

Strengthening Collaboration Among Secondary School Teachers: Insights for Future Training Pathways

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Teacher collaboration is a cornerstone for enhancing both the educational environment and professional development. This paper explores how collegial interaction among secondary school educators can influence their sense of professional identity. Through a mixed-method study, incorporating a literature review and data from a survey of 488 teachers in the Varese province, we uncover a disconnect between the acknowledged importance of collaboration and its perceived relevance to professional self-conception. Our findings suggest that while collaboration is recognized, it does not play a central role in shaping teachers' professional identities. We propose the integration of collaborative frameworks, such as Communities of Practice and Change Laboratories, in teacher training programs to promote experiential learning and peer knowledge sharing, fostering enhanced educational outcomes.

Keywords: teacher cooperation, career identity, mixed-method analysis, lifelong learning, curriculum restructuring

Preliminary Thoughts: Teacher Training and Relational Skills

Ongoing teacher development plays a crucial role in enhancing both professional and interpersonal competencies, a point underscored by numerous international studies and educational bodies (Baldacci, Nigris, & Riva, 2020). Teacher education generally falls into three main categories: the concurrent model, which integrates professional training within tertiary education; the consecutive model, which follows the completion of university studies; and in-service training models, which are often marked by a fragmented, disorganized approach involving multiple methods (Agrusti, 2020; Batini, Falcinelli, Salvato, Vannini, & Agrusti, 2022).

The 2018 TALIS survey, however, highlights a significant gap in the preparation of Italian teachers. More than half of those surveyed reported feeling ill-equipped to manage classroom dynamics and engage effectively with families and local institutions (OECD, 2018; OECD, 2021; OECD-TALIS, 2019; OECD-TALIS, 2020).

The article represents a collaborative effort between the two authors. For the purpose of crediting their contributions, Letizia Ferri is responsible for sections 1, 2, and 3, while Stefano Bonometti authored sections 4, 5, and 6.

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These findings underscore the urgent need for a systemic overhaul in both initial and ongoing teacher training, with a particular focus on developing relational and managerial skills.

Teachers are required to be not only experts in their subject matter but also proficient in managing classroom dynamics and effectively communicating with families and the broader school community. Building these capabilities necessitates an integrated training approach that addresses both theoretical knowledge and practical application (European Commission/EACEA/Eurydice, 2018). Continuous professional learning—rooted in self-reflection and dialogue within professional communities—emerges as a highly effective means of fostering these skills (Lankshear & Knobel, 2004). This approach not only supports individual growth but also creates “free spaces” where educators can step back from daily tasks to assess their strengths and areas for improvement, thereby establishing “safe professional arenas”.

Professional learning relies on self-reflection as well as dialogues in a professional collegium. For professional learning to potentially be meaningful and powerful, the interplay between the individual and the collective needs to be supported for reflection on action and learning from experiences (Penney and Leggett 2005, Francisco et al. 2021). This potentially provides a necessary “free space” (Berg 1981, p. 116) or professional freedom of action for the prospective teachers to identify professional strengths and constraints by establishing “safe professional arenas” (cf. Forsman et al. 2014, p. 128). (Karlberg-Granlund & Pastuhov, 2024, p. 374)

Addressing these challenges requires the adoption of training models that nurture the development of relational and systemic competencies. These models should foster critical reflection and constructive dialogue among colleagues. Cultivating a collaborative, collegial environment can significantly enhance the quality of teaching, thereby improving students’ educational experiences (World Economic Forum, 2023).

In this context, the present article delves into how relational and systemic interactions among teachers can positively influence student learning outcomes. It examines how creating spaces for professional reflection and dialogue can support teachers’ professional development, offering both theoretical and practical frameworks for continuous education. Through a review of literature and an analysis of collaborative training models, this paper explores the dynamics that contribute to fostering an educational environment where collegiality and cooperation among teachers become essential for educational success.

Research Methodology: A Mixed-Methods Approach to Understanding Teacher Professionalism

The methodology employed in this study followed a mixed-methods approach (Creswell & Plano Clark, 2011), combining both qualitative and quantitative elements to ensure a comprehensive and nuanced data collection and analysis. The research was conducted in several key phases, enabling an in-depth exploration of both the numerical and personal, emotional dimensions of teachers’ professional experiences.

In the initial phase, a pilot study was conducted, utilizing an open-ended questionnaire distributed to 58 secondary school teachers. This preliminary stage allowed for the collection of a wide array of perspectives and experiences regarding professional development and collaboration among teachers. The responses gathered in this phase provided valuable insights that shaped the subsequent development of a more structured questionnaire.

Built on the information from the pilot study, a closed-ended questionnaire was designed to focus on specific issues and dynamics that had emerged. This structured tool (Trinchero, 2004) was then distributed, in collaboration with the Territorial School Office of Varese, to all secondary schools in the province. Through this

broad distribution, a total of 488 completed questionnaires were collected, providing a strong foundation for quantitative analysis.

An innovative feature of the questionnaire was the inclusion of a qualitative section (Pagani, 2020), where teachers were asked to select an image that they felt represented their professional identity and briefly explain their choice. This approach allowed for the exploration of more personal and emotional aspects of teaching, adding a rich, complex layer to the understanding of teacher professionalism. A total of 409 teachers participated in this section, offering in-depth qualitative responses.

For the quantitative analysis, Likert scale questions and SPSS (0-5) were employed, which offered precise measurements of teachers' attitudes and perceptions regarding various aspects of their professional development and collaboration. This approach yielded measurable and comparable insights, facilitating the identification of trends and key areas of interest through SPSS software analysis.

The qualitative data analysis was conducted using thematic coding, with the aid of MAXQDA software. This process involved applying both predefined codes, derived from existing literature, and emergent codes identified directly from the participants' responses. In total, 794 codes were assigned, allowing for a detailed and nuanced examination of the different facets of teacher professionalism.

The collected data were then represented graphically, mapping the correlations between the meanings assigned to the images by both the researchers and the teachers themselves. This provided deeper insight into teachers' perceptions of their professional roles, highlighting the various nuances and complexities of the educational profession. The methodology thus not only enabled the collection of a substantial amount of data but also ensured a rich and detailed analysis, making a significant contribution to research on teacher training and professionalism.

To address these challenges, it is essential to reframe collaboration as an integral part of teaching practice, one that goes beyond mere compliance with institutional requirements. Instead, it should be positioned as a key driver of professional development, with teachers encouraged to see themselves not only as educators but also as collaborative learners who can contribute to the growth of the entire school community.

Survey Results

The study was conducted with a representative sample of 488 secondary school teachers from the Varese province. The gender distribution among participants showed a balanced representation, with a higher proportion of female teachers (28.1% male, 71.9% female), accurately reflecting the demographic composition of the teaching population at the provincial level.

In terms of age, the sample included teachers across various age groups, providing a comprehensive view of the diverse experiences and perspectives present within the teaching workforce. The majority of participants fell within the 30 to 50-year-old range, with a notable presence of both younger and older teachers (20 years: 3.1%; 30 years: 25.5%; 40 years: 23.6%; 50 years: 35.6%; 60 years: 12.1%).

