Cohen-Scali, Valérie

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Valerie Cohen-Scali (ed.)

Competence and Competence Development

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Study Guides in Adult Education

edited by
Regina Egetenmeyer

Valerie Cohen-Scali (ed.)

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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.

5. Competence Evaluation Processes in Adult Education

Valérie Cohen-Scali

Professionals in the adult education field regularly have to deal with evaluating the competences of diverse populations at various stages in their work process: first when analysing people's needs, next when designing training programmes to meet these needs (translating competence needs into training needs), and finally when assessing whether the training helped individuals acquire the expected competences. Moreover, adult education professionals are more and more involved in the process of validating competences. Although the process of evaluating competences shares a number of points with that of evaluating knowledge (which is a more common activity for adult education specialists), however, it implies being more concerned with the characteristics of the situations and experiences through which learning takes place. It may be work situations or more general social experiences which provide a source of new competences. Evaluating competences therefore obliges the training professional to take greater account of the particular characteristics of the situations encountered by individuals. As a result, this activity complements the process of evaluating knowledge, but requires an entirely new set of approaches, tools, and methodologies. The tools used must be able to bring out knowledge that is not directly identifiable. Evaluation has close links with the recognition and later the validation of competences.

This chapter will examine a number of aspects of the process of competence evaluation. First, it will outline various elements to help identify the origins and subsequent development of competence evaluation activities. Secondly, it will explain the conceptual and practical difficulties associated with evaluating competences, describing the most commonly used tools and methods. Finally, we will look at how competences are evaluated in various European countries, concluding with a number of examples of schemes currently in use.

Keyword: Evaluation

Evaluating is making a value judgement about an object or set of objects, people, phenomena or events. Any act of evaluation implies a reference (explicit or implicit) to a scale of standards or values, the origin of which is either internal to a given individual, or shared by a smaller or larger group of individuals (Aubret, Gilbert, & Pigeyre, 2002).

5.1 What is involved in evaluating competences?

Evaluating competences emerged in two contexts in the 1990s. On the one hand, in the context of international comparisons of school systems in different areas, such as the *Third International Mathematics and Science Study* (TIMSS) or the *Programme for International Student Assessment* (PISA) (Straka, 2004). On the other, it relates to research carried out first in the United States and later in Europe, into new approaches to evaluation, marking a move away from traditional psychometric approaches based on capacities believed to be innate and fixed. These new approaches were supposed to take more account of aspects such as learning and the development of knowledge within individuals. They gave rise to various types of tools for evaluating and recognising competences, which we will examine later.

Finally, there was another development which tended to accentuate the process of identifying new forms of evaluating knowledge in action. This was the Lisbon process in 2000, during which the European Commission defined lifelong learning as a priority. This new emphasis led to an increasing acknowledgement of non-formal and informal learning, that is, learning which takes place outside of educational institutions. As Straka (2004) points out, definitions of competences reflect these new concerns. In 2001, the European Commission defined competence as 'the capacity to use effectively experience and qualifications' (European Commission, 2001, p.31 cited by Straka, 2004, p. 275). The Cedefop defined competence as 'the proven/demonstrated – and individual – capacity to use know-how, skills, qualifications or knowledge in order to meet usual – and changing – occupational situations and requirements' (Straka, 2004, p. 275).

The question of competence evaluation quickly became associated with the issue of validation. For individuals, the purpose of evaluation is often to have their competences recognised within an institutional or company setting

and then to have them validated, that is, to ensure that evaluation enables them to be awarded some or all of a certificate or diploma. Evaluation now seems to be an essential stage in the competence validation process. The Cedefop (2008a) report entitled *Validation of Non-formal and Informal Learning in Europe* thus distinguishes between three main phases of the validation process: 'identification, assessment and recognition of non-formal and informal learning.'

> This distinction reflects that even where validation results in a formal certificate or qualification, the identification and assessment stages preceding the formal recognition are critical to the overall process. The quality of the validation process very much depends on how the initial identification and assessment of the – frequently tacit – learning is handled. The distinction between identification and assessment and recognition is frequently referred to as that between *formative* and *summative* approaches to validation. The primary purpose of summative assessments is to generate a concluding statement about learning achieved to date and is explicitly about the formalization and certification of learning outcomes. . . . The primary purpose of formative assessment is to enable learners to broaden and deepen their learning. Formative approaches to assessment provide feedback to the learning process or learning career, indicating strengths and weaknesses and providing a basis for personal or organisational improvement. (Cedefop, 2008a, pp.13–14)

Both of these dimensions are present in all competence evaluation schemes. Another distinction also needs to be drawn. When evaluating competences, it is always important to think of tools which can cover both the observable and non-observable aspects of competences at the same time. Indeed, whilst it is possible to base a judgement on behaviours, the completion of tasks, and what the person produces, it not so easy to identify the knowledge, motivation, and capacities associated with a particular performance situation. Evaluation schemes must therefore always include some elements based on direct observation, and others which provide evidence of activities which cannot be observed directly. As one might predict, evaluating competences is a complex process, partly linked to the instability of the concept of competences itself, as well as to the fact that the psychological and social processes which need to be considered are constantly changing.

