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Advancing Project Manager Competency Validation: A Stakeholder-Driven Approach Using Structured Democratic Dialogue

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Abstract

This study advances competency validation in project management by integrating Structured Democratic Dialogue (SDD) with a stakeholder-driven evaluation framework. While traditional competency models prioritize standardized assessment, they often fail to capture context-specific and relational aspects of competencies in dynamic project environments. This study addresses that gap by applying SDD to co-construct a competency validation framework, revealing systemic interdependencies among critical competencies. Findings contribute to project governance theory, reinforcing the role of participatory validation mechanisms. The approach provides actionable insights for policymakers, professional bodies, and researchers, ensuring competency frameworks remain adaptive, empirically grounded, and stakeholder-informed.

Keywords

Professional Development, Adaptive Project Management, Project Governance, Competency Validation, Multi-Stakeholder Engagement, Competencies, Complexity, Structured Democratic Dialogue

1. Introduction

Several researchers have studied the competencies required for project managers in nonprofit organizations (Gaddis, 1959). According to Brière et al. (2015), project managers (PMs) working for international NGOs should possess competencies in project design, project planning, project implementation, leadership and communication, and stakeholder management. Loufrani-Fedida and Missonier (2015) suggest that project managers in project-based organizations (i.e., such as

those implementing European-funded projects) should have technical and social skills, leadership, and project management competencies. However, in the design phase of mass house-building projects, project managers primarily need competencies in design, technical, interpersonal, and business skills (Ahadzie et al. (2014). More recently, Hassan (2023) explored competencies that support the successful implementation of projects that focus on sustainable development. His work revealed that four categories of PMs' competencies influence the success of sustainable development projects: project management skills, team management abilities, emotional intelligence skills, and formal skills. His model explains that PMs who acquire these specific competencies have a higher potential to achieve outstanding results in current or future SD projects. Project managers in academia should have competencies in project planning, leadership, communication, and problem-solving (Percic & Manolescu, 2021). Eikenberry and Kluver (2004) argue that nonprofit project managers need especially strategic planning, fundraising, and program evaluation competencies.

Other researchers suggest that project managers, in general, should have competencies in technical skills, project management skills, and leadership skills. For example, Cheng et al. (2005) suggest that project managers' ability to manage projects, technical knowledge, and leadership skills are the most critical competencies. Hanna et al. (2016) developed an integrated mathematical model of project manager competency that also includes planning, scheduling, risk management, communication, leadership, and negotiation skills.

Hölzle (2010) proposes that the design and implementation of a career path, in the context of a professional development plan, is ideal for project managers. In contrast to that, Cotton (2013) argues that a certification process in project management can in itself facilitate the development of the required competencies. Other authors have examined the consequences of retaining project management competence (Ekrot et al., 2016), influencing factors for the promotion of international vocational qualification and certification for international project managers (Bai et al., 2020), and the development prospects of the project management profession (Ilmete et al., 2011).

To summarize, the competencies required for project managers in nonprofit organizations vary depending on the specific context and objectives of each project. Nevertheless, authors agree that some are essential for project managers in all types of organizations. These include project design, planning, implementation, leadership, and communication competencies that are commonly identified as necessary for project managers in nonprofit and project-based organizations. Technical, project management, and leadership skills.

A multi-level approach could be taken to verify or certify the skills and competencies expected of project managers in nonprofit organizations. First, defining the specific competencies required of project managers in the nonprofit sector is essential. Studies such as Brière et al. (2015) and Ekrot et al. (2016) have explored the competencies of project managers in international NGOs and the antecedents

and consequences of retaining project management competence, respectively. These studies can provide a starting point for identifying the key competencies needed in nonprofit project management. Next, an action research study, such as the one conducted by Takey and de Carvalho (2015), can be undertaken to map the competencies required for nonprofit project managers within a specific organization. This study involved interviewing project managers and stakeholders to identify the competencies needed for project success and then developing a competency framework. Once the competencies are identified, a certification or qualification program can be established to verify that project managers possess the necessary skills. Certification programs such as the International Project Management Association Global Qualification, Certification, and Accreditation, described by Turner (1996), and the Project Management Professional (PMP) certification offered by the Project Management Institute (2017) can provide models for developing a certification program for nonprofits project managers.

To ensure ongoing professional development, a career path for project managers in the nonprofit sector can be designed and implemented, as suggested by Hölzle (2010). We can, therefore, conclude that identifying, verifying or certifying the skills and competencies expected of project managers in nonprofit organizations is a rather complex challenge. It requires a multi-level approach that includes defining the competencies, mapping them to specific organizations, establishing a certification program, and providing ongoing professional development opportunities.

One could argue that there is a system for certifying skills and competencies required for project managers also in Europe. The International Project Management Association (https://ipma.world) (IPMA) is a federation of global project management associations, which includes those in Europe. The IPMA provides a four-level certification system based on competencies defined in the IPMA Competence Baseline (ICB). The ICB framework describes project managers' competencies for success, covering both technical and behavioral competencies. The four levels of IPMA certification are Certified Project Management Associate (Level D), Certified Project Manager (Level C), Certified Senior Project Manager (Level B), and Certified Projects Director (Level A).

In addition to the IPMA certification, other certification programs are available in Europe, such as the PMP certification mentioned above, offered by the PMI. However, PMI is not specific to the nonprofit sector.

The authors recognized the limited support available for recognizing and validating knowledge, skills, and competencies, specifically of international project managers active in Civil Society Organizations (CSOs) in the adult education sector. This challenge was actually formulated during the implementation of a joint Erasmus project, named "First International Realisation Support Team Network (https://first-network.eu/en/)," led by the second author. The mission of that project was to strengthen the capacity of CSOs and other entities active in the adult education sector to operate in the international arena, enhancing innovativeness

and the ability to adapt to changes in the modern world. In a follow-up project, also led by the second author, called "Recommendations for International Project Managers Competences Recognition and Validation for Lifelong Learning (https://fundacjaaie.eu/projects.html)" (AER-V), a consortium of six European CSOs from Poland, Italy, Denmark, Austria, Portugal and Cyprus worked together for 34 months (Dec. 2019-Oct. 2022) to develop recommendations supporting the recognition and validation of knowledge, skills and competencies of the European project managers active in CSOs.

The project included several transnational meetings during which at good practices and experiences were exchanged, and a short-term joint staff training event. These activities served as preparation for a Structured Democratic Dialogue (SDD) Co-laboratory, which aimed to define the essential characteristics of a validation system for the EU projects' managers. SDDs are generally regarded as very democratic processes that support stakeholders with diverse perspectives and conflicting points of view to converge democratically (Christakis & Bausch, 2006; Diedrich & Christakis, 2021; Laouris et al., 2014; Laouris, 2015; Schreibman & Christakis, 2007).

2. Methodology

The experts developed a list of recommendations on what should be included or excluded from a certification scheme in the context of four transnational meetings. In their first two meetings, they exchanged good practices related to existing solutions for recognizing and validating knowledge, skills, and competences as they might be available or applied today in adult learning CSOs across Europe. In their third meeting, the experts discussed training options for acquiring or upgrading competences preceding the recognition and validation process (i.e., taking an exam). The fourth meeting concluded their discussions regarding the examination system for the certification and validation of competences. The four meetings served as preparation for the last meeting, during which the same experts, with some additional senior individuals working in CSOs, worked together using the methodology of Structured Democratic Dialogue (SDD) to organize, streamline, and prioritize their recommendations. The SDD process was facilitated with the help of the Triggering Question (TQ), "What would you consider as useful characteristics of a validation system for the EU projects' managers? An SDD event is typically called a co-laboratory of democracy. The process has been extensively documented (Christakis & Bausch, 2006; Flanagan & Christakis, 2009; Flanagan, 2020; Laouris, 2012; Laouris & Michaelides, 2018). The SDD has been recently described and proposed as a problem structuring method (PSM) within the repertoire of community operational research (COR) tools (Laouris & Michaelides, 2018; Laouris & Romm, 2022a). For recent readings on PSMs within citizen science and soft methodologies, see Gregory & Atkins (2018), Jackson (2006), and Midgley & Rajagopalan (2021).

