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Governance Challenges in School-to-Work Programs

Exploring PCTOs in Italy

Paola Giannoni, Valeria Pandolfini, Claudio Torrigiani and Mauro Palumbo

ABSTRACT: *The article explores the governance mechanisms of Pathways for Transversal Skills and Orientation (PCTOs) in Italy, analysing their processes and results within a multi-level governance framework. Drawing on qualitative research and survey data, it highlights both strengths and critical weaknesses in the integration of PCTOs into educational pathways, specifically addressing the territorial disparities that affect their implementation. The research also investigates the socioeconomic and institutional factors that influence the effectiveness of this program, focusing on regional inequalities and the role of territorial networks in shaping School-to-Work transition outcomes. The findings show that, although PCTOs aim to bridge the gap between the education system and the labour market by enhancing skills development and promoting social inclusion, their implementation is highly variable. Key determinants contributing to this fragmentation include the type of educational institution, local labour market dynamics, and the effectiveness of local governance mechanisms. The article emphasizes the importance of addressing these governance challenges to enhance the educational value of PCTOs and integrate them more effectively into schools' teaching strategies.*

KEYWORDS: *School-to-Work Program (SWP), Pathways for Transversal Skills and Orientation (PCTOs), Education governance, Educational inequalities*

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Introduction

School governance is increasingly discussed internationally due to its complexity in a globalized context (Pang and Chan, 2022). The shift towards decentralized governance models has led scholars to analyse new governance structures and relations (Brunila and Nehring, 2023; European Commission, 2017; Kwan and Li, 2015). Although the government still makes education policy, networked governance models that involve multiple stakeholder groups have surfaced (Tamtik and Colorado, 2022).

This viewpoint raises the question of whether the increasingly pervasive decentralization process in the educational sector offers an opportunity for democratic and cooperative policy and decision-making at the local and regional level, or if it means less government intervention, which opens the door for more privatization, market efficiency, deregulation, and exclusion, with the potential to exacerbate social inequality in terms of educational access (Cefalo *et al.*, 2024; Benadusi and Giancola, 2020). The specific objective of this article is to analyze the governance mechanisms of PCTOs from an explicitly multi-level perspective, with the aim of identifying systemic weaknesses and specific regional or local factors that influence their effectiveness. In previous contributions, we addressed the topic with an exploratory and descriptive approach (see Torrigiani *et al.*, 2020), particularly in relation to the public debate on School-to-Work Program. More recently, the issue of PCTO governance mechanisms has been tackled with a focus on capturing territorial differences (Giannoni *et al.*, 2024), with specific attention to coordination across institutional levels. In this essay, building on further analysis of research data, we aim to highlight both strengths and weaknesses directly related to the integration of PCTOs within educational pathways. The mixed method approach we adopt is made possible by the combination of qualitative data and quantitative survey results, unlike previous articles that relied exclusively on qualitative interviews. Furthermore, in this essay we intend to develop a more systematic framework, addressing in an integrated way both the outcomes of PCTOs and the socioeconomic and institutional determinants of their territorial variability. Our goal is to move further away from the subjective perceptions of the involved stakeholders and, instead, provide a more empirically grounded analysis of the fragmentation of the entire system, the actual effectiveness of school-work integration, and the

role of territorial networks, thus offering an interpretation more oriented toward the impact evaluation of PCTOs.

The article addresses this question by outlining the key findings from qualitative research and survey analysis that investigated the governance mechanisms of Pathways for Transversal Skills and Orientation (PCTOs) in Italy. It also looks at how these organizations function in terms of processes and results, highlighting important components and strengths. Relying on previous research on the implementation of School-to-Work Program (SWP) in the Italian context (Pinna and Pitzalis, 2020, 2024; Giancola and Salmieri, 2021), an integrated and systematic framework of relationships between the various subjects of the territory can help make SWPs more meaningful, by supporting clearer roles, better coordination, and stronger relevance for both teachers and students. This requires exploring the different modes and mechanisms of governance underlying the SWPs in Italy. To better understand the governance of PCTOs, the article focuses on the relationship between the education and training system and hosting organizations (public, private, and third-sector organizations). It does this by analyzing the ways in which the various actors of the two systems coordinate and interact. It also looks at the interactions between the different players in the system, negotiating decisions about how to design and implement the pathways. In particular, the multi-level governance of education systems is covered in Section 1 in order to identify the models that underpin the research and summarize the primary issues facing the Italian educational system; the methodological approach used in the empirical analysis is described in Section 2; the study's key findings are presented in Section 3; the analysis's findings are discussed in Section 4 in relation to the theoretical framework; and the conclusion offers some final thoughts while examining possible policy developments.

