Report on the development of a competence model for validation experts in close collaboration with science and practice

Abstract

Over the last decades, the European Union has established a plethora of alternative procedures for the evaluation and recognition of non-formal education-based competencies. Currently, the emphasis is on further developing the systems and procedures. A high premium is placed on the professional development and development of those responsible for competency validation. PROVE (Professionalization of Validation Experts) is a multinational project that aims to facilitate the professionalization of validation specialists in Europe. Ten partners from six EU nations collaborate on the two-year project, which began in October 2019 and is sponsored by the European Union through the Erasmus+ program. Several of these organizations are research institutions, while others are project partners with expertise in validation practice.

The project's objective is to build three products that will aid in the professionalization of validation experts: 1) a competence model, 2) a model-based competence-oriented self-evaluation tool, and 3) a learning toolkit. The competency model created in the first step is intended to have European relevance to a variety of contexts and heterogeneous validation techniques, as well as to effectively represent the diverse actions and responsibilities of validation specialists. It should be practicable and appropriate for developing significant learning results and a competence-based self-evaluation tool and (self-)learning resources for validation practitioners.

The purpose of this article is to promote the understandability and transparency of the competency model's birth and to contribute to its scientific connectedness. To begin, this article discusses the theoretical foundations, methodological approaches, and stages involved in developing this competency structure model, which is based on the Design-Based Research process model that is proposed by Euler (2014a). The second portion introduces and details the PROVE competency model for validation specialists.

1. Introduction

Competencies obtained through non-formal and informal learning procedures are becoming increasingly relevant in the context of lifelong learning. Simultaneously, validation of prior learning (VPL) becomes a critical area of study and practice in adult education theory and practice in order to make these learning outcomes evident. Over the last decades, the European Union has established a plethora of alternative procedures for the evaluation and recognition of non-formal education-based competencies. The emphasis at the moment is on further developing these systems and procedures. A high premium is placed on the professional development and development of those responsible for competency validation. As evidenced by the European Inventories on validation of non-formal and informal learning, the professionalism of validation professionals remains insufficient in a number of EU nations (Cedefop et al., 2017, p. 64ff, 2019, p. 44ff). There are numerous approaches to professionalizing validation people, and many EU nations have no or very limited criteria for the competency of validation personnel.

PROVE (Professionalization of Validation Specialists) is a multinational project that aims to facilitate the professionalization of validation experts in Europe. Ten partners from six EU nations collaborate on the two-year project, which began in October 2019 and is sponsored by the European Union through the Erasmus+ program. Several of these are research institutions, while others are project partners with expertise in prior learning validation.

The main research questions within the project are:

- What are the diverse activities, tasks and competence descriptions of validation professionals in the European Union?
- How can these be developed into a generic competence model applicable to different professional contexts and heterogeneous processes in the field of validation?

The aim of the project is to develop three products that will support validation experts in their professionalization: 1) a competence model, 2) a competence-oriented self-evaluation tool based on the model and 3) a learning toolkit.

On the one hand, the competency model that will be built should be practically applicable and suitable for formulating critical learning outcomes for validation professionals working in a variety of national contexts and with a variety of validation techniques. On the other hand, it should add to the state-of-the-art knowledge in the field of validation regarding professionalization, competence description, and competence development.

Thus, this study discusses the theoretical foundations (section 2), as well as the methodological techniques and stages used to construct this competence structure model, which are based on the process model of Design-Based Research (Euler 2014a) (section 3). The next section introduces and details the PROVE competency model for validation experts (section 4). The paper concludes with a reflection on the model and a preview of the additional material that will be developed in the project's subsequent stages based on the competence model to support the professionalization of experts working in the validation of non-formal and informal learning (VNFIL) (section 5), as well as a brief summary (section 6).

The purpose of the article is to increase the readability and transparency of the process of developing a competency model that is founded on current scientific knowledge and practical expertise in the field of validation.

2. Theoretical references

The PROVE project's competency model intends to contribute to validation professionalism and the development of validation practitioners' professional competencies. The following section explains how these notions are conceptualized.

About professionalization and professionalism

Professionalization is currently the subject of debate in research, politics, and practice, each with a distinct purpose. Professionalization, in a general sense, refers to the process of developing self-contained paid activities that adhere to certain quality standards (Mieg, 2006, p. 343). Thus, professionalization encompasses both a collective social process and a necessity that applies to a whole sector of activity. Individuals and activities can both improve their professionalism and gain it. Professionalism is inextricably tied to the massive changes that have occurred in the modern workplace and is widely regarded as a sign of quality (Egetenmeyer et al., 2019).

Professionalism in the sense of professional action refers to a certain body of knowledge and its application in complex and unique work conditions. As Gieseke points out, professionalism in adult education emphasizes on competent, differentiated, and flexible use of knowledge in a specific field of practice, as well as diagnostic and networked action (Gieseke, 2018, p. 1056). Professionalism can be viewed in this light as a successful mode of interaction between scientific knowledge and situational coping processes.

