



Review

A Review About the Effects of Digital Competences on Professional Recognition; The Mediating Role of Social Media and Structural Social Capital

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Abstract

This article investigates how digital competences contribute to the production of social capital and professional recognition through a systematic review of international literature. Drawing on 62 peer-reviewed articles indexed in Web of Science, Scopus, and ERIC, the review identifies the most frequently mobilized theoretical frameworks, the predominant types and sources of recognition, and the associated dimensions of social capital. The findings reveal a growing emphasis on communicative and network-based digital competences-particularly digital communication, information management, and virtual collaboration—as key assets in professional contexts. Recognition is shown to take predominantly non-material, extrinsic, and visibility-oriented forms, with social media platforms emerging as central sites for the performance and circulation of digital competences. The results indicate that social media proficiency has become a central determinant of social recognition, favoring individuals who possess not only digital fluency but also the ability to strategically develop and mobilize their networks. This dynamic reframes signal theory in light of today's platformed ecosystems: recognition no longer depends increasingly on one's capacity to render competences legible, visible, and endorsed within algorithmically mediated environments. Those who master the codes of visibility and reputation-building online are best positioned to convert recognition into social capital and professional opportunity.

Keywords: digital competences; skills; social capital; professional recognition



Academic Editor: Sandro Serpa

Received: 2 May 2025 Revised: 24 June 2025 Accepted: 27 June 2025 Published: 9 July 2025

Citation: De la Hoz-Ruiz, J.; Chaker, R.; Fernández-Terol, L.; Olmo-Extremera, M. A Review About the Effects of Digital Competences on Professional Recognition; The Mediating Role of Social Media and Structural Social Capital. Societies 2025, 15, 194. https://doi.org/10.3390/soc15070194

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1. Introduction

Advanced digital competences refer to a heterogeneous set of skills, encompassing not only the technical ability to operate digital devices and navigate communication systems but also the capacity to mobilize these tools strategically in complex informational and social environments [1]. These competences do not merely relate to instrumental proficiency; they support situated forms of problem-solving, adaptive communication, and innovation within contemporary work ecologies [2,3]. Hence, in this research, we will use the term "skills" as a subdimension of "competences," especially when we refer to the latter's "knowhow" and demonstrable aspect. In this regard, it emphasizes their foundational role in those competences in the development of digital literacy, increasingly recognized as a

Societies **2025**, 15, 194 2 of 22

structural condition for meaningful engagement in both the digital economy and civic life [4].

The increasing embeddedness of digital technologies across professional and personal domains reinforces the centrality of these competences. According to the World Bank [5], digital competences are among the most critical assets for the future workforce. Their importance extends beyond employability and career progression, contributing as well to broader dynamics of inclusion. Digital fluency, in this sense, facilitates access not only to work, but also to diverse configurations of knowledge circulation, social connectedness, and life opportunities [6].

Within the digital economy, the ability to make digital competences visible in professional contexts functions as a vector of social and career differentiation. As argued by [7], digital proficiency increasingly serves as a marker of employability and a lever for professional mobility. Its formal recognition can expand access to collaboration, mentoring, and other relational resources likely to enhance career advancement [8]

To further examine how digital competences, intersect with the production of social capital, it is useful to revisit, who analyzes the ways these competences are acknowledged and valued within different professional environments. Following Bourdieu [9], social capital may be understood as the set of resources embedded in networks of relationships and social affiliations, which individuals can mobilize to pursue personal or professional goals. Accordingly, exploring how digital competences are converted into social capital through professional recognition sheds light on the interplay between competence, legitimacy, and equity in the digital age [10–12].

Based on these theoretical contextual premises, the purpose of this study is to explore how digital competences are transformed into social capital through professional recognition. This research aims to identify the mechanisms by which professional environments acknowledge and value digital competences and how this recognition enhances individuals' social networks and career opportunities. In other terms, local dynamics and patterns of recognition, such as in the workplace, give way to more global, i.e., at a meta-level, social dynamics and processes, re-organizing and selecting which kind of competences should be advantaged and nurtured. By examining these processes, the study seeks to provide a deeper understanding of the role of digital competences in personal and professional development. This upward causation pattern [13](from situations towards context) draws on Elias' [14] sociological approach of social dynamics and transformation. His relational and configurational paradigm helps explain how recognition processes at a local level contribute to transform and shape societies during a historical sequence, taking into account the existing technological level of progress. In our case, it concerns the ongoing transformation of the labor market.

As such, this study is relevant in the context of the ongoing digital transformation impacting all sectors of society. The findings will contribute to the existing body of knowledge on digital literacy and its implications for career advancement and social inclusion. Moreover, the insights gained from this research can guide educational institutions, policymakers, guidance counselors, and organizations in developing strategies to better support the acquisition and recognition of digital competences.

2. Theoretical and Empirical Background

The theoretical and empirical background is intended not merely as a theoretical literature review but as a positioning device that articulates how digital competences function as a bridge between individual dispositions and social recognition. By grounding our analysis in Bourdieu's theory of capital and complementing it with a situated understanding of cognition and competence [15,16], we are able to trace how digital competences become

Societies **2025**, 15, 194 3 of 22

valuable, not in and of themselves, but through social legitimation and contextual enactment. This dual lens allows us to engage with ongoing debates about digital inclusion, employability, and recognition in contemporary labor markets. Furthermore, it highlights a critical gap in the literature: while many studies explore digital skills acquisition, fewer examine the sociocultural and relational mechanisms through which these competences are rendered visible and meaningful in workplace contexts. Our study addresses this gap by focusing on the micro-processes through which digital dispositions are transformed into social and symbolic capital. This approach offers significant implications for both educational policy and organizational practice, especially in contexts where digital equity and recognition remain unevenly distributed.