1. The Governance of SWP: Challenges for the Italian Educational System

The term 'governance' has no universally accepted definition. With an emphasis on the analysis of the interactions between the different stakeholders, sectors, and levels involved in non-hierarchical and network-like structures, this ana-

lytical viewpoint is propelling the political field's approach from an actor-centered to an institution-centered point of view (Bevir, 2011; Ball and Junemann, 2012). Several organizational and geographic typologies are commonly used to conceptualize governance, including (Wilkins and Milfsud, 2024): *i*) levels (direct, intermediate, distant); *ii*) sites (federal, state, regional, local, institutional, individual); *iii*) tiers (local government, board of trustees, regional schools commissioner, school governing body); *iv*) scales (market, network, hierarchy); *v*) spaces/places (schools, hospitals, prisons).

In the welfare field, the term 'governance' was widely used when, in the late Seventies, the idea that the public sector could directly address citizens' needs vanished and it became clear that the efforts of public, private, and third-sector organizations needed to coordinate in order to do so (Burns and Köster, 2016). According to Bache (2012), George (2004), and Sbragia (1992), this is directly related to the term 'multi-level governance', which refers to the increasingly intricate relationships between public, private, and nonprofit actors arranged at various territorial levels. Additionally, it calls into question the effectiveness and responsibility of current public decision-making (Soares *et al.*, 2023). As Bevir (2019: 152) states: «governance expresses a widespread belief that the state increasingly depends on other organizations to secure its intentions, deliver its policies, and establish a pattern of rule».

The term 'governance' signifies the shift from a centralized logic of structures to an autotelic or interactive logic of structures (Rhodes, 1996). This is also because rules are no longer set exclusively by the state. When initiatives are funded and managed independently by third-sector organizations, and policies reflect the different – yet aligned – goals of multiple actors with their own decision-making and operational autonomy, governance becomes more complex.

The term 'governance' has also been a helpful analytical tool since the Nineties for describing something qualitatively and historically distinct regarding the networked influence of both human and non-human actors on the creation and implementation of educational policies (Wilkins and Milfsud, 2024). The «field of educational governance», as Madsen (2022) calls it, and «governance educational research», as Pataki (2015) calls it, are closely related to the fields of organization studies, political science, and international relations. The extremes of centralization and decentralization in control can be used to categorize various types of governance. In decentralization, the control is institutionalized through

self-regulation with the participation of concerned stakeholders and the collaboration of governmental, private, and various collective actors, whereas in centralization, the control is exercised through authoritative decision-making by governmental actors (Pang and Chan, 2022).

Based on the patterns of interactive independence of the actors concerned, three different educational system governance models can be observed: hierarchy, markets, and network (Ehren and Baxter, 2021; Greany and Higham, 2018). The state's formal authority is referred to as hierarchy. This includes the direct performance management of services and interventions, national, regional, and local bureaucracies, as well as statutory policies and guidelines. Markets are designed to promote choice, competition, accountability, and commercialization using incentives and (de-)regulation. Networks are defined as the (re-)creation of interdependencies that encourage and/or compel cooperation, partnerships, and involvement across organizational boundaries. It is therefore difficult and dependent on a wide range of intricate factors to analyze how networks, markets, and hierarchy interact to affect choices and actions in various local contexts. The following are noteworthy among the others mentioned in the literature (Greany and Higham, 2018): the history of local relationships between schools and local authorities, as well as the coalitions, agreements, and disputes that have shaped local education; the social, economic, and geographic context of individual schools; and the agency of local actors, including their ability to act and be informed, as well as how these are impacted by personal and professional values.