The contemporary scientific discourse on professionalism makes a distinction between two approaches: competence-theoretical and difference-theoretical. Whereas the competence-theoretical approach is concerned with the abilities required of professional role holders in order to fulfill a given professional task, the difference-theoretical approach is concerned with the central issues, conflicts, and contradictions inherent in professional action. It examines the distinctions between knowledge and capability, as well as the distinctions between scientific and professional reasoning. Thus, the difference-theoretical approach demonstrates that professional behavior is always contextualized and confronted with a variety of, often contradictory, criteria. Professionalism in this sense does not imply the most seamless application of technical knowledge, but rather a reflective approach to the fundamental challenges inherent in the field of activity. Contradictions involving contrasting requirements for action, divergent forms of knowledge and judgment, or the tension between proximity and distance at the relational level cannot be resolved definitively but must be addressed appropriately. As a result, the difference-theoretical approach avoids an excessively harmonistic and rationalistic vision of reality, as can occur with competence-theoretical approaches to professionalism. Especially when competency-based approaches fail to fully account for actual professional practice, competence profiles risk being reduced to normative programs. On the other hand, the strength of the competence-theoretical approach to professionalism is in the development of systematization and standardization with regard to the competencies required for professional task handling in a subject area. This is accomplished through the use of competency profiles, models, and catalogues, among other tools. By describing the qualities, varieties, and proportions of skills and knowledge stocks as objectivities of professionalism, these competence catalogues allude to real needs for professional conduct. This enables them to be linked to the content of qualifications and training courses, as well as to validation and certification procedures standards. The normative validity of competency profiles is established through reference to requirements, job descriptions, and occupational field analyses. The theoretical and empirical foundations, the rigor and transparency with which competence models are constructed, and the presentation of the genesis of competency profiles all serve as indicators of the models' excellence (Nittel, 2000, p. 73ff.).

To aid in the professionalization of the fragmented field of validation action, it appears necessary to set fundamental requirements for professional behavior in the form of a competency model. According

to European policies, it is required that validation practitioners build professional competencies in order to establish comprehensive, high-quality validation systems in EU member nations (Council of the European Union 2012, p. 3). The identifying and description of competencies enables validation practitioners to interpret individual and collective professionalism both internally and externally (Schmidt-Lauff & Lehmann, 2012, p. 33).

As previously said, professionalism is not to be construed narrowly as the individual performance of a specialized worker equipped with knowledge, skills, and qualifications. Rather than that, professionalism in a larger, collective meaning recognizes the tight connection between professional action and societal, institutional, and organizational variables. Professionalization is a multi-level process that takes into account societal and institutional factors such as regulations and laws or employment structures, organizational factors such as the growing importance of organizations that provide working environments, and subjective factors relating to the professional staff (Egetenmeyer et al., 2019).

Professionalism is not a state that can be gained or reached; rather, it is a brief professional accomplishment that must be repeated in each scenario. The information and abilities that can be updated repeatedly are linked to the professional activity's situational references, which necessitate a high level of reflection and judgment on the part of the actors (Nittel, 2000, p. 83ff).

Taking these factors into consideration, professionalism can be defined as the repeated and repeatable demonstration of professional ability. The PROVE-competency project's idea substantiates the provided definition of professionalism.

Competence concept

The term "competence" is not defined explicitly in the current discourse. Rather than that, there are numerous interpretations across fields and situations (Klieme & Hartig, 2007). This results in a great deal of variation in approaches, as well as a lack of a commonly agreed theoretical foundation for systematic discussion. All competency notions, in common, allude to a match between situational requirements and individual resources necessary to behave correctly. Additionally, these understandings refer to skills as person-related categories that do not exist in a static state but emerge and evolve over time, particularly during biographical and professional socialization processes. In summary, the fundamental properties of competence notions are typically thought to be situational and contextual, action-oriented, subject bounding, and changeable (Kaufhold, 2006, p. 22). Additionally, the contrast between competence and performance, which dates all the way back to Noam Chomsky's language philosophy, is critical. It underlines the fact that competencies are not immediately accessible and express themselves through performance. Thus, competence refers to the utilization of a potential and is not directly accessible, but rather is observable and quantifiable through performance (Gnahs, 2010, p. 19).

On the basis of the notion of competence, numerous competence models have been developed and differentiated, each with a unique set of references and degrees of specification ranging from the most abstract to the most precise. This diversity reflects the fact that competences must be defined in light of specific requirements and with an eye toward the competence recording and assessment objectives (Geldermann et al., 2009, p. 38). Taking into account the diverse contexts of validation and the heterogeneous validation procedures in Europe, as well as the varied activities and responsibilities of validation professionals, a competence model for validation practitioners was developed during the course of the project. Competences are defined in this context as the cognitive abilities and skills that individuals possess or can acquire in order to solve specific problems, as well as the associated motivational, volitional, and social willingness and ability to solve problems successfully and responsibly in a variety of situations (Weinert, 2001, p. 27). Baumert and Kunter incorporated essential parts of this competence idea into a concept of teachers' professional action competence (COACTIV) (2006). They

created a multidimensional model of professional competence that is compatible with established psychological and educational theories. Thereafter, professional competence arises from the interplay of

- specific, experience-saturated declarative and procedural knowledge (competencies in the narrow sense: knowledge and skills),
- professional beliefs, subjective theories, normative preferences and goals,
- motivational orientations and
- skills of professional self-regulation (Baumert & Kunter, 2006, p. 481).