5.2 Competences: A difficult object to evaluate

Several factors contribute to making competences difficult to evaluate. The first relates to the variety of points of view and the instability of representations of competences. The second has to do with the complexity of the

processes driven by competences. The third is linked more to the difficulties involved in the process of evaluating people.

5.2.1 Evaluation must be able to accommodate a range of conceptions of competences

Attempts to come up with a definition of competence are always faced with the difficulty caused by the multiplicity of approaches which rely on this notion. Not only is the notion of competences not stable, but competences refer to conceptions and representations used by individuals in different firms on a daily basis. Research conducted by Bandura (1997) and Levy and Dweck (1998), for example, pointed to the mechanisms by which conceptions of competences intervene in the regulation of behaviours. People who believe that competences are acquired through experience or learning seek out situations which enable them to increase their knowledge and competences. They see mistakes as a source of learning and progress. People who see their competences as an expression of their innate qualities tend to be particularly positive about situations where they perform well and to avoid situations likely to lead to failure, because this would suggest a lack of capability. Research by François (2004) confirmed that both these conceptions are present to varying degrees in different professional communities, organizations, and groups. The author concludes that competence equates to a 'thema' as defined in Moscovici's theory of social representations.

Keyword: Thema

Themas are defined as source ideas: primary conceptions which are rooted in the collective memory and used to organise social representations. As far as competence is concerned, these source ideas could be beliefs about the malleability of human capacities (see Moscovici & Vignaux, 1994).

We can conclude that it is difficult to evaluate competences because points of view and attitudes vary, depending on the conceptions of evaluation professionals.

5.2.2 *Evaluation relates to a multi-faceted object*

Evaluating competences is also difficult because of the protean aspect of the object. The fact that there are different types of competences implies a need for different forms of evaluation. Zarifian (2005), for example, distinguishes competences by type. He draws a distinction between:

- technical competences, which are specific competences and can rarely be transferred to another area of work
- generic competences, which are common to multiple sectors and include the ability to be flexible, cooperation and problem management. He identifies four families of generic competences:
  - anticipation and organisation: these relate to the ability to project oneself into the future and plan one's activities.
  - communication: relates to the ability to provide and interpret information and build relationships with partners.
  - management: the ability to influence, lead, and argue
  - control: the ability to bring an idea or project to fruition and bring together resources and means.

Finally, social competences are manifested in three areas: autonomy, acceptance of responsibility, and communication.

Research has also been conducted in the area of key competences (Rychen & Salganik, 2003; Houssemand & Meyers, 2006). These are general competences in relation to professional situations. They are likely to be able to be implemented in a variety of different contexts. They are transferable and may, once they have been learned in a particular situation, be reused in other professional situations. They should be a prerequisite to the acquisition of technical competences in a given field.

Finally, competence can be characterised according to three dimensions (Pastré, 2005):

- Being competent is about knowing how to resolve professional problems.
- Being competent is about knowing how to adapt to a variety of new situations.
- Competence is not an absolute value: it is always manifested in a 'task category'.

As we have seen, competence can only be understood in professional contexts. It can be accessed through a particular 'situation'. Traditional evaluation situations therefore seem to be inappropriate.

5.2.3 Evaluation must include the individual being assessed

Another peculiarity of competence analysis concerns the role of the individual being assessed. In order to access their own competences, the operator must become aware of them. They must become, as Pastré (2005) emphasises, 'the historian of their own activity' (p. 77). Individuals necessarily play an active role in evaluating their own competences. The process of reflecting on their activity, which can be developed in training and debriefing situations, for example, seems to play a fundamental role in analysing and developing competences. In his study of learning how to run a nuclear power station using a simulator, Pastré showed that replaying critical situations on the simulator had only a limited effect on the development of new competences. Conversely, when two sessions on the simulator were interspersed with a debriefing session to analyse what happened, operators acted in a significantly more effective way. Similarly, for Zarifian (2005), although the development of competences is based in part on managing unforeseen events and difficulties at work, the training aspect of work is primarily associated with the opportunities for reflection it offers the operator.