In Italy, the governance of the SWPs is a very delicate aspect because it refers to a mission that schools must develop by opening up to the territories in a significant way and whose results end up depending not only on the work of the schools, but above all on the contributions of the 'external' organisations that host the students (Giancola and Salmieri, 2021). Moreover, SWP's introduction in Italy should also be considered in the broader perspective of the validation of non-formal and informal learning to formal education, as outlined by article 4 of Law 92 in 2012 and Legislative decree 13 in 2013, which align with corresponding European directives (Council of the European Union, 2012; European Parliament, 2008). These regulations were intended to give equal weight to education obtained in a variety of settings and ways, allowing schools (in the case of SWP) to acknowledge informal and non-formal learning

within their formal curricula and allowing the labour market to assess how well learned information is applied in real-world situations (e.g. combining disciplinary and cross-cutting abilities). On this point, the challenge is not to fall into the mistake of adopting a position opposed to integration, such as the tendency to once again 'separate' and 'dichotomize' general and professional skills, school and work, or education and training versus the economy. Rather, all these concepts need to be framed within the more comprehensive perspective of human capabilities and development (Benadusi, 2021). Indeed, such a perspective (Sen, 1999) invites us to think of SW not only as the development of specific skills for the labour market, but as a process of integrated human development, aimed at contributing to the growth of an individual in its multiple dimensions: cognitive, social, emotional, and civic. The challenge is to integrate school and work as components of a unified path, aimed at the full realization of everyone's potential. Thus, SWP should be seen not only as a bridge to the world of work, but as a training ground for the development of a wide range of human capabilities. Effective governance could enable the creation of environments that expand people's freedoms and opportunities, enabling them to develop capabilities, contribute to society, and live fulfilling lives. Governance systems could contribute to the development of such opportunities.

Another challenge is connected to the plurality of stakeholders involved in the design and implementation of PCTO paths, both within schools and hosting organisations, since the different involved actors seem to have partially different objectives, or they seem to interpret the orientation objective of the tool in different ways. Indeed, on the one hand, schools often perceive it as a means of bringing students to the labour market by potentially creating employment opportunities (in technical and vocational upper secondary schools) or as a form of orientation for selecting university programs (in general upper secondary schools) (Giannoni *et al.*, 2024). Indeed, as highlighted by Pinna and Pitzalis (2020, 2021a), the 'opposition' between general upper secondary schools and technical and vocational upper secondary schools primarily appears in the practices of teachers belonging to the two segments:

high school teachers tend to stigmatize manual work as demeaning, whereas vocational schoolteachers, on the other hand, tend to value practical activities. The 'universes of possible futures' imagined in the two types of schools thus appear to be opposed and even irreconcilable (Pinna and Pitzalis, 2020, 31).

This opposition has significant pedagogical implications. High school teachers seem to be aligned with the viewpoint of families and students, for whom school is an investment in cultural capital and educational credentials consistent with aspirations for careers in intellectual professions and advanced services. In this case, transversal skills are at the center of the educational framework, in line with the objectives set by European policies. On the contrary, paradoxically, in vocational institutes, practical skills remain at the center of the framework, while transversal skills are more marginal or instrumental to the former. On the other hand, hosting organizations are more often driven by visibility objectives as prospective employers or providers of postsecondary education for students than by orientation and transversal skill acquisition objectives. Therefore, accomplishing the goals of PCTOs is difficult since it is made more difficult by the different viewpoints that the actors in these structures have about the pathways and the various coordination modalities that take place in various local contexts.

2. Research Questions and Methodological Approach

In this paper, we present the focus of the Genoa Unit within a broader research project, as outlined in the introduction to this *Scuola democratica* Special edition. Our aim is to delineate the governance system related to PCTOs and to examine how this system functions in terms of both processes and results. The research questions guiding this study are directly linked to the overarching objectives of the national project¹. These questions are designed to explore the complexities of PCTOs and their implications for educational practices, while promoting effective governance, innovation, and collaboration among stakeholders: how can governance models for PCTOs be improved to enhance collaboration between schools and local firms? What strategies can be identified to address socioeconomic challenges that hinder effective PCTO governance and student participation? How can territorial networks be strengthened to improve collaboration among stakeholders in PCTO governance?