This nonhierarchical model of professional competence is a general structural model that must be customized for practitioners' actions but remains true in its fundamental structure. The German GRETA project was a first attempt to develop such a customized model for the target group of trainers in continuing education and it has established its worth in the sphere of continuing education (see Strauch et al., 2021). Thus, the aforementioned components of professional competence are developed in many competence aspects, while also incorporating the commonly held distinction between theoretical formal and practical knowledge. This distinction takes into account the distinct characteristics of specialist knowledge on the one hand and practical professional skills and ability on the other, which also implies distinct methods of verifiability and is thus required when the competence model serves as a foundation for the development of (self) evaluation tools for professionalization. Thus, the PROVE competency model encompasses four distinct areas of competence: (1) validation and domain-specific knowledge, (2) practical skills and knowledge, (3) professional values and attitudes, and (4) professional self-management. These elements of competence are further classified into domains of competence, indicating distinct areas of competence. As the most detailed level of the competence model, the competence facets exhibit partial elements of competences. The PROVE competency model for validation practitioners is detailed in depth in section 4 of the current article, along with its various competence elements, areas, and features.

3. Methodological approach

To develop the competence model on the basis of the theoretical foundations mentioned previously, namely a competence theoretical understanding of professionalism and a holistic competence concept as described by Weinert (2001) and Baumert and Kunter (2006), and on the basis of validation experts' professional practice, we chose the Design-Based Research approach (Euler, 2014a), which is characterized by a close interaction between science and practice.

Integrating the development (design) of creative solutions for practical educational processes with the generation of scientific information, is the goal of design-based research. Design-Based Research is defined as the systematic examination of the design, development, and evaluation of educational interventions (e.g., programs, teaching/learning strategies, materials, and systems) as solutions to complex problems in educational practice, with the additional goal of increasing knowledge about the characteristics of these interventions and development processes (cf. Plomp 2007, p. 13 cited in Euler, 2014a, p. 16). The development perspective and the integrated collaboration of science and practice are critical to this. From the start of Design-Based Research, the development of novel solutions with practical utility and future potential is an inherent element of the research process. The identification and specification of unsolved problems and questions is thus the beginning point for design-oriented research. Iterative cycles of design, testing, analysis, and re-design characterize the research process. According to Euler (2014a, p. 20), six phases or fields of action can be distinguished: (1) First, the problem is specified and refined; (2) Next, the literature and experience are analyzed and a theoretical frame of reference is developed; (3) Next, the design is developed and a prototype is constructed; (4) Finally, the design is tested and formatively evaluated. (5) Finally, on this basis, generalizable design principles are developed; If necessary, the design is revisited (re-designed) at this phase to raise the intervention's maturity level; (6) Finally, the intervention is summarized and the design principles are

consolidated. A problem can be described again if necessary. All parts of this iterative cyclical process are carried out in collaboration between science and practice (Euler, 2014a).

The following figure shows the research and development cycles in Design-Based Research.
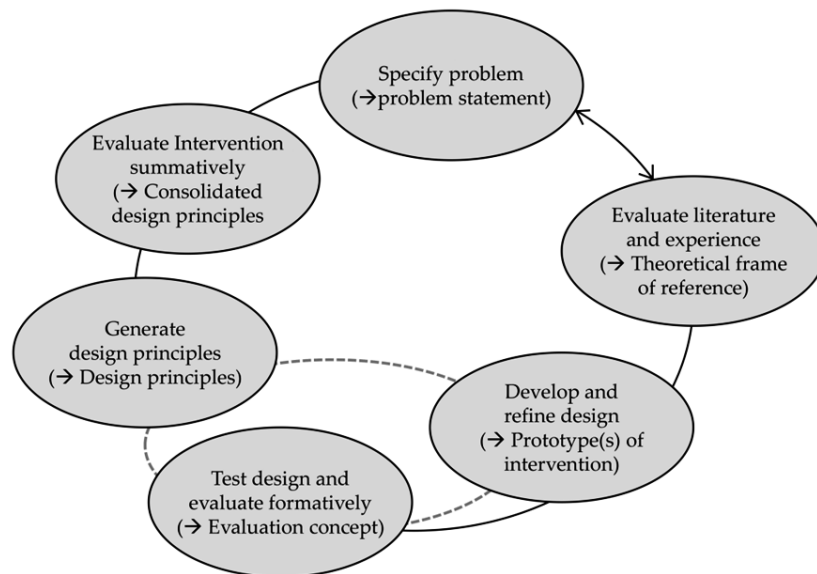

Figure 1: Research and development cycles in the design research context (Euler 2014a, p. 20)

To develop a competence model supporting the professionalization of validation practitioners in different European countries and validation contexts we followed a multi-step process in close interaction between science and practice as the guiding principle during the development process. This process will be described in detail in the following sections.

(1) Desk Research

The research process begins with a distinct description of the problem and objective, incorporating theoretical and practical viewpoints (Step 1: Problem statement). This is accomplished by identifying pertinent theories and formulating theory-based assumptions for the design of the intervention – or, in our case, the competence model – (theoretical perspective), and by conducting a context analysis and activating frequently implicit experiential knowledge from practice (practical perspective) (Step 2: Theoretical frame of reference).

Thus, at the outset of the PROVE-project, we conducted a desk research to collect and analyze relevant literature and experience. All project partners conducted desk research using a standardized form. The template was created with the objective of compiling the tasks and appropriate competency standards for validation staff that exist in the nations of the project partners or in other EU countries. Each partner was asked to specify a piece of literature concerning

- the most relevant tasks that validation professionals have to cope with in the partner countries,
- the competences needed to meet the different roles of staff working in validation,
- whether and which (scientifically approved) standards exist for the professional fulfilment of these tasks and competences
- and whether there already exist standardized education/training provisions or (cross-procedural) competence models and learning tools for validation experts to build on.

