Kokosowski, Alain

Changes in work and competences

Cohen-Scali, Valérie [Hrsg.]: Competence and competence development. Opladen : Verlag Barbara Budrich 2012, S. 17-30. - (Study guides in adult education)

Study Guides
in Adult Education

Valerie Cohen-Scali (ed.)

Competence and Competence Development

Barbara Budrich Publishers

Competence and Competence Development

Study Guides in Adult Education

edited by
Regina Egetenmeyer

Valerie Cohen-Scali (ed.)

Competence and Competence Development

Barbara Budrich Publishers
Opladen, Berlin & Toronto 2012

This book is available as a free download from www.barbara-budrich.net (http://dx.doi.org/10.3224/86649462). A paperback version is available at a charge. The page numbers of the open access edition correspond with the paperback edition.

ISBN 978-3-86649-462-6
eISBN 978-3-86649-514-2
DOI 10.3224/86649462

Barbara Budrich Publishers
Stauffenbergstr. 7. D-51379 Leverkusen Opladen, Germany

86 Delma Drive. Toronto, ON M8W 4P6 Canada
www.barbara-budrich.net

A CIP catalogue record for this book is available from
Die Deutsche Bibliothek (The German Library) (http://dnb.d-nb.de)

Institutional Editor: University of Duisburg-Essen, Germany
Jacket illustration by disegno, Wuppertal, Germany – www.disenjo.de
Copy-editing: Carsten Bösel

Contents

Preface

In recent decades, the term competence has become a keyword in the international discussion about education. This international discussion was accompanied by several national discussions, which mostly had a different emphasis compared to the international context. Especially in the European Union, competences became the central term in discussions about learning outcomes. Here, competences emerged as a counter-concept to the idea of qualifications – which are strictly bound to (national) educational systems. As the European Union, in the Maastricht Treaty, has agreed not to harmonise the educational systems of its member states, national differences tend to become more pronounced; thus qualifications cannot bring transparency and comparability to European education. Competence, in contrast, is a concept that can be used to compare people's knowledge and skills across national education and training systems.

To look at competences rather than qualifications means to shift the focus from educational input (length of a learning experience, type of institution, etc.) to the outcomes of learning processes. Competences as learning outcomes have nowadays been defined in almost all educational programmes. Furthermore, referring to competences highlights the fact that they can also be developed outside of educational programmes. Therefore, a variety of contexts became relevant that enable or constrain competence development. These contexts include the workplace, social class, family, and friends, for example. As a consequence, the validation – that is, the evaluation, recognition, and certification – of competences acquired outside of educational systems became relevant. To address this issue, a variety of methods and instruments were developed throughout Europe. On this basis, competences can support transparency and comparability in education and lifelong learning in Europe.

What is more, the term *competence* also serves to introduce a new didactic approach to adult education. The competence discussion helps strengthen

individuals' self-responsibility and self-efficacy as they engage in their learning processes. In other words, it is up to the learners to decide whether, where, when, and how they learn or not. Adult education programmes can merely provide contexts to facilitate learning processes and stimulate motivation. This is especially relevant in the education of adults, since adults are much more independent than children in their decisions about what and when to learn.

In this study guide, Valérie Cohen-Scali, Alain Kokosowski, Thierry Piot, and Richard Wittorski introduce the topic of competence development with a special focus on the working context. They give an insight into the Western backgrounds of the competence discussion and show the consequences of this discussion with respect to professionalisation and competence development in adult education. Furthermore, they present a variety of instruments for validating and evaluating competences. Finally, they raise the issue of competence management in adult education and highlight some of the changes in vocational education and training brought on by the competence discussion.

All of the authors are French researchers with special expertise in the area of competences. The study guide, therefore, gives an insight both into the European discussion and into the French discussion about competences. Valérie Cohen-Scali developed this study guide during her guest professorship at the University of Duisburg-Essen. By bringing on board her French colleagues, she created an interdisciplinary team of experts from psychology, human resource management, and education. As a result, the study guide provides an interdisciplinary perspective on the topic. Thanks go to Valérie Cohen-Scali for coordinating this study guide and to all the authors for their contributions to this volume.

Regina Egetenmeyer

1. Introduction

Valérie Cohen-Scali

Since the 1980s, questions around people in the workplace have been addressed more from the point of view of competences than the time match between an individual and a particular role. Approaching work through competences appears to be at odds with a tradition which conceives of work as the association between an individual and a task. This traditional conception of people at work emerged with the development of industrialisation in Europe and the United States in the nineteenth century. It was profoundly influenced by the principles of Scientific Management developed by Frederick Taylor, an engineer, who was invited into factories in the United States in order to help them introduce a more rational way of organising their work. Taylor's primary preoccupation was with the best way of doing a particular job, what an appropriate workload would be, and what fair payment was, with the aim of increasing workers' efficiency and performance. He carried out numerous studies (Kanigel, 1997) of the work stations of manual workers and made recommendations in order to provide workers with the most appropriate tools for the way they worked.

This conception of work as an activity was strengthened in the twentieth century with the advent of the Second World War, which prompted an acceleration in the development of occupational psychology. Military activities led, on the one hand, to the development of psychological evaluation tools to be used on soldiers, and on the other, to the creation of military equipment which was easier to handle and better suited to the morphology and cognitive abilities of its users. Later, social conditions at work came under intense scrutiny, addressing questions such as motivation, job satisfaction and supervision. Nonetheless, work as an activity continued to be perceived in terms of the relationship between the individual and the task.

This may have seemed relatively well suited to a context of stable industrial production, a booming socio-economic environment, and homogeneous demand. The 1970s are associated with the first world economic crisis linked to an increase in the price of fossil fuels. This was accompanied by a harshening of the socio-economic environment and an increase in unemploy-

ment in Western societies. Businesses needed to be more vigilant about the changes occurring in a more uncertain and complex environment. They also needed to prove that they could be more responsive and more flexible. Many national governments focused on vocational training to tackle the changes taking place. This meant training employees with inadequate skills and qualifications to carry out increasingly varied and changing activities, which often required a more extensive range of cognitive abilities.

From this point onwards, the traditional conception of work as a relationship between an individual and a relatively simple task no longer seemed appropriate. Researchers in sociology, psychology, and training reflected on other paradigms which might be better suited to defining the new reality. The term *competences* gradually came into common use. It was initially used by Chomsky in 1960 in relation to linguistics, as a document published by the European Centre for the Development of Vocational Training (Cedefop) explains:

> The use of the term 'competence' goes back to Noam Chomsky and was related to his creation of the theory of generative grammar as well as being part of his contributions to linguistics and cognitive psychology ... Chomsky distinguishes between linguistic competence as the speaker/hearer's knowledge of his language on the one hand and linguistic performance as 'the actual use of language in concrete situations' on the other hand. (Cedefop, 2009b, p. 108)

The term *competences* is used to describe the actual use of a particular aptitude in a given context. In the working environment, the term *competences* emphasises on the one hand, the role of the specific context of a particular activity as a determinant of the way a worker will approach a given task, and on the other, highlights the fact that work is essentially an individual and/or collective process of problem solving. According to Weinert, implementing competences in the workplace relies on the use of several processes: 'ability, knowledge, understanding, skill, action, experience, motivation' (Winterton, Delamare-Le Deist, & Stringfellow, 2006, p. 34).