The methodology was implemented in its standard form in the face-to-face

meeting, i.e., all stages were conducted face-to-face over five day-long sessions. A strict sequence characterizes the steps of the SDD process, briefly illustrated in Figure 1.

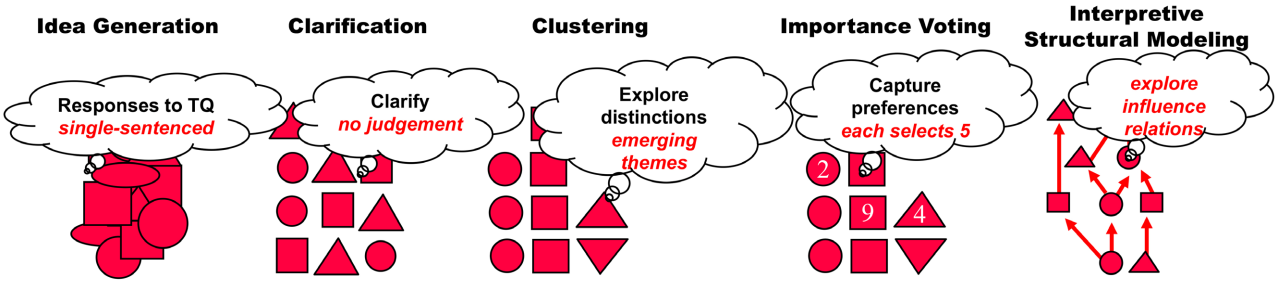

Figure 1. The typical steps of the SDD process.

Generation of responses: Each participant is invited round-robin to contribute one response at a time as a single statement, which should contain only one specific recommendation.

Clarifications: Once all the recommendations are collected, each participant clarifies the meaning behind theirs.

Clustering: The next step involves categorizing recommendations using a bottom-up approach. This process takes much longer than top-down clustering methods because it encourages discussion, which serves to deepen understanding, clarify and sharpen meaning.

Preference voting: Participants choose the five recommendations they consider most important (from the whole pool). Recommendations that receive two or more votes progress to the next stage.

Structuring: Participants are confronted with two recommendations at a time (to reduce cognitive load) and are requested to discuss them and decide whether one influences the other. In the example shown in Figure 2, the participants were confronted with whether implementing Recommendation #9, "Clear definitions/understandings of competences, skills, and experiences," would significantly support us in implementing #13, "Clear expectations of requirements."

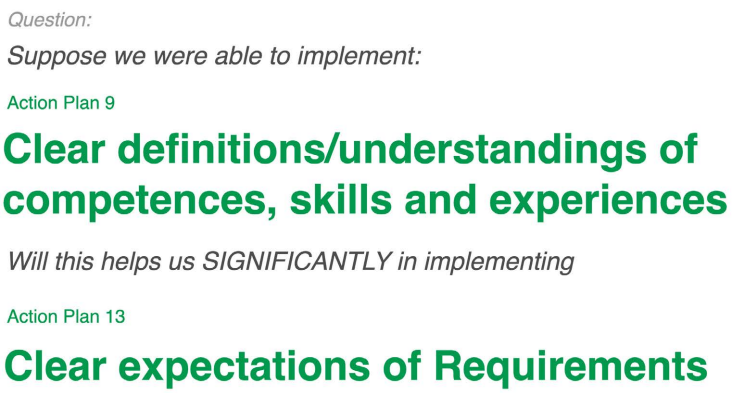

Figure 2. Example of the influence question presented to the participants.

A relation is established only when it is supported by a large majority (in this case, two-thirds) following a constructive debate. Applying Warfield's (1994) Interpretive Structural Modelling (ISM) algorithm reduces the number of questions the software will ask. The binary connections that the group establishes are used to build up an influence tree (see **Figure 4** & **Figure 5** in Results). The SDD is supported by specialized software, which renders applications self-documenting, thus significantly reducing cognitive overload for the participants. The ISM algorithm reduces the questions the software will ask for pairwise comparisons. The algorithm also places factors in levels according to their relative influence on factors above them. The SDDs reported here were supported by Cogniscope v.3 (https://www.futureworlds.eu/wiki/Cogniscope_Software).

Sometimes, time constraints do not allow organizers to structure all ideas with two or more votes. This was also the case in this project. A smaller group of eight participants conducted an online (Laouris & Christakis, 2007; Laouris, 2023; Laouris & Dye, 2024; Laouris & Metcalf, 2024) follow-up co-laboratory and added additional recommendations that received 3 and 2 votes.

2.1. Post-SDD Literature Scan

For the purpose of examining the relevance of our findings to the project management literature, we conducted a brief literature survey of evidence for selected ideas and relationships that ended up near the root of our Influence Map. We came to focus on Idea 9: "Clear definitions/understandings of competences, skills and experiences," Idea 2: "Not only theoretical but also practical," as well as the influence between Idea 9 and Idea 2. We examined what the frameworks of emerging paradigms in Project Management Theory may offer the process view of Validation System Design for the social sector, NGOs, and Civil Society Organizations. Specifically, we sought to draw distinctions between findings from the traditional PM and social sector and development literatures with respect to how clear definitions may or may not assist in accommodating the certification of practical competencies. We also looked for gaps in the literature to identify needed areas of research and theoretical development and where new, emerging paradigms of Project Management research may serve as better foundations for inquiry.

2.2. Framing: Competency Validation in Project Management

Competency validation is a critical yet underexplored area in project management research, particularly within civil society organizations (CSOs), where standardized competency frameworks remain underdeveloped. Traditional competency models, such as those proposed by Crawford (2007) and formalized in PMI's Talent Triangle (Project Management Institute, 2017), emphasize technical, leadership, and strategic skills. Đajić et al. (2024) propose a five-dimensions-scheme that includes technical skills, managerial competences, communication skills, management style-leadership, and technological and methodological competences. Adding an additional fifth dimension, Đajić et al. underscore the multidimensional

nature of project manager skills. However, all these models often fail to capture the participatory and stakeholder-driven nature of competency development required in mission-driven organizations.

2.3. Advancing Project Competency Theory through Stakeholder-Driven Validation

Recent research in project governance and competency development calls for more adaptive, context-specific validation frameworks that move beyond rigid competency lists to embrace stakeholder engagement and systemic complexity (Müller et al., 2019). Müller & Klein (2018) highlight that theoretical contributions to project management must define competencies and explain their systemic role within project ecosystems. Similarly, Locatelli et al. (2023) argue that project management research must engage with complexity, recognizing that competencies emerge from dynamic, socio-political environments rather than fixed institutional criteria.

Gutheil (2021) examined adaptive project management in the civil society sector. Reviewing twenty-one projects, he identifies what donors and implementers consider as adaptive practices and their perceived effects and obstacles. He examines what actors drive the adaptive agenda and which practices are considered as adaptive.