Considering the diverse actors involved in the project – validation providers, trainers, and researchers – the literature collection on the basis of the template facilitated three central activities aimed at connecting theory-driven literature research and practical experience (Euler, 2014a, p. 25): establishing an initial orientation for all project partners regarding current developments in various EU-countries, initiating the field-based investigation, and conducting a literature review.

(2) Demand analysis

Following that, the results of the demand study on relevant tasks/activities, needs, and competencies of validation practitioners were summarized among validation specialists. This executive summary served as the starting point for a collaborative conversation about the scope and needs for the targeted competency model. This facilitated a more precise problem definition and clarification of the requirements for the competence model's design, such as a shared understanding of professional competence to be depicted in a holistic competence model and agreement on the relevant validation practitioner tasks to be mapped by the model.

(3) Competence identification inventory

On this foundation the next step could follow: the development of a table that sums up the activities of validation experts and the responding competences. This table includes the knowledge, skills and attitudes necessary to professionally perform various activities that occur in the different phases or task areas of validation, such as (1) information, guidance and counselling, (2) competence identification, (3) documentation, (4) assessment, (5) certification and (6) stakeholder coordination. This makes the model connectable to the central phases of validation (identification, documentation, assessment, certification) and conditions for developing validation (e.g., information/guidance/counselling or stakeholder coordination) as stated in the Cedefop guidelines for validation (Cedefop, 2015).

(4) Model development

On this basic the next steps in Design-Based Research could follow - the development, testing, evaluation, and refinement of the design (Step 3: prototypes of intervention/model; Step 4: testing and formative evaluation) consisting of several iterative cycles (steps 3 – 5). During these cycles systematic documentation of the development process is necessary for the purpose of tracking the acquisition of knowledge. Euler (2014a, p. 28-31) advocates a strategy for the continuous formative evaluation of the intervention to be developed that selects the evaluation focus or objectives as well as the methods used depending on the maturity of the design existing so far (Step 4: Evaluation concept).

Throughout the PROVE-project, we used the developed competency identification inventory as the basis for a deductive and inductive content analysis conducted in multiple cycles according to Mayring (2015). Apart from categorizing the competence inventory table (knowledge/skills/attitudes), the inductive analysis ensured that the table's frequent, dominant, or significant competencies were recreated. The selected competencies were then mapped and arranged in accordance with a rough structure composed of four competency aspects. As far as the structure and external appearance of the model are concerned, we have based ourselves on the GRETA competency model, which has proven its worth for trainers in continuing education. With its four competence aspects based on Baumert and Kunter's (2006) COACTIV model of professional pedagogical action competence, it provided us with an appropriate structure consisting of competence aspects, areas, and facets (see Strauch et al., 2021).

(5) Evaluation

The concept was developed with a strong emphasis on collaboration within the consortium in order to include national practical experience. The methodological steps of prototype development and initial formative evaluation (steps 3-4) were carried out by the writers of this article's subgroup "competence

model." The initial draft of the competency model was then discussed among the consortium's 10 members, who contributed their experience and practical know-how to the final modeling. The emphasis of the so-called communicative validation was on the model's adaptability and applicability, as well as on the terminology's fit. The partners' comments were incorporated and addressed in the larger group. Four rounds of communicative validation were conducted in total. Thus, competences were derived, which ultimately resulted in the development of a competency model for validation practitioners (see section 4 of this article).

(6) Finalization

After all stakeholders agreed on the established competences and model structure, the final version was written in English and the defined competence areas and facets were succinctly stated. Then, in their partner languages, each partner began translating the model and the meanings of the competence terms. Finally, the competence model and glossary of words are provided in English, German, Portuguese, Greek, French, and Dutch.
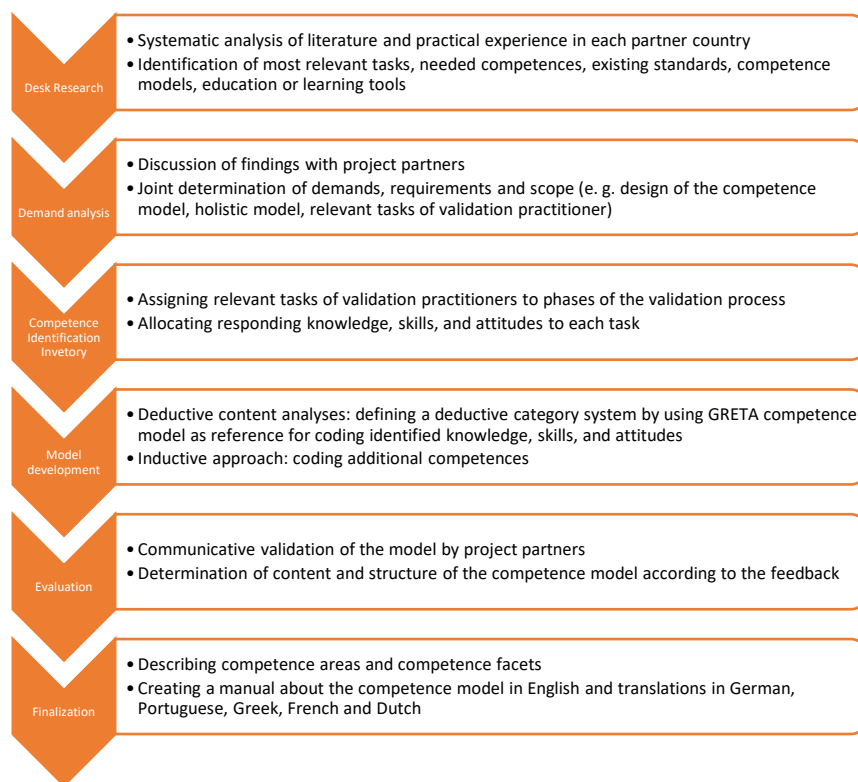
The different steps are pictured in figure 2.