The teaching experience of participants varied significantly, with a large proportion of teachers having over 15 years of experience (1-10 years: 48%; 11-20 years: 21.1%; 21-30 years: 18.4%; 31-40 years: 12.5%). This is a crucial factor in understanding how collaboration dynamics and professional perceptions might shift with increasing experience.

The sample included teachers from different types of secondary schools, ensuring representation from a variety of educational settings, including high schools (16.3%), technical institutes (28.5%), vocational schools (13.6%), and middle schools (40.8%). Additionally, the employment status of participants varied, with most holding permanent positions (63.1%), while others were on probationary periods (12.6%) or temporary contracts (24.2%), giving an overview of the different employment conditions within the province.

These figures indicate that the sample is representative of the overall secondary school teacher population in the Varese province, providing a thorough snapshot of the educators involved in this study.

From a quantitative perspective, the findings revealed that:

- 61% of the teachers reported regularly collaborating with their colleagues during the school year.

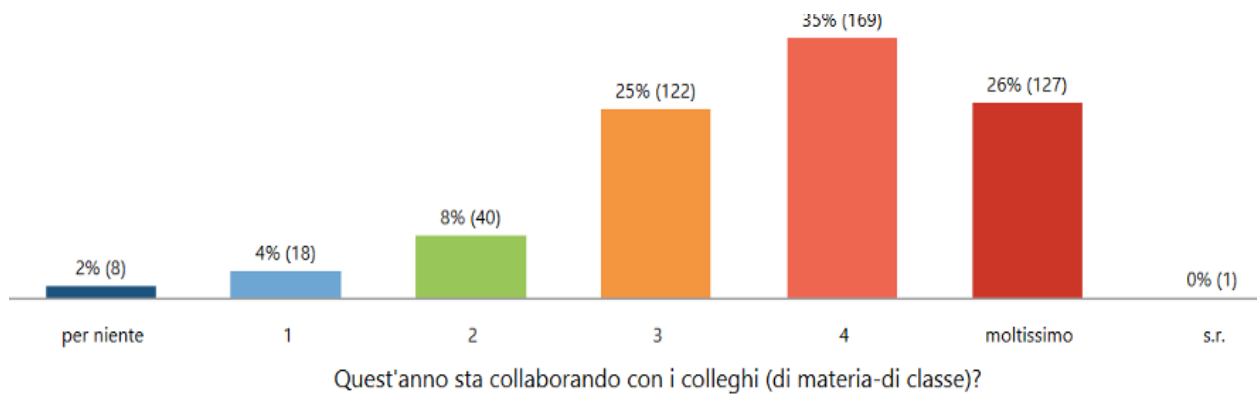


Figure 1. Collaboration with colleagues/SPSS.

- 65% of the teachers considered this collaboration to be effective.

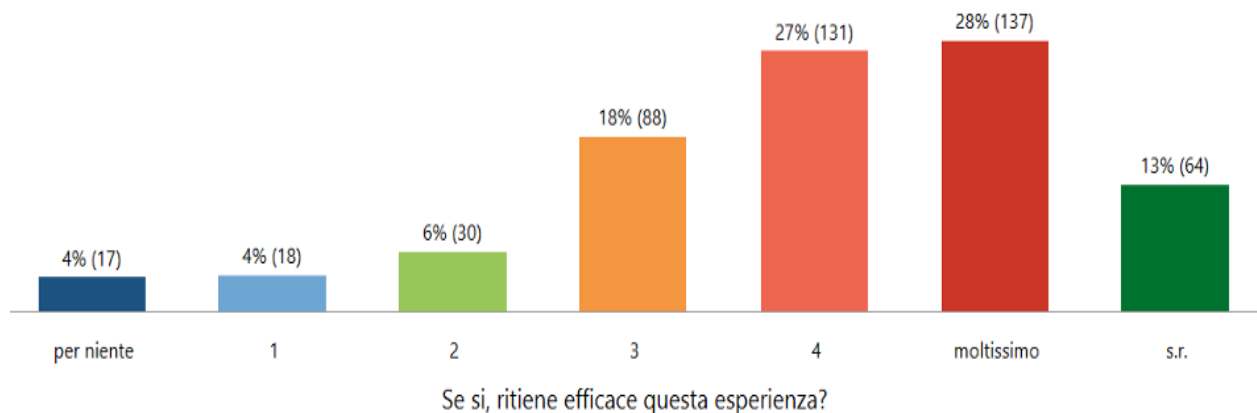


Figure 2. Effectiveness of collaboration/SPSS.

Regarding collaboration with special education teachers and educators:

- 64% of the teachers indicated they had worked with special education teachers or educators during the academic year.

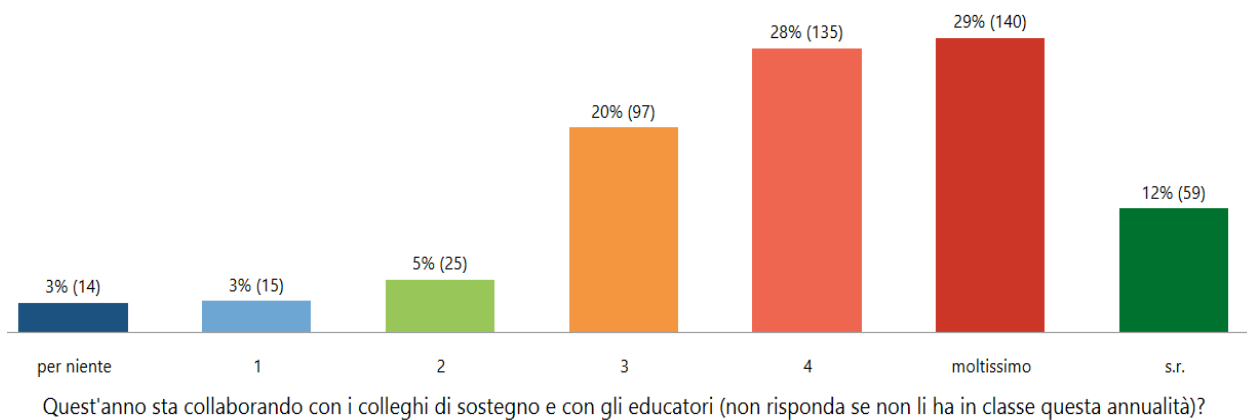


Figure 3. Collaboration with special education teachers/SPSS.

- Of those, 60% found the collaboration to be effective.

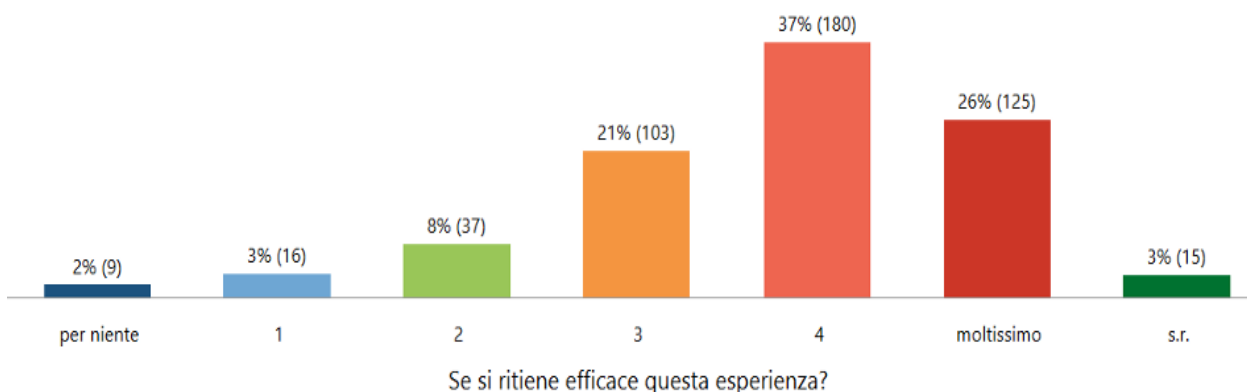


Figure 4. Effectiveness of collaboration with special education teachers/SPSS.