This study extends Structured Democratic Dialogue (SDD) as a theoretical and methodological approach to competency validation, offering a participatory alternative to top-down competency models. Unlike traditional models prioritizing expert-driven standardization, SDD captures interdependencies among competencies, identifies systemic leverage points, and aligns validation processes with organizational realities. This contributes to a growing body of work in adaptive project governance (Turner, 2006) and stakeholder-inclusive competency frameworks (Crawford et al., 2006).

The application of SDD to validate project management competencies addresses a fundamental gap: engaging stakeholders in validating competencies. Our approach ensures that competency frameworks are empirically grounded, contextually relevant, and actionable in dynamic project environments.

3. Results

The results were collected during five project events: 1) The 1st Transnational Working Meeting, organized by COOSS, took place virtually because of COVID-19 travel restrictions between the 28th and 29th of May 2020. The purpose was to review the existing competence recognition and validation systems applicable to adult learning CSOs in the project's partner countries. 2) The 2nd Transnational Working Meeting, organized by: EDUCULT, took place in Vienna, Austria, on the 6th and 7th of September 2021. During this event, training was offered for acquiring and upgrading relevant project management competences preceding the recognition and validation process. 3) The 3rd Transnational Working Meet-

ing, organized by Rightchallenge in Porto, Portugal, took place on the 22nd and 23rd of November, 2021. During this event, the partners discussed possible requirements for maintaining the "Project Manager" certification and validation of competences and exchanged ideas regarding good practices in adult education. 4) During the 4th Transnational Working Meeting in Copenhagen, Denmark, 23rd and 24th of March 2022, organized by Interfolk, the experts concluded their discussions regarding the examination system for the certification and validation of competences (including micro certification). 5) In the final meeting, 16th to 20th of May, 2022, in Paphos, Cyprus, the project's experts, together with other experts invited from across Europe, engaged in a structured democratic dialogue to identify the most valuable characteristics of a validation system for the EU projects' managers.

The outcomes of each meeting are presented separately in the following subsections.

3.1. Outcomes of 1st Transnational Working Meeting

The purpose of the first meeting was to exchange good practices in the field of adult education and prepare an initial draft of general recommendations regarding good practices related to existing solutions for recognition and validation of knowledge, skills, and competences as they might be available or applied today in adult learning CSOs across Europe. The conclusions are summarized in Table 1.

Table 1. Issues to observe and issues to avoid.

Prior learning	
Requirements	**What to avoid**
Different according to level of certification one applies for	Too much restrictive criteria of recruitment
Consider work experience in lifelong learning, or get it by job-shadowing, and/or serving as a partner	Limiting the offer of the certification provider
	Limiting the access for specific area of studies
Training offer	
Wide offer with tailored courses on CSOs needs	Too expensive courses
Provision of different level of certification is important	To not well-defined skills for each level
Low prices	
Blended methodology: on-line/in class training + some mentoring; some assignments supervised, etc.	
Clear target of beneficiaries	

Continued

Mixture of different approaches: workshops, lectures, discussions, project development) Possibility of financing: possibility to pay for the course from a project grant (i.e., Erasmus+ mobility applications to get grants for trainees) Certified trainers will be and added value	
Examination	
Different aspects have to be examined according to the level of certification - Basic level: more technical, written examination (multiple/closed questions, knowledge of simple procedures, use of management tools—i.e. how to fill in a budget form, a Gantt, etc.)1st level: training, written exam (multiple choice, closed question) - Advanced level(s): more experiencing examination, proofs from work experience, case study, etc. A certification should be offered, by each level	An examination solution including only an online or distant examination methodology
Continuing certification	
Important to have a continuing certification system Quantitative aspects have to be evaluated for renewal: proof of involvement in international projects (time-oriented) Possibility to attend workshops, courses to certificate skills Review after 2 to 3 years	High fees for the renewal

3.2. Outcomes of 2nd Transnational Working Meeting

During their 2nd meeting, the consortium identified new challenges and requirements for certifying and validating the role of "international project management." They concluded that the definition of roles, particularly in international project management, could be enhanced by involving individuals managing European projects in the CSO sector of adult education. They also recognized that standardizing the validation system while maintaining flexibility is crucial due to the varying job roles and experiences. Flexibility and appeal could be improved through micro-certification and adaptable job roles, but a system with too many levels may not be suitable given the often-blurred boundaries of job descriptions in CSOs.

Key points include:

- Collaborations with organizations and experts in certification, validation, and training can raise the system's reputation and facilitate entry.
- No single validation provider should monopolize the validation, certification, training, and examination process. Diversification and cooperation are essential.
- The European CSO sector requires not just a recognition and validation system but also access to further training. Exam preparation courses should be structured as training opportunities.
- Based on these insights, an initial draft for structuring a recognition and validation system for European project management in the CSO sector of adult education was developed.

The group agreed on the following structure:

- Main Category: Structured by three job roles—National Coordinator for European Projects, Coordinator for Entire European Projects, and Trainer/Mentor/Supervisor for EU Project Managers.
- Middle Category: Structured by content-related modules—e.g., Communication, Financing, Soft Skills, Strategy, Technical, CSO, Sustainability, etc.
- Micro Category: Assignment of necessary units/competencies to the respective modules.
- Certification is possible at all three levels with varying degrees of effort:
- Certification in a Job Role: Requires completing all necessary units/competencies from different modules.
- Certification in a Module: Requires completing all competencies/units assigned to that module.
- Micro-certification: Allows targeted certification and further training on a specific competence/unit.
- Further training courses for all competencies/units should be made available.

3.3. Outcomes of 3rd Transnational Working Meeting

The 3rd transnational working meeting focused on the requirements for maintaining the "Project Manager" certification and validating competencies. Experts discussed challenges and best practices in adult education, identifying two key difficulties: 1) Defining competence, which involves integrating knowledge, skills, and attitudes/awareness, is not always straightforward; 2) Accurately assigning competencies to specific job roles is complex. Key recommendations for maintaining certification included:

Merging skills to create a compact module with six competencies per category.

- Assigning merged skills to each leg of the PMC triangle module.
- Using the three-leg PMC triangle, with each axis representing one unit: Technical Competencies, Leadership Competencies, and Strategic and Business Management Competencies, each containing six competencies.
- Focusing on certification through training via a micro-certification system,

simplifying the certification model to 18 units (3 legs × 6 units).

- Introducing a new job role: Project Designer/Applicant/Fundraiser, recognizing the importance of successful EU project applications in a competitive environment.

3.4. Outcomes of 4th Transnational Working Meeting

At the end of the 4th Transnational Working Meeting, the experts concluded with their final recommendations. The resulting certification schemes which include 4 job roles and relevant qualification levels for: 1) Technical Skills, 2) Leadership Competences, and 3) strategic and Business Management competences, are documented in Appendices 1, 2, and 3.

3.5. Results of the SDD

The SDD took place over five days (16th to 20th of May, 2022) in Paphos, Cyprus. In addition to developing, fine tuning and prioritizing recommendations for international project managers competences recognition and validation for lifelong learning, the 5-day program aimed to train the participants in the application of the SDD methodology using experiential learning. The training was also designed to upgrade competences of the FAIE staff, already acquired from a previous special training in the context of mentoring and support. Lastly, the meeting served to strengthening international networking between the participants.

On the morning of Day 1, following some theoretical and practical background on SDD, twenty-four participants from Poland, Denmark, Italy, Austria, Portugal, and Cyprus—representing the six CSOs involved in the AER-V project—generated 46 responses to a "triggering question": "What would you consider as useful characteristics of a validation system for EU project managers?" This question was selected to stimulate the generation of recommendations for the recognition and validation of competencies for European project managers working in CSOs, which, if implemented, would contribute significantly to developing a comprehensive validation system for EU project managers.