Two terms are now commonly used in adult education: competence and competency. According to Eraut, there is a subtle difference between the two:

> There is a distinction mostly in the American literature between the term 'competence' which is given a generic or holistic meaning and refers to a person's overall capacity, and the term 'competency', which refers to specific capabilities. However even the word competency can be used either in a direct performance-related sense: a competency is an element of vocational competence, a performance capability needed by workers in a specified occupational area or simply to describe any piece of knowledge or skill that might be construed as relevant. (Eraut, 1996, p. 179)

Other, more specific shades of meaning are also found in the literature. For example, instead of generic competences, there are references to key competences:

> Key competences are context-independent, applicable and effective across different institutional settings, occupations and tasks. These typically include basal competences, such as literacy, numeracy, general education; methodological competences, like problem solving, IT skills, communication skills, including writing and presentation skills; and judgement competences, such as critical thinking. (Winterton, Delamare-Le Deist, Stringfellow, 2006, p. 33)

A series of other terms used in the literature on competences are defined in the box below.

Keywords: Knowledge, understanding, and capacities

Wittorski (see Chapter 3) defines a number of concepts similar to competences: knowledge (theoretical, action, and professional), understanding, and capacities.
A piece of knowledge can be defined as a socially validated and communicable statement. It is therefore a descriptive or explanatory statement about a given reality. Knowledge can be differentiated in a number of ways:

- Knowledge is described as theoretical when it is established and recognised by a given academic and cultural community at a given time (certain laws of fundamental physics, for example) as a dominant phenomenon, based on a *truth criterion*. Knowledge of this kind is disseminated through encyclopedias, textbooks, and specialist publications in the place and at the time concerned (in the form of slate tablets, papyrus or parchment rolls, papers or books, or files).
- Knowledge can be described as 'action' knowledge when a social community (made up of people who engage in the same activity) decide to validate a statement describing a sequence of actions judged, as a dominant phenomenon, to be 'effective' (*the criterion here is its effectiveness for action*, whilst the challenge is to organise effective local practices and produce a *social identity*).
- Knowledge can be described as 'professional' when an actual or prospective professional community decides to validate a statement describing a sequence of actions judged, as a dominant phenomenon, to be 'distinctive and legitimate' in order to have it acknowledged and recognised in the social arena (the criterion here is that of legitimacy and better recognition in the selected arena, whilst the challenge lies in social intelligibility and the production

of a *professional identity*). Knowledge therefore has a very strong social dimension, combined with an identified or codified process of formalisation.

The judgement or validation criteria mentioned here are not exclusive, but are dominant criteria for each type of knowledge (some theoretical knowledge, for example, may also be validated according to an effectiveness criterion).
Understanding, however, is a social construct which refers both to the process of internalisation and assimilation (transformation) by the individual of the knowledge and/or information passed on to them or which they contribute to producing, and the result of this process. From this point of view, understanding is on the one hand, the process (and the product) of comprehension and memory (i.e. what the individual retains in qualitative and quantitative terms of the knowledge passed on to them), and on the other, the process (and the product) of drawing conclusions from their actions by the individual, which constitute the value they derive from their experience. In this last case, experience, in the sense of 'known' experience, lies more in the subject identifying their modalities of action and the results they produce. Experience is therefore constructed primarily by a process which consists of deriving understanding from one's actions. Understanding therefore has a much stronger subjective dimension.
In the same way that there is a close link between competence and identity, there is a close relationship between understanding, knowledge, and identity. Effectively, knowledge and understanding constitute a communicative situation about or for actions and people, and act to some degree as 'markers' and 'foils' for identity.

Capacities are social constructs which describe a relatively transversal ability to take action. Capacities represent an acquired potential to take action: they are not in use at the point at which they are described but are nonetheless available to be brought into play when needed.

Whilst the notion of competence and research into competences is now widespread, particularly in the context of studies carried out by the European Union (published by Cedefop) in the area of Vocational Education and Training (VET), it must be said that guides to this area aimed particularly at students are rare. The aim of this study guide is to provide European students with an overview of competences and their development, as far as possible from a European perspective. Its objective is therefore both to describe the main theoretical developments in relation to the concept of competences, and to underline the way in which the European Union deals with the question of

competences at both a reflective and practical level in order to support the development of qualifications. The guide has been written by a number of French authors specialised in adult education and training, and tackles the question of competences from a number of different and complementary points of view, with an emphasis on VET professionals and activities.

Chapter 2 describes recent changes in the working environment that explain why competence-based approaches now appear to be particularly relevant in adult education.

Chapter 3 addresses competences from a theoretical perspective, given the imperatives of professionalisation for individuals and the continuous emergence of new activities.

Chapter 4 addresses the question of the transmission of competences and learning in the workplace, with a presentation of professional didactics.

Chapter 5 discusses options for evaluating and validating competences, identifying the evaluation methodologies and validation practices currently in use in various European countries.

Chapter 6 outlines the main features of management practices in relation to competences, which are currently emerging as a recent but major concern in major European businesses.

Chapter 7 focuses on changes in employment in adult education and training and the consequences of these changes on the competences of professionals.

The guide is designed to enable students to work independently or as a group, both inside or outside the classroom, by referring to the suggested exercises and tasks at the end of each chapter. The bibliography lists a large number of English publications and documents to help students gain a more detailed understanding of the theoretical aspects or explore practical illustrations and examples implemented in a number of European countries.

2. Changes in Work and Competences

Alain Kokosowski

This introductory chapter is in three sections, and will discuss the main changes that have affected the world of work over the past 50 years, and their consequences on organisations, activities, and the competences of employees.

2.1 Main changes in the workplace

In less than 40 years, the world of work has undergone a profound upheaval, which has had significant consequences on the work of individuals on a day-to-day basis.

2.1.1 The end of a model

The first oil crisis in 1974 sparked a fundamental change in the whole of the Western world about the nature of crises, resulting in a radical and long-lasting transformation of the world of work and employment. Prior to this point, work had been characterised by

- protected employment
- organisation centred on production constraints
- segmented and sequential organisation.