Investigating the importance of collegiality in professional development, about 50% of teachers viewed collegiality as crucial to their career, while nearly 80% attributed a key role to it in their professional growth, with this opinion particularly prevalent among younger teachers.

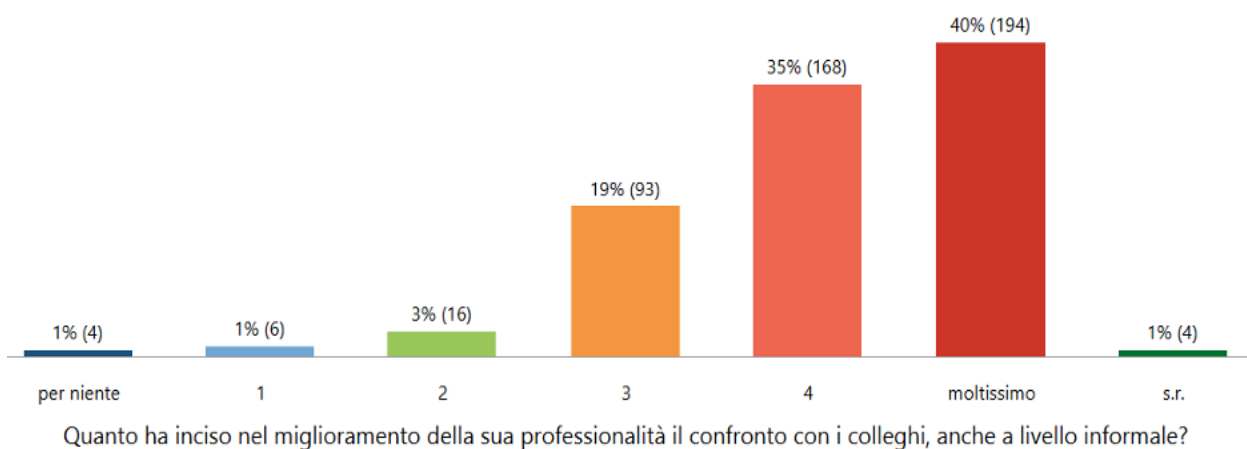


Figure 5. Importance of "informal collegiality" in professional growth.

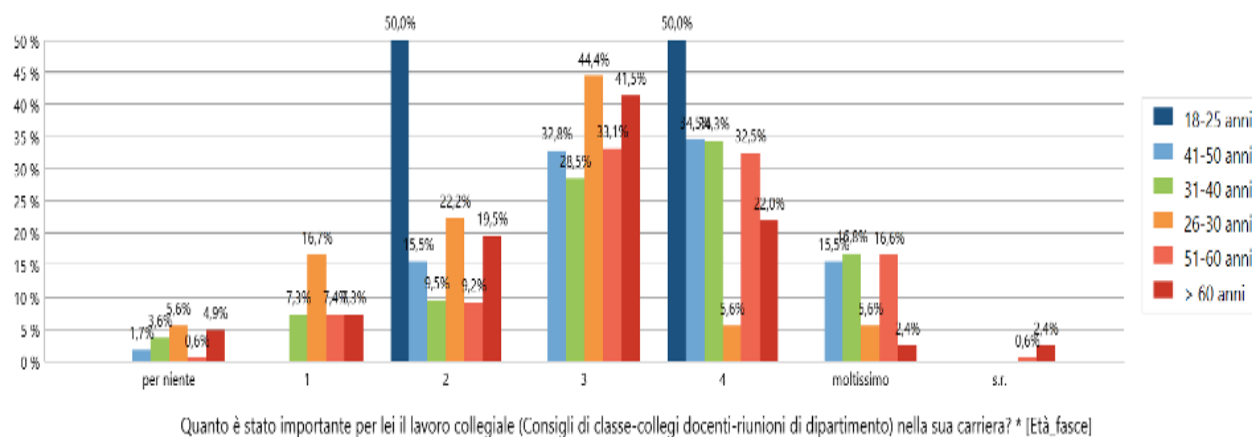


Figure 6. Importance of collegiality in professional growth and division by age group/SPSS.

The initial quantitative data indicate that the teaching population in Varese has integrated collegial work and professional collaboration as central to their professional values. However, the qualitative findings paint a more complex picture.

The qualitative section of the survey asked teachers to choose one image, from eight options developed in the pilot survey, that they felt best represented their professional identity and explain their choice (“Select one image that, in your opinion, realistically represents the teaching profession”). This method revealed more personal and emotional aspects of teaching. However, only 37 out of 409 responses mentioned collegiality as the most important factor, indicating that this aspect plays a marginal role in their professional identity.

Out of 485 teachers, 477 (98%) provided comments regarding their chosen image. The analysis of these comments was conducted by identifying key concepts (in-vivo coding), major themes (selective coding), and broader categories (axial coding), all part of an emergent coding process (inductive).

Below are the Maxmaps created using the hierarchical Code-subcode model, showcasing teachers’ observations on their choices. All comments were coded, and codes with frequencies greater than 10 were highlighted in bold and marked with green icons on the conceptual maps.

(1) Collaboration and Sharing

This image received 16 selections (3.4%). The two most frequent codes were “Helping students think critically” (seven occurrences) and “Shared reflection” (six occurrences).