To address these research questions, this article synthesizes findings from the interviews conducted by the Genoa Unit with the survey results gathered

¹ This contribution focuses on governance as part of a broader research project. For a comprehensive understanding of the overall research design and framework, see the Introduction to this Special edition.

by other research units, providing a comprehensive understanding of PCTO functioning in different contexts. Specifically, our research unit conducted 54 semi-structured interviews with stakeholders operating at the micro (local), meso (regional), and macro (national) levels, targeting key informants, from both the educational and business sectors. These included school representatives, representatives from Regional school offices (USRs), Territorial area offices (UATs), Chambers of Commerce (CCIAAs), and employers' associations across 13 regions – referring to the quota sampling method, stratified according to the geographical areas and upper secondary school types defined by the Italian National Institute for the Evaluation of Education (INVALSI). The interview transcripts were analysed using content analysis and processed with MAXQDA software.

Subsequently, we compared our qualitative findings with quantitative data collected through online surveys conducted by other research units, targeting Educational Tutors (256 respondents), students (3,168 respondents), and School Principals (73 respondents) from sampled schools. This comparative approach allows a deeper analysis that enriches and expands our interpretations, offering a more comprehensive understanding of the insights gathered from various stakeholders. By integrating both qualitative and quantitative perspectives, we provide a nuanced understanding of PCTO governance and its impact on educational outcomes and labour market integration.

3. Findings

The findings of this study explore the complexities of PCTO implementation through three key dimensions: the coordination between the education system and the labour market (§ 3.1); the influence of the socioeconomic and institutional context on PCTO governance (§ 3.2); the significance of territorial networks in shaping and enhancing governance practices (§ 3.3) – not only as indicators of effective governance but also as crucial factors that actively influence and advance governance initiatives.

3.1. *Coordination between the Education System and the Labour Market: The Role of PCTOs in Addressing Social Inequalities*

Coordination among schools, firms, and other stakeholders involved in PCTOs is crucial to ensuring that these pathways are both effective and accessible to all students. The success of PCTOs is closely linked to the degree of integration between the educational system and the labour market, typically occurring at an intermediate territorial level (Giannoni *et al.*, 2024). This requires collaboration among schools, companies, and associations, fostering networks that extend beyond individual educational institutions. In fact, the analysis of data collected through online surveys reveals that, for 63% of school principals and 38.3% of Educational Tutors, the relationship between school orientation and external organizations is primarily characterized by co-managed planning and ongoing monitoring of activities. However, the main challenge in implementing these pathways appears to lie in creating a functional synergy that effectively integrates the educational system with the evolving labour market. One of the central objectives of these pathways is precisely «to enrich the learning acquired in education and training programs through the acquisition of competences that are relevant to the labour market» (Legislative decree 77 in 2005). While the demands of the labour market are undoubtedly a key consideration, they should not become the sole determinant in shaping educational experiences. Equally important is the broader goal of equipping students with transversal skills that enable them to adapt to an ever-changing world – including the labour market – thus addressing both current and future needs, rather than merely responding to short-term labour market or societal demands.

As a matter of fact, one of the main issues that emerged from the interviews with key informants is the lack of «a central coordinating group that we can report to» (Southern CCIAA), which often leads stakeholders to work separately, resulting in fragmented initiatives. As an interviewee explained, «if you're asking whether anyone is providing regional oversight, I don't think so. Each organization has basically had to figure things out on its own» (Northern USR). In many regions, stakeholders report feeling 'disconnected' and without strong coordination: «sometimes the Chamber of Commerce steps in and tries to bring some stakeholders together, depending on the specific project» (Southern CCIAA).

In the absence of effective coordination, in more favorable contexts, specific actors at the meso and micro levels intervene to compensate for the lack of more structured initiatives. For example, «the Chamber of Commerce has sought to facilitate connections between schools and businesses by bringing together teachers and Company Tutors to guide them in designing a PCTO and understanding each other's positions, as these two actors do not always have the same objectives» (Southern CCIAA).