2.1. From Digital Competences to Digital Capital

In the context of current research, digital competences are seen as a contemporary manifestation of cultural capital, a notion originally developed by Bourdieu [9]. These competences refer to the use of digital devices, communication tools, and networks to access and manage information efficiently. The situated approach to competences, advocated for by authors like Wenger [17] and Suchman [15], suggests that competences do not exist in isolation but must be actualized in specific situations to be effective and valuable, and, as such, digital competences, from the ecological and situated approach, can be considered as digital dispositions [18,19]. Following the theory of capitals [9], digital capital—like cultural capital—may be applied across different fields and can manifest in three distinct forms: objectified capital (material access to digital resources), embodied capital (knowhow, usage patterns, internalized models, etc.), and institutionalized capital (referring to formal recognition in the form of diplomas, exam success, and so forth). The notion of digital capital, understood as a modality of cultural capital, has also been mobilized to address more general uses of digital tools [10,20–22].

In this research, we use the definition of digital competences proposed by D'Costa [23]: "A range of abilities needed to use digital devices, communication tools, and networks to access and manage information. These include both basic digital literacy and more advanced competencies" [24] (p. 10). Hence, we adopt a definition of digital competences that builds on the broader concept of digital literacy. Rather than limiting digital competences to technical skills, we consider them as encompassing the capacity to function, socialize, and work effectively within digitally mediated environments. This approach reflects a holistic understanding of digital literacy as the ability to not only operate digital tools, but also to critically navigate, communicate, and participate in the digital world [25]. As such, digital competences include both foundational digital skills and higher-order abilities required to engage meaningfully in contemporary socio-technical contexts [23,24].

However, a structural approach to the acquisition of digital capital may be fruitfully complemented by a situated perspective—that is, one that accounts for the sociocultural contexts in which cultural practices emerge. These contexts may stem from school-based experiences or from family practices. Hence, digital competences, translated into digital capital, are developed not only in the classroom or formal training but also through everyday and social experiences. This situated approach implies that digital competences must be revealed in workplace contexts to be transformed into other types of symbolic capital, such as economic capital. Therefore, an ecological context is essential to allow these digital dispositions to manifest and be recognized by peers, supervisors, and other stakeholders [4,26].

In the context of current research, it is necessary to explain how digital competences are classified to understand their impact on professional recognition. Classification helps in identifying specific competences required in various contexts and how they contribute

Societies **2025**, 15, 194 4 of 22

to the transformation of digital competences into other forms of symbolic capital, such as economic and social capital. This understanding aids in effectively leveraging digital competences in both formal and informal environments.

2.2. Social Capital and Professional Recognition

Previous sociological research has shown that for competences to translate into actual professional outcomes within workplace contexts, they must first undergo a process of social recognition both from institutions and from peers. In other words, the activation of cultural capital in the form of competence remains contingent upon its legitimation through collective acknowledgment. For cultural capital to be converted into economic capital, individuals must draw upon social capital as an intermediary resource. Cultural capital, in this sense, is not a fixed or static asset but a fluid and contextual construct that encompasses skills, competences, and dispositions, recognized either through material rewards or symbolic validation [27].

Moreover, building on Granovetter's [28] seminal concept of the "strength of weak ties," it becomes evident that the activation of digital competences into professional opportunities often depends on access to diverse and loosely connected social networks. These weak ties are more likely to serve as bridges to new information, resources, or job prospects than dense, homogenous networks. In digital contexts, such ties may manifest through social media connections, online communities, or professional platforms where visibility and endorsement play a key role in recognition processes.

Accordingly, the professional recognition of advanced digital competences is strongly mediated by individuals' position within social networks. These networks operate not only as spaces of recognition but also as vectors for accessing further opportunities, whether in the form of collaboration, mentorship, or career advancement [29]. As [30] suggests, social capital refers to the set of resources embedded within social networks and relationships, which may be mobilized for individual or professional benefit. The transformation of digital competences into social capital thus depends largely on the mechanisms of professional recognition that confer legitimacy upon them [31].

2.3. Digital Competences for Improving Social Capital Through Professional Recognition

If we focus on how exactly this digital capital, in the form of digital competences, is transformed at the micro-level of a workplace or social situations, one must adopt a situated account. For instance, some authors [15–17] situated perspectives on competences are central to understanding contextualized digital skills and digital literacy. This transformation plays a key role in the comprehension of the dynamics of the modern labor market and the importance of professional recognition in career development.

Studies have shown that digital competences are essential for social and professional inclusion, more specifically for participation in the digital economy and society [8]. However, more research is needed to better understand the social conditions under which digital dispositions are recognized by peers and/or by a vertical hierarchy structure in workplace contexts. More broadly, this gap in the literature highlights the need for additional studies examining how digital competences are valued and transformed into social and economic capital [32]. In line with Granovetter's theory [28], integrating this perspective helps to further understand how social capital operates as an intermediary for the conversion of digital dispositions into symbolic or economic capital.

This study has the potential to inform research in educational technology from the perspective of digital competences and lifelong learning. Additionally, it can contribute to workplace studies by providing a better understanding of situated development of competences and their local recognition processes. Some authors [15,33] the importance

Societies **2025**, 15, 194 5 of 22

of understanding context and interactions in skill development in workplace studies. By exploring how digital dispositions are transformed into social capital through professional recognition, this research can provide valuable insights for policies and practices that promote digital literacy and competency across various sectors.

3. Research Questions

Based on the preceding conceptual framework and methodological positioning, this article addresses the following research questions:

 RQ1: What are the most commonly mobilized theoretical frameworks for analyzing how digital competences are transformed into social capital and professional recognition?

The purpose of RQ1 is to identify and map the conceptual tools most frequently used to examine the relationship between digital competences, recognition processes, and the generation of social capital. Understanding which theoretical frameworks are mobilized (whether sociological, organizational, or communication-based) is essential for clarifying how this relationship is operationalized in empirical studies. In other words, RQ1 does not merely seek to catalog theories but to grasp how they structure the analytical lens through which recognition and capital accumulation are understood and measured. This step allows for a more fine-grained understanding of the mechanisms, dimensions, and mediating factors that connect digital competences to professional legitimacy. Moreover, answering RQ1 lays the conceptual groundwork for RQ2:

 RQ2: In what ways do digital competences shape processes of social and professional recognition?