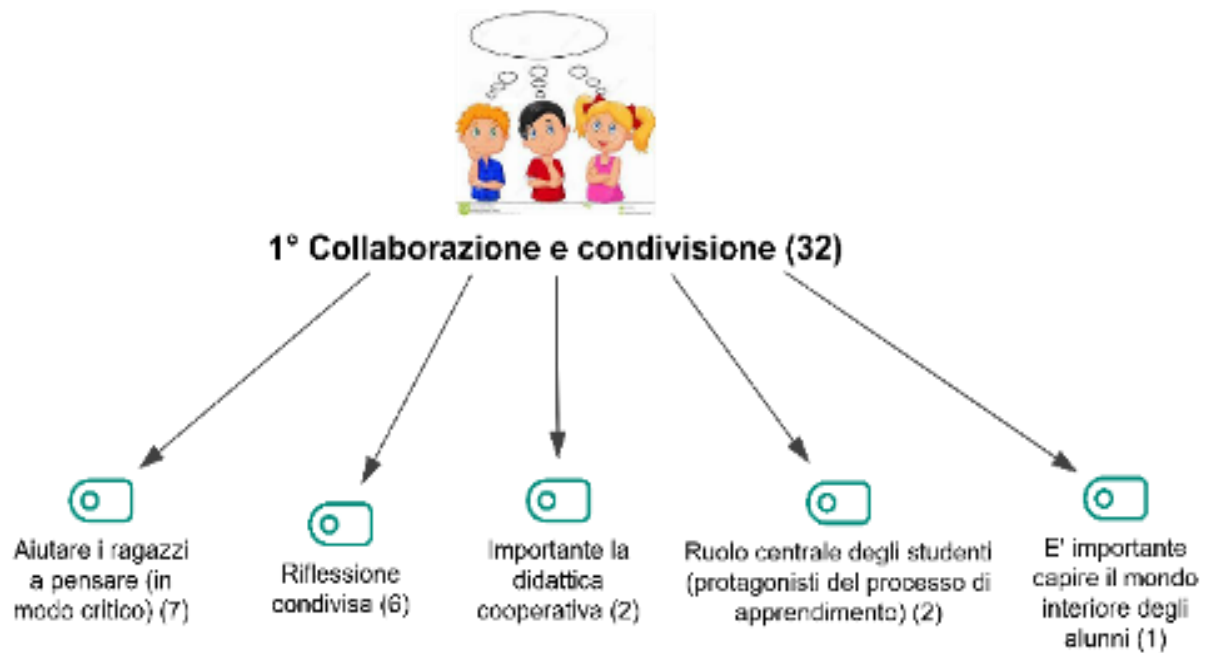


Figure 7. Image 1/SPSS.

(2) Teacher at the Center of Students

This image received 165 selections (34.6%). Four main themes emerged. Teachers felt this image best represented them as facilitators engaged in constant dialogue with their students. The image also symbolized the shift in classroom settings, with teachers positioned among their students rather than delivering frontal instruction.

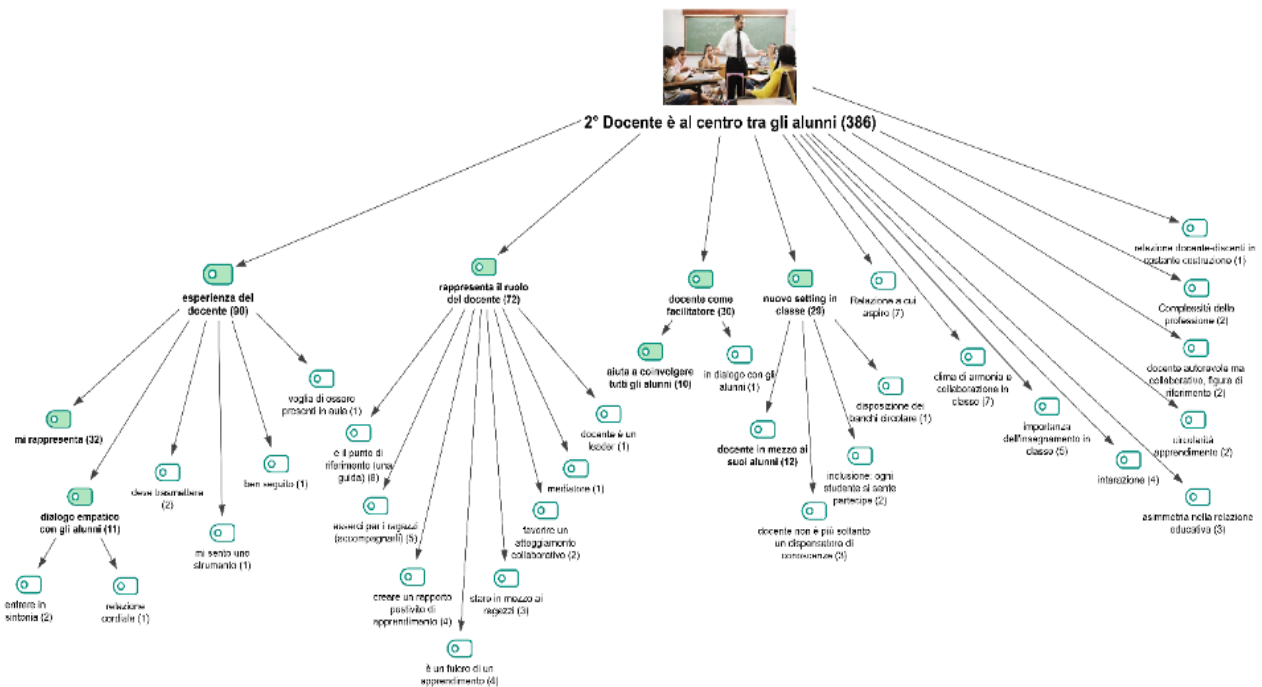


Figure 8. Image 2/SPSS.

(3) At the Top of the Mountain

This image gathered 17 selections (3.6%). Teachers who chose this image emphasized the importance of observing and reflecting during interactions with students. A sense of disillusionment was also noted among those who selected this image.

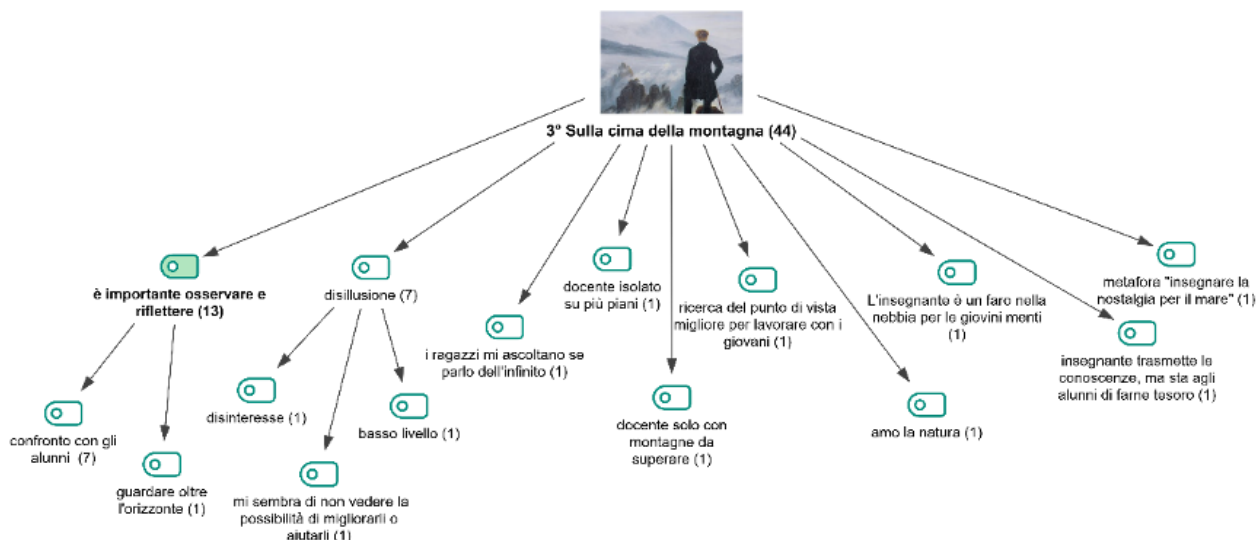


Figure 9. Image 3/SPSS.

(4) Watering Minds

This image garnered 117 selections (24.5%). The most common comment was that the image “represents the educational goal”, meaning helping students grow through care and the transmission of knowledge. Some teachers viewed this image as a metaphor for “being a teacher”, which also explains the instructional role.