At the micro level, the role of families in facilitating connections with companies was investigated, specifically examining whether they serve as a source of relationships between schools and host organisations (European Commission, 2017). School Tutors from various educational pathways (general, technical, and vocational upper secondary schools) were asked to evaluate the contribution of families to the drafting of PCTOs on a scale from 1 (no contribution) to 6 (maximum contribution). The data indicate a clear difference among educational institutions: in general upper secondary schools, tutors tend to perceive a low or non-existent contribution from families; in vocational upper secondary schools, an intermediate level of involvement is reported; while in technical upper secondary schools the greatest involvement is perceived, with families favouring relationships with firms that not only represent potential future employers but are also more actively engaged in the design and implementation of the pathways. In any case, the perception of various educational stakeholders (school principals, educational tutors, and students) provides a clear overview of the marginal role that families play in PCTOs (see Table 1). The same trend is confirmed by the interviews conducted.

The distribution of responses suggests that schools exert a greater influence than parents in pathway selection, reinforcing the marginal role of families

TAB. 1. *Family involvement in PCTOs*

ASPECT	KEY DATA
Perceived challenge of family participation	Reported as a significant issue by 12.3% of School Principals and 4.9% of Educational Tutors
Family contribution to project drafting	Rated 1-2 (on a 0-4 scale) by 50.7% of School Principals and 61.8% of Educational Tutors
Family participation in scientific committees	Reported by only 3% of Educational Tutors

Source: authors' elaboration based on data from *Educational Tutors and School Principals* survey

in both formal participation (e.g., scientific committees) and project design. Furthermore, the data indicate that families do not perceive these pathways as relevant grounds for exercising their influence. This observation leads to the hypothesis that the design and implementation of PCTOs may reduce the impact of family background on student choices, potentially mitigating existing social inequalities. However, it is important to stress that the mere lack of parental involvement should not be interpreted as evidence of social justice. Rather, the capacity of PCTOs to operate independently of family influence may offer a means to counterbalance social disparities that are otherwise perpetuated by familial resources and involvement.

Another key actor who plays a fundamental role in coordinating PCTO pathways, as highlighted in the literature (European Commission, 2017), is the school principal, who is involved in various stages of the PCTO implementation (Table 2). The school principal plays a crucial role in coordinating PCTO pathways, ensuring engagement across all phases of the project. As the project progresses, tutors report a slightly reduced but still significant role for school principals, with their highest involvement in administrative reporting and final supervision. However, educational tutors note a decrease in the school principal’s involvement in defining project content, suggesting that this phase might rely more on the tutors themselves or other school staff members.

In this regard, the survey of educational tutors indicates that only 37.5% of schools have formally established a scientific committee for PCTOs, while 37.9% report a minimal contribution from these committees to project drafting. The analysis of data related to these cases offers insights into the committees’ composition, meeting frequency, and key functions (Table 3). These data

TAB. 2. *School principal’s role in PCTOs*

PROJECT PHASE	SCHOOL PRINCIPAL’S INVOLVEMENT
Initiation	57.6%: establishing relationships with external organizations and network 60.2%: managing administrative reporting activities
Implementation	49.3%: overseeing administrative processes 48.8%: coordinating overall project execution 47.7%: collecting feedback from tutors and monitoring project progress
Conclusion	60.6%: completing administrative reporting 56.8%: supervising final project outcomes

Source: authors’ elaboration based on data from *Educational Tutors and School Principals* survey

TAB. 3. *Scientific committees in PCTOs*

ASPECT	CATEGORIES	%
Committee composition	School teachers	96.0
	School principals	78.8
	External experts	27.3
	Business consultants	15.2
	Students	11.1
	Families	7.1
	Other (e.g., department heads, former teachers, notable figures)	Rare
Meeting frequency	Every 2-3 months	36.4
	Once a year	31.3
	Every 4-6 months	20.2
	Once a month or more frequently	12.1
Main functions	Project design	68.7
	Monitoring and evaluation	54.5
	Network building	45.5
	Strategic direction	38.4

Source: authors' elaboration based on data from *Educational Tutors and School Principals* survey

suggest that, even in contexts where they are established, scientific committees have variable composition and roles, with functions primarily focused on project design and monitoring rather than on network building or providing strategic direction for the pathways.