On the second day, participants clarified the meaning of each recommendation, clustered them into categories (see below), and conducted a preference voting session. In the afternoon, they received training on how various SDD tools operate and how to use them in face-to-face or hybrid applications. The third day was dedicated to constructing and discussing the influence map, while the final two days were focused on training and reflection. The training sessions included discussions on the complementary roles of the facilitator, computer operator, and recorder, as well as guidance on preparing SDD Co-laboratory reports or scientific publications. Participants also reviewed how the ISM algorithm works behind the scenes to reduce the time needed to examine all possible pairs of ideas for their influence on one another.

3.5.1. Clustering the Factors

During this process, ideas get tested against each other in order to form groups.

Participants discussed between them whether a pair of ideas shared significant common attributes to justify putting them in the same category and whenever the great majority (in this case one third) agreed, they were clustered together. Thirteen clusters emerged as shown in Figure 3.

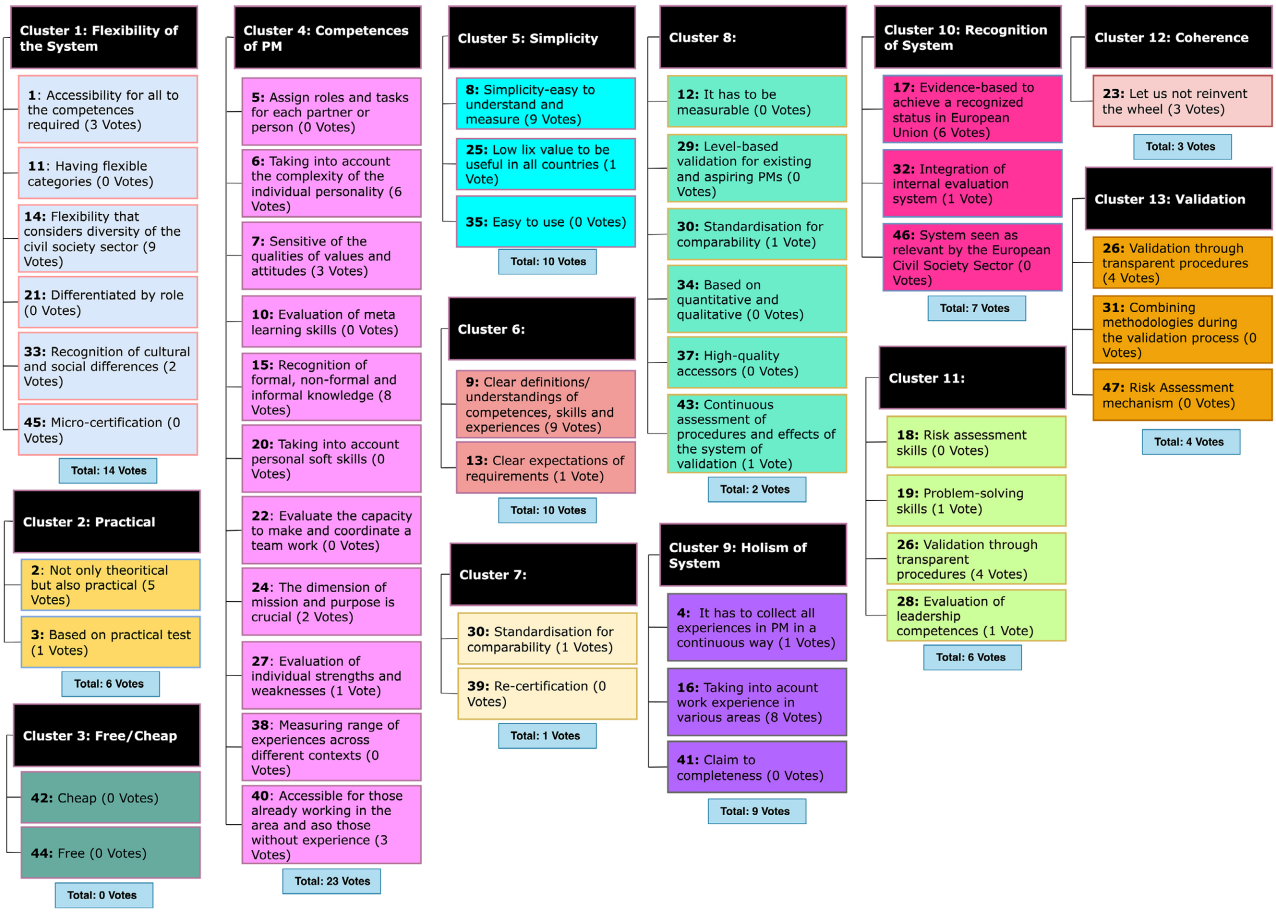

Figure 3. The 45 recommendations clustered in 13 categories.

3.5.2. Prioritizing Factors in Terms of Perceived Importance

During this phase participants voted on the factors they believed were a priority in achieving the goal of encouraging engagement and participation in democratic processes. Each participant was asked to select 5 different individual factors out of the 46. From a total cast of 90 votes, 25 received votes, while 15 received two or more votes. A scientifically defined parameter, Spreadthink (Warfield, 1995) or divergence (ST or D respectively), is a measure of disagreement. According to numerous studies, the average degree of Spreadthink is 44%. Spreadthink is defined as $(V - 5)/(N - 5)$ where N is the total number of ideas and V is the number of ideas that received one or more votes. In this case, Spreadthink was 47%, which is considered within the healthy range. Low or high values of Spreadthink signal either Groupthink (Janis, 2008; Warfield, 1994, 2003) or insufficient time provided for people to discuss and reach agreeable understandings. The ideas that received the 2 or more votes are displayed in Table 2.

Table 2. Ideas with two or more votes.

Idea	Votes	Description
8	9	Simplicity-easy to understand and measure
9	9	Clear definitions/understandings of competences, skills and experiences
14	9	Flexibility that considers diversity of the civil society sector
15	8	Recognition of formal, non-formal and informal knowledge
16	8	Taking into account work experience in various areas
6	6	Taking into account the complexity of the individual personality
17	6	Evidence-based to achieve a recognized status in European Union
2	5	Not only theoretical but also practical
26	4	Validation through transparent procedures
1	3	Accessibility for all to the competences required
7	3	Sensitive of the qualities of values and attitudes
23	3	Let us not reinvent the wheel
40	3	Accessible for those already working in the area and also those without experience
24	2	The dimension of mission and purpose is crucial
33	2	Recognition of cultural and social differences

3.5.3. Influence Mapping

The final stage of a typical SDD is the construction of an Influence Map using the ISM algorithm (Warfield, 1994, 2003). The process was described in Methods. The mapping was conducted in two stages: During the face-to-face co-Laboratory in Paphos, and during a follow-up session among a smaller group of eight individuals that took place on the 8th of July 2022. During the face-to-face session an influence tree comprising 4 levels was created for all ideas that received 4 or more votes Figure 4.