Answering RQ2 will help us reveal the assumptions and logics embedded in current literature, thus enabling us to formulate a more precise and empirically grounded analysis of the dynamics at play in contemporary recognition systems in our digital socioeconomic system.

4. Methodology

A systematic literature review was conducted following the methodology outlined by Kitchenham and Charters [34], structured in four phases: identification, screening, inclusion, and appropriateness. This process was further guided by the PRISMA 2009 framework [35,36], which ensures transparency in selection and inclusion decisions. The initial identification phase involved database searches in Scopus, ERIC, and Web of Science using keywords such as "digital competences," "digital capital," "social capital," and "professional recognition." The screening phase applied exclusion criteria (e.g., non-peer-reviewed publications, articles not in English or Spanish, or irrelevant focus) and inclusion criteria (studies published between 2005 and 2024, addressing digital competences in education or workplace contexts). In the third stage, full-text articles were evaluated for conceptual clarity, theoretical grounding, and empirical relevance. Finally, studies were assessed for appropriateness based on their contribution to understanding the transformation of digital competences into symbolic and social capital. This approach ensures methodological rigor while enabling a thematic synthesis of findings relevant to our research objectives.

4.1. Identification and Screening

In this document, Web of Science (WOS), Scopus, and ERIC have been used as data sources. These were selected for the following reasons:

 Web of Science (WOS): Recognized as one of the most authoritative and comprehensive platforms for scholarly literature, Web of Science indexes a wide array of Societies **2025**, 15, 194 6 of 22

- peer-reviewed journals through its Social Sciences Citation Index (SSCI) and Science Citation Index (SCI).
- Scopus: Scopus is an internationally renowned bibliographic database, comparable in scope and rigor to the SCI.
- ERIC (Education Resources Information Center): ERIC stands as a leading specialized database in the field of education. It is distinguished by its broad coverage of scholarly and professional resources, including peer-reviewed journal articles, research reports, conference proceedings, policy briefs, and doctoral dissertations.

The following key terms were integrated into the systematic review and used in the search formula: (AB="Digital"ORAB="ICT"ORAB="Information and communication technology")AND(((AB="Professional"ORAB="Labor"ORAB="Labour"ORAB="Job"OR AB="Workplace"ORAB="Employment" ORAB= "Organizational"ORAB="Profession"OR AB="Institution"ORAB="Business"ORAB="Market")AND(AB="Recognition"ORAB="Prestige" ORAB="Reputation"ORAB="Esteem"ORAB="Equality"ORAB="Care"OR AB="Respect" ORAB="Love"ORAB="Status"ORAB="Award"ORAB="Compensation"OR AB="Acknowledgement"))AND(AB="Socialcapital"ORAB="Professionalcapital"OR AB="Symbolic Capital")). After removing duplicate citations, 201 articles were extracted at this early stage. The words used in the search equation are general terms related to the focus of the study accompanied by their related terms in the area. The search was conducted on 15 March 2023, after which articles underwent the process of reading, selection, and analysis. Figure 1 shows the search and selection process for the reviewed studies.

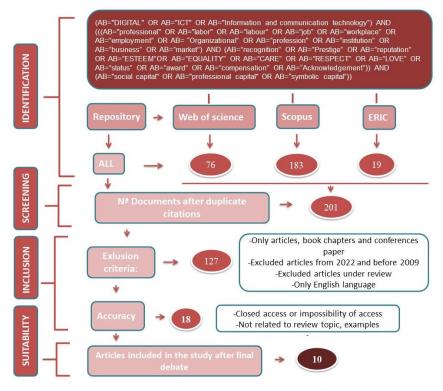


Figure 1. Search and selection process of studies to be reviewed.

4.2. Inclusion and Eligibility Criteria

After specifying the search terms mentioned above, the search was further narrowed by applying the following criteria, as described in Table 1, resulting in a final corpus of 77 articles.

Societies **2025**, 15, 194 7 of 22

Table 1. Inclusion and exclusion criteria of the systematic review.

| Criteria | Inclusion | Exclusion |
|-----------------------------|--|---|
| Topic and focus of study | Digital skills contribute to social capital through professional recognition | Not provide substantial evidence or primarily focus on other aspects of digital skills, such as personal well-being or recreational technology use. |
| Language | English or Spanish | - - |
| Publication period | January 2009–December 2022 | Articles excluded 2022 onward and those before 20009 |
| Type of publication | Articles, book chapters, and conference communicat | Books, posters, workshop documents, editorials, and reports. |
| Publication status Other | Peer-reviewed articles Accessible | Non-peer-reviewed and in-press articles Inaccessible, and literature reviews |

Source: own elaboration.

We also adopted quality assessment (QA) as mentioned by Schön et al. [37]. Table 2 shows the checklist used to assess the quality of the included studies. All primary studies (10 papers) were assessed on the basis of quality indicators.

Table 2. Quality criteria used to assess the adequacy of the study.

| Item | Assessment Criteria | Score | Description |
|------|---|-------|--|
| | Were the objectives of the | -1 | The objectives were not described |
| QA1 | research clearly stated? | 0 | The objectives were partially but unclearly described |
| | | 1 | Yes, the objectives were well described and clear |
| | Does the article include a | -1 | No, details were missing |
| QA2 | detailed description of the | | Partially, if you wish to use the |
| | proposed solution or approach? | 0 | approach or solution, you must read the references |
| | | 1 | Yes, the approach can be used based on the presented details |
| | Is the muoneed colution or | -1 | No |
| QA3 | Is the proposed solution or approach valid? | | It was partially validated in a |
| | approach valid: | 0 | laboratory, or only portions of the |
| | | | proposal were validated |
| | | 1 | Yes, by a case study |
| | Does the article present an | -1 | Yes |
| QA4 | opinion or viewpoint? | | Partially because the corresponding work was explained, and the work was set into a specific context |
| | | 1 | No, the paper was based on research |
| | He the study bear sited in | -1 | No, no one cited the study |
| QA5 | Has the study been cited in | 0 | Partially. Between one and five |
| | other scientific publications? | U | scientific papers cited the study |
| | | 1 | Yes, more than five scientific papers cited the study |

Source: own elaboration.