Desk Research
- Systematic analysis of literature and practical experience in each partner country
- Identification of most relevant tasks, needed competences, existing standards, competence models, education or learning tools

Demand analysis
- Discussion of findings with project partners
- Joint determination of demands, requirements and scope (e. g. design of the competence model, holistic model, relevant tasks of validation practitioner)

Competence Identification Invetory
- Assigning relevant tasks of validation practitioners to phases of the validation process
- Allocating responding knowledge, skills, and attitudes to each task

Model development
- Deductive content analyses: defining a deductive category system by using GRETA competence model as reference for coding identified knowledge, skills, and attitudes
- Inductive approach: coding additional competences

Evaluation
- Communicative validation of the model by project partners
- Determination of content and structure of the competence model according to the feedback

Finalization
- Describing competence areas and competence facets
- Creating a manual about the competence model in English and translations in German, Portuguese, Greek, French and Dutch

Figure 2: Methodological phases of developing the PROVE competence model

As mentioned previously, we prioritized the responsive involvement of experienced practitioners (science-practice dialogue) throughout the developmental process. Euler (2014a, p. 33) emphasizes the importance of this in order to produce both sustainable solutions and practice-relevant theories of moderate scope in the form of context-sensitive design principles.

What this project did not include was the development of design principles with a view to generalization, as well as their evaluation and consolidation (Step 5-6). Such design concepts will guide the development of future interventions of a similar nature. They are developed inductively by (comparative) study of each design case and investigation of commonalities and rationales among the various design

cases generated over the course of the development process's multiple cycles (Euler, 2014b, p. 105). This phase can be completed at a later date and was not included in the scope of the project.

Rather than that, a testing and evaluation of the competency model's completeness and usefulness was conducted with validation practitioners from all partner nations, which confirmed the produced model.

4.   The competence model

As a result of this research process, which was guided by Euler's (2014a) Design-Based Research approach, the PROVE competency model was developed, which will be discussed in greater detail today. The PROVE competence model encompasses not only cognitive abilities and skills, but also aspects of motivation and social willingness, which are classified into four categories of competence (see the outer ring of the graphic), which include validation- and field-specific knowledge, practical skills and knowledge, professional values and attitudes, and professional self-management. The term "knowledge" in this context encompasses both theoretical and formal knowledge (e.g., technical knowledge) as well as application-specific and practical knowledge. The four competence dimensions are further subdivided into competence areas (see the graphic's inner ring), which are further subdivided into fine-grained competence facets (see the middle ring of the graphic).
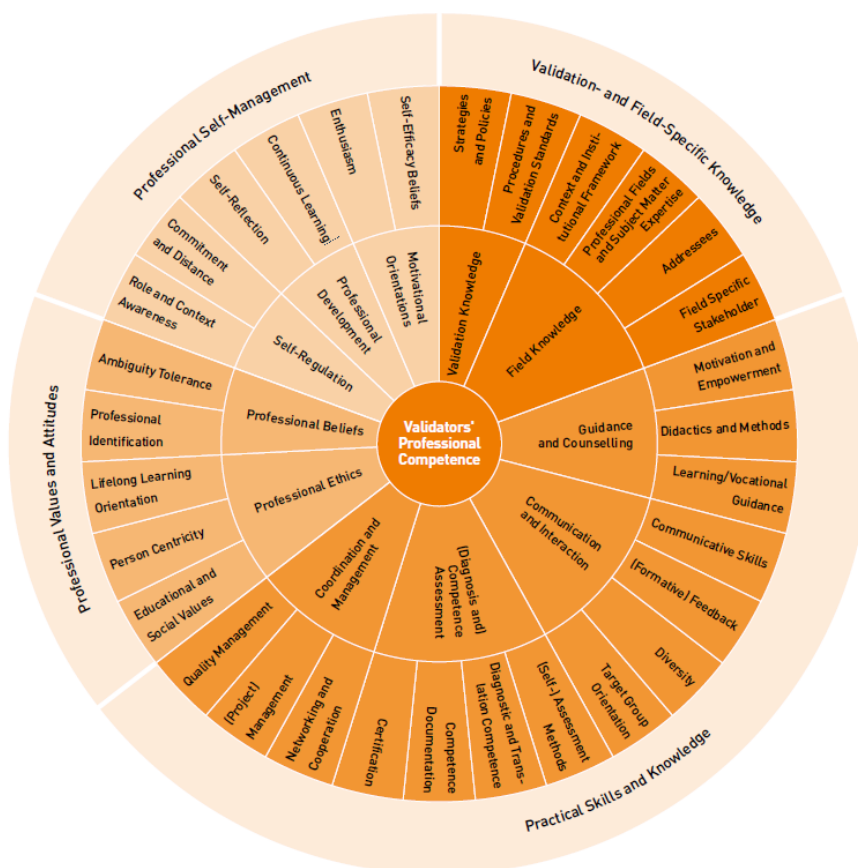