Although the individual whose competences are being evaluated plays a central role in the process, the person conducting the evaluation is also an essential player. Although there are many systems for self-evaluation of competences and behaviours available, the purpose of any evaluation is for competences to be recognised by society. This implies the involvement of a third party, the person carrying out the evaluation, who must, as far as possible, remain objective in order to analyse the situation presented to them. Numerous psychosociological studies have shown, however, that maintaining objectivity is extremely difficult, given the confrontation of social interactions, standards, and representations.

5.3 Psychosocial bias in competence evaluation

In looking at evaluation, it is useful to refer on the one hand, to the concept of social norms, given that evaluation activities are inevitably associated with confronting these, and on the other, the psychological processes that underpin the formation of impressions.

Traditionally, norms are split into two categories. Some are descriptive. The norm then becomes an almost statistical summary of the way members of a given social community, group or profession behave or make judge-

ments. Other norms define social optimality. These indicate the way in which behaviours or judgements are valued by society. This means that in order to be valued, it is in an individual's interest to behave in line with the norm. Moreover, what is optimal for one group may be descriptive for another. Production standards in a factory, for example, are often only a description of an average level of production (here, we take 120 phone calls a day) prior to their becoming indicative of optimality for the group and new recruits to the team.

These norms contribute to the formation of judgements, on the one hand, by prompting explanations of behaviours and on the other, by making it easier to predict what behaviours will be.

5.3.1 The norm of internality

This norm enables the person carrying out the evaluation to identify explanations for the behaviours observed.

The initial research by Jellison and Green (1981) on the norm of internality prompted numerous studies on bias in the evaluation of individuals, their performance, and their competences. Two types of explanation have been put forward. Explanations which attribute the cause of behaviours to individuals are called internal norms. Those which attribute the cause of behaviours to contexts and situations are called external norms. Some authors also refer to internal and external loci of control.

Keyword: The norm of internality

The norm of internality has been defined as 'the social valorisation of explanations of behaviours and outcomes which emphasise the causal role of the actor' (Beauvois & Dubois, 1988, p. 312).

Studies carried out on the norm of internality show that individuals who attribute the causes of their behaviour to themselves (their character, personality, experience, and motivation) rather than to the context (random chance, or how events pan out) appear more credible and score more highly with those evaluating them). This has been confirmed in numerous experimental and ecological situations, independently of the profiles of the individuals being evaluated (e.g. a job applicant being evaluated by an HR expert, a child in a class being evaluated by their teacher, an executive being evaluated by their line manager, etc.) (Hewstone, 1989). Numerous research studies have shown

that internal explanations were socially more desirable and that they tended to be expressed by social groups in more privileged positions. It also seems that the ability to adopt a socially desirable attitude and convey a positive image of oneself to other people in line with the goals one has set for oneself is related to an interpersonal competence which can be acquired through training.

5.3.2 The norm of consistency

The norm of consistency relates to a very common conception of humans as coherent and rational beings. This is an idea postulated by psychosocial theories of cognitive consistency. According to theories developed by Heider (1958), people seek cognitive consonance and a coherent relationship between their attitudes, beliefs, and conduct. A situation of cognitive dissonance (Festinger, 1957) would oblige the individual to modify either their beliefs or their behaviours in order to re-establish overall consistency. This tendency is based on a social norm. Individuals show stronger cognitive consistency when they are instructed to convey a positive image of themselves (social approval instruction) than when they are instructed to convey a negative image (social disapproval instruction). Moreover, it has been observed that consistency has a higher social value than inconsistency, and that this in turn has an influence on evaluation practices. The more an individual is known for expressing consistency, the better they are judged.

Keyword: The norm of consistency

'The norm of consistency is defined by the social valorisation of the expression of behaviours and/or consistent beliefs, which make it possible to attribute perceptions to the individual which are constant and therefore predictable over time.' (Louche, Pansu, & Papet, 2001, p. 370)

These norms of judgement are deemed to be one of the links in our liberal societies and culture of individualism, which promote the model of a human being as 'responsible' and 'autonomous' (Beauvois & Joule, 1996). Normativity appears to be a decisive factor in social selection processes. Society selects and recruits normative people and helps them to develop. It is important that people carrying out an evaluation are aware of the normative biases to which they are subject. It is therefore also important to reduce the impact of such biases on their judgement. It may also be possible to train those who are being evaluated to present themselves in normative ways. Most people do

this spontaneously. Some training courses offered to job seekers emphasise the importance of conveying a consistent internal image of oneself. Whatever the circumstances, people conducting evaluations and those being evaluated benefit from being aware of such social norms and their influence on judgement.