The first item (QA1) evaluates the purpose of each study. This question was answered positively in 82% of the studies. The second point (QA2) measures whether the study presents a detailed description of the approach, and the answer to this question was positive in 77% of the studies. The third item (QA3) relates to the method for results validation, with only 21% of studies using adequate validation methods. The fourth point (QA4) evaluates whether the studies are based on opinions or points of view. Only 31% of

Societies **2025**, 15, 194 8 of 22

studies responded positively. Finally, the fifth item (QA5) refers to the number of citations received by studies, and the answers demonstrated that 53% of the studies had more than five citations in other studies.

4.3. Coding and Grouping

This section shows the results of the coding of each of the 10 documents according to the categorizations of the study approach. Data extraction was used to obtain information relevant to the research questions.

The categorization of the data is divided into a general matrix for the codifications of a more quantitative nature, while for the extraction of information of a deeper and qualitative nature, the deepening table is used (see Appendix A). For the categorization of the data, already established models and theoretical frameworks were used [9,38–42]. All this information can be consulted in a more orderly and in-depth way within Appendix A.

In addition to this coding, the identified articles were reviewed by two authors and summarized according to a number of additional factors, such as repository of origin, type of document, journal, authorship, sample number, methodologies, instruments for data collection and analysis, discoveries, future lines, etc., all of which are shown in Appendix A.

5. Findings and Discussion

This systematic review aimed to address the first RQ:

5.1. RQ1: What Are the Most Commonly Mobilized Theoretical Frameworks for Analyzing How Digital Competences Are Transformed into Social Capital and Professional Recognition?

This systematic review first sought to identify the specific characteristics and strategic approaches through which digital competences are effectively mobilized to enhance social capital and professional recognition. The analysis reveals a notable increase in scholarly interest over the past decade, with a concentration of research outputs originating from technologically advanced countries, most prominently Switzerland, the United Kingdom, Norway, the United States, and France (see Figure 2). These national contexts are marked by well-developed research infrastructures and educational policies that intend to present digital literacy as a strategic objective [43]. In such contexts, digital competences are framed not only as technical requirements but also as key levers for competitive positioning, economic development, and equitable access to social participation.

Figure 3 synthesizes the theoretical frameworks most frequently cited in the analyzed corpus, with a particular focus on social capital and professional recognition. Three major theoretical contributions emerge prominently. First is the work of Burt [44], whose conceptualization of social capital stems from organizational and business sociology. Second is the three-components model proposed by Nahapiet and Ghoshal [41], which also originates in the field of organizational studies. First, they propose structural capital, which encompasses key elements of an organization's social fabric—such as patterns of interaction, the density of social ties, and modes of informal coordination—referring to the overall configuration of connections and the channels through which information and resources circulate. Second, relational social capital pertains to the quality of interpersonal relations within the network, encompassing trust, norms of reciprocity, mutual obligations, and the affective ties that facilitate cooperation. Third, cognitive social capital refers to the shared codes, language, and interpretative frameworks that enable collective sense-making. It involves the "identification of shared values and common assumptions developed by members (agents) of a network that are manifested at both individual and group levels" [41]. The third theoretical framework most frequently cited is the foundational perspective of Pierre Bourdieu [45], whose structural theory of capital continues to inform sociological analyses of power, recognition, and resource distribution.

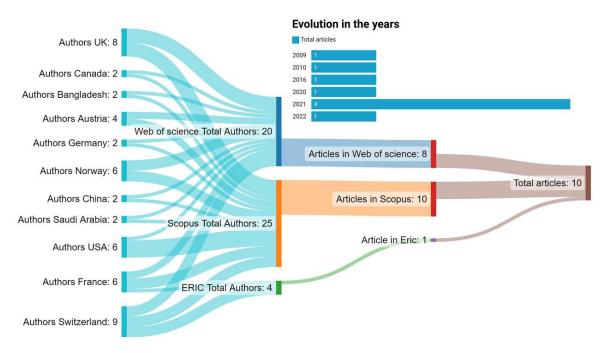


Figure 2. Number of publications by type of document, repository, authors' nationality, and evolution in the years. Source: own elaboration.

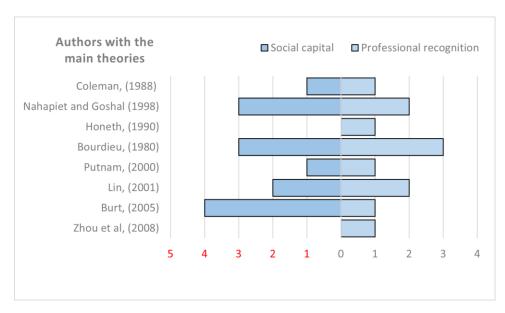


Figure 3. Number of publications by authors' theories in function of social capital or professional recognition. Source: own elaboration.

Across the articles reviewed, social capital is most commonly defined as the aggregate of actual and potential resources that are embedded within, accessible through, and derived from an individual's or group's network of relationships. This includes not only the structure of the network itself but also the assets that can be mobilized through it [9,46]. In this view, social capital is relational in nature, and its effectiveness hinges on the configuration and mobilization of social ties.

Burt's [44] contribution is especially notable for introducing the dual concepts of brokerage and closure as mechanisms through which individuals accrue social capital. He defines social capital as "the advantage created by a person's location in a structure of relationships," emphasizing how structural holes—gaps in social structure—can be bridged to create informational and strategic advantage. However, for the benefits of such

brokerage to be realized and sustained, Burt argues that these bridges must be embedded within cohesive, trust-based networks. This dual dynamic, which he coined *structural* autonomy, combines the innovation of intermediation with the stability of closure.