3.2. Socioeconomic and Institutional Context: Governance Challenges

The importance of the socioeconomic context is considered crucial, representing «probably the most important factor» (Southern CCIAA), as it «plays a decisive role, opening up opportunities or potentially closing them» (Northern Industrial Association). Similarly, from the educational perspective, it is emphasized that «a more developed and robust socioeconomic context, with a richer socioeconomic network, increases the range of possibilities» (Northern USR), acting as a driving force to expand collaboration opportunities between schools and businesses, thereby promoting effective implementation of pathways. The governance of PCTOs is indeed closely linked to territorial integration among the economic, associative, institutional, and educational sectors, with a strong dependence on the dynamism of the local context. Such dynamism within the

productive and associative sectors is particularly evident in economically vibrant areas, where the presence of a robust entrepreneurial network facilitates collaboration with the educational system. This is supported by the findings that 48.5% of Educational Tutors acknowledge the positive impact of PCTOs in enhancing schools' awareness of business environments. On the other hand, in areas characterized by greater fragmentation of the economic structure or a 'lack of culture' for intersectoral collaboration, the governance of PCTOs experiences more significant obstacles, consequently limiting the opportunities available to students. As a matter of fact, the local economic context directly impacts schools' ability to establish relationships with host organisations, with 32.9% of School Principals reporting difficulties in finding companies or other organizations for PCTOs. This data is also reflected by Educational Tutors: 29.5% indicate that they face similar issues, highlighting how territorial variability affects the ability to create effective networks.

A significant aspect highlighted by the analysis of interviews with school principals and representatives from the Regional education office pertains to the relationship between the type of school and the degree of dependence on the territorial context. Specifically, technical and vocational upper secondary schools seem to be more strongly influenced by the local productive and associative context, as they require direct interaction with the industrial sector to offer practical learning experiences for students.

Furthermore, the analysis has revealed that, in addition to the economic context, the institutional framework and the dynamics of collaboration among local actors can exert equally significant influences. For instance, a representative of the Southern Chamber of Commerce emphasized that, while the socioeconomic context is relevant, «the key factor is the collaborative efforts of individuals: when people can establish effective relationships, the initiative succeeds regardless of the socioeconomic context, which does have an impact but is not the sole determinant». This implies that even in economically less developed settings, the capacity of local actors to forge collaborative networks can offset the structural shortcomings of both the associative and productive sectors.

3.3. Territorial Networks: Products or Drivers of Governance?

Territorial networks emerge as key elements in the governance of PCTOs, both as outcomes of the socioeconomic and institutional context and as crucial drivers that propel their functioning. These networks between schools and firms are often the product of independent initiatives and have demonstrated promising results. For instance, Unioncamere has played a pivotal role in fostering collaboration among various Chambers of Commerce at the national level. In the interviews, it was emphasized that «when individual Chambers of Commerce go beyond provincial efforts and collaborate to provide equal opportunities across the entire region, positive results emerge» (Southern Chamber of Commerce). This underscores the importance of collaboration: «working with other Chambers involved in PCTOs allows us to exchange ideas and learn from diverse experiences [...] The national-level connection between Chambers of Commerce is another key strength» (Northern Innovation and Business Development Foundation).

The qualitative data, supported by verbatim excerpts from interviews, highlight how fostering collaboration through the networking of various stakeholders can compensate for the structural weaknesses at the macro level, fostering coordination and dialogue among different contexts and the sharing of best practices. However, it is important to note that the active participation of schools in territorial networks is still limited. Furthermore, the involvement of school principals in evaluating partnerships – a critical phase for enhancing the quality of PCTOs – remains low. These figures underscore the marginal role that schools play in decision-making processes and in the leadership of territo-

TAB. 4. *School principals' engagement in PCTO networking and partnerships*

SURVEY	AREA	%
School principals' survey	Regular engagement in network-building activities	30.1
	High level of commitment to networking	26.0
	Maximum engagement in evaluating partnerships	16.4
Educational tutors' survey	Engagement in developing relationships with external stakeholders and networks	38.3
	Engagement in evaluating partnerships	31.8
	Engagement in maintaining external relationships and monitoring networks	23.9

