop their literacy, language or numeracy skills once they have left school. Yet these skills are vital to achieving a vocational qualification and in the world of work. They are needed to learn the job, to do the job, to keep up with changing technology, new forms of organisation and so on.

We also know that in the UK employers consistently report concerns about employees' basic literacy and numeracy. For example, a recent Confederation of British Industry survey reported that 41% of employers were concerned about employees' basic literacy and 39% with their numeracy and that a previous survey had shown about 50% were dissatisfied with school leavers' basic skills (CBI 2008).

For learners who do not have English as their first language there are slightly different issues. For these learners, learning the language of an occupation whilst learning vocational skills may be both more efficient and motivational and speed their progression to or in employment.

So there is a 'common-sense' argument for embedding language, literacy and numeracy into vocational programmes. Learners are more likely to be motivated and better prepared for the world of work if the LLN they need is taught as part of their vocational course.

In England, many vocational programmes require the learners to pass English and maths qualifications and many providers offer additional support to learners with poor levels of literacy, language and nu-

¹ Literacy, language and numeracy [LLN] is now the preferred term for adult literacy, adult numeracy and English for Speakers of Other Languages [ESOL] or basic skills in England.

meracy. But the extent to which these courses are related to the overall vocational aims of the learners and how far they are seen as relevant by learners [and for that matter, vocational teachers] has been an issue. As a consequence, in the past few years considerable focus has been given to how best to embed literacy and numeracy within vocational education. This chapter looks at some of current research into embedded literacy and numeracy in England and the implications for practice.

Policy Background

The launch of Skills for Life, the national strategy for improving adult literacy and numeracy skills, in 2001 provided a major impetus and significant funding for increasing opportunities for people of working age to develop their literacy and numeracy skills. Skills for Life recognised the impact of poor literacy and numeracy on individuals, in both social and economic terms. It also highlighted the wider cost to society in an increasingly global, knowledge-based economy. The strategy set out to boost demand for learning, increase capacity to deliver high quality provision, raise standards by putting in place a new teaching and learning infrastructure and increase achievement by removing barriers to learning and encouraging more learners to work towards a nationally recognised qualification.

As part of the strategy National Research and Development Centre for Adult Literacy and Numeracy (NRDC)² was established in 2002 to provide a research base on which to support development. The NRDC has undertaken a number of research and development projects focusing on embedded literacy, language and numeracy (For details see Further Reading at the end of this chapter). One of these, however, is of particular significance for vocational education because it provides convincing evidence of the impact of embedded learning on vocational achievement and insights into features of effective embedded programmes.

Defining Embedded Literacy, Language and Numeracy

Before looking at this research, we need to look at what is understood by embedded literacy, language and numeracy in England since there are varying interpretations of what it means. The Skills for Life Strategy Unit uses the following definition:

«Embedded teaching and learning combine the development of literacy, language and numeracy with vocational and other skills. The skills acquired provide learners with the confidence, competence and motiva-

² NRDC is a consortium of partners led by the Institute of Education in London. It is dedicated to conducting research and development projects to improve literacy, numeracy, language and related skills and knowledge. See <<http://www.nrdc.org.uk/index.asp>> (09/09).

tion necessary for them to succeed in qualifications, in life and at work» (Department for Business Industry and Skills 2009).

Building on earlier work by Eldred (2005) which looked at different models of delivery and the NRDC's own work on embedding, the NRDC research team concluded that a simple definition is not possible. Instead, in a briefing paper for practitioners, it proposes that:

A defining characteristic of embedded provision is that the processes and organisation of LLN learning are designed to fit the vocational objectives of the learners. The approach is strongly learner-centred and, typically, involves active collaboration between vocational teachers and LLN teachers, perhaps with an element of team-teaching (NRDC 2006).

The NRDC Research

The research project, *Embedding literacy, language and numeracy in post-16 vocational programmes – the impact on learning and achievement*, set out to answer the following question: «What is the relationship between provision in which literacy, numeracy and ESOL are embedded in a variety of ways, and learners' retention on courses, achievement of qualifications, and attitudes?» (Casey *et al.* 2006).

Methodology

The research, which took place between January and December 2005, was based on a sample of 1,916 learners, drawn from 79 courses in 15 further education colleges and one private training provider in five of the nine English regions. The learners were enrolled on Level 1 and Level 2 courses in the following areas of learning:

- health and social care;
- hair and beauty therapy;
- construction;
- business;
- engineering.