Another psychosociological process also deserves to be mentioned, since it plays an essential role in evaluation and governs the formation of impressions.

5.3.3 The formation of impressions

In any evaluation, the person conducting the evaluation must form an impression and make a judgement about the person being evaluated based on the observations and information available to them. This impression is then translated into evaluation criteria, which will be more or less well defined within the organisation. Evaluations can range from a fairly general, overall assessment of the person to more specific assessments of certain fairly well-defined aspects of their performance, possibly based on evaluation scales or questionnaires. In spite of any precautions taken, the impression formed is rarely an objective one. Part of the formation of impressions is a process of categorisation. This helps to simplify the way information is coded in a person's memory. The person conducting the evaluation will then rank those being evaluated in particular categories. These are formed on the basis, for example, of physical appearance, gender, and culture. These categories tend to bias our impressions at the point at which we recall information, when we tend to be better at remembering the characteristics of the category rather than those of the individual being evaluated. Finally, it seems that the person carrying out the evaluation is limited to retaining only the characteristics of the category at the point of the evaluation. This effect becomes more marked where there is a longer period of time between observation and recall.

Other phenomena associated with the formation of impressions often encountered by recruitment professionals will play a role in recalling observations at the point of an evaluation. The halo effect, for example, is a form of contamination by the information present in the context. An individual who struggles to express themselves clearly, for example, could be seen as stupid, whilst an individual who follows someone mediocre could be seen as outstanding. The guinea pig effect is another of these phenomena. This refers to the fact that an individual who feels they are being judged or evaluated will change their behaviour to reflect what they think is expected of them. It is

then difficult to know whether a particular behaviour genuinely reflects the individual or whether they are simply acting.

The expression of these forms of bias, which are characteristic of recruitment situations, can be limited through the use of certain scientifically based evaluation tools.

5.4 Competence evaluation tools

This section examines the importance of the metrical characteristics of competence evaluation tools and provides a brief overview of some of those in common use in Europe.

5.4.1 Characteristics of competence evaluation tools

A variety of methods are available for evaluating individuals and predicting their performance in future work situations, from psychological tests to systematic observations of behaviour and other tools (Guillevic & Vautier, 1998). The value of each method is relative, insofar as it depends on the situation, the problem to be addressed and the population concerned. Certain scientific criteria can nonetheless be defined.

More specifically, methods or tools need to be selected on the basis of three parameters:

- reliability
- discrimination or sensitivity
- validity.

Reliability

Reliability must be the main criterion for any method or tool. This refers to the method's ability to produce the same results at different times and in different places. This characteristic is important, because if several different measurements produce different results, it must be possible to determine whether the tool itself is poor, whether the tool is being used incorrectly, or whether the person has changed. It is therefore essential to be certain that the tool being used is reliable, and to be confident that the results will be consistent, regardless of who is using it. For a tool to be reliable, it is important to ensure that one of the two following methods has been used: the test-retest

method or the use of parallel forms. The test-retest method consists of using the same technique on two consecutive occasions, under identical conditions, on the same group of subjects. This is cumbersome and assumes that subjects will not try to remember how they responded the first time, and thus relies on their goodwill. A correlation between the two sets of results then has to be calculated (and must be strong). Using parallel forms consists of developing two equivalent versions of the same tool, which are comparable in terms of form and difficulty. It is then easier to use the two forms on two occasions with the same individuals. Again, the two sets of results need to be correlated. It can then be said that the tool displays strong internal coherence.

Discrimination

The tool used must be capable of differentiating between candidates. If the tool offers responses on a scale of 1 to 5 and all the subjects questioned answer 3, it does not discriminate effectively and is therefore of limited use. A tool can be classed as discriminating if the responses can be distributed in line with normal (Gaussian) distribution. A test should not be so difficult that everyone fails and not so easy that everyone passes.

Validity

Finally, it is important that the tool used can provide useful information for the decision to be taken. The tool needs to evaluate the elements required, not something else.

The validity of a tool can be evaluated through reading up on its theoretical basis, examining the behaviours it studies, conducting work analyses and statistical techniques. There are two types of validity: validity of content and validity of construction. To ensure validity of content, the tool has to be capable of fulfilling the objectives set for it: if one is looking, for example, to evaluate the communications abilities of candidates for a particular job, it is first necessary to identify what is meant by 'communications abilities' and whether the tools being used are able to measure these. As far as validity of construction is concerned, this involves verifying whether the tool really measures the phenomenon it is supposed to measure. This in turn means ensuring that the tool is based on recognised theories or models which are pertinent to the aspects being examined.