The first oil crisis threw this balance into doubt, with the new order heralding a greater focus on customers and shareholders. This was a fundamental shift away from the traditional relationship between a firm and its employees, particularly its executives. Five major consequences emerged:

- Work needed to be done more quickly and in a more extensive way.
- More work was done by people working together, which involved dependency and confrontation.
- Performance reviews became more common and pay was individualised.

- Relocation became more widespread.
- Organisations, groups, and individuals in the workplace became more vulnerable.

What were the consequences of this situation on day-to-day work?

2.1.2 Fundamental changes in the relationship between people and their work

Over the last 20 years, institutions and organisations have become less important in favour of collective forms of working and networks of varying degrees of density, based on people working together for different periods of time. Organisations today increasingly operate as networks, that is, as groups of businesses of various sizes linked by a particular relationship. Networks of this kind throw up new problems by driving the emergence of new values and social and psychological tensions. In this type of situation, managers of each unit have an interest in maintaining a degree of autonomy and a certain lack of transparency about what they do. This can then result in there being less effective synergies, and a decline in innovation. Individuals are forced to respond continuously to numerous calls on their attention, which necessarily leads to the development of procedures and standards to facilitate interactions.

In addition, work has become increasingly intellectualised, and it has distanced itself significantly from industrial or agricultural-type production. We are witnessing the growth of the written word and more generally, a formalisation of work through rules and procedures. Work consists less of physical objects and stable, repetitive processes and more of human relationships and managing information. It is carried out using processes that involve groups and cutting-edge techniques. These changes have been supported by new information and communications technologies, which often serve to strengthen controls and translate activity into measurable indicators. Increasingly, employees rarely have a direct relationship with all the activities of the business, as the majority of their work consists of using screens and representational tools which tend to distance them from reality.

In addition, more and more activities, including individual ones, now incorporate a ‘service’ dimension, which creates increasingly dense relationships with other productive organisations, as well as with customers. The direct consequence is the creation of small units, which are close to their markets, and which sooner or later question the continued coherence of the system or network. Another consequence is the development of non-standard

employment patterns (particularly amongst young people): 10 per cent of employees work at night, 50 per cent work on Saturdays, and 30 per cent work on Sundays.

It is interesting to note, in general terms, the contradiction between increasingly formalised work on the one hand, increasingly complex work requiring higher levels of expertise on the other, and finally, the significant impoverishment of work in certain sectors, for example in telephony services. Similarly, it is interesting to note that managers are increasingly being told to review their employees' performance but that at the same time, they have fewer and fewer tangible evaluation criteria for the work actually done available to them. As De Gaulejac (2011, p.191) notes: 'The benchmark then becomes what is prescribed rather than the reality. The ideal becomes the standard by which everyone's results are measured.'

2.1.3 The consequences on individuals

These changes have transformed managerial practices. It seems that we have entered into an era of 'management by chaos', by continual action, and without respite, as underlined by De Gaulejac (2011). Organisations are characterised by permanent instability, disorder, tension, and a lack of meaning, and they give rise to a 'paradoxical situation in which the individual's attempts to combat incoherence, "resolve" contradictions, re-imbue situations with meaning, and rationalise behaviour, in fact result in increasing complexity, in which antagonistic and contradictory "approaches" win out over complementarity and synergies' (p. 235). The author identifies seven paradoxes with which individuals are confronted at work:

1. The paradox of urgency: the more time one saves, the less one has, and urgency becomes the norm.
2. The paradox of long-term excellence: always excelling and pushing everyone to be exceptional results in the disappearance of those things which are common to everyone, and which link individuals to each other.
3. The paradox of controlled autonomy: people at work today have to prove that they can be responsive, adaptable and creative whilst at the same time obeying the instructions and rules imposed by the organisation.
4. The paradox of willing compliance: the business expects every employee to comply spontaneously with its values, principles, and beliefs but also expects everyone to make their choices willingly.
5. The paradox of impediments to work: employees are expected to prove their commitment but there is no or little recognition or consideration.

Management fails to play its role as a facilitator to groups of employees, despite the importance of this in addressing problems and emergency situations on the one hand, and driving innovation on the other. Employees do everything they can to ensure their activities are successful, in spite of a lack of organisation, contradictory instructions, and inappropriate standards.

6. The paradox of implied desubjectivation: the development of artificial intelligence and information and communications technologies demand intense mental and cognitive effort whilst at the same time requiring the implementation of rigid, standardised procedures.
7. The paradox of cooperation: the organisation is a cooperative system which prevents people from working together. Numerous organisational systems prevent cooperation, because they are based on individual performance, continuous reorganisations of work, and internal competition.

The work situations individuals are currently encountering make significant demands on them at both a cognitive and emotional level. These trends tend to run through all organisations to varying degrees.

These underlying tendencies, however, should not mask the diversity of organisational structures and working conditions.

2.2 Continued existence of a wide variety of work situations

The major transformations of recent years have contributed to accentuating the diversity of systems of work. A European survey (Lorenz & Valeyre, 2005) on working conditions draws a number of conclusions. On the one hand, the way work is organised varies significantly from one business sector to another. On the other hand, different ways of organising work co-exist in Europe. Finally, the ways work is organised are associated with different types of human resources management. In this survey, 15 variables are used to describe the organisation of work in Europe:

- a team-working variable
- a task rotation variable
- two variables relating to autonomous working: autonomy in working methods and autonomy in the pace or speed of work
- two variables characterising quality management methods: compliance with specific quality standards and self-assessment of the quality of work

- three variables linked to the cognitive content of the work: solutions for addressing unforeseen problems, learning new things as part of the job, and the complexity of tasks
- a task monotony variable
- four variables associated with constraints linked to the pace of work: 'automatic' constraints associated with the automatic speed of a machine or movement of a product; constraints linked to quantitative production standards; 'hierarchical' constraints linked to direct management control and 'horizontal' constraints linked to dependency on the work done by colleagues
- a task repetitiveness variable. (Lorenz & Valejre, 2005)

A statistical analysis of the survey results highlights the fact that the variables may be divided along two axes.