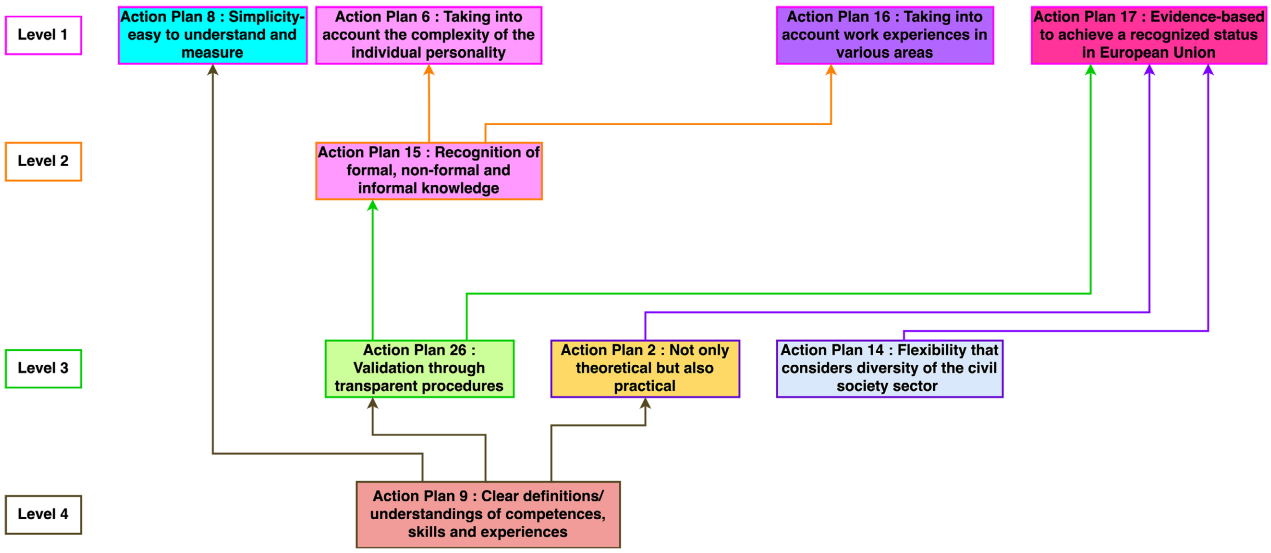

Figure 4. Influence MAP version 1 with nine ideas.

The Map was enhanced when participants considered also the influences of ideas that received 3 or 2 votes. Figure 5. depicts the extended final map, which comprises 7 levels.

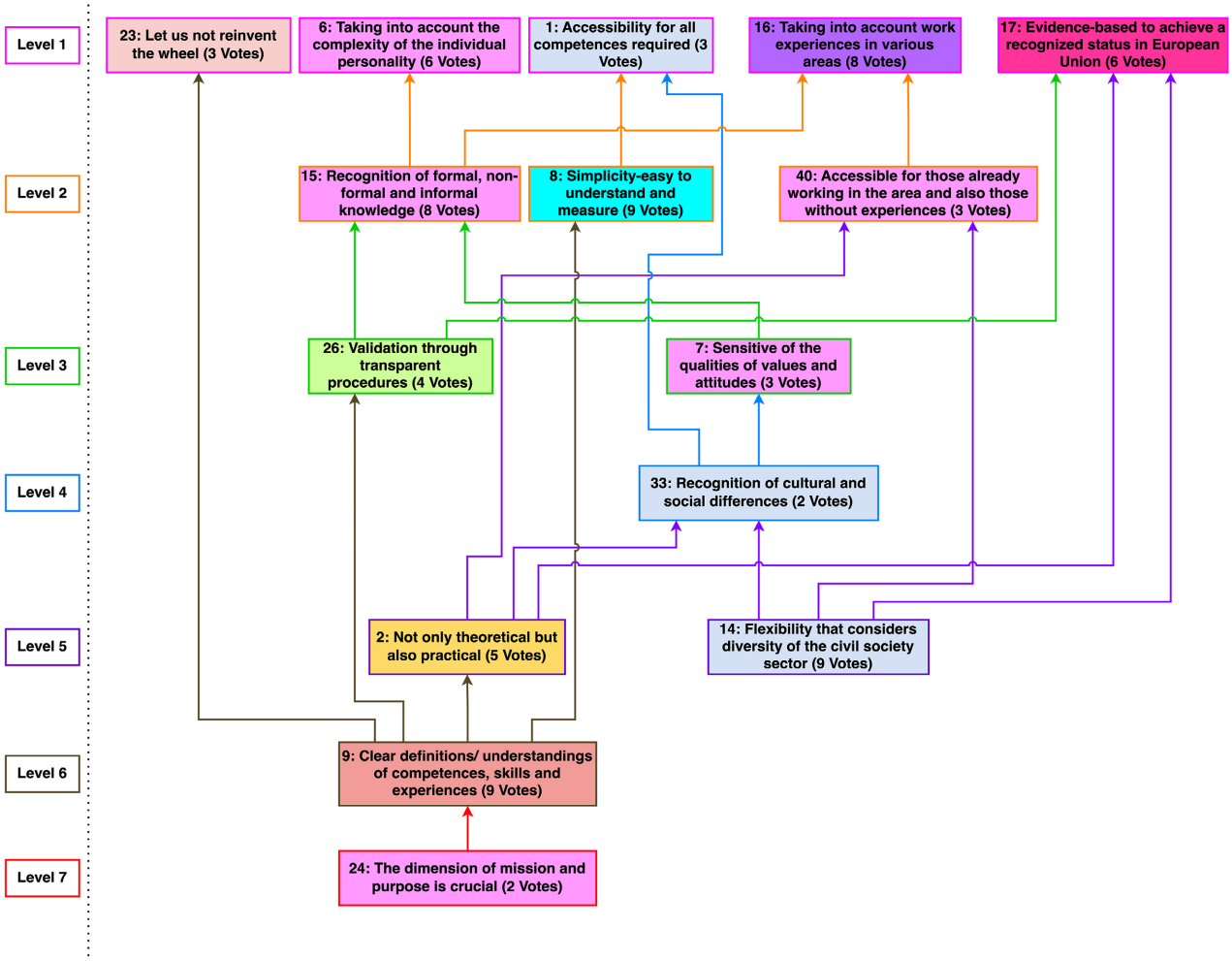

Figure 5. Extended Influence Map including 15 ideas.

According to the map, the most critical recommendation, identified by the collective wisdom of the participants as a top priority, is: "Idea 24: The dimension of mission and purpose is crucial." The experts clarified that they envision a validation system specifically designed for project management in the civil society sector (3rd sector), where a value-driven approach is essential for both NGOs and their volunteers. This contrasts with project management in the market sector (2nd sector), where economic rationality and profit are paramount, and the public sector (1st sector), where bureaucratic rationality prevails. Although many technical skills may appear similar across these three sectors, leadership competencies in the third sector require a stronger focus on the purpose and meaning of the activities. Likewise, strategic competencies must emphasize the importance of mission and purpose as key drivers to engage and motivate volunteers, who participate not as employees but as active citizens.

The full interpretation of the Map is conducted in the Discussion.

3.5.4. Literature Scan Regarding Key Findings

We sought to employ key findings from the SDD as a guide to pertinent literature in order to critique it. For the purpose of this paper, we summarize the finding of the prospective leverage of #9 on #2, which appear on levels 6 and 5 in the enhanced map respectively, in the context of the extant PM competency validation literature. Since this map is the result of dozens of strong majority assertions, it behooves us to concentrate resources which may be allocated to further rounds of inquiry into the asserted relations which are abducted to have the greatest leverage on the overall system of issues.

Our preliminary literature scan included both theoretical topics and empirical studies which seemed most pertinent to the influence of #9 on #2. Theoretical topics touched on the subjects of knowledge and definition processes, practice-based understanding, and the influence of contexts the latter of which is of special concern in development. Empirical studies addressed implementation of PM appraisal tools, certification processes, investigation of failed cases, and the roles of culture, power and resistance. While this is preliminary, we can posit an outline of some themes regarding findings of theoretical contributions and evidence as well as gaps in both.