Figure 3: PROVE Competence Model for Validation Experts including competence aspects, areas and facets (Source: PROVE)[1]

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[1] Regarding the development of the structure of the PROVE model, see also the development of the GRETA model: Lencer & Strauch (2016), the GRETA project: Kompetenzmodell - Websites - Greta (greta-die.de) as well as Strauch, A., Bosche, B., & Lencer, S. (2021) and Strauch, A., Lencer, S., Bosche, B., Gladkova, V., Schneider, M., Trevino-Eberhard, D. (2019).

The competence aspect validation- and field-specific knowledge is divided into the competence areas validation knowledge and field knowledge. To permit, accompany, carry out, or manage validation, it is necessary to grasp both the basic conditions and the particular and objectives of validation. Thus, validation knowledge includes information about validation strategies and policies, as well as information about various validation systems and methodologies and current advancements on both an international and national level. Additionally, a thorough understanding of the validation process and its components, as well as the many validation techniques and their associated standards, ideas, instruments, methods, and requirements, is required (Cedefop, 2015). Additionally, a thorough understanding of the social and political components of validation enables one to reflect on one's own validation actions. Validation occurs in a variety of settings, including the educational system, vocational sectors and firms, the labor market, and the voluntary sector (Cedefop, 2015, p. 26), each of which has its own institutional structure. As a result, field knowledge presupposes a thorough understanding of the context and institutional framework within which validation is embedded, as well as knowledge of (inter-)national educational systems, vocational sectors, (labor market issues and opportunities), vocational education and training, and educational policy. Validation practitioners must be informed of professional regulations, standards, and legal requirements, as well as difficulties and opportunities in their respective sectors, as well as other career or validation options. Additionally, current developments and demands in the sector must be considered, which necessitates the capacity to seek out accurate and pertinent information and use it appropriately in a situation-specific manner with the goal of stimulating and fostering validation.

The competence aspect practical skills and knowledge is divided into four competence areas including guidance and counselling, communication and interaction, (diagnosis and) competence assessment and coordination and management. Validation professionals are frequently consulted and accompanied by applicants or participants throughout validation operations. The role of the adviser or guide is critical for initiating the validation process and maintaining motivation and empowerment throughout the process. This involves the ability to develop, select, and deploy appropriate motivational strategies and procedures to empower individuals during the validation process and during their access to validation. According to Travers and Harris (2014), during the validation process, it is critical to define the roles and responsibilities of all parties involved, to specify the associated tasks and steps, and to provide learners with guidance on how to set goals and identify appropriate career and education pathways (Travers & Harris, 2014, p. 236).

To activate and utilize the participants' performance potential during the validation process, validation specialists must regulate and control communication processes in order to foster a trusting communication environment. This needs both theoretical and practical knowledge of various communication styles, methods, and tactics, as well as knowledge of how to apply them effectively. Communication and conversational skills that contribute to the creation of a good, encouraging, and motivating environment are therefore critical to promoting trust in the validation process and enabling validation experts to reach out to possible applicants (Cedefop, 2015). Along with communicative abilities, the validation process emphasizes knowledge and skills related to accepting and providing (formative) feedback, managing diversity, and target group orientation.

It is critical that validation specialists are capable of applying methodologies and tools appropriately for diagnostic and competence evaluation, which includes recognizing, classifying, rating, and documenting skills using various qualitative and/or quantitative approaches (Strauch et al., 2009, p. 25). This means that they should be able to use participant-centered methodologies and tools appropriately to the circumstance and goal at hand. Additionally, validation specialists must be capable of designing, constructing, implementing, and evaluating relevant documentation procedures, tools, and methodologies, as well as the ability to certify the assessment results in the form of a certification or credits toward a qualification.

Due to the fact that validation professionals must also coordinate and manage, they must be able to collaborate and network with stakeholders, collaboration partners, field experts, teams, and relevant networks in order to share information and experiences and ensure effective resource utilization. This requires the ability to act as a connector/matchmaker in order to attract participants and relevant stakeholders/partners, to assist others in effectively navigating various networking structures, and to incorporate networking into training activities and collaboration with colleagues and stakeholders. Argyris and Schön (1978) underline the importance of management focusing on the organization's results and performance. This places project management on a par with quality management and necessitates knowledge of project management approaches, instruments, tools, and about project controlling, monitoring, and development on the one hand, and knowledge of quality criteria and quality control in relation to the validation procedure as well as specific validation processes such as information, guidance, and counseling on the other. Additionally, it comprises knowledge of the many expectations and needs for validation imposed by various actors, as well as understanding of the various elements affecting the quality of validation work. Additionally, validation experts must be able to identify areas for improvement in strategic policies and procedures and to utilize the internal management system to better and further develop validation.