Individuals carrying out evaluations rarely have to construct their own evaluation tools. Most of the time, they use tools which have already been developed, and which they then have to learn to use. Nonetheless, they have

to be confident of their scientific quality, based on the information supplied with the tool or by contacting the designer.

5.4.2 Categories of evaluation tools used in Europe

This section outlines the main competence evaluation tools used in Europe based on the analysis carried out in the 2005 *European Inventory on Validation of Non-Formal and Informal Learning* (Souto Otero, McCoshan, & Junge, 2005). This document gave an overview of the different methods and approaches to identification, documentation, and assessment of competences across the 30 European countries studied; furthermore, it identified the principal methodologies used in most of them.

Tests and examinations are methods used for identifying and validating informal and non-formal learning through or with the help of examinations in the formal system. These processes formalize an individual's skills as an end result, generally a recognized diploma or a certificate. This type of examination can be a mix of written and practical, as well as psychological tests. Several types of psychological tests can be useful. Generally speaking, five categories of tests can be distinguished. Most of them involve having a diploma in psychology to be able to use and interpret these tests.

- *Knowledge tests* assess what people know. They resemble classic examinations. They allow for the evaluation of theoretical knowledge in connection with a specific work or training situation. The main advantages are that they have a high level of validity, are easy to submit, and easy to interpret.
- *Cognitive ability tests* assess cognitive and intellectual capacities. They may also be called intelligence tests. They allow for the evaluation of learning capacities, problem-solving abilities, understanding, and intelligence quotient.
- *Aptitude tests* evaluate the practical intelligence level. They can evaluate aptitudes in mathematics, mechanics, physics, and so on, but are often criticised for being out of touch with real work situations.
- *Personality tests* evaluate characters traits or personality. They help us understand how people think, feel, or act in a certain situation. There are a great number of such tests on the market, and they vary in their definitions of personality.

Declarative methods are 'based on individuals' own identification and recording of their competences, normally signed by a third party, in order to

verify the self-assessment' (Cedefop, 2008a, p. 22). These methods are focused on the individual's own recording of experiences. They are based on different interviewing techniques. For example, the 'elicitation interview', developed by the French psychologist Vermersch (2010), consists of asking the interviewee for a very detailed description of a specific work activity. Using a precise procedure, the interviewer helps the interviewee imagine himself or herself performing this specific task. The semi-structured interview appears to be the method which needs to be mastered by the evaluator. The individual generally needs the support of a third party to identify and then evaluate situations where competences have to be developed, and to record their competences. These methods are more reliable than the others and tend to be the most formative.

Portfolio methods are a very popular methodology used in several European countries. They are used both in the public and the private sectors. They consist of using 'a mix of methods and instruments employed in consecutive stages to produce a coherent set of documents or work samples showing an individual's skills and competences in different ways' (Cedefop, 2008a, p. 22). The portfolio method combines a variety of tools, as well as methods of internal self-assessment and external assessment. They seem to be formative approaches.

Observation means 'extracting evidence of competence from an individual while performing everyday tasks at work' (Cedefop, 2008a, p. 22). This extraction of evidence is made by a third party concerning the competence level acquired. Often, observation is used in combination with other assessment methods. It involves asking the person to perform practical activities carried out at the workplace. It can be useful in this kind of situation for the evaluator to build a grid for supporting their observations by using categories of behaviour. For example, Bales (1950) created an observation grid for analysing the evolution of group members' relational and communicative behaviour during a meeting.

Simulation and evidence extracted from work are methods which relate to situations where individuals are placed in a situation 'that fulfils all the criteria of the real-life scenario to have their competences assessed. To extract evidence from work, the candidates collect physical or intellectual evidence of learning outcomes. This may relate to work situations, voluntary activities, family or other settings' (Cedefop, 2008a, p. 22). This method involves the creation of fictitious situations allowing the candidates to be in contact with samples of professional activities.

5.4.3 Specific features of evaluating collective competences

Evaluating collective competences consists of identifying the degree and quality of cooperation between the members of a group. As Le Boterf (2010, p. 205) observes, 'collective competence ... results from the quality of cooperation between individual competences.' Real cooperation can only operate if it is voluntary, rather than obligatory. In practice, several degrees of cooperation can be identified:

- imposed cooperation – driven by line management
- cooperation resulting from a desire to share information because of the limitations imposed by tasks being divided into different silos
- cooperation based on the ability of the key players involved to take the initiative in terms of cooperation.