Theme: Definition Process literature associate participatory definition processes with better implementation. It also suggests that "top-down" "clear" definitions often fail in practice. The gap seems to be in research on theoretical frameworks for participatory definition of competencies.

Theme: Knowledge Integration literature challenges the particular collective assertion of the final SDD #9 → #2 in asserting that practical knowledge must inform definitions. It further asserts that theoretical "clarity" is insufficient without practical wisdom in this domain. However, there seem to be few models for such knowledge integration. This finding in the literature suggests that #9 and #2 should be considered to be in a cycle of influence.

Theme: Power Dynamics literature suggests that clarity is strongly biased by power relations and that practical knowledge is frequently marginalized. There seems to be limited theoretical work on power dynamics in definition processes regarding PM competencies.

Summarizing severely the literature suggests the importance of balance between the definition process and practical knowledge though research literature and frameworks supporting this seem limited.

Our preliminary scan has built appreciation for arguments in the research literature supporting this relationship as well as counter-arguments and evidence the relationship may even be deleterious with respect to the social sector. In addition, it appears there are significant gaps in both theory and practice concerning #9, #2, and the influence of #9 on #2 with respect to the context of our concern. This suggests opportunities for innovative approaches to certification development in the social sector specifically in the adaptability and stakeholder engage-

ment in the appreciation of practical PM competencies. The evolution of theoretical frameworks underpinning approaches to the process of developing PM competency validation systems for the social sector is called for especially in the manner of defining practical knowledge.

Theoretical implications of this preliminary scan of the research literature, focused on #9 and #2 and their inter-relationship (from the SDD) include calls for new frameworks. We need integrations models for theory and practice, accommodations of power and knowledge dynamics in the definition process, ways to engage productive deliberation between local cultures and contexts with respect to universal standards. Consider the following theoretical questions.

- Who are the authorities? Challenge traditional notions of expertise, the espoused role of a priori clarification of definitions, and the limits of universal standards. We ought to look for or engage research regarding the validation of practical knowledge, assessing the validity of practical knowledge as compared to expertise and universal frameworks. Seek out or develop new validation approaches which demonstrate processes for legitimating multiple knowledge sources. Look at studies on how context determines validity.
- What are the power dynamics in knowledge creation? There is a need for knowledge frameworks which take power into account, acknowledge the politics around how competencies are defined, appreciate the multi-directional nature of knowledge flow, and recognize how context affects how competencies are defined.
- How can better orchestrate the relationship between practice and theory? We must develop definition processes which integrate practice and theory through co-creation feedback loops in new models of knowledge development.
- When the systems within which social sector organizations operate are complex how do we build a definition which can address that? The operating environment of organizations in the social sector often has unclear/fluid boundaries, the relationships involved are complicated, and this overall system is continuously emerging. This reality calls for new approaches to system definition which may draw on complexity theory.
- Where aspects of local cultural knowledge are as salient as guidelines in universal standards how do we develop validation processes? We need means to not only recognize culturally-specific knowledge but integrate it with international frameworks typically developed in other cultures.

There is a need for process models that include these types of questions in the development of PM competence validation processes in the social sector.

4. Discussion

The challenge of developing a system for the recognition and validation of knowledge, skills, and competencies for international project managers in CSOs within the adult education sector was first identified during the implementation of a previous Erasmus project2, led by the second author. Several members from

that project also participated in the AER-V follow-up project, during which the SDD reported here was conducted. Consequently, most of the participants in this SDD had ample opportunities to accumulate relevant knowledge and experience, either from the previous project or through the three preceding Transnational Working Meetings organized as part of the AER-V project, which is the focus of this publication. The first transnational meeting concentrated on reviewing existing competence recognition and validation systems applicable to adult learning CSOs. The second meeting offered participants training to enhance their project management competencies. During the third transnational meeting, the partners discussed the requirements for maintaining the "Project Manager" certification, validated competencies, and exchanged ideas on best practices in adult education.

The SDD co-laboratory provided an opportunity for CSO experts from across Europe to respond to the Triggering Question in a structured format, examine how their ideas influence one another, and collectively determine which ideas have the greatest leverage. The proposed recommendations have been organized into the Influence Map presented in the previous section, which illustrates how progress made in promoting or implementing the recommendations at the root (7th level) is anticipated to drive progress at the 6th, 5th, 4th, 3rd, 2nd, and 1st levels.

The recommendation identified as the most influential by the process is: "The dimension of mission and purpose is crucial" [Factor 24]. During the structuring process, the great majority of participants recognized a strong connection between Factor 24 and the other factors that received two or more votes. They saw a clear link between understanding the mission and purpose in the civil society organizations sector and the recommendations for validating and recognizing the competencies of European project managers in this sector. They believed that emphasizing the importance of mission and purpose would enhance the effectiveness of:

- Defining clear definitions/understandings of competencies, skills, and experiences [Factor 9];
- Building competence validation and recognition systems that encompass both theoretical and practical components [Factor 2];
- Including flexibility that considers the diversity of civil society [Factor 14];
- Recognizing cultural and social differences [Factor 33];
- Being sensitive to the qualities of values and attitudes [Factor 7]—particularly in measuring the intangible components of competence (understood as a combination of knowledge, skills, and attitudes/values/awareness), and
- Delivering validation through transparent procedures [Factor 26].

Such an approach would facilitate the development of a recognition and validation system for European project managers in the 3rd sector, ensuring the "Recognition of formal, non-formal, and informal knowledge" [Factor 15], characterized by "simplicity—easy to understand and measure" [Factor 8]—described in clear terms, including graphical and contextual aspects—and accessible to both those already working in the area and those without experience [Factor 40], thereby

accommodating various levels of recognition and validation.

Additionally, the system should account for "the complexity of individual personalities" [Factor 6], ensure "accessibility for all required competencies" [Factor 1], consider "work experiences in various areas" [Factor 16], and be "evidence-based to achieve recognized status in the European Union" [Factor 17].

Lastly, while developing such a system, it is essential to "not reinvent the wheel" [Factor 23], as similar certification schemes likely already exist. These should be considered and referenced to ensure coherence in the development of this system.

4.1. Systems Complexity and Project Management

Several authors have published about systems complexity and its relation to project management. Giotis (2012) was the first to propose utilizing structured dialogic design for advancing project stakeholder management. Stacey (Stacey et al., 2000), well-known in the field of complexity theory and its application to project management, published a book with his colleagues in which they explore the implications of complexity theory on management practices, including project management. The work of David Snowden (Snowden & Boone, 2007), a leading authority on complexity thinking and its application to organizational management, offers many insights into managing complex systems and their relevance to project management. Wysocki (2011) has written extensively about the impact of complexity on project success.

Cooke-Davies (2011) writes about the intricacies of managing complex projects and offers practical guidance for project managers. Kerzner (2017) has written on aspects of project management related to the systems approach and how systems complexity influences project outcomes as well.

While, however, these authors provide insights into the challenges posed by complex systems and offer strategies for managing projects within such environments, they did not delve deeply into the challenges of validating the knowledge, skills, and competences of project managers, which is an important aspect of ensuring their proficiency in the field.

Even though very few studies focus explicitly on the complexity of this task, some authors have addressed aspects, such as project manager competency assessment and certification processes, that are closely related. For example, the Project Management Institute (2017), a globally recognized organization that deals with project management, has developed the Project Management Body of Knowledge and offers diverse types of certifications.