The first axis shows opposition between:

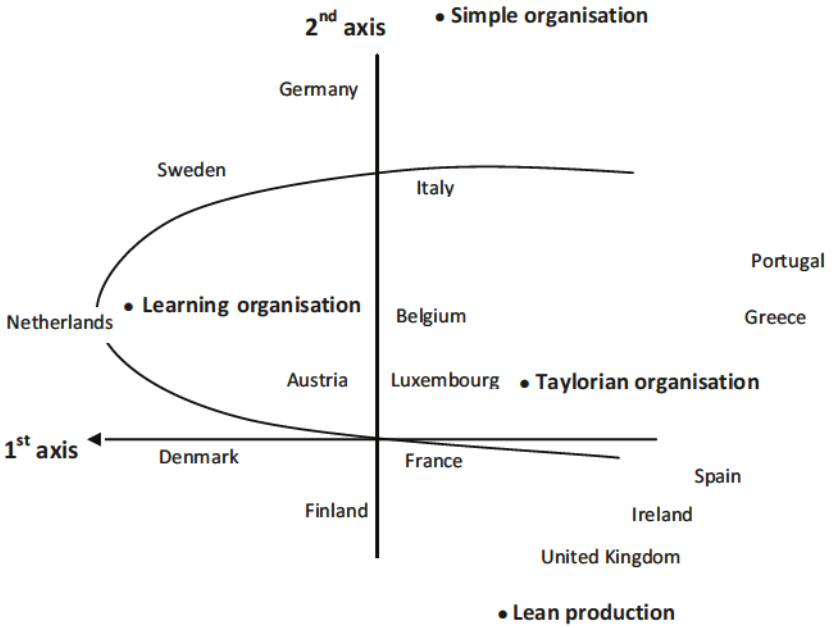
Taylorian organisation	vs.	**Post-Taylorian organisation**
• monotony (simplicity of tasks) • the pace of work constraint • the production standards constraint		• autonomy • learning • problem solving • complexity of tasks

The second axis shows opposition between:

Constraints and simple procedures	vs.	**Freedom and collective working**
• quality constraints • specific quality standards • control of the pace of work		• lean production • group working • task rotation

The following graph shows the position of various European countries in relation to these two axes:

Figure 1: Types of organisations in European countries



Source: Lorenz & Valejre, 2005, p. 99

Four types of organisation can be identified based on these initial analyses.

1. **Learning organisations** (39% of employees in Europe). Employees in these organisations carry out complex, relatively non-repetitive tasks. They are autonomous, monitor the quality of their work themselves, and are able to resolve any unforeseen problems they encounter. This way of working can be seen in sectors as varied as banking, insurance and business services, generally amongst executives and intermediate occupations.
2. **Lean production organisations** (28%). This type of organisation is influenced by the Japanese model and focuses on team working, task rotation, adherence to quality standards, and quality control. The level of autonomy is lower than in the previous example, whilst constraints around the pace of work and fulfilment of quantitative targets are higher. This way of working essentially involves industrial workers in transport equipment manufacturing, electrical and electronics manufacturing, etc.

3. **Taylorian organisations** (14%) continue to combine work with low cognitive content, repetitive tasks, and constraints on the pace of work. This traditional form of organisation is still found in the food processing and textile industries, and in call centres.
4. **Simple organisations** (19%). These share a number of common features: limited employee autonomy, few concerns over quality, the low cognitive content of the work, limited formalisation of procedures, control through direct supervision, etc. The main employees concerned are shop assistants and unskilled workers (particularly in the transport sector, and in personal services).

The proportion of these forms of organisation varies by country. Northern European countries (Denmark, Sweden, and the Netherlands) have more learning organisations, whilst Greece, Portugal, and Italy have the most Taylorian organisations. Elsewhere, in France and the United Kingdom, for example, the breakdown is slightly more even, but with a preference for lean production.

The main differences between these forms of organisation are summarised in the table below.

Table 1: Main differences between types of organisations regarding ways of working

Type of organisation of work	Learning (%)	Lean production (%)	Taylorian (%)	Simple (%)	Overall (%)
Autonomy in working methods	89.1	51.8	17.3	46.5	61.7
Learning new things	93.9	81.7	42.0	29.7	71.4
Complexity of tasks	79.8	64.7	23.8	19.2	56.7
Team working	64.3	84.2	70.1	33.4	64.2
Task rotation	44.0	70.5	53.2	27.5	48.9
Monotony of tasks	19.5	65.8	65.6	43.9	42.4
Hierarchical constraints on pace of work	19.6	64.4	66.5	26.7	38.9
Quantitative production standards constraints on pace of work	21.2	75.5	56.3	14.7	38.7

Source: Summarised from Lorenz & Valejre, 2005

The conclusion reached by the authors of the study on the organisation of work in Europe is as follows. The types of ways in which the work of employees in the European Union is organised shows that dividing these simply into Taylorian and post-Taylorian forms is inadequate in terms of characteris-

ing the variety of configuration observed. New forms of organisation are not based on a single model in contrast with the Taylorian model. They are divided, in fact, into two quite distinct categories: learning organisations and lean-production organisations. Whilst learning organisations display a range of characteristics which distinguish them from the Taylorian model, lean-production organisations, conversely, still share many of its features, which means they cannot, in fact, be classed as post-Taylorian. In addition, simple organisations are still numerous, and constitute a category which stands outside the dichotomy between Taylorian and post-Taylorian organisations (Lorenz & Valeyre, 2005).

Learning organisations tend to offer better working conditions, more training, and a more stable working environment. They also tend to foster the development of competences. Individual competences are highly sought after in this context. Individuals need to develop new competences throughout their lives to adapt to constant change.

Professional competences emerge as central in all current European research on changes in the workplace. The emphasis placed on competences is justified by the increased pace of change in the content of jobs, associated primarily with the increasingly widespread use of information and communications technologies and continual reorganisations. Individuals therefore need to be proficient in a wide range of technical, methodological, and organisational competences. They need to improve their ability to communicate and learn on a continuous basis. They need to address the contradictory demands of the employment market, with employers seeking individuals who are both highly adaptable (i.e. generalists) and can be operational immediately (i.e. specialists).

As Bunk (1994) emphasises, current working environments imply the use of complex competences:

> Simple technical competence is now no longer enough. Methodological, social and so-called 'contributional' competence (the ability to coordinate, organise, make decisions, and accept responsibility for one's own work and for one's professional environment) are also now essential. It is not enough, however, to examine these or transmit them in isolation. What matters is to try to incorporate all of these competences in overall operational professional competence. (Bunk, 1994, p. 14)

2.3 The question of competences in the new working environment

This new context therefore raises questions both about the continued development of knowledge and competences and the professionalisation of those involved. New theoretical models have been developed over the last ten years to provide a means of reflecting on the way in which professionals must now prepare to address the working environment. These oblige us to go beyond microscopic behavioural analyses, which resulted in long and generally unusable competence frameworks, in favour of a more comprehensive approach, where professionals interact with other people to manage different kinds of situations.

2.3.1 The professionalisation of key players

Professionalisation emphasises the notion of individual and collective professional identities in a more or less explicit way. The organisation develops representations of what is expected and what is not acceptable from a 'professional' and thus creates a model of identity which individuals can choose to embrace. This includes providing role models, which individuals can then emulate. Professional bodies and trade unions can also provide information on possible other ways of playing one's role as a professional. As they engage further in their activities, individuals develop their own specific professional identity, based on role models and their own representations, projects, interests, and previous experience. The organisation, for its part, sets up negotiating bodies that play a role in the professionalisation of individuals and the construction of their identity, for example through interviews with their immediate managers to discuss pay increases and training needs.