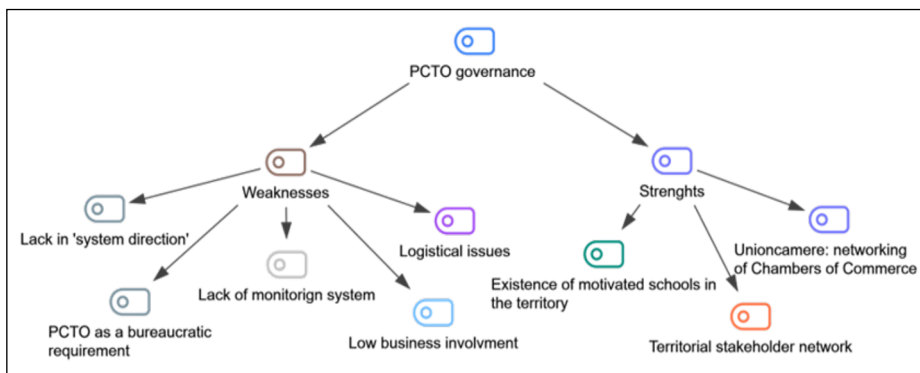
Source: authors' elaboration based on data from *Educational Tutors and School Principals* survey

rial networks, as evidenced by both the self-reporting of School Principals and the opinions of educational tutors (Table 4).

Company tutors are crucial to the success of PCTO experiences and the development of local networks. Data from the 2021-22 academic year show that 48.2% of students felt adequately integrated by their Company Tutors, while 51% received consistent support during their work experience. However, the involvement of company tutors in facilitating the connection between workplace training experiences and classroom learning – positively noted by only 12.7% of students – suggests that there is still considerable room for improvement in engaging these strategic actors throughout all phases of the educational process.

The conceptual map (Figure 1), which represents the main categories identified from the qualitative analysis of interview texts using MAXQDA software, highlights the strengths and weaknesses in the governance of PCTOs. The challenges in governance are centred around a series of structural issues that limit their effectiveness. In particular, the lack of a coordinated system leadership creates fragmentation among the actions of the involved stakeholders, risking the reduction of PCTOs to mere bureaucratic fulfilment, lacking genuine educational value for the students. Additionally, the absence of a shared monitoring system, where schools, firms, and institutions can collaborate and evaluate the impact of the pathways, along with the limited involvement of companies, represents further obstacles – often exacerbated by logistical challenges that hinder

FIG. 1. Concept map of key categories representing strengths and weaknesses in the governance of PCTO, analysed using qualitative text analysis with MAXQDA software



Source: authors' own elaboration

student participation, especially in marginalized areas. Nevertheless, significant strengths also emerge. The presence of motivated and proactive schools in the territory provides examples of excellence, where the quality of PCTOs manages to overcome even the difficulties posed by the socioeconomic context. Moreover, local networks of stakeholders play a crucial role in compensating for the lack of central coordination. In particular, the role of Unioncamere, which facilitates collaboration among various Chambers of Commerce, exemplifies how network-based governance can promote dialogue, the exchange of best practices, and overall improvement of PCTOs.

4. PCTO: A Litmus Test for Education and Labour Market Integration

The exploration of PCTOs reveals critical insights into the integration between education and the labour market, functioning as a litmus test for current educational practices and labour market alignment. Coordination among schools, firms, and stakeholders is fundamental to ensuring that PCTOs are accessible and effective. The weakness in the connection between schools and the labour market – both in terms of intersystem alignment and relationships with local firms – not only limits the effectiveness of PCTOs but also risks deepening educational segregation. This happens because access to quality PCTO experiences often depends on strong local partnerships, which are unevenly distributed. In weaker contexts, students – especially those from disadvantaged backgrounds – may receive lower-quality placements or be excluded entirely, limiting their chances to build transversal skills and professional networks. This perpetuates inequalities both in resources (e.g., acquired and practiced transversal skills) and in opportunities (e.g., continuing education, career orientation), further disadvantaging already vulnerable groups (Palumbo and Pandolfini, 2019; Pinna and Pitzalis, 2021b).