The researchers undertook classroom observations, documentary analysis and in-depth interviews with nearly 200 staff. Learners' perceptions and attitudes were gathered by a questionnaire and through focus groups. A four point scale was used to judge the degree of embeddedness (from those where LLN development was fully integrated into the vocational programme to those where LLN and vocational studies were entirely or almost entirely separate). Whilst the model of embedding was not fixed and courses were judged on a range of features and the strengths of those features, all embedded courses included some aspect of teachers working together to focus on learners' progress.

The Findings

The key findings in terms of achievement and success rates were that in Level 1 and Level 2 vocational course with embedded LLN:

- retention rates were higher;
- success rates in terms of vocational qualifications were higher;
- achievement of literacy/language qualifications was higher;
- achievement of numeracy qualifications was higher;
- learners believed that they were better prepared for their work in the future.

Higher Retention Rates:

- overall, the retention rate was almost 16% higher for embedded courses;
- this increase in retention was more marked for courses at Level 2, where there was an increase of 26%;
- this suggests that learners were less likely to drop out of embedded courses.

Figure 1. Percentage of learners completing courses (Source: Casey *et al.* 2006).

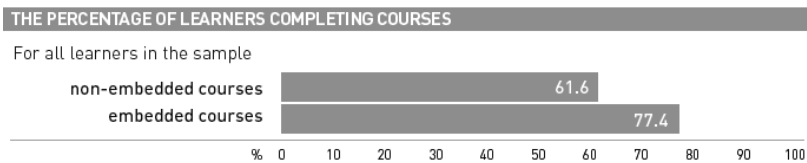
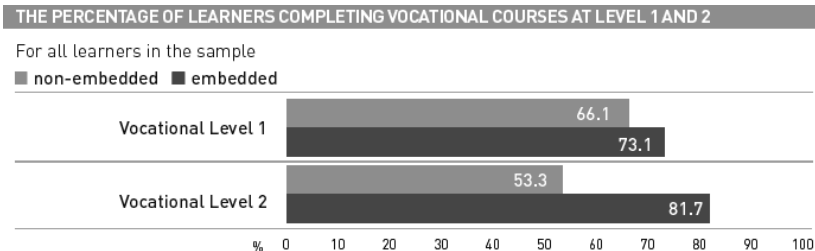


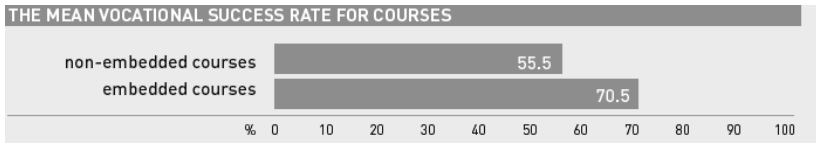
Figure 2. Percentage of learners completing vocational courses at Levels 1 and 2 (Source: Casey *et al.* 2006).



Better Vocational Outcomes

- success rates, defined as the number of learners achieving a vocational qualification as a percentage of those who started the course, were 25% higher on embedded courses.

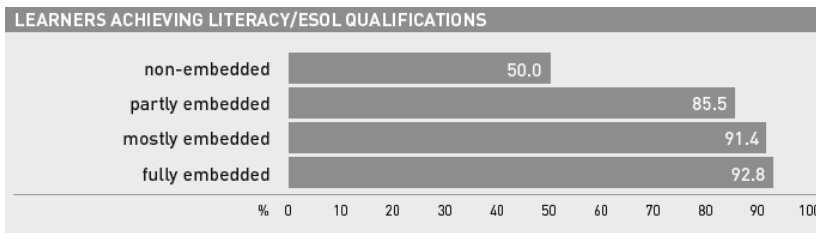
Figure 3. The mean vocational success rates for embedded LLN (Source: Casey *et al.* 2006).



Achievement of Literacy and English for Speakers of Other Languages (ESOL) Qualifications

- for those learners who were assessed as below Level 2 in literacy on entry, the proportion gaining a literacy/ ESOL qualification was more than 35% higher where there was some level of embedding in the programme;
- on fully embedded courses, this proportion rose to 42%, with over 92% achieving a literacy/ESOL qualification.