All key players in the business are encouraged to contribute to the professionalisation of their activity so that it is organised and becomes recognised. They must also engage in a process of professional development and work on building their competences throughout their working lives.

Keyword: Professionalisation

The term *professionalisation* refers to three types of activities and important elements of identity (Sorel & Wittorski, 2005).

1. Professionalising activities and even particular jobs refers to the ways in which a profession is created: the development of rules for exercising the profession, social recognition that these rules are useful, and the development of training programmes for the activities concerned.
2. Professionalising key players refers to instilling the knowledge and producing the competences required to exercise the profession.
3. Professionalising organisations means developing systems of expertise within firms, which enable them to perform more effectively.

2.3.2 The importance of 'acting competently' in a work situation

What types of competences do individuals need today? Research into competences shows that these are acquired exclusively in a professional context – that is, through engaging in a set of tasks, functions, interpersonal, technical, and organisational activities in conjunction with other professionals.

Keyword: Acting competently

According to Le Boterf (2003), being competent means being able to mobilise a combination of competences deliberately in order to address a set of professional situations.

A comprehensive approach to competences should be taken. 'Acting competently' has replaced 'having competences'. For Le Boterf (2003), acting competently means a continuous combination of 'knowing how to act', 'wanting to act', and 'the possibility of acting'.

'Knowing how to act' implies using and developing resources, organising work situations in ways which foster professionalisation, providing support and organising opportunities to share practices. It also makes use of practical intelligence in a situational context.

'Wanting to act' means assigning meaning to one's action, providing constructive feedback on the work carried out, highlighting development opportunities, demonstrating consideration, and contributing to the quality of working life. Wanting to act is associated with taking the initiative and accepting responsibility.

The 'possibility of acting' refers to various actions such as time management, delegating, making resources available on time, creating positive working conditions, and mobilising networks of key players.

In this new working environment, the attitudes and behaviours of individuals, namely the way in which an individual approaches their environment in a 'situational' context and the way they behave, are particularly important. This is what some authors, such as Zarifian (1999), refer to as social competence.

Keyword: Social competence

Social competence refers to the behaviours manifested in three areas (Zarifian, 1999):

- autonomy
- acceptance of responsibility
- communication.

Autonomy, acceptance of responsibility, and communication form an integral part of professional competences. It seems today that what are sometimes described as 'social competences', which refer to the ways in which an individual approaches their working environment, are becoming essential in addressing the complexity of current professional situations.

Any professional must rely on both their knowledge and their previous practices but also be capable of adapting and inventing new solutions. The situation, knowledge, and competence therefore work together as a system, with each element continuously feeding into the others.

2.3.3 Training schemes that facilitate problem solving in a range of situations

Resolving complex problems has become a dominant activity in the new contexts in which work is performed. Nonetheless, it is essential for work situations to provide more support than they currently do for the development of problem-solving processes, in particular by emphasising the importance of reflection and analysis in work situations. The principle of alternating between theory and practice should be more widespread. In practice, resolving problems relies both on identifying the actions and procedures associated with a particular work situation and constructing an interpretation of the situation, which must be consistent with implementing the relevant know-how. It may also be beneficial to alternate between real professional situations in context and simulated professional situations (case studies, games, role plays, etc.) and to use online resources to acquire theoretical knowledge. In these

contexts, individuals should be offered training schemes which alternate between real work situations and simulated situations (Ledru, 2004). These schemes are useful in facilitating the identification of the cognitive processes at work in problem-solving processes and transferring these procedures to similar situations. They can also facilitate the transformation of mental representations during group discussions. Finally, they should enable the trainee to make sense of the potential contribution made by theory, by encouraging them to develop a targeted approach to research. This approach can be developed based on problems relating to the work activity, identified with the help of a tutor and the individual's fellow trainees. Once the research has been completed, a comparative analysis can be carried out between field data and theoretical data, thus enhancing the individual's representations of the situations and problems encountered (Ledru, 2004).

To conclude, we should emphasise that it therefore seems essential for new forms of support for professionals to be created to help them develop their competences on an ongoing basis. These new ways of providing support for acquiring competences in a particular situation imply changes in the profile of adult trainers. In particular, this means a shift away from the traditional idea of the training situation, which is often limited to face-to-face sessions between teacher and students. More specifically, Ledru (2004) emphasises that trainers must develop their

- relationship to knowledge: trainers must be able to demonstrate subject-matter expertise and their abilities in facilitating and working with groups.
- relationship with their trainees, which implies an ability to listen effectively and provide specific support in line with individual needs.
- relationship with the group, because the trainer needs to be able to work with groups of different kinds (from forums to virtual classrooms) and in varied contexts (video conferences, company training courses, etc.).
- relationship with the organisation, since trainers need to be able to adapt to a varied range of demands and contexts.

Exercises and tasks

Exercise 1

Re-read the seven paradoxes identified by V. De Gaulejac described in this chapter. Write two pages summarising the principal consequences of these paradoxes.

Exercise 2

The following text is taken from P.E. Tixier (2010), *Ressources Humaines pour Sortie de Crise*. Paris: Les presses de Sciences politiques.

1. We should remember, however, some operational implications which the social sciences, as applied to management, put forward in terms of organisational development. A group is more competent than the sum of its individual competences as soon as it has to address a collective task, but on one condition: that it is a socially constituted group.
2. Research carried out by psycho-sociologist Jacob Moreno on the performance of squadrons of American pilots going to bomb Germany during the Second World War showed that the crews which suffered fewest losses in flight were not those whose members were the most intelligent or the best trained, but those who had been able to create a relationship based on implicit communication and common knowledge, in other words collective social and cognitive capital.
3. The famous Hawthorne studies carried out by Elton Mayo and his team at Harvard University provided ample proof that behaviours in terms of individual productivity depend first and foremost on two key factors: the feeling operational staff have that the business is interested in them through its tangible actions and that it recognises them as people, and a management style amongst immediate supervisory staff which prioritises the quality of human relationships at a group level. (Tixier, 2010, p. 16)

Write a one-page summary of the contribution made by groups to the organisations.

Task 1

Read the the following report by Lorenz and Valeyre:

Lorenz, E., & Valejre, A. (2004). *Organisational change in Europe: National models or the diffusion of a new one best way?* DRUID Working Paper, 04–04. Available from http://www.druid.dk/wp/pdf_files/04_04.pdf.