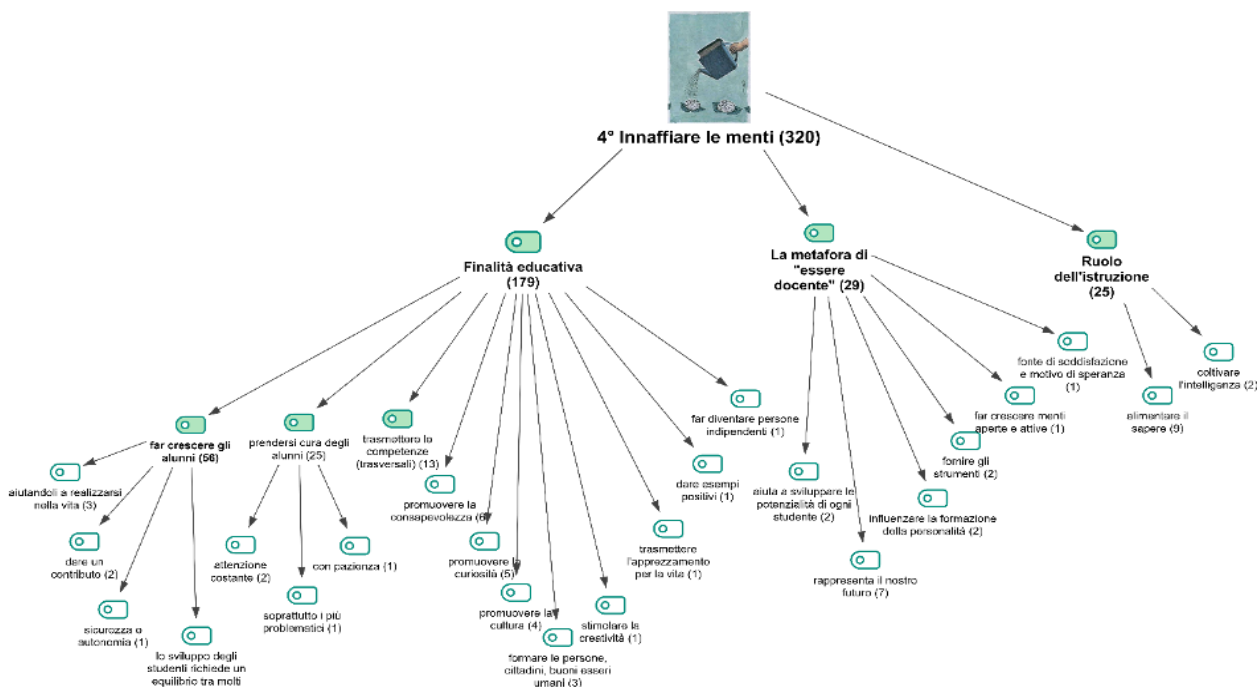


Figure 10. Image 4/SPSS.

(5) Teamwork

This image received 71 selections (14.9%). The most frequent comment was “collaboration is important” as it fosters constructive relationships. Some teachers also related the image to cooperative learning and the value of inclusion. However, the image was rarely associated with collegiality or shared work.

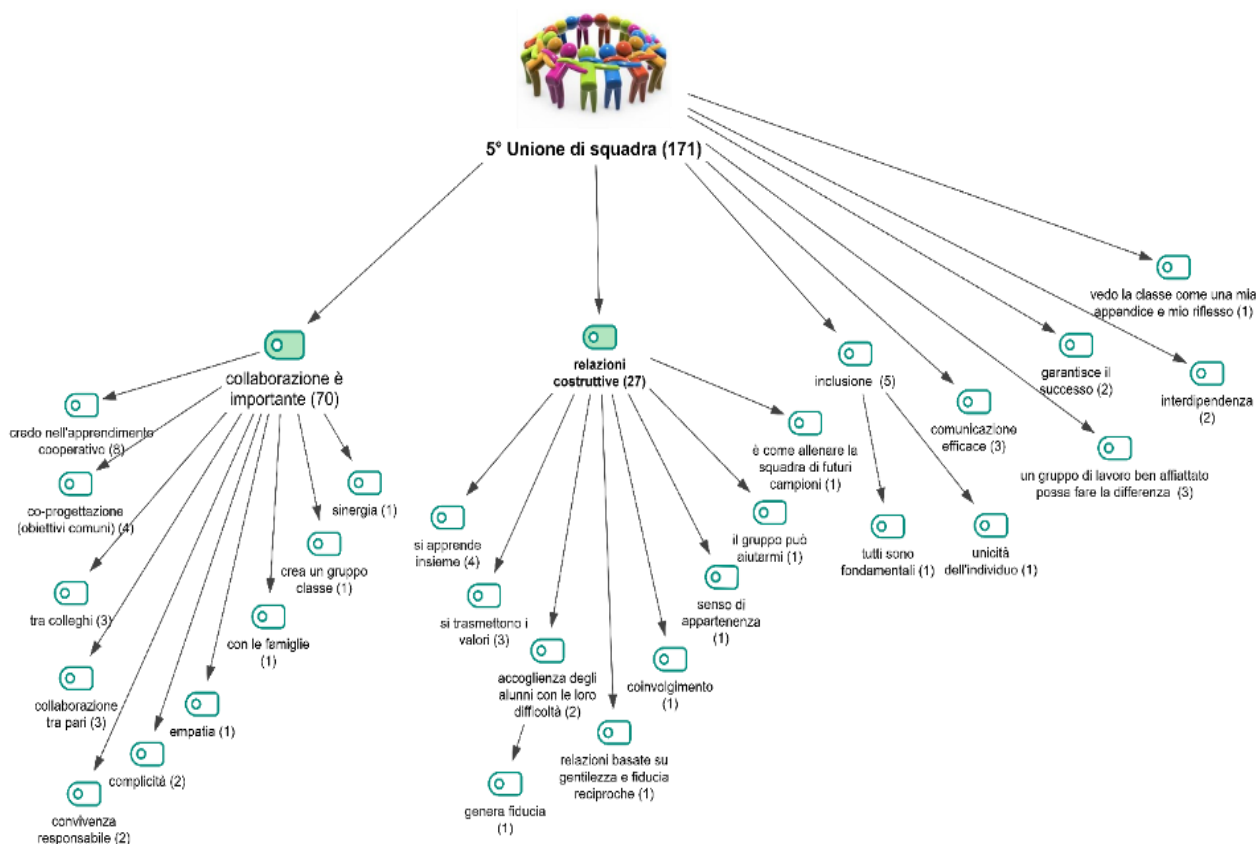


Figure 11. Image 5/SPSS.

(6) Paperwork

This image garnered 60 selections (12.6%). Teachers who selected this image criticized the school system for being overly bureaucratic, which they felt detracted from time that could be spent on teaching. A secondary theme that emerged was frustration with the various projects teachers that were required to manage, which often increased their workload without necessarily aligning with their teaching responsibilities.