These three levels of cooperation can be used as benchmarks for evaluation. In this author's view, it is necessary to define cooperation indicators which recognise that the members of a group are cooperating and to identify the degree of cooperation (for example, if they develop shared representations of the problems they encounter and the resources they use to resolve them). Shared representations of this kind develop gradually through collective action. Several markers can be used to identify the level of cooperation in a work group. These are not always observable from the outside (for example, what the author calls the common cognitive framework, the synchronisation of arguments, the level of attention to detail, etc.). Others can be evaluated based on long-term observations of work situations, semi-structured group interviews, and analyses of documents produced by the group. Although more easily observable, these markers are not necessarily easy to evaluate. An example might be identifying whether the members of the group develop cooperative behaviours, whether they share out the workload fairly, and whether they make decisions on the basis of consultation.

Ad hoc tools are often the most appropriate for evaluating collective competences, as they must be closely linked to the specific collective activity carried out by the group being evaluated. Tools used to evaluate competences often involve adaptations to the social and/or professional contexts familiar to the individuals being evaluated and the countries concerned (in relation to language, culture, etc.). In fact, the question of evaluating competences has been a preoccupation in all European countries since 2002.

5.5 Evaluating competences in Europe

Within the European Union, the Copenhagen Declaration of 2002 established the importance of defining a series of common principles in relation to the validation of formal and informal learning in order to ensure greater compatibility between the approaches in different countries and at different levels (Straka, 2004). The various countries in the European Union have gradually taken action to set up schemes and establish practices for group evaluation and validation.

5.5.1 Competence evaluation and validation systems in European countries

All European countries are engaged in a process of developing schemes to evaluate, recognise, and validate learning acquired in a variety of social and professional contexts. Nevertheless, the development of validation in Europe is a multi-speed process. Countries are at different stages of practical implementation and overall acceptance. In summary, at the end of 2007, countries had reached three main levels of development regarding competence evaluation and validation (Souto Otero, Hawley, & Nevala, 2007). Souto Otero et al. distinguished countries where validation has become or is close to becoming a reality for individuals, is emerging as a practical reality, and is at an initial stage of development.

- *Countries where validation is a practical reality for individuals:* Countries in this group 'have validation policies and practices enabling individuals to see their learning outcomes identified, validated, or both on a systematic basis. Validation has moved from the level of general policy statements to tangible practices. Countries like Belgium, Denmark, Estonia, Finland, France, Ireland, Netherlands, Norway, Portugal, Slovenia, Romania, Spain and the UK belong in this category. In these countries there is a high degree of acceptance of validation as an instrument supporting lifelong learning. Most countries have legal structures supporting validation methods, together with a strong policy framework.' (Cedefop, 2008a, pp. 23-24) These validation practices concern both the public and the private sector.
- *Countries where validation is emerging:* This second set includes countries that 'have still to put in place practices making it possible for individual citizens to have their learning outcomes identified and/or validated

on a systematic basis. The level of activity varies considerably in this group. Countries like Austria, the Czech Republic, Iceland, Italy, Germany, Hungary, Lithuania, Luxembourg, Malta, Poland, and Sweden can be said to belong in this category. This group of countries have either recently set up a legal or policy framework for validation.They are currently starting to implement it or have had experience of piloting a variety of different methodologies. . . . Validation of informal and non-formal learning will play a greater role in the coming years.' (Cedefop, 2008a, p. 27)

- *Countries with a low level of activity of competence evaluation and validation:* Countries in this group 'frequently describe validation as a new theme and something yet to influence the overall education, training and employment agenda. In some countries, validation is a controversial theme, sometimes triggering resistance from national stakeholders, including in education and training. This group includes countries like Bulgaria, Croatia, Cyprus, Greece, Latvia, Lichtenstein, the Slovak Republic and Turkey.' (Cedefop, 2008a, p. 31). In these countries, there is little in terms of policy or practice to facilitate informal and non formal learning validation.

5.5.2 Examples of competence evaluation schemes in Europe

The last part of this chapter presents three examples of competence assessment practices in different European countries. The aim is to illustrate the diversity of approaches with regard to competence assessment and validation, which takes place in very different contexts. The first approach, the French *bilan de competences,* is a national public procedure open to a large public. The second one, from Norway, reflects a procedure developed in a professional sector whose goal is to match business skills needs to workers aspirations and competences. The third one, an example from Finland, aims to help young adults get recognition for competences acquired in recreational activities.

France: The *bilan de competences*: A muti-method competence approach

The French *bilan de competences*, sometimes called *Competencies Elicitation Career Counseling (CECC)* intervention, can be given as an example of the assessment of informal and non-formal learning that has been used widely and very successfully.