Try to identify the main reasons why certain types of organisation are more common in certain countries. Discuss these in your group.

Task 2

Arrange an interview with an adult training provider and identify the main paradoxes they face in their work, referring to those identified by V. De Gaulejac (2011) and discussed in this chapter.

List of Abbreviations

CCEC:	Competences Elicitation Career Counseling
ECVET:	European Credit for Vocational Education and Training
EQF:	European Qualifications Framework
HR:	Human Resources
NCVER:	National Centre for Vocational Education Research
PISA:	Programme for International Student Assessment
SMEs:	Small and Medium Sized Enterprises
TIMSS:	Third International Mathematics ans Science Study
TTnet:	Training of Trainers Network
VET:	Vocational Education and Training

Annotated Bibliography

Bandura, A. (1997). ***Self-efficacy. The exercice of control.*** **New York: Freeman**
A key book by Albert Bandura, one of the world's leading researchers in social psychology working in the field of social learning and self-efficacy. This book develops the theory that forms the basis of the self-efficacy concept – that is, social cognitive theory – and summarises a set of convincing research results on different topics.It shows the impact of self-efficacy beliefs on the daily life of individuals. Self-efficacy emerges as a key psychological mechanism governing a variety of human activities. This approach suggests that it is possible in certain conditions to question social determinism.

Collin, A, & Young, R. A. (Eds.). (2000). ***The future of career.*** **Cambridge: Cambridge University Press.**
The fragmented nature of modern working life has led to fundamental changes in our understanding of the term *career*. Few people now expect to have a lifetime of continuous employment, regardless of their qualifications or the sector they work in. This book presents a kaleidoscopic view of the concept of career, reviewing its past and considering its future. The chapters are wide-ranging, exploring topics such as the changing issues of career, individual career experiences, multicultural issues, women's careers, and the implications for practice and policy-making.

Savickas, M. L., Nota, L., Rossier, J., Dauwalder, J. P., Duarte, M. E., Guichard, J., Soresi, S., Van Esbroeck, R., Van Vianen, A. E. M. (2009). Life designing: A paradigm for career construction in the 21st century. ***Journal of Vocational Behavior,*** **3, 239–250.**
At the beginning of the twenty-first century, a new social arrangement of work poses a series of questions and challenges to scholars who aim to help people develop their competences and working lives. In this article, the authors formulate potentially innovative responses in a kind of international forum. It presents a career counseling model: the life designing model for career interventions. The article offers an overview of different approaches of career counseling models and develops a framework for new methods and tools in career counseling.

References

Argyris, C., & Schön, D. A. (1989). *Theory in practice: Increasing professional effectiveness.* San Francisco: Jossey Bass.

Arthur, M. B., & Rousseau, D. M. (1996). *The boundaryless career: A new employment principle for a new organizational era.* New York: Oxford University Press.

Aubret, J., Gilbert, P., & Pigeyre, F. (1993). *Savoir et pouvoir, les compétences en question*. Paris: Presses Universitaires de France.

Aubret, J., Gilbert, P., & Pigeyre, F. (2002). *Management des compétences*. Paris: Dunod.

Bales, Robert F. (1950). *Interaction process analysis: A method for the study of small groups*. Cambridge, MA: Addison-Wesley.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.

Barbier, J. M., & Galatanu, O. (Eds.). (2004). *Les savoirs d'action: Une mise en mot des compétences?* Paris: L'Harmattan.

Bateson, G. (1984). *La nature de la pensée*. Paris: Seuil.

Beauvois, J. L., & Dubois, N. (1988). The norm of internality in the explanation of psychosocial events. *European Journal of Social Psychology*, *18*, 299–316.

Beauvois, J. L., & Joule, R. V. (1996). *A radical dissonance theory*. London: Taylor & Francis.

Bernaud, J. L., Gaudron, J. P., & Lemoine, C. (2006). Effects of career counseling on French adults: An experimental study. *Career Development Quarterly*, *54*, 242–255.

Boutinet, J. P. (2002). Questionnement anthropologique autour de l'accompagnement. *Education Permanente*, *153*, 241–250.

Bousquet, S. (2007). *Spotlight on VET: Germany*. Cedefop. Luxembourg: Office for Official Publications of the European Communities.

Bruner, J. S. (1996). *The culture of education*. Harvard: Harvard University Press.

Bunk, G. P. (1994). Transmission de la compétence dans la formation professionnelle en Allemagne. *Revue Européenne de Formation Professionnelle*, *1*, 8–14.

Burgoyne, J., Pedler, M., & Boydell, T. (1994). *Towards the learning company*. Washington, DC: McGraw-Hill.

Carré, P., Moisan, A., & Poisson, D. (1997). *L'autoformation*. Paris: Presses Universitaires de France.

Carré, P., & Charbonnier, O. (2003). *Les apprentissages professionnels informels*. Paris: L'Harmattan.
Cedefop. (2000). *Trends in the development of training and the role of innovation as a transferable practice.* Luxembourg: Publications Office of the European Union. Retrieved from http://www.cedefop.europa.eu/EN/Files/3009x_en.pdf
Cedefop. (2001). *Open and distance learning and the professionalization of trainers.* Luxembourg: Publications Office of the European Union. Retrieved from http://www.cedefop.europa.eu/EN/Files/3017x_en.pdf
Cedefop. (2002). *Objectif competence. Former et se former.* Cedefop References Series Luxembourg: Publications Office of the European Union.
Cedefop. (2008a). *Validation of non formal and informal learning in Europe*: *A snapshot 2007*. Luxembourg: Publications Office of the European Union. Retrieved from http://www.cedefop.europa.eu/EN/Files/4073_en.pdf
Cedefop. (2008b). *Vocational education and training in France: Short description.* Luxembourg: Publications Office of the European Union. Retrieved from http://www.cedefop.europa.eu/EN/Files/5190_en.pdf
Cedefop. (2009a). *Future skills supply in Europe: Medium term forecast up to 2020. Synthesis report*. Luxembourg: Publications Office of the European Union. Retrieved from http://www.cedefop.europa.eu/etv/Upload/Information_resources/Bookshop/546/4086_en.pdf
Cedefop. (2009b). *Modernising vocational education and training*: *Synthesis report.* Cedefop Reference Series. Luxembourg: Publications office of the European Union.
Cedefop. (2010). *A bridge for the future: European policy for vocational education and training 2002-2010*. Cedefop Reference Series. Luxembourg: Publications Office of the European Union. Retrieved from http://www.cedefop.europa.eu/EN/Files/3058_en.pdf
Cedefop. (2011). *Learning while working: Success stories on workplace learning in Europe*. Luxembourg: Publications Office of the European Union. Retrieved from http://www.cedefop.europa.eu/EN/Files/3060_en.pdf
Champy-Remoussenard, P. (2005). Les théories de l'activité entre travail et formation. *Revue Savoirs*, *8*, 11–50.
Chomsky, N. (1965). *Aspects of the theory of syntax*, Cambridge: M.I.T. Press.
Citeau, J. P. (2002). *Gestion des ressources humaines*. Paris: Armand Colin.
Cohen-Scali, V., Guichard, J., & Gaudron, J. P. (2009). Career counseling in France: A growing practice among diverse professional groups. In L. H. Gerstein, P. P. Heppner, S. Aegisdottir, S. A. Leung, & K. L. Norsworthy (Eds.), *International handbook of cross-cultural counseling* (pp. 329–337). Los Angeles: Sage.
Cuddy, N., & Leney, T. (2005). *Vocational education and training in the United Kingdom*. *Short description*. Cedefop Panorama Series. Luxembourg: Publications Office of the European Union.
De Gaulejac, V. (2011). *Travail, les raisons de la colère*. Paris: Editions du Seuil.
Defélix, C., Klarsfeld, A., & Oiry, E. (Eds.). (2006). *Nouveaux regards sur la gestion des competences*. Paris: Vuibert.