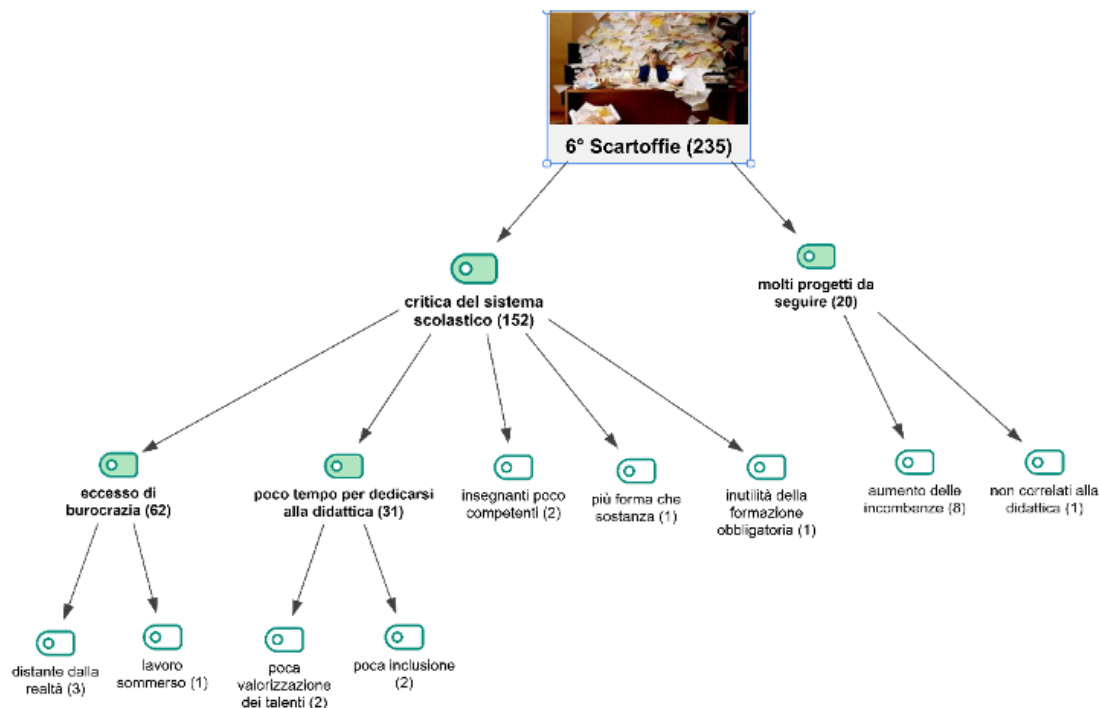


Figure 12. Image 6/SPSS.

(7) Octopus

This image received 20 selections (4.2%). The octopus was viewed as a symbol of multitasking, with teachers having to juggle many different responsibilities, leading to a sense of frustration.

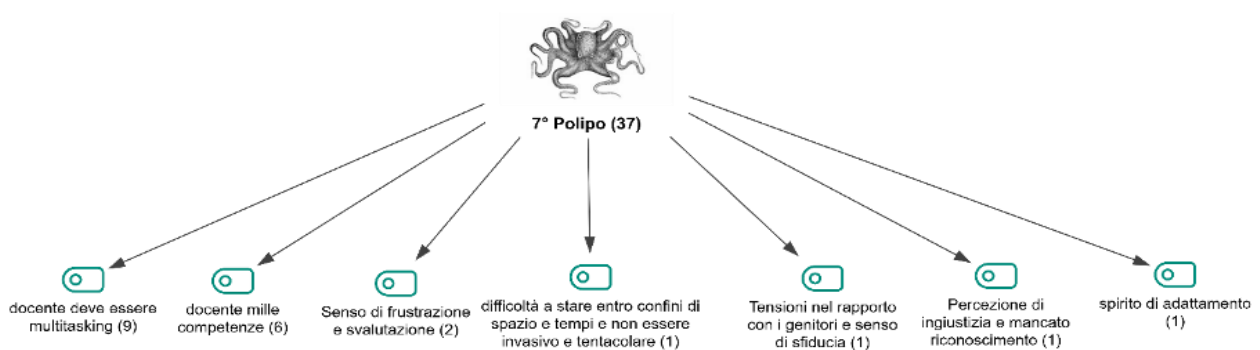


Figure 13. Image 7/SPSS.

(8) Meme on Salary Importance

This image received 11 votes (2.3%). Only a few teachers chose this ironic meme, so significant themes did not emerge. The only notable interpretation was that some teachers felt undervalued for their complex role, with one describing the profession as lacking in gratification.

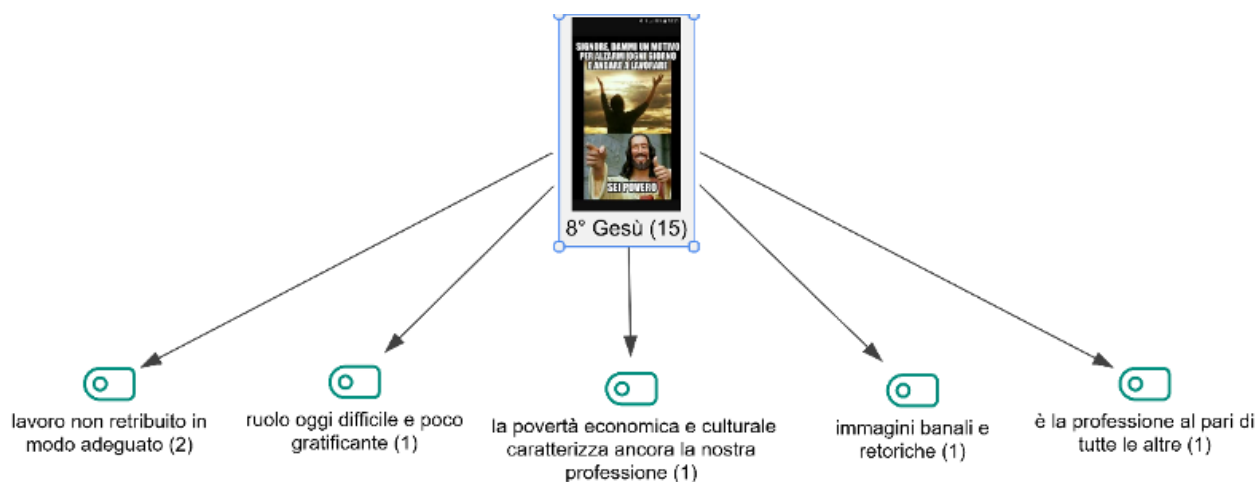


Figure 14. Image 8/SPSS.

In summary, three images dominated the teachers' selections: *Teacher at the Center of Students* (165 selections), *Watering Minds* (117 selections), and *Teamwork* (71 selections). The common thread among these frequently selected images is the idea of a fundamental relationship between teachers and students, who actively collaborate to nurture and develop their minds, creating a supportive environment for growth and learning. However, collaboration among teachers did not emerge as a central element for achieving common educational objectives.

The qualitative responses were analyzed using MAXQDA software, allowing for the application of both predefined codes based on existing literature and emergent codes drawn from the data itself. A total of 794 codes were identified, providing a detailed mapping of teachers' perceptions.

The data showed that collegiality is rarely associated with teaching and student skills development. Instead, it is more often linked to bureaucratic management and administrative tasks.