The CECC intervention is based on law and several statutory orders initiated by public authorities, unions, and management.

It enables employed and unemployed persons to analyse their abilities, skills and motivations to build a career plan. It must be undertaken with the person's consent, who is also the only recipient of the results. The person is entitled to a 24-hour leave from work to undertake it with no loss of salary. The expenses are covered by his or her firm or a continuing education fund, and it must take place in one of the 900 official centers.

This approach is composed of three steps: a) a preliminary phase, which aims at reinforcing the involvement of the persons, clarifying their needs, and acquainting them with procedures; b) an investigating phase to analyse the person's motives, competencies, professional and personal abilities through self-report measures and interviews, and to determine different possibilities in career development with the improvement of some kind of skills; and c) a final phase during which the results are observed, the different projects are reviewed, and the steps of the selected project are defined. Since its creation in 1991, an average of 60,000 employees per year have gone through this process.

Despite this general process, a wide variety of tools like psychological tests, work analysis methods, collective activities are used, reflecting both the existence of different theoretical backgrounds and the heterogeneous profiles of the counselors. (Cohen-Scali, Guichard, & Gaudron, 2009, p. 333)

To ascertain the validity and effectiveness of this procedure, research has been performed. For instance, a longitudinal and experimental study analysed the effects of the CECC intervention on several criteria such as participants' self-esteem, self-analysis, self-concept, and situation (work, training, or unemployment) (Bernaud, Gaudron, & Lemoine, 2006). Compared to a control group and *measured* at three time periods (pre- and post-intervention, and at 6 months) the positive effects of the intervention were significant.

The two following examples have been selected as 'good practices' from the 2005 European Inventory (Souto Otero et al., 2005).

Norway: Assessing the competences of workers in electro-technology companies

We present a summary of this project here. The reader could have a look at the original document to get more information.

The lead organisation, ELBUS, is the National Centre for Electro technical vocational post [a not-for-profit organisation]. ELBUS together with other partners from Norway and 4 other countries developed a methodology to map key competences and skills in electro-technology companies in order to be able to better match the business development strategies with professional competences, skills and aspirations of employees and potential employees. (Souto Otero et al., 2005, p. 324)

This project was motivated by the difficult situation of the sector, the high rate of staff turnover, the need for professional development opportunities for electricians, and the need for skills improvement. 'A fundamental element of this methodology was development of a process to identify, document and assess professional and social skills of employees and potential employees.' (ibid.) This aim involved increasing the visibility of learning occuring outside of the formal training and education system. The project target groups are employees and human resource managers in the electro-technical industry. The assessment process consists of several steps:

> The first part of the assessment is focussed on gathering information about skills, knowledge, expertise, competences and other attributes that employee/potential employee possess that can be of value in their work. A three-part CV is used to record this information in a systematic manner. The CV covers information on personal details, professional skills and more general skills.
>
> The final step of the process for employees is a discussion with their employer about future, development, training and aspirations. To aid the development of dialogue with employer and employee, the project has developed an 'Ability to take action' questionnaire. The questionnaire refers to issues such as ability and motivation to learn and train further, career aspirations, team working and analytical skills and communication capabilities.
>
> Finally a discussion with an employer will be held, based on what the individual has recorded about him/herself on the CV and Ability to take action – questionnaire. The discussion follows defined guidelines and is strictly confidential between individual and employer. Discussion will lead to a personal development plan for each individual employee and different personal development measures (such as in-house or formal training courses) are discussed. Skills gap analysis can be carried out after the skills and competences of employees are recorded on the system.
>
> The key benefit for employees is creation of personal development plan that improves employees' training and career progression opportunities. [For the company,] identification and recognition of informal and non-formal learning has improved effectiveness of companies' human resource policies and management. (pp. 326–327)

Finland: Evaluating the competences young people acquire in recreational activities

The aim of this validation procedure is to take into account young people's participation in voluntary and leisure activities. After all, these activities can offer valuable life skills such as co-operation and team skills, communication skills, goal orientation, and problem-solving skills. These are skills that may also benefit young people as they enter further education or working life.

Evaluating or measuring informal learning is particularly difficult because the learning outcomes are very difficult to place in a specific context,

time, or place. In Finland, a system called 'Recreational Activity Study Book' has been in place since 1996.