Dewey, J. (1938). *Logic: The theory of inquiry*. New York: Henry Holt.
Dewey, J. (1967). *Experience and education*. New York: MacMillan.
Doise, W., & Mugny, G. (1981). *Le développement social de l'intelligence*. Paris: Inter-Editions.
Eraut, M. (1996). *Developing professional knowledge and competence*. Bristol, PA: Falmer.
European Commission. (1995). *Human resource development and training strategies: The experience and results of the Eurotecnet programme. Four priority fields of focus*. Luxembourg: Publications Office of the European Union. Retrieved from http://eric.ed.gov/PDFS/ED461009.pdf
Festinger, L. (1957). *A theory of cognitive dissonance*. Evanston, IL: Row, Peterson.
François, P. H. (2004). Représentations des compétences, une approche psychosociale. *Psychologie du Travail et des Organisations*, *10*, 131–144.
Gerhardt, U. (2002). *Talcott Parsons: An intellectual biography*. Cambridge: Cambridge University Press.
Giddens, A. (1991). *The consequences of modernity*. Cambridge: Polity Press.
Gilbert, P. (2003). Jalons pour une histoire de la gestion des compétences. In A. Klarsfeld, & E. Oiry (Eds.), *Gérer les competences*: *Des instruments aux processus* (pp. 11–32). Paris: Vuibert.
Guillevic, C., & Vautier, S. (1998). *Diagnostic et tests psychologiques*. Paris: Nathan.
Heider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.
Hewstone, M. (1989). *Causal attribution: From cognitive processes to collective beliefs*. Oxford: Blackwell.
Hippach-Schneider, U., Krause, M., & Woll, C. (2007). *Vocational education and training in Germany: Short description*. Cedefop Panorama Series. Luxembourg: Publications Office of the European Union. Retrieved from http://www.cedefop.europa.eu/EN/Files/5173_en.pdf
Houssemand, C., & Meyers, R. (2006). Evaluating key competencies in the professional domain. *European Review of Applied Psychology*, *2*, 123–138.
Hutchins, E. (1988). The technology of team navigation. In J. Galagner, R. E. Kraut, & C. Egido (Eds.), *Intellectual teamwork: The social and technological foundations of cooperative work* (pp. 199–221). New Jersey: Erlbaun.
Inkson, K. (1995). Effects of changing economic conditions on managerial job changes and careers. *British Journal of Management*, *7*, 183–194.
Jellison, J. M., & Green, J. (1981). A self-presentation approach to the fundamental attribution error: The norm of internality. *Journal of Personality and Social Psychology*, *40*, 643–649.
Kaddouri, M. (2002). Le projet de soi entre assignation et authenticité. *Recherche et Formation*, *41*, 31–47.
Kaddouri, M. (2005). Professionnalisation et dynamiques identitaires. In M. Sorel, & R. Wittorski (Eds.), *La professionnalisation en actes et en questions* (pp. 107–115). Paris: L'Harmattan.

Kanigel, R. (1997). *The One Best Way: Frederick Winslow Taylor and the Enigma of Efficiency*. New York: Viking.
Kant, E. (1790/1995). *Critique de la faculté de juger*. Paris: Aubier.
Karklins-Marchay, A. (2004). *Joseph Schumpeter, Vie–Œuvres–Concepts*. Paris: Ellipses.
Kolb, D. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs: Prentice Hall.
Lave, J. (1988). *Cognition in practice: Mind mathematics and culture in everyday life*. Cambridge: Cambridge University Press.
Lave, J., & Wenger, E. (1993). *Situated learning*. New York: Cambridge University Press.
Le Boterf, G. (2003). *Développer la compétence des professionnels*. Paris: Editions des Organisations.
Le Boterf, G. (2007). *Professionnaliser, le modèle de la navigation professionnelle*. Paris: Editions d'Organisation.
Le Boterf, G. (2010). *Construire les compétences individuelles et collectives*. Paris: Editions d'Organisation.
Ledru, M. (2004). *Travail et formation: Quels nouveaux dispositifs?* Paris: Editions Liaisons.
Leplat, J. (2001). Compétence et ergonomie. In J. Leplat, & M. Montmollin (Eds.), *Les compétences en ergonomie* (pp. 41–53). Paris: Octares.
Levy, S., & Dweck, C. S. (1998). Trait-focused and process-focused social judgment. *Social Cognition, 16*, 151–172.
Lorenz, E., & Valeyre, A. (2005). Les formes d'organisations du travail dans les pays de l'Union Européenne. *Travail et Emploi*, *102*, 91-105.
Louart, P. (2003). L'impact des systèmes éducatifs sur la gestion des competences: Une comparaison internationale. In A. Klarsfeld, & É. Oiry (Eds.), *Gérer les competences: Des instruments aux processus. Cas d'entreprises et perspectives théoriques* (pp. 33–58). Paris: AGRH-Vuibert.
Louche, C., Pansu, P., & Papet, J. (2001). Normes je jugement et appréciation du personnel. *Bulletin de Psychologie*, *3*, 369–374.
Louis, M. (1980). Career transitions: Varieties and commonalities. *Academy of Management Review*, *5*, 329–340.
Lozier, F. (2006). Competences individuelles, collectives et stratégiques. In A. Klarsfeld, & E. Oiry (Eds.), *Nouveaux regards sur la gestion des compétences* (pp. 33–48). Paris: Vuibert.
Mintzberg, H. (1978). *The structuring of organizations: A synthesis of the research*. Upper Saddle River, NJ: Prentice Hall.
Monchatre, S. (2005). Managing competence and setting up qualifications: How to reconcile company performances and individual careers? *Training and Employment*, *60*.
Moscovici, S., & Vignaux, G. (1994). Le concept de thêmata. In C. Guimelli (Ed.), *Structures et transformations des représentations sociales* (pp. 25–61). Neuchâtel: Delachaux et Niestlé.
Mudler, M. (2007). Competence: The essence and use of the concept in ICVT. *European Journal of Vocational Training*, *1*, 6–21.