To summarize, we can conclude that Turner (2009) has contributed notably to our understanding of project manager competencies. His work has highlighted the challenges and documented existing approaches for assessing project management competences. As mentioned in the introduction, Crawford's work (Crawford, 2021; Crawford et al., 2007) has also underscored the significance of competency-based approaches and the necessity for effective assessment methodologies. Finally, Müller's research pinpointed identifying key competencies required for project management success and developing assessment models (Müller et al., 2019).

4.2. SDD Applications for Project Management

The SDD methodology has been used in diverse contexts, such as creating shared community visions (e.g., Laouris & Romm, 2022b), identifying obstacles and threats collectively (e.g., Laouris et al., 2008; Laouris, Michaelides et al. 2009; Laouris et al., 2011), and developing action plans and roadmaps (e.g., Laouris, Erel et al., 2009; Laouris et al., 2017; Roe et al., 2011). Beyond its efficacy in helping groups of stakeholders with diverse or conflicting viewpoints reach a consensus on barriers to current events or planning actions for improvement, SDD is also acknowledged for its capacity to promote learning (Laouris et al., 2010; Laouris, 2014) and to empower participants as individual and collective agents of change (Laouris et al., 2022; Romm et al., 2022). Recent advances allowing SDD to be carried virtually (Laouris, 2023; Laouris & Christakis, 2007; Laouris et al., 2011; Laouris & Dye, 2024; Laouris & Metcalf, 2024) have paved new doors for its use in project management and beyond. In the post-SDD assessment carried out with the participants of the process described in this paper, the participants underlined the need for the dialogues and discussions that took place during the process to deepen learning and refine their knowledge of every recommendation.

4.3. A Preliminary Critique of a Key Finding

We bring our focus now to a critique, drawing on a cursory scan of the literature, of a key finding resulting from the final SDD. This is our participants concern with the role of clarity of definitions (#9) with respect to the appreciation of practical knowledge (#2) in a validation system in the social sector. In observation that NGO projects tend to have higher than desirable failure rates (Golini et al., 2015) we consider the prospect which a focus on this deep influence in the network of concerns may have.

There is some research literature which supports the role of a priori clarity (#9) in appreciation of PM competencies characteristic of the social sector (#2) (i.e., Edwards & Fowler, 2002). There is also some research literature regarding praxis in Development Management (related to #2) (i.e., Uphoff, 1987; Chambers, 1997). There is even some research literature regarding the Influence of definitional clarity (#9) on the appreciation of practical competencies (#2) found in the development literature (for example Fowler, 2013). Fowler Documents how clarity in development competencies enables better practice and espouses the importance of clear frameworks for practical capacity building. Similarly, in NGO Management Research (Lewis, 2004) espouses how clear understanding of required competencies shapes practice and links competency frameworks to practical effectiveness. There is even some empirical evidence regarding this influence relationship in the social sector.

However there seems to be limited theory about-How social sector "competencies" translate to practice, the nature of influence mechanisms specific to civil society contexts, and the accommodation of cultural factors in competency-practice relationships. Some areas seem largely missing such as, the social impact of com-

petency clarity, the criticality of value-based practice enablement (#24, our deepest driver), and the engagement of community-centered competency frameworks.

There are counter examples of the positive aspect of the influence link of our focus (#9 → #2). That is, it is not always advantageous to start with "clear" definitions because the social sector has idiosyncracies. These include the need for practical knowledge, the need to balance power and who defines it, the existence of corruption that the social sector must confront and improvise around, the diverse cultural settings of NGOs, and poor access to resources.

There is a compelling need for an adaptive approach to defining competencies as well as the process of developing certification systems for the social sector. For example, with respect to working with power dynamics in standardization we should follow the evolution of the development branch of the PM literature such as indicated by Ika & Hodgson (2014).

4.4. Theoretical Contributions: Advancing Project Competency Validation

Our work advances project management research by demonstrating how stakeholders' engagement through SDD can support the development of more relevant competency validation frameworks. Because traditional project management competency models (such as those defined by Crawford (2007) and the PMI Talent Triangle (Project Management Institute, n.d.) rely primarily on top-down standardization to provide general competency structures, they do not account for competencies that evolve dynamically in different organizational settings. This weakness is particularly important for the CSO environment because projects are mission-driven and require context-specific skills.

In sum, our work extends project competency theory in several ways: First, unlike conventional frameworks that treat competencies as discrete requirements, the SDD approach reveals relational structures among competencies. Systemic interdependencies reveal which capabilities support others, thus highlighting leverage points. Second, we propose that competency validation should be co-constructed with practitioners in line with modern participatory governance principles (Locatelli et al., 2023). We propose that a stakeholder-driven definition ensures that competency frameworks always align with real-world project demands. Finally, in line with contemporary guidelines for more adaptive project management research (Gutheil, 2021; Turner, 2006; Van der Waldt, 2011), our work demonstrates how deliberative methodologies can generate competency frameworks that are dynamic rather than static. These contributions reinforce the need for iterative competency frameworks that adapt to emerging project complexities, stakeholder expectations, and organizational learning cycles.

4.5. Practical Contributions: Implications for Project Managers and Policymakers

Beyond theoretical advancements, our study provides practical implications for project managers, policymakers, and organizations implementing competency

validation frameworks, which are discussed in the next paragraphs.

The findings support a move toward sector-specific competency validation models, particularly for civil society organizations and mission-driven projects, where traditional project management certifications may not be fully applicable.

The results also demonstrate that participatory validation approaches may be more effective. The engagement of those affected in shaping competency frameworks aligns with broader trends in participatory project governance (Müller et al., 2019).

CSOs can utilize our work to design novel competency-building pathways, ensuring that project managers develop the right skills at the right time based on stakeholder-defined priorities rather than externally imposed criteria.

Finally, our methodological approach can inform international and national competency certification initiatives, ensuring that project management competency standards remain responsive to evolving industry and governance demands.

To summarize, these findings reinforce the argument that competency validation should not be a static assessment but a continuous, iterative process incorporating stakeholder perspectives and systemic insights.

5. Limitations and Future Research Directions

The study provides a structured, stakeholder-driven approach to the validation of competences in project management. Nonetheless, the authors acknowledge that several limitations may be present. First, the findings are based on a specific project management context, i.e., CSOs, which may have unique competency needs that cannot necessarily be generalized to the corporate or, public-sector or agile project environments. Second, although the application of SDD in connection with the Multi-Criteria Decision Analysis (MCDA) offers a systematic and participatory validation method, it might still suffer from stakeholder biases. For example, the scoring of feasibility, impact, and likelihood is subjective. Future research could explore alternative criteria to enhance robustness.

Additionally, the scalability of this approach to large-scale or multinational project environments is doubtful. The identification, selection and engagement of the relevant stakeholders in such large-scale environments is not trivial. Since competency frameworks vary across industries and governance models, future studies should assess how SDD-driven competency validation adapts to different organizational structures, including private-sector project teams, large infrastructure projects, or portfolio management offices. Comparative studies could provide insights into how contextual factors (e.g., regulatory requirements, team composition, leadership structures) affect the prioritization of competences.

The above limitations pinpoint possible future research directions. First, the methodology could be tested in other project environments to examine its applicability across industries and organizational scales.

Longitudinal studies constitute a further possible direction for research. For example, studies could assess how required competencies change in response to

shifting civil society priorities or needs, emerging technological advancements, or changes in regulations and policies. Third, as mentioned above, our framework could integrate additional quantitative metrics. Finally, as a fourth proposal, the policy implications of our model could be further explored. Researchers could, for example, assess how stakeholder-driven approaches (like SDD) could be utilized by industry-wide certification models. In particular, professional bodies such as the PMI and IPMA could consider our approach when developing frameworks that are responsive to evolving project management challenges.