> The study book is a non-formal and informal learning CV for young people. They can collect entries from all learning experiences in voluntary and leisure activities. [In 2004,] there [were] over 70,000 study book owners in Finland. The book serves young people as a tool for making all the experiences and learning – self-development, growth etc. – outside school visible. It is also an instrument for identifying and crediting nonformal learning when applying for a job or further education. ...
>
> The Finnish study book system focuses strongly on the development of the individual learner – young people. Therefore, there are neither any criteria for the measurement of learning outcomes or performance, nor any public examinations held to assess the competencies supposedly acquired. The Recreational Activity Study Book system is feasible for the documentation – and recognition – of both qualifications and competencies acquired by participating in youth voluntary and leisure activities. ...
>
> In the study book, more emphasis is put on the development of each young person's personality rather than the actual qualifications of the skills required in particular job requirements. (Souto Otero et al., 2005, p. 346)

Young people fill in the part 'Self-assessment of the learning'; then, an adult who is either responsible or well aware of the particular activity will record these different activities and the skills that young people think they have developed. 'The idea is to focus more on what and how things have been learned rather than what has only been done. The person undersigning the entry in the system adds his/her contact information, in case someone wants to check whether the young person actually has participated in the activity or not.' (p. 349) So this evaluation process is mainly a formative process, and competences are identified through self-evaluation and confirmation provided by a third party. For more information about this experiment, see Souto Otero et al. (2005).

A wide variety of conceptions and procedures exists in relation to competence evaluation. These depend on the objectives of the process (such as recognition or validation), the population concerned (e.g. employees or young people) and the degree to which businesses are involved.

5.6 Conclusion

Adult education specialists are required to be involved in the process of evaluating competences in both young people and adults. Evaluation may involve learning that has taken place in a variety of contexts, such as training,

work, social experiences, or leisure. Tools are essential to limit the influence of representations and biased judgements. Individuals conducting evaluations should be encouraged to broaden their knowledge of existing tools and the context in which they are used. In practice, tools are generally developed within specific frameworks and aimed at specific populations. It is therefore not always possible to transfer them. Insofar as the tools used are closely associated with the characteristics of the populations being evaluated and the types of competences studied, it is often necessary to develop *ad hoc* tools. In this case, it is important to take precautions to ensure they are scientifically based and in particular to verify their validity. All European countries are currently in the process of developing competence evaluation procedures which should help to foster lifelong learning, and recognise and value knowledge acquired in a variety of contexts. The various schemes identified demonstrate the creativity of those involved in the field of competence validation.

Exercises and tasks

Exercise 1

Build a training programme. This task deals with the main bias we often encounter in the context of evaluating individuals. Go back in this chapter to the section on bias in the evaluation of competences and reflect, as a group, on ways to counter the effects of this type of bias. Then plan a training programme designed to train competence evaluation specialists to become more aware of their errors of judgement and to adopt new forms of behaviour in relation to the individuals they are evaluating. Use the following questions to help you develop your programme:

- What are the main competence needs of the evaluators?
- How will you analyse the representations and bias of each evaluator?
- Do you think it could be useful for them to confront their point of view?
- How will you formalise this information?
- What will be the criteria for you to know whether the training has been successful?

Exercise 2

Imagine a procedure that would allow you to evaluate the competences of adult trainers. What kind of approach would you choose: interviewing or observing? Moreover, what kind of tool would you create? Imagine an interview guideline or an observation grid to identify these competences.

Task 1

Explore the 2005 European Inventory (see link below). It provides an overview of all the procedures for assessing and validating competences assessment that have been developed in Europe. Identify those that are more focused on young people's skills. Compare these different programmes and try to complete them, considering your own experience as a student. What kind of procedures could be imagined to validate and evaluate young people's work experience? Make a list of these new procedures and then ask your colleagues what they think of them.

Souto Otero, M., McCoshan, A., & Junge, K. (2005). *European inventory on validation of non-formal and informal learning*. Final report. DG Education and Culture of the European Commission. Luxembourg: Publications Office of the European Union. Available at www.ecotec.com/europeaninventory/publications/inventory/european_inventory_2005_final_report.pdf

Task 2

International competences: In their article, Schomburg and Teichler (2009) summarise the main results of a survey about the international competences of university students. This survey, which was conducted a few years after graduation, retrospectively examines respondents' educational and life paths, suggesting an impressive degree of border-crossing mobility. The study shows that persons who have gained international experience prior to or shortly after graduation are clearly more likely to be internationally mobile and to take over jobs that require international competences. This confirms a strong 'horizontal' link between international learning and experience on the one hand and international work on the other hand.

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. A summary of the article is available at http://www.cereq.fr/pdf/fe103.pdf.

Discuss the findings from this report in small groups, using the following three questions as guidelines:

- Based on what has been presented in this chapter, how would you categorise these types of competences?
- How would you define 'international competences'?
- What are the main criteria that could allow us to identify these international competences?

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.

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