This conception diverges from that of Putnam [47,48], who emphasizes the communal and civic dimensions of social capital. While Burt focuses on the benefits that accrue to individuals occupying advantageous positions within networks, Putnam highlights the collective benefits derived from dense, overlapping networks within communities. Together, these perspectives have been instrumental in shaping integrative models that link social capital to the generation of intellectual capital, particularly through the mediating role of trust, shared norms, and network structure [41]. Bourdieu [9] adds further nuance by asserting that the volume of social capital possessed by an agent depends both on the size of their network and on the capital—economic, cultural, or symbolic—held by those within it. This approach emphasizes the cumulative and transitive dimensions of capital distribution, where the ability to mobilize others' resources becomes a source of positional advantage.

Finally, these theoretical accounts converge on a key insight: social capital is not a static attribute but a dynamic resource, mediated by the structure, density, and quality of social ties. The mobilization of these ties—whether for recognition, collaboration, or innovation—remains contingent on the institutional logics in which agents are embedded [30,49].

5.2. RQ2: In What Ways Do Digital Competences Shape Processes of Social and Professional Recognition?

To answer this question, we will explore how digital competences impact social and professional recognition and how this recognition, in turn, influences social capital. Therefore, the following visualizations are shown.

Figure 4 presents the distribution of digital competences most frequently associated with professional recognition. The findings first indicate a clear predominance of digital communication as the most salient skill, followed by information management and virtual collaborative work. These results point to the central role of interactional and organizational capacities in the valorization of digital expertise within professional settings.

Figure 4. Types of digital skills and involved platforms. Source: own elaboration.

Secondly, when analyzed by category, communication and collaboration emerge as the most critical types of digital competence. This underscores the importance of social relationships and relational structures in processes of recognition. As discussed earlier, the acknowledgment of digital competences in professional contexts has the potential Societies **2025**, 15, 194 11 of 22

to enhance an individual's social embeddedness in the local context, thereby facilitating access to mentorship, collaborative networks, and career advancement opportunities [8]. In this sense, relational networks are not merely supportive environments but constitute a form of actionable capital, providing access to information flows, strategic opportunities, and institutional resources [41]. These findings align with broader observations about the increasing integration of digital technologies into both personal and professional spheres. They further support the argument that sustained development of digital competences is essential not only for employability, but also for social inclusion and full participation in contemporary knowledge societies [22,48].

Finally, the articles reviewed indicate that professional recognition of digital competences occurs predominantly through social media platforms. This finding reinforces the relationship between ICT usage and the development of professional social capital, highlighting the mediating role of recognition in facilitating both social integration and career development. It suggests the need to reconceptualize social capital not merely as a latent potential but also as an outcome produced through recognition processes and interactional dynamics.

Figure 5 displays the distribution of publications according to the forms of professional recognition identified. The most frequently cited form is visibility (six studies), followed by material recognition (four studies) and symbolic or immaterial recognition (three studies) [39,50]. These results underscore the pivotal role of visibility—whether through citations, endorsements, or professional acknowledgments—in the validation of digital competences within organizational contexts. Material recognition (e.g., promotions, remuneration) and symbolic recognition (e.g., prestige, esteem) likewise contribute to professional trajectories by offering both concrete and intangible assets that reinforce one's position within professional hierarchies [9,44].

| | Material | Immaterial | Intrinsic | Extrinsic | Total | |
|-------------------------|----------|------------|-----------|-----------|-------|----|
| Honorific symbols. | | 1 | | 1 | L | 2 |
| Visibility | | 5 | | | 5 1 | 0. |
| Salary | | | | | | |
| Conditions | | | | | | |
| Score Comments | | 2 | | 2 | 2 | 4 |
| Job status | | 1 | | 1 | 1 | 2 |
| Number of contacts | | | | | | |
| (accomulation of social | | | | | | |
| capital) | | 2 | | 2 | 2 | 4 |
| Citations | | 1 | | 1 | 1 | 2 |
| Unspecified | | 3 | | 3 | 3 | 6 |
| Total | 0 | 15 | 0 | 15 | 5 | |

Figure 5. Number of publications by forms of recognition. Source: own elaboration.

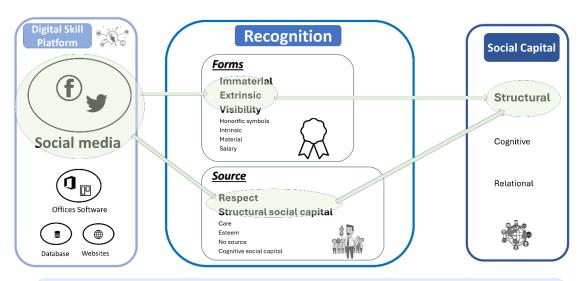
Figure 6 illustrates the main sources of professional recognition found in the studies analyzed. Respect is the most prominent source, supported by six studies, followed by recognition of esteem (five studies) and care (four studies) [40,51] Recognition constitutes a fundamental condition for the moral and social development of individuals, as it directly shapes one's sense of self-worth, belonging, and autonomy. When individuals are not adequately recognized, whether in their capacities, contributions, or identities, they may experience forms of misrecognition that lead to alienation, marginalization, and affective disintegration [40]. The satisfactory validation of these dimensions of recognition reinforces the positive dynamics within professional social networks [8,30].

Source of recognition



Figure 6. Number of publications by source of recognition. Source: own elaboration.

Figure 7 identifies the dimensions of social capital that have benefited the most according to the sources of professional recognition. The dimension of structural social capital is the most predominant in the studies analyzed, evidenced in seven studies [46,52]. This dimension refers to the connection between actors, i.e., the links and configuration of networks, as well as roles, rules, precedents, and procedures. Relational and cognitive social capital also stands out, with five and four studies, respectively, showing the ability to exchange resources and shared understanding within professional networks [41,49]. More specifically, Figure 7 illustrates how digital platforms, especially social media, influence forms of professional recognition, highlighting the importance of visibility and respect in structural social capital. These elements reflect how external validation and public perception play a crucial role in career satisfaction and building social capital.