6. Conclusions and Final Recommendations

During a final meeting, the Consortium has reviewed the learnings gained from the previous Erasmus project, the three transnational meetings, and the SDD, and came up with the 14 recommendations documented in Table 3 to guide the design of a validation and recognition system for the European project managers working in CSOs.

Table 3. Fourteen recommendations to guide the design of a validation and recognition system for the European project managers working in CSOs.

#	Recommendation
1	Acknowledge that the dimension of mission and purpose is crucial in the 3rd sector.
2	Define clear definitions/understandings of competences, skills and experiences.
3	Build competence validation and recognitions systems encompassing not only theoretical but also practical part of a competence.
4	Allow flexibility that considers diversity of the civil society.
5	Recognize cultural and social differences.
6	Be sensitive of the qualities of values and attitudes.
7	Ensure validation through transparent procedures.
8	Ensure recognition of formal, non-formal and informal knowledge.
9	Ensure simplicity to understand and measure.
10	Allow accessibility for those already working in the area [of civil society] and also those without experience.
11	Take into account the complexity of the individual personality [of the candidates to validate and recognize their competences].
12	Take into account work experience in various areas.
13	Have the recognition and validation system evidence based to achieve recognized status in the European Union.
14	Include references to the already existing, similar/relevant recognition and validation schemes to avoid' reinventing the wheel".

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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Appendix 1: Six Units to Evaluate Technical Skills

The PMC Triangle		Job roles			
Technical competences, Leadership competences, and Strategic & business competences		Partner & national coordinator	Project developer & designer	Project coordinator & manager	Mentor
		Competence levels	Competence levels	Competence levels	Competence levels
1. Technical skills - 6 units		1. Technical skills - 6 units			
1	**English language competences**	x	x	x	x
	i.e. competences of reading, writing and speaking English as the common foreign language in European cooperation, incl. knowledge of and ability to properly apply the terminology related to adult education/lifelong learning, to the civil society organisations context and the European projects' calls and management.	Competent	Proficient	Competent	Proficient
2	**Planning and designing the project**		x	x	x
	i.e. An ability to: design and express a project idea in a structured manner answering clearly named needs; choose a proper co-funding programme; find, chose and engage co-applicants; plan and agree with co-applicants on the disposition of the key project tasks and responsibilities, according to the involved partners expertise, concluded in designing and submitting a project application to a specific call for proposals.		Proficient	Competent	Proficient
3	**Project scheduling, budgeting & financial management**	x	x	x	x
	i.e. Ability to: plan the break down structure of the work programme according to clearly defined goals set as SMART (Specific / Measurable / Achievable / Realistic / Timely defined); plan the key activities and outputs; estimate the time needed for implementing each task; estimate and assign relevant costs for each task and output; designing the corresponding budget structure in a way making it available to monitor the execution of the budget; manage the budget spending, accounting, internal control and financial reporting in accordance with the project plan.	Competent	Proficient	Proficient	Proficient
4	**Coordinating the teamwork and internal communication**	x	x	x	x
	i.e. Ability to: put the workplan into practice by creating task lists, nominating responsibilities, supervising the execution of tasks with clear procedures for oversight, time management and needed flexibility; plan and implement an effective, assertive and motivating communication with the project team that defines What, Why, Who, Where, When and How, incl. mastering appropriate the ICT tools.	Basic	Competent	Proficient	Proficient
5	**Dissemination strategy planning and realising**	x	x	x	x
	i.e. Ability to plan, revise/update if needed, and execute the dissemination strategy in accordance with the clearly named beneficiaries/target groups and stakeholders, including defining the specific messages, tools and channels to effectively reach them with information, incl. appropriate use of the social media.	Competent	Proficient	Proficient	Proficient
6	**Evaluation strategy planning and realising**	x	x	x	x
	i.e. Ability to plan, conduct and report progress and accuracy of reaching the project goals, defining evaluation methodology including both process evaluation, impact evaluation and sustainability of the project results, incl. procedures of designing online evaluation tools.	Basic	Proficient	Proficient	Proficient
		5	6	6	6

Appendix 2: Six Units to Evaluate Leadership Competences

The PMC Triangle		Job roles			
Technical competences, Leadership competences, and Strategic & business competences		Partner & national coordinator	Project developer & designer	Project coordinator & manager	Mentor
		Competence levels	Competence levels	Competence levels	Competence levels
2. Leadership competences - 6 units		2. Leadership competences - 6 units			
1	**Communication in the international CSO context,** i.e. the ability to communicate the project vision and meaning of the activities to stakeholders in a international civil society context, including intercultural competences	x Competent	x Competent	x Proficient	x Proficient
2	**Motivation and Influencing,** i.e. to have the needed empathy to understand and motivate the project team and key stakeholders with clear goals and empower them to put their mark on the work, which reinforces the cohesion and co-ownership.	x Competent		x Proficient	x Proficient
3	**Improvisation and agility,** i.e. to be able to act agile when needed and to improvise in unforeseen situations to ensure progress and effect by following new openings, possibilities and the flow of the context.	x Competent		x Proficient	x Proficient
4	**Team building and delegating of project tasks,** i.e. to coordinate the teamwork with clear values and goals and promotion of ownership that can strengthen the mutual responsibility and makes it easier to delegate the varied tasks to the team.	x Competent	x Competent	x Proficient	x Proficient
5	**Moderating and organising meetings and idea workshops** i.e. to have the ability to moderate virtual, hybrid and life meetings, and to organise idea workshops with brainstorming or brain-writing with the aim to qualify the project idea or to design solutions to unforeseen problems.	x Competent	x Competent	x Proficient	x Proficient
6	**Peer-to-peer counselling and conflict resolution** i.e. to provide counselling and advice on a peer-to-peer level in a cross-border and multilateral context, including to mediate in challenging situations and secure conflict resolutions.	 	 	x Proficient	x Proficient
		5	3	6	6

Appendix 3: Six Units to Evaluate Strategic and Business Management Competences

The PMC Triangle		Job roles			
Technical competences, Leadership competences, and Strategic & business competences		Partner & national coordinator	Project developer & designer	Project coordinator & manager	Mentor
		Competence levels	Competence levels	Competence levels	Competence levels
3. Strategic and Business Management competences - 6 units		3. Strategic and Business Management competences - 6 units			
1	**Acting in CSO environment providing adult education** i.e. knowledge of the mission, needs, challenges, conditions, legal situation and history of the CSO sector of non-formal and informal adult education in your own country; ability to act in a CSO environment.	x basic	x Proficient	x Competent	x Proficient
2	**International and multilateral networking in the CSO field** i.e. knowledge about the European CSO sector; ability to develop a strong European network in the CSO sector and to find and select appropriate new partners as well as to promote your own organisation as a future partner; ability to create synergies between international and national projects.	x basic	x Competent	x Competent	x Proficient
3	**Applying for European funding programmes** i.e. knowledge about the relevant funding programmes and an insight in the specific demands these programmes have for the project plan and the specific application design; ability to apply to the programmes.	x basic	x Proficient	x Competent	x Proficient
4	**Needs analysis and risk management** i.e. to know how to analyse the needs for the project idea and to meet the needs and to involve the key stakeholders, to clarify the strengths, weaknesses, opportunities and threats of the project and manage the risks.	 	x Proficient	x Proficient	x Proficient
5	**Legal and regulatory compliance** i.e. to ensure that the project complies with relevant European laws, policies, and regulation as well as that the tools for communication of the project are applied within the legal framework.	x basic	x Proficient	x Proficient	x Proficient
		4	5	5	5