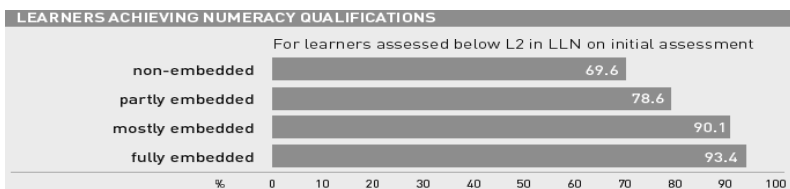
Figure 4. Learners achieving literacy/ESOL qualifications (Source: Casey *et al.* 2006)



Achievement of Numeracy Qualifications

- here again, the proportion of learners achieving a numeracy qualification was higher on embedded programmes, with a difference of over 20% between achievement on embedded courses and non-embedded programmes.

Figure 5. Learners achieving numeracy qualifications (Source: Casey *et al.* 2006).



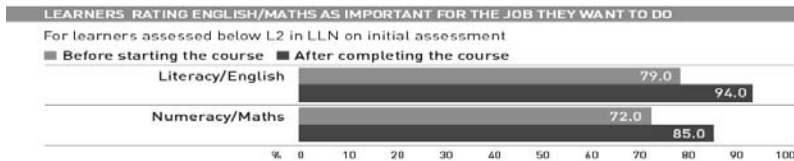
Learner Attitudes

- data from the learner questionnaire showed that the more embedded a course was, the more likely they were to state it had prepared them for work;
- it also showed that they were more likely to recognise the importance of good literacy and numeracy skills at work.

Figure 6. Positive learner responses to how their course has prepared them for work (Source: Casey *et al.* 2006).



Figure 7. Learners rating English/maths as important for the job they wanted to do (Source: Casey *et al.* 2006).



Key Factors in Embedded Courses

The research identified 30 features of embedding. From these, four broad categories of features emerged as making a difference as to whether a programme was embedded or not. These categories were:

- aspects of teaching and learning;
- team work;
- staff understandings, values and beliefs;
- organisational features (see Fig. 8 below).

The researchers concluded that there is «no single model of embedded provision». There were significant differences between organisations in how they were making the features noted above work for their learners and teachers. This finding concurs with an earlier NRDC study which, through seven detailed case studies, provides a valuable insight into embedded approaches at work (Roberts *et al.* 2005).

The research highlights that successful embedding depends on a complex interplay between the features. So, for example, implementing a purely organisational arrangement, such as timetabling a vocational

and an LLN teacher for the same session will not, in itself, be sufficient. Teamwork and shared understandings and beliefs are just as important.

Figure 8. Key Features of Embedded Provision (Source: Casey *et al.*, 2006).

Key Features of Embedded Provision	
<p>Team Work</p> <ul style="list-style-type: none"> • Formal shared planning, in officially allocated time, between vocational, LLN and ALS¹ staff. • Informal shared planning. • • Team-working 	<p>Staff understandings, values and beliefs</p> <ul style="list-style-type: none"> • LLN teachers viewed by staff and learners as contributing to learners' vocational aspirations. • LLN teachers understanding and engaging with the vocational area. • Vocational teachers understanding and engaging with LLN. • LLN teachers willing to develop skills in relation to vocational area. • Vocational teachers willing to develop skills in relation to LLN.
<p>Teaching and Learning</p> <ul style="list-style-type: none"> • LLN teaching linked to practical, vocational content. • LLN materials contextualised to the vocational area. • Initial/diagnostic assessment contributing to integration of LLN. • Differentiation – the way the course is taught matches the learners' LLN needs • LLN seen as essential in the development of learners' professional identity and success. • LLN development treated as relevant to all learners, not only those with LLN needs. 	<p>Organisational Features</p> <ul style="list-style-type: none"> • Departmental and institutional managers and policies supporting embedded provision in both principle and practice. • Organisational arrangements, resourcing and working conditions all supporting embedded provision.

Implications for Practice

The NRDC research provides convincing evidence that embedding LLN works. However, it also presents challenges for teachers and organisations, requiring a change of traditional attitudes, working practices and use of resources.

Embedding works because it puts the learners' motivation at the centre of the learning process. Most learners embark on a vocational programme because they want to become a skilled professional. Vocational teachers act as powerful role models of professional identity; they represent what the learner aspires to become. As a result they have

³ ALS (Additional Learning Support) is extra support provided learners with learning difficulties or disabilities.]