National Center for Vocation Education Research. (2005). *Shifting mindsets, the changing work roles of vocational education and training practicioners*. Canberra, Australia: NCVER. Retrieved from http://eprints.vu.edu.au/1781/1/Shifting_mindsets.pdf

Nicholson N. (1984). A theory of work role transitions. *Administrative Science Quarterly, 29*, 171–191.

Nuissl, E., & Lattke, S. (2008). *Qualifying adult learning professionals in Europe*. Bielefeld: W.Bertelsmann.

Ochanine, D. (1978). Le rôle des images opératives dans la régulation des activités de travail. *Psychologie et Éducation*, *2*, 63–72.

Pastré, P. (2005). Dynamique et métamorphose des compétences professionnelles. *Psychologie du Travail et des Organisations, 11*, 73–87.

Pastré, P. (2011). *La didactique professionnelle*. Paris: PUF.

Paul, M. (2002). L'accompagnement: Une nébuleuse. *Education Permanente*, *153*, 43–56.

Piaget, J. (1974). *La Prise de conscience*. Paris: PUF.

Piot, T. (2006). *Les compétences pour enseigner: Contribution à la compréhension de la notion de compétence dans les métiers de l'interaction humaine* (Habilitation thesis, University of Nantes, France).

Piot, T. (2008). La construction des compétences pour enseigner. *McGill Journal of Education*, *2*, 95–110.

Ricoeur, P. (1977). *La sémantique de l'action*. Paris: CNRS.

Rychen, D. S., & Salganik, L. H. (Eds.). (2003). *Key competencies for a successful life and a well-functioning society*. Göttingen: Hogrefe & Huber.

Samurçay, R., & Rabardel, P. (2004). Modèles pour l'analyse de l'activité et des compétences, propositions. In R. Samurçay, & P. Pastré (Eds.), *Recherches en didactique professionnelle* (pp. 163–180). Toulouse: Octarès.

Savickas, M. L., Nota, L., Rossier, J., Dauwalder, J. P., Duarte, M. E., Guichard, J., Soresi, S., Van Esbroeck, R., Van Vianen, A. E. M. (2009). Life designing: A paradigm for career construction in the 21st century. *Journal of Vocational Behavior*, 3, 239–250.

Savoyant, A. (1974). Eléments pour un cadre d'analyse des situations de résolution de problème par des équipes de travail. *L'Année Psychologique*, *74*, 219–238.

Schlossberg, N. K., Waters, E. B., & Goodman, J. (1995). *Counseling adults in transition*. New York: Springer.

Schomburg, H., & Teichler, U. (2009). International mobility of students and early career. In U. Teichler, *Higher education and the world of work* (pp. 269–283). Rotterdam: Sense Publishers.

Schön, D. (1983). *The reflective practitioner*. New York: Basic Books.

Shewhart, W. (1989). *Les fondements de la maîtrise de la qualité*. Paris: Economica

Slomp, H. (2000). European Politics into the twenty-first Century Integration and Division. Westport: Praeger.

Sorel, M., & Wittorski, R. (2005). *La professionnalisation en actes et en questions*. Paris: L'Harmattan.

Souto Otero, M., Hawley, J., & Nevala, A. M. (2007). *European inventory on validation of informal and non formal learning.* Final report. DG Education and culture of the European commission. Luxembourg: Publications Office of the European Union.

Souto Otero, M., McCoshan, A., & Junge, K. (2005). *European inventory on validation of non-formal and informal learning*. Luxembourg: Publications Office of the European Union. Retrieved from http://www.ecotec.com/europeaninventory/publications/inventory/european_inventory_2005_final_report.pdf

Straka, G. (2004). Measurement and evaluation of competence. In P. Descy, & M. Tessaring (Eds.), *The foundations of evaluation and impact research*: *Third report on vocational training and research in Europe* (pp. 267–307). Luxembourg: Publications Office of the European Union.

Theureau, J. (2000). Anthropologie cognitive et analyse des compétences. In Centre de Recherche sur la Formation (Ed.), *L'analyse de la singularité de l'action* (pp. 171–211). Paris: PUF.

Tixier, P. E. (2010). *Ressources humaines pour sortie de crise.* Paris: Presses des sciences politiques.

Vergnaud, G. (1985). Concepts et schèmes dans une théorie opératoire de la représentation. *Psychologie Française*, *30*, 29–42.

Vermersch, P. (2010). *L'entretien d'explicitation*. Paris: ESF.

Vigotsky, L. S. (1986). *Thought and language*. Boston: M.I.T. Press.

Volmari, K., Helakorpi, S., & Frimodt, R. (Eds.). (2009). *Competence framework for VET professions: A handbook for practitioners*. Helsinki: Finnish National Board of Education. Retrieved from www.cedefop.europa.eu/EN/Files/111332_Competence_framework_for_VET_professions.pdf

Weick, K. (1965). Laboratory experimentation with organizations. In J.G. March (Ed.), *Handbook of organizations* (pp. 194–260). Chicago: Rand MacNally.

Winterton, J., Delamare–Le Deist, F., & Stringfellow, E. (2006). *Typology of knowledge, skills and competences: Clarification of the concept and prototype.* Luxembourg: Publications Office of the European Union. Retrieved from http://www.cedefop.europa.eu/EN/publications/13031.aspx

Wittorski, R. (2007). *Professionalisation and professional development*. Paris: L'Harmattan.

Wittorski, R. (2008). Professionalisation: Summary note. *Revue Savoirs*, *17*, 11–39.

Woods, D. D., & Roth, E. M. (1988). Cognitive systems engineering. In M. G. Helander, T. K. Landaeur, & P. V. Prabhu (Eds.), *Handbook of human computer interaction* (pp. 415–430). New York: Elsevier.

Young, R. A., & Collin, A. (2000). Introduction: Framing the future of career. In A. Collin, & R. A. Young (Eds.), *The future of career* (pp.1–17). Cambridge: Cambridge University Press.

Zarifian, P. (1992). Acquisition et reconnaissance des compétences dans une organisation qualifiante. *Education Permanente*, *112*, 15–22.

Zarifian, P. (1999). *Objectif competence*. Paris: Liaisons.

Zarifian, P. (2005). *Compétences et stratégies d'entreprise*. Paris: Liaisons.