Professional values and attitudes fall under the competence category. They include professional beliefs and professional ethics. When examining the professional competencies of validation practitioners, professional values and beliefs are critical, as they have a significant impact on how the validation activity is performed. These are subjective beliefs and theories (Groeben et al., 1988) that are incorporated more or less consciously into the performance of professional activities and influence the practitioner's behavior. Pajares (1992) defined beliefs as subjective explanatory systems that include subjective judgments and views. They range from subjective theories about others to attitudes toward one's own specialty (Kunter & Pohlmann, 2009). In relation to validation practitioners, these subjective beliefs and theories have a strong influence on the pedagogical attitude underlying the activity in terms of validation tactics and principles, the image of one's own function, the image of the intellect able human, and the teaching-learning concept. Additionally, validation practitioners collaborate extensively with individuals from varied backgrounds. Moral action pervades adult education's daily work and manifests itself in a variety of ways, including moral behavior, knowledge transmission, and participants' moral development (Erpenbeck, 2010). Along with concepts about professional quality standards, the emphasis is also on personal integrity, as manifested by acts that are consistent with one's personal value system. The professional acts of validation practitioners are thus predicated on a normative assertion, in the sense that they are obligated to assist persons on their path through life, focused on instructional principles and standards.

The competence aspect professional self-management is divided into three competence areas including motivational orientations, professional development and self-regulation. According to Baumert and Kunter (2011), motivational factors play a significant role in determining professional behavior (e.g., self-efficacy beliefs and positive experiences during the performance of an activity). On the one hand, validation practitioners' motivations are manifested in their personal passion and enthusiasm for their profession. Self-efficacy beliefs, on the other hand, are a critical component of motivational orientations. Having a high feeling of self-efficacy might have a direct effect on one's dedication and passion for the validation activity (Baumert & Kunter, 2011). Professional action should not be seen as an immutable constant. Competencies cannot be considered static; they can be gained, continuously developed, and modified via a variety of different learning paths and modes of acquisition. Validation professionals must always improve their competencies in order to remain professionally capable. Thus, it is necessary to reflect on one's own knowledge resources and competencies in relation to one's own learning objectives in order to establish the starting point for necessary development efforts and to address pertinent pedagogical concepts and professional topics, as well as to reflect on structural conditions during one's own professional development (Pachner, 2018). The analysis of the validation practitioners' cognitive, motivational, and emotional resources is critical during the validation process

and strives to ensure their responsible management. It is a critical component of validation practitioners' professional competence because self-regulation is viewed as a prerequisite for psychological functioning that enables the individual competence profile to be further developed and overcome difficulties and barriers through a continuous willingness to make efforts and reflect (Baumert & Kunter, 2006, 2011).

5.   Reflection on the model and further steps in PROVE

The term "validation of non-formal and informal learning" (VNFIL) has evolved in the current EU policy environment from a broad term that encompasses a diverse range of divergent events in the world's political and cultural debate to a more narrowly focused plan of action that is more focused on the concept of economic progress. It is now viewed as a means of increasing opportunities for gaining those abilities that are viewed as a strategic condition based on the likelihood of actively participating in economic and productive processes as a result (Singh, 2005).

There is undoubtedly a lack of clarity in VNFIL 's current practice about fundamental terms and concepts, as well as the required actions. Numerous terms are used in this particular field of research, practice, and policy development, including recognition, justification, and certification, to name a few. It was only recently that academics, practitioners, policymakers, and even users understood the importance of defining them. Additionally, given Europe's challenges, such as increased global competition, high rates of youth unemployment, a high proportion of low-skilled workers, and an aging population, validation is not yet widely recognized as a critical instrument for facilitating the transfer and acceptance of all learning outcomes across different settings and contexts (by individuals, stakeholders, and social partners). In contemporary Europe, the primary focus of validation is on the validation of individual learning outcomes, which may result in the award of a certificate or diploma. The real issue for everyone involved in the process is how this review is undertaken, who is accountable for it, and against what standards it is conducted.

A model of required competency for VNFIL professionals is intended to provide structure to an otherwise chaotic field of knowledge and practice. A significant portion of this is attributable to workplace changes, the requirement for continual adaptation and lifelong learning, and the abolition of what can be called "conventional learning" methodologies. These are also challenges that VNFIL must overcome in the course of its operations. VNFIL's mission is to make visible and use an individual's whole range of knowledge and abilities, regardless of where or how they were acquired. We can see from the PROVE competence model that VNFIL is no longer considered a concept, but rather a process. This entails bringing to light, making visible, and valuing those competencies (mostly horizontal or transversal) acquired through non-formal or informal learning paths through the use of instruments, mechanisms, or techniques that not only provide reliability for practice, but also monitor or control the process's final outcome; this is referred to as authorizing the process.

After thoroughly analyzing and debating the scope, content, and underlying premise of the PROVE competence model, one of the most critical aspects that immediately comes to mind is the development of a consistent profile framework for VNFIL professionals that incorporates pertinent information about tasks, responsibilities, and the required knowledge, skills, and attitudes through the involvement of experts and stakeholders. In comparison to previous models, the PROVE competence model illustrates a much broader context, by which we mean the framework within which VNFIL is provided, the factors that influence the precise shaping of the competences and weightings of VNFIL professionals, and the way in which VNFIL is essentially mapped as a non-static and dynamic field. Numerous dependent and independent variables, including the target groups (beneficiaries), the composition of the VNFIL team, the validation procedures used, the commitment of those involved to professional development, as well as the specific mission of the institute that provides VNFIL, all play a significant role in

this context. The PROVE competency model emphasizes the following characteristics in each of the aforementioned factors:

1. Promotion of awareness of the essential skills and duties done by professionals in this sector.

2. The process of designing and applying a range of techniques to measure beneficiaries' learning outcomes.

3. Administration, organization, and performance of key service providers in the employment and helping of field personnel are critical concerns.