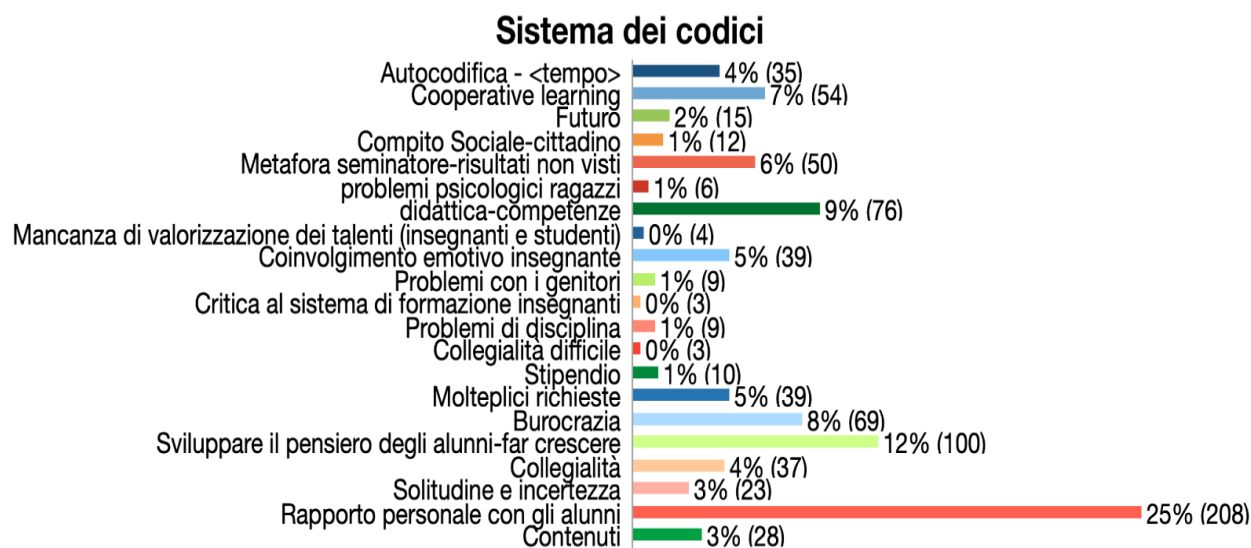


Figure 15. Image selection/SPSS.

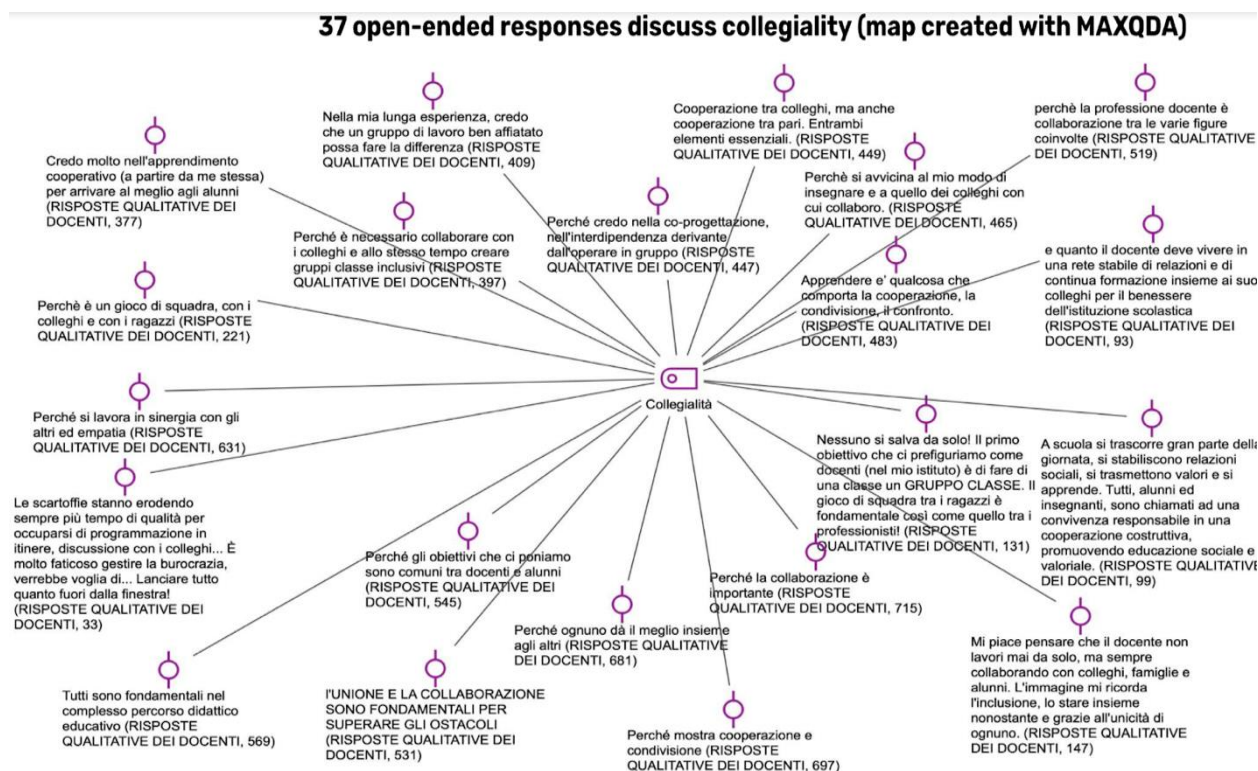


Figure 16. Use of the term “collegiality”/SPSS.

Teachers’ experiences with collegiality were influenced by contextual variables such as bureaucracy and personal motivations. For instance, some teachers viewed collegiality as an opportunity for professional improvement, while others perceived it as an unnecessary bureaucratic imposition. This suggests a need to reconsider the role of collegiality in teacher training and professional practice, promoting a culture of collaboration that extends beyond administrative tasks and genuinely encourages professional growth and improved teaching practices (Castoldi, 2024).

Key Findings

The results of the questionnaire demonstrate that teachers actively collaborate with their colleagues and view collegiality as an important aspect of their profession. Most of the teachers surveyed reported working regularly with their peers during the academic year and found these collaborative experiences to be effective. Specifically, 70% of the teachers confirmed they had collaborated with colleagues in the past year, and 65% of them considered this collaboration to be beneficial.

However, the qualitative findings—based on the selected images and the descriptions of their professional identity—reveal that collegiality plays a marginal role, with its meaning varying significantly among participants. Only 37 teachers explicitly mentioned collegiality as a core element of their profession. This suggests that while collegiality is acknowledged as important, it is not universally perceived as central to teachers’ professional identity.

The discrepancy between the quantitative and qualitative data on the significance of collegiality in teachers’ work is evident. While the quantitative data suggest that collegiality is highly valued, the qualitative analysis of professional perceptions, expressed through images and descriptions, indicates that it does not occupy a central

place. The term “collegiality” does not carry a consistent meaning across the teaching staff, as each teacher attributes different values to it.

Few teachers see collegiality as a tool for professional improvement that directly influences teaching practices and student skill development. The qualitative analysis of the segments related to collegiality, conducted through thematic coding, reveals divergent approaches among teachers, shaped by their motivations and contextual factors, such as bureaucracy. Co-occurrences of the codes indicate that collegiality is rarely associated with teaching and student development; rather, it is often linked to bureaucratic management and administrative tasks.