<u>Digital Skill Platform (SOCIAL MEDIA)</u> + [Form of recognition (IMMATERIAL + EXTRINSIC + VISIBILITY) + Source of recognition (Respect + Structural social capital)] + <u>Dimension of social capital (Structural)</u> = 5 articles: Arnado et al, (2021) Maares et al, (2021) Sisjord et al, (2021) Haniffa et al, (2022) and Vacchiano et al, (2022)

Figure 7. Final equation. Source: own elaboration.

Professional recognition tends to be predominantly oriented towards non-material, extrinsically motivated, and highly visible forms, emphasizing the importance of being acknowledged and validated by peers and others rather than grounded in self-motivation or intrinsic satisfaction. This emphasis on visibility (particularly in digital environments such as social media) privileges performative aspects of competence over substantive demonstration. In such contexts, recognition is often mediated by public displays and reputational cues, which may not reliably reflect the actual depth or quality of the skills exercised. This phenomenon is well captured by Spence's [53] signal theory, which posits

that individuals seek to communicate unobservable qualities, such as competence or productivity, through observable proxies or signals. In the context of professional social media, these signals may take the form of endorsements, visibility metrics, or associations with prestigious networks. However, such visibility does not necessarily attest to actual skills or effective performance. Signal theory diverges from Becker's [54] human capital theory, which assumes a direct correlation between education, skill acquisition, and productivity. While human capital theory presumes that formal qualifications reflect real capacities, signal theory problematizes this assumption by emphasizing the strategic and sometimes superficial nature of self-presentation.

In today's digital ecosystems, recognition can be acquired within social networks through signaling practices. This reality underscores the fact that the communicative dimension of digital competences, i.e., the ability to present, circulate, and render one's activity legible within networked environments, often precedes, and sometimes overshadows, their technical or functional dimensions. Consequently, the performative and relational aspects of digital competences can be seen as primary entry points for recognition, particularly in contexts where visibility itself becomes currency.

6. Conclusions

6.1. Principal Results to Our Two Research Questions

What are the most commonly mobilized theoretical frameworks for analyzing how digital competences are transformed into social capital and professional recognition?

This systematic review highlights the growing academic interest in the role of digital competences in fostering social capital and professional recognition, particularly within technologically advanced national contexts characterized by robust infrastructures and strategic investments in digital literacy. The analysis reveals that recognition processes are increasingly mediated by the capacity to render skills visible and legible within networked environments. The most frequently mobilized theoretical frameworks—namely those of Burt, Nahapiet and Ghoshal, and Bourdieu—underscore the relational nature of social capital and its dependence on trust, shared meaning, and strategic positioning within social structures. While Burt emphasizes the structural mechanisms of brokerage and closure, Nahapiet and Ghoshal articulate a multidimensional model linking social capital to knowledge production, and Bourdieu offers a broader sociological reading of capital accumulation and distribution. These perspectives converge on a key insight: social capital emerges not as a fixed asset but as a dynamic and mediated resource, activated through recognition, embeddedness, and relational mobilization. Understanding how digital competences function within these frameworks allows for a more nuanced grasp of the mechanisms through which individuals gain legitimacy, visibility, and access to professional opportunities in contemporary knowledge societies.

In what ways do digital competences shape processes of social and professional recognition?

The findings of this review collectively demonstrate that digital competences play a central role in shaping access to social and professional recognition, particularly through their communicative and relational dimensions. Digital communication, collaboration, and information management emerge as the most salient competences associated with recognition, underscoring the importance of visibility and interactional performance in digitally mediated environments. Social media platforms, in particular, serve as key arenas where recognition is enacted and circulated, primarily through mechanisms of public signaling rather than substantive evaluation. This aligns with Spence's [53] signal theory, which foregrounds the strategic display of qualities that are otherwise difficult to observe, often at the expense of the deeper validation processes assumed by human capital

Societies **2025**, 15, 194 14 of 22

theory [54]. Recognition tends to take visible, symbolic, and non-material forms, such as respect, esteem, and care, which are fundamental not only to career advancement but also to the construction of self-worth and professional identity [40]. These sources of recognition contribute in turn to the development of social capital, most prominently in its structural dimension, by reinforcing access to networks, roles, and resources. Ultimately, this review suggests that digital competences should not be considered solely in terms of their technical function but also as communicative resources that enable visibility, foster legitimacy, and mediate access to professional opportunity within contemporary knowledge societies.

6.2. A Contemporary Reappraisal of Recognition in the Era of Digital Social Networks: Intersections with Structural Social Capital

Overall, mutual recognition constitutes a foundational dimension of personhood, as it anchors the individual's sense of self in intersubjective processes of validation and acknowledgment [55]. This recognition is not abstract but is enacted in concrete, situated interactions—what Garrett [56] refers to as *micro-encounters*—where individuals negotiate identity, legitimacy, and value. Within the workplace context, mutual recognition often takes the form of the acknowledgment of skills, expertise, and job performance, serving as a key mechanism through which individuals gain professional legitimacy [57].

Performance recognition, conceptualized as a form of mutual identification [58], plays a critical role in enabling the identification, transfer, and mobilization of knowledge within organizational networks. In this sense, recognition is not merely symbolic; it activates flows of informational and relational capital. As outlined by Nahapiet and Ghoshal [41] this process engages both the relational dimension of social capital (i.e., trust, reciprocity, and shared normative commitments) and the cognitive dimension, which includes shared interpretative frameworks and collective representations.

Social recognition, therefore, is first and foremost the acknowledgment of one's activity and contribution within a social or institutional context. It is this symbolic and interactional validation that mediates the translation of social action into perceived professional value. From a sociological standpoint, mutual recognition between social actors functions as a resource-generating mechanism, capable of producing and reinforcing social capital through institutionalized and durable relationships [45]. The more actors engage in reciprocal recognition, the greater their capacity to access and mobilize social capital. As Maak [59] notes, such reciprocal recognition enhances both relational embeddedness and cognitive alignment, reinforcing the two key dimensions of social capital essential for collective efficacy and individual advancement.