4. Continuing professional development (CPD) of relevant employees, which involves retaining knowledge and skills linked to professional lives as well as acquiring new information, abilities, and attitudes necessary for successful practice.

Additionally, the level of responsibility associated with working in this environment is assessed (particularly on motivational and ethical issues). This approach enables the development of a model with holistic value, rather than one that compartmentalizes VNFIL staff into distinct categories or taxonomies such as novices and experts, or even procurement tasks such as identification and documentation, as well as motivation and certification, as the pertinent literature suggests. It is critical to situate the objective, process, management, and ongoing professional development within the context of VNFIL service, with an emphasis on competency, practice areas, and delivery.

PROVE competence modeling generates a reliable profile of VNFIL professionals as long as it defines what a competence is in the context of the particular VNFIL in question. As a result, the PROVE model's competencies are recognized in their contextual complexity as a collection of information, abilities, and attitudes required to successfully complete a given activity, with tangible and verifiable (although not quantitative) outcomes. In general, the phrase "knowledge" refers to a collection of facts, concepts, ideas, principles, theories, and practices pertaining to a certain field of activity. The term "skills" refers to the capacity to perform relevant actions through the use of acquired or developed knowledge. VNFIL practice is the ability to accomplish an activity on a physical, mental, and emotional level. The phrase "abilities" or "attitudes" refers to the physical, mental, and emotional capacity required to successfully complete a VNFIL activity. When the specific setting in which these workers work is abstracted, the set of competencies depicted in Figure 3 applies to all specialists working in the VNFIL business.

Additionally, the PROVE model seeks to incorporate all of the capabilities necessary to support institutional and temporary operations. This means that the collection of necessary abilities serves as a foundation for not just validation procedures, but also a variety of other vocations (for example, management and protocol creation activities, motivational and outreach activities, and evaluation activities, among others). Additionally, while not every VNFIL expert must possess all of the aforementioned competences; it is preferable if all competencies are made available to a VNFIL provider, institute, or company's entire staff.

Additionally, the technique can be utilized to construct competency profiles for certain VNFIL provider jobs or individuals. Three interconnected components, or layers, comprise the model. The first relates to the professionals' repertoire of tasks and activities, or the precise acts that a VNFIL professional is expected to undertake in the course of their work. The second type of scenario is one in which a VNFIL specialist is required to undertake the aforementioned actions. This is a vital component of establishing the case for the competency selection process. Additionally, the degree of responsibility that should be assigned to a professional's individual profile is examined in relation to their area of expertise. The extent to which a professional bears responsibility varies according to the situation in which they find themselves, as well as the degree of autonomy with which they perform their job. The third

and last section discusses the actual skills and abilities required to do these activities. To create an appropriate profile for a particular job, it is necessary to first characterize the role's environment, then determine the actions that must be done, and finally, identify the aptitude that must be demonstrated. This three-tiered structure exemplifies the concept of PROVE competence.

Additionally, this context-sensitive strategy can be utilized to enrich the PROVE competency model by making it more adaptable to a broader range of scenarios and validation techniques, as well as to develop a competence-oriented self-evaluation tool and more user-friendly (self-)learning materials. Given the long-term sustainability of the competence model, the next stage was the development of a 'Self-Evaluation Tool,' which assists VNFIL practitioners in examining their own skills and identifying opportunities for professional advancement. Additionally, a validation practitioner learning tool kit was developed to assist professionals in this field in purposefully developing their professional competencies where they are needed and contributing to the ongoing professionalization of validation staff, based on their unique validation practices and requirements identified through a needs assessment.

6. Conclusion

Validation of informal and non-formal learning outcomes becomes increasingly relevant as lifelong learning progresses, since it has the ability to make evident competencies acquired through less typical learning paths. This work has shown that a high premium is placed on the quality development and professionalization of those who conduct competence validation and accompany persons as they validate their skills in this setting (Cedefop, 2015).

Taking into account the diverse validation contexts and procedures used across Europe, as well as the diverse activities and responsibilities of validation professionals, the PROVE (Professionalization of Validation Experts) project's generic competence model for validation practitioners aims to support the professionalization of validation experts in Europe. It is founded on a heuristic understanding of competence (Weinert, 2001, p. 27) and defines professionalism as the recurrent and repeatable demonstration of professional competence. Thus, the competence model encompasses not only cognitive abilities and skills, but also aspects of motivation and social willingness, which are classified into four domains of competence: validation- and domain-specific knowledge, practical skills and knowledge, professional values and attitudes, and professional self-management.

The establishment of the generic competence model was a critical first step toward professionalization of validation specialists in Europe. Due to the model's tight connection between science and practice, it is realistically useful due to the model's development process being based on the process model of the Design-Based Research approach (Euler, 2014a). The model serves as a critical foundation for the design of meaningful learning outcomes and used as such throughout the development of the competence-oriented self-evaluation tool and the learning tool kit, the project PROVE's two additional products. These two technologies directly assist validation practitioners in their professional development.

The competency model is predicted to have a positive impact on validation practice while also serving as a useful conversation tool for policymakers and policy advisors.

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