These findings highlight the complexity of teacher collaboration. While some educators see collegiality as an opportunity for professional growth, others perceive it as a bureaucratic obligation with little impact on pedagogy. This underscores the need for a systemic reevaluation of the role of collegiality, promoting a culture of collaboration that extends beyond administrative functions and genuinely fosters professional development and improved teaching practices.

The framework developed from the data on teacher collegiality (Figure 17) provides a structured view of professional dynamics within schools. This model is based on two main axes: teacher motivation (low vs. high) and the type of school management (normative vs. empowerment-based). The data analysis identifies four distinct types of teacher behavior and corresponding representations of collegial work:

(1) Exhausted Executor (Low Motivation, Normative Management)

- Teachers in this quadrant exhibit low motivation and work within a school context characterized by strict normative and bureaucratic control. They perceive collegiality as a “steel cage”, feeling demotivated and drained. For these teachers, collaboration is experienced as an inescapable obligation that further depletes their energy.

(2) Restless Operator (High Motivation, Normative Management)

- Motivated teachers in a rigid system experience frustration due to the constraints imposed by bureaucracy. Despite this frustration, they continue to perform their duties efficiently. In this case, collegiality is seen as task-oriented, revolving around agendas, assignments, and reports, which, while carried out precisely, leave little room for creativity or innovation.

(3) Proactive Creator (High Motivation, Empowerment-Based Management)

- In an empowering management context, motivated teachers display proactive and creative attitudes. In this scenario, collegiality takes the form of effective teamwork, where collaboration is not only valued but also becomes a powerful tool for professional growth and instructional improvement. Collegial work becomes an opportunity to innovate and develop together.

(4) Invisible Passive (Low Motivation, Empowerment-Based Management)

- Lastly, teachers with low motivation, even in an environment that seeks to empower them, tend to become passive and seek invisibility. Here, collegiality is perceived as a waste of time. These teachers feel pulled into compulsory tasks and become increasingly disillusioned with the value of collaborative work.

The framework highlights how the perception and effectiveness of collegiality are deeply influenced by the interaction between individual motivation and the type of school management. While many teachers recognize the importance of collegiality, its practical application and impact on teaching vary significantly. This model provides a basis for reflecting on the conditions necessary to promote meaningful and effective collegiality, one that goes beyond bureaucratic aspects and genuinely supports professional improvement and the quality of teaching.

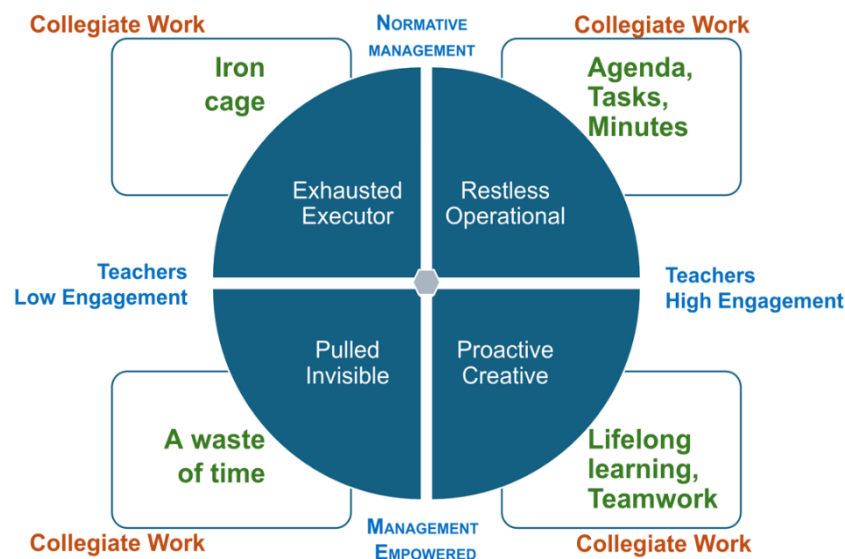


Figure 17. Perception of collegiality (Source: Data analysis with Canva).

Proposed Interventions

It is proposed to adopt a systemic-ecological-relational approach, as outlined by Bronfenbrenner (2002), in teacher research and training. This approach emphasizes the role of the system in shaping teacher professionalism, focusing on three fundamental dimensions: social, organizational, and educational.

Social Dimension

- Recognizing the social context that influences teaching practices and student outcomes is crucial. Acknowledging these influences allows for more effective adaptation of educational strategies.

- Furthermore, community support and collaboration among teachers, families, and other educational institutions are essential for enhancing teaching effectiveness. Strengthening these connections can help create a more inclusive and collaborative learning environment.

Organizational Dimension

- The school's structure, policies, and available resources play a significant role in shaping the teaching environment. It is important to highlight the significance of these elements in creating favorable conditions for teaching and learning.

- Promoting a supportive organizational culture that fosters professional growth and collaboration among educators is necessary. A school environment that values teacher professionalism contributes to improved education quality and job satisfaction among staff.

Educational Dimension

- Ensuring alignment between educational objectives, curriculum standards, and teaching practices is vital. Such coherence is essential for providing high-quality education that meets students' needs.

- Continuous professional development for teachers should be supported by offering training opportunities that address evolving educational needs and new pedagogical methodologies. Ongoing skill development is crucial for maintaining high standards of education and adapting to changes in the educational context.

To support and implement these dimensions, various examples of collaborative work experiences between teachers in both initial training and in-service contexts can be considered:

- **Communities of Practice:** These represent an effective model where educators can share experiences, resources, and teaching strategies, fostering mutual learning and professional growth.
- **Service Learning:** Combining academic instruction with community service, service learning enables teachers to develop practical skills and reflect on their educational role within a real-world context.
- **Philosophical Dialogue:** Encouraging teachers to explore pedagogical concepts and ethical dilemmas, philosophical dialogue enhances their critical reflection and informed decision-making abilities.
- **Virtual Communities of Practice:** Digital platforms for collaboration and idea exchange among educators from different regions can overcome geographical barriers and facilitate access to resources and professional support.
- **Change Laboratory:** Structured environments where teachers can collectively analyze and redesign educational practices, experimenting with new methodologies and teaching approaches.

The adoption of this integrated and systemic approach, supported by the aforementioned collaborative experiences, can provide a solid foundation for improving teacher training and, consequently, enhancing the quality of education.

Conclusions

Although often acknowledged abstractly, collegial work is not yet perceived as central to teacher professionalism. Research indicates that collegial work and collective agency support teachers in the long term, helping to mitigate burnout (Pedditzi & Nonnis, 2009) and improve relationships at all levels, as well as the quality of teaching.

Systemic reforms are needed to address bureaucratic constraints and promote leadership. Initial teacher training should emphasize relational skills, recognizing the importance of developing interpersonal abilities that facilitate collaboration and team cohesion.

Ongoing professional development should focus on building communities of practice through experiential learning. This approach allows teachers to reflect on their practices, share experiences, and learn collectively, strengthening community bonds and mutual support.

In conclusion, valuing collegiality not merely as an abstract concept but as a central and daily practice in teacher professionalism requires cultural and structural changes within the educational system. Such changes must be supported by policies that promote collaboration and training programs that prepare teachers to work effectively together, creating a more positive and productive educational environment for all.

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