‘a natural legitimacy’ in the eyes of the learner (Roberts *et al.*, 2005). Their attitude to and awareness of LLN in professional performance is critical. If they recognise and understand the importance of these skills within vocational education and the workplace, then learners are more likely to do as well.

Securing this awareness can be a challenge. Not all vocational teachers will be supportive. Some may share the negative attitudes often expressed by young learners: «We’re here to teach plumbing; it’s the practical skills that count, not English».

For others, it may be simply a question of time and priorities: «Look, I’ve enough on my plate getting this lot through their course». Some may have concerns about their own English or maths and their capacity to teach these skills, especially if they think embedding means that they will have to take sole responsibility for LLN teaching. As one of the vocational teachers interviewed by the NRDC put it: «You wouldn’t expect a plasterer to go and teach English and maths, and you wouldn’t expect a maths teacher to teach plastering» (Casey *et al.*, 2006).

However, contrary to popular belief, embedding does not mean that vocational teachers have to become literacy or numeracy teachers. The NRDC research is quite specific on this point. Learners taught by non-specialists [vocational teachers] were twice as likely to be unsuccessful in LLN qualifications. But it does mean that vocational teachers need to recognise and value the role of LLN in vocational education and make this explicit to the learners.

Equally, LLN teachers need to recognise and respect the skills and expertise of their vocational colleagues. They have direct knowledge of the workplace and the demands the vocational course and, in effect, are the course leaders. LLN teachers have to become familiar with the content and style of vocational teaching. They also have to learn how to work in a context where they are not in overall control of the curriculum and where they have to earn legitimacy in the eyes of the learners and, in some cases, their vocational colleagues. This can be uncomfortable for those new to working in vocational education, more used to working with highly motivated learners who have chosen to develop their literacy or numeracy.

Collaborative working is not easy, but it is essential. One of the key points to emerge from the research is the importance of vocational and LLN teachers working together to plan ‘behind the scenes’ so that literacy and numeracy work is closely related to the vocational content.

Increased awareness and collaborative working can be promoted through joint staff training that includes activities such as:

- taking a skills audit of a vocational course to help pinpoint the LLN skills the learners have to use to follow the programme, complete as-

signments and so on. This helps teachers to identify the points at which LLN skills will need to be taught to enable learners cope with the vocational content;

- analysing a vocational assignment or task to identify the literacy and numeracy skills involved and planning together how they could be addressed;
- observing a vocational session. Vocational teachers could note literacy, numeracy, speaking and listening activities required by the learners. LLN teachers could use an observation to become familiar with vocational pedagogy and content;
- assessing the readability of course materials. This will help to assess how accessible they are and how they might be modified to take account of the varied reading levels of the learners;
- using any existing contextualised materials to illustrate how LLN and vocational content can be addressed⁴.

Clearly there are practical and organisational implications here. Teachers need time to meet and plan together. Some investment is required in additional training and, there may also be the need for occasional team teaching. Although-embedded approaches sometimes start because of the commitment and enthusiasm of a small group of individuals, this is unlikely to be sustainable in the long term without organisational backing. This is why the support of senior managers is needed. In England, the training and support offered to organisations has stressed the importance of a whole organizational approach to embedding if it is to be successful.

It's not a quick fix. The UK experience shows that changing attitudes and practice at all levels needs initial investment and sustained commitment to be successful. This is still continuing at organisational, regional and national level, supported by national resources and training, much of which is freely available and accessible on-line. However, as the NRDC research shows, the payoff is high in terms of better vocational outcomes, improved literacy, numeracy and language. The organisation benefits by higher retention and success rates, and employers benefit from new employees with the LLN skills they need for work. Above all, many more learners achieve their vocational qualifications and are able to move on to further training or employment. Everyone's a winner. It's a win/win situation.

⁴ There is a wealth of such material to be found in English on the Excellence Gateway. See <<http://www.excellencegateway.org.uk/page.aspx?o=201226>> (09/09).

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- All the above are available to download or order from <<http://www.nrdc.org.uk/>> (09/09).

Resources And Training

Information about the Skills for Life strategy and a wide range of resources and training, including a wide range of embedded materials, may be found on the Excellence Gateway at <<http://www.excellencegateway.org.uk/page.aspx?o=sfl>> (09/09).

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