Hence, in today's digitally networked environments, social media platforms function simultaneously as spaces for expanding professional networks and as arenas for acquiring recognition. These two processes are mutually reinforcing: as individuals broaden their relational ties, they increase the visibility and circulation of their competences, while recognition, in turn, enhances their social capital and attractiveness within the network. This dynamic is visually synthesized in Figure 7, which maps the relationships between the use of digital platforms, particularly social media, and the forms, sources, and outcomes of professional recognition as they relate to social capital. These platforms facilitate three main forms of recognition: immaterial, extrinsic, and visibility-based recognition. Recognition then contributes directly to the development of structural social capital, the dimension most frequently identified in the literature reviewed. This form of social capital refers to the configuration of networks, the establishment of rules and roles, and the formalization of connections among actors. The framework represented in the figure is supported by five key studies [60–64], which collectively show how digital signaling, recognition, and network positioning intersect to shape individuals' access to social capital in digital contexts. In this context, digital fluency [65] is no longer limited to the technical manipulation of

Societies **2025**, 15, 194 15 of 22

tools but increasingly refers to the capacity to strategically signal competence, credibility, and value through socially intelligible cues and relational dynamics online.

Hence, in the context of digital social networks, recognition increasingly hinges on an individual's ability to render their competences legible, visible, and endorsed within algorithmically mediated environments. Platforms such as LinkedIn, X, Facebook, or ResearchGate do not merely host professional content; they actively shape the modalities of recognition through visibility metrics, algorithmic amplification, and socially embedded validation (likes, endorsements, shares). In this landscape, those who master the semiotics and rhythms of digital self-presentation and who strategically cultivate their online networks are disproportionately advantaged. They are more likely to transform symbolic visibility into actionable social capital and access to professional opportunities, illustrating how structural social capital today is as much about digital positioning as it is about interpersonal connections. Recognition thus becomes performative, and visibility, especially in algorithmically mediated spaces, emerges as a proxy for expertise and legitimacy. Finally, our study suggests that digital tools, including the use of artificial intelligence (AI)-powered tools, do not displace workers directly but rather shift the basis on which professional value and recognition are attributed. Mastery of such tools becomes a symbolic asset in itself, i.e., an embodied and performative competence that signals adaptability and future-oriented professionalism. From this perspective, digital competences are not only instrumental but also relational: they function within recognition systems that reward those who are seen as fluent in emergent technological paradigms.

6.3. Future Research

For future research, it is essential to expand the scope of investigation by incorporating a broader range of databases and including studies published in multiple languages. This would enable a more comprehensive and globally representative understanding of how digital competences influence professional recognition and the development of social capital. Moreover, future studies should further explore the less frequently addressed dimensions of social capital (particularly its cognitive and social facets), moving beyond purely structural analyses. Longitudinal research designs would also be valuable in capturing the evolving nature of professional recognition across time and diverse occupational contexts. In parallel, quantitative analyses should be complemented with qualitative investigations that elicit deeper insights into practitioners' lived experiences, perceptions of recognition, and the nuanced ways in which social capital is enacted and negotiated within digital environments. Such mixed-methods approaches can illuminate the complex, dynamic interplay between digital competences, recognition mechanisms, and the construction of professional legitimacy.

Author Contributions: Conceptualization, R.C.; methodology, J.D.l.H.-R.; software, J.D.l.H.-R.; validation, R.C. and L.F.-T.; formal analysis, J.D.l.H.-R.; investigation, M.O.-E.; resources, J.D.l.H.-R.; data curation, J.D.l.H.-R.; writing—original draft preparation, R.C., J.D.l.H.-R., L.F.-T. and M.O.-E.; writing—review and editing, M.O.-E. and J.D.l.H.-R.; visualization, M.O.-E.; supervision, R.C.; project administration, J.D.l.H.-R.; funding acquisition, J.D.l.H.-R. and M.O.-E. All authors have read and agreed to the published version of the manuscript.

Funding: This work was supported by the predoctoral contracts grant for the training of PhD candidates provided under the State Subprogram of Training within the State Program for Developing, Attracting, and Retaining Talent, within the framework of the State Plan for Scientific, Technical, and Innovation Research 2021–2023, implemented by the Spanish Ministry of Science and Innovation (grant number PRE2021-098075), associated with the project PID2020-117020GB-I00, funded by MCIN/AEI/10.13039/501100011033. Additionally, this article has been funded through the project B-SEJ-234-UGR20 grant provided by the Concierge of University, Research and Innovation.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Data sharing is not applicable (only appropriate if no new data is generated or the article describes entirely theoretical research).

Conflicts of Interest: The authors report that there are no competing interests to declare.

Appendix A

Appendix A.1 Coding Scheme Used

| Research and year (1.R) | Ganley and Lampe (2009), Gayen et al. (2010) (For more details about the coding of the rest of the journals, click on the link in the note of this table titled general matrix) | | | |
|------------------------------|--|--|--|--|
| BIBLIOMETRIC DATA | | | | |
| | WOS (1) | | | |
| Repository (2.R) | SCOPUS (2) | | | |
| | ERIC (3) | | | |
| | Articles (1) | | | |
| Document types (2.DT) | Conference paper (2) | | | |
| | Book chapter (3) | | | |
| Journal (2.J) | Decision Support Systems, International Journal of Sociology and Social Policy (For more details about the coding of the rest of the journals, click on the link in the note of this table titled general matrix) | | | |
| | USA (1) | | | |
| | Canada (2) | | | |
| | UK (3) | | | |
| | Bangladesh (4) | | | |
| | France (5) | | | |
| Country of authorship (2.AN) | Austria (6) | | | |
| | Germany (7) | | | |
| | Norway (8) | | | |
| | China (9) | | | |
| | Saudi Arabia (10) | | | |
| | Switzerland (11) | | | |
| OBJECTIVE OF THE STUDY (3.0) | Deep qualitative response, click on the link in the note of this table titled deepening table (IT) | | | |
| SAMPLE A | AND STUDY FOCUS AREA | | | |
| Sample (4.S) | Deep qualitative response, click on the link in the note of this table titled deepening table (IT) | | | |

| | Institution (1) | |
|--|---|--|
| - | Company (2) | |
| Focus group according to Von Schrader, Shaw, and Colella (2024) (4.FG) | Supervisor (3) | |
| | Employee (4) | |
| | People looking for work (5) | |
| | General, several groups at the same time (6) | |
| | Education (1) | |
| - | Healthcare (2) | |
| - | Technology (3) | |
| - | Business (4) | |
| Type of work area (4.TW) | General, several type of work area at the same time (5) | |
| - | Famous artist (6) | |
| - | Journalism (7) | |
| | Sports (8) | |
| | Scientific (9) | |
| TYPES OF DIGITAL SKILLS | S AND INVOLVED PLATFORMS | |
| | Information management (1) | |
| | Digital communication (2) | |
| | Virtual collaborative work (3) | |
| | Strategic digital vision (4) | |
| Digital skill according to World Bank (2019), Banga and te Velde (2019) and Segrera-Aarellana et al. | Digital leadership (5) | |
| (2020). (5.DS) | Digital security and technical resolution (6) | |
| | Office automation and content editing (7) | |
| | Digital health and wellness (8) | |
| | Unspecified (9) | |
| | All of them (10) | |
| | Information and data literacy (1) | |
| | Communication and collaboration (2) | |
| | Digital content creation (3) | |
| Type of digital skill according to Vuorikari et al. (2022) (5.TD) | Safety (4) | |
| (2022) (3.1D) | Problem solving (5) | |
| - | Unspecified (6) | |
| _ | All of them (7) | |

| | Twitter (1) | | |
|---|--|--|--|
| | Blogs (2) | | |
| | Trello (3) | | |
| | SlashDot (4) | | |
| | UK Data Service (5) | | |
| | IRMA (6) | | |
| | Unspecified (Media platforms) (7) | | |
| | Social media (8) | | |
| T 1 100 0 0 1 1 1 0 0 0 1 1 1 1 1 1 1 1 | News websites (9) | | |
| Tool or platform for the development of digital skills (5.TP) | e-commerce (10) | | |
| (6.22) | Offices Software (11) | | |
| | Leisure (12) | | |
| | frequency (13) | | |
| | Google Meet (14) | | |
| | Zoom (15) | | |
| | Facebook (16) | | |
| | Social network in general (17) | | |
| | Google scholar (18) | | |
| PROFESSION | IAL RECOGNITION | | |
| Theorical framework professional recognition (6.TF) | Deep qualitative response, click on the link in the note of this table titled deepening table (IT) | | |
| | Material (1) | | |
| | Immaterial (2) | | |
| | Intrinsic (3) | | |
| | Extrinsic (4) | | |
| | Honorific symbols (5) | | |
| Forms of recognition according to Brillet et al. (2013) and Onge et al. (2011) (6.FR) | Visibility (6) | | |
| | | | |
| | Conditions (8) | | |
| | Score Comments (9) | | |
| | Job status (10) | | |
| | Number of contacts (accumulation of social capital) (11) | | |
| | Citations (12) | | |

| | Esteem (1) | | |
|---|--|--|--|
| | Respect (2) | | |
| | Care (3) | | |
| Source of recognition according to Honeth (1990) | No source (4) | | |
| source of recognition according to Horicui (1770) | Cognitive social capital (5) | | |
| | Social Capital Relations (6) | | |
| | Structural social capital (7) | | |
| Tool to collect the data (6.TD) | Deep qualitative response, click on the link in the note of this table titled deepening table (IT) | | |
| Data collection method (5.DM) | Deep qualitative response, click on the link in the note of this table titled deepening table (IT) | | |
| SOC | IAL CAPITAL | | |
| Theoretical framework social capital (7.TF) | Deep qualitative response, click on the link in the note of this table titled deepening table (IT) | | |
| | Structural (1) | | |
| Dimensions of social capital (7.DS) | Cognitive (2) | | |
| | Relational (3) | | |
| Tool to collect the data (7.TD) | Deep qualitative response, click on the link in the note of this table titled deepening table (IT) | | |
| Data collection method (7.DM) | Deep qualitative response, click on the link in the note of this table titled deepening table (IT) | | |
| Finds (8.F) | Deep qualitative response, click on the link in the note of this table titled deepening table (IT) | | |
| Current and future trends (9.FT) | Deep qualitative response, click on the link in the note of this table titled deepening table (IT) | | |
| | OTHERS | | |
| Try to increase economic capital according to | Yes (1) | | |
| Bourdieu (OT.1) | No (2) | | |
| Informaci cituations are used (OT 2) | Yes (1) | | |
| Informal situations are used (OT.2) | No (2) | | |

Notes: Full analysis at the following links (open access). General matrix: https://drive.google.com/file/d/1V3B0Te8jI8U3h-piIXgY6jCSkpXfOLJW/view?usp=sharing (20 March 2025) https://drive.google.com/file/d/1XOvAlPK6cHMiEGxbfl3rq1aZ7IX6wEVX/view?usp=sharing (20 March 2025).

Table A1. Criteria of the systematic review. Inclusion and exclusion.

| Criteria | Inclusion | Exclusion |
|--------------------------|---|--|
| Topic and focus of study | Digital competences contribute to social capital through professional recognition | Not provide substantial evidence or primarily focus on other aspects of digital competences, such as personal well-being or recreational technology use. |

Societies **2025**, 15, 194 20 of 22

| T-1-1- | A 1 | Caul |
|--------|-----|-------|
| Table | AI. | Cont. |

| Criteria | Inclusion | Exclusion |
|---------------------|--|--|
| Language | English or Spanish | - |
| Publication period | January 2009–December 2022 | Articles excluded 2022 onward and those before 20009 |
| Type of publication | Articles, book chapters, and conference communications | Books, posters, workshop documents, editorials, and reports. |
| Publication status | Peer-reviewed articles | Non-peer-reviewed and in-press articles |
| Other | Accessible | Inaccessible, and literature reviews |

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