In this regard, the analysis emphasizes the significant role of the socioeconomic context in determining PCTO effectiveness. As highlighted by Greany and Higham (2018), although in the context of the UK, the socioeconomic context is a key factor, shaping the opportunities available for collaboration between educational institutions and the business sector. While their findings are context-specific, they offer relevant analytical insights that help interpret

similar dynamics observed in the Italian setting, particularly in relation to territorial disparities and governance fragmentation. Indeed, the dual influence of the context – both external (which affects the actions of various actors) and internal (which shapes the actions and relationships within the network) – underscores the complexity of PCTO governance, which navigates between external variables, such as economic dynamism, and internal factors, such as the capacity to establish effective networks. This confirms that the effectiveness of School-to-Work transition pathways is inextricably linked to the dynamism of the local context and the specific territorial configurations it adopts (Cefalo *et al.*, 2024; Pinna and Pitzalis, 2024).

The lack of macro-level coordination and intermediary institutions to facilitate collaboration exacerbates territorial disparities and hampers the development of cohesive governance structures (Bache, 2012; George, 2004), leaving individual schools to independently navigate complex networks. Stakeholders at the micro level tend to act autonomously to address the needs of managing PCTOs, seeking to create connections and territorial networks that compensate for the lack of a stronger institutional framework within a multi-level governance structure. As a result, schools are compelled to take a proactive role in building relationships with the production sector and host organisations (Giancola and Salmieri, 2021), often without the necessary support. The educational system, depending on the governance models it adopts – whether network-based, market-driven, or hierarchical (Ehren and Baxter, 2021; Greany and Higham, 2018) – can play a crucial role in addressing these challenges. This allows for more effective management of relationships with the local context and the optimization of opportunities presented by it and suggests the need to reconsider top-down governance models, as local dynamics can play a crucial role in the success of PCTOs.

In this framework, it is evident that the implementation of PCTOs is deeply influenced by the degree of territorial integration (Bache, 2012; George, 2004; Sbragia, 1992). Territorial networks serve as both products of and drivers behind PCTO governance. Their effectiveness largely depends on the local actors' ability to overcome institutional barriers and on the ability of schools to assume a key role in establishing significant relationships with the local economic and social context. The efficacy of PCTO governance is enhanced when integration occurs not only at the individual school level but also through inter-school net-

works, fostering collaboration among multiple stakeholders and strengthening the capacity to address the challenges presented by the socioeconomic context.

The study has several limitations, including its focus on specific regions in Italy, which may limit the generalizability of the findings to other contexts. Additionally, although the study is longitudinal, the project's duration may not adequately capture the long-term effects and evolution of PCTOs, potentially overlooking shifts in governance dynamics over time. Future research will aim to provide a more comprehensive understanding of PCTOs and their impact across diverse contexts.

Conclusion

The article aims to explore the extent to which the governance of PCTO contributes to the pursuit of the aims established by law². These aims include, in particular, promoting the integration of classroom-based learning and practical experiences; supporting the acquisition of competences that are transferable and valued in the labour market; facilitating young people's career orientation; reinforcing the systemic relationship between schools, the labour market, and civil society; and aligning educational provision with local development. These goals can be achieved both by enhancing transversal skills and strengthening the links between school, society and labour market, through practical experiences (whether through work placements in private companies or in third sector or public organizations, or within a simulated training enterprise). As a matter of fact, PCTOs serve as a barometer for the degree of systemic or irregular connections between the labour market, institutional, social, cultural, and economic entities and the educational system. In this regard, PCTOs have offered an extraordinary opportunity for the schools to collaborate with external realities

² The aims of PCTO are established in article 2 of Legislative decree 77 in 2005, which defines them as follows: to implement flexible learning modalities that are culturally and educationally equivalent to the outcomes of upper secondary education, and that systematically connect classroom-based learning with practical experience; to enrich the learning acquired in education and training programs through the acquisition of competences that are relevant to the labour market; to support young people's career orientation by enhancing their personal vocations, interests, and individual learning styles; to establish a coherent link between educational and training institutions and the labour market and civil society, enabling the active participation of the stakeholders referred to in article 1, paragraph 2, in the educational processes; to align educational offerings with the cultural, social, and economic development of the local context.

also to provide students experiences aimed at developing transversal skills, autonomy and orientation responsibilities. This means understanding transversal skills in a broad sense, according to the European Recommendations, i.e. skills that can be used in the social dimension and not just in the professional one, through paths allowing young people to combine specialist knowledge with transversal skills, to use all the personal resources developed during their lives, and not only those acquired in formal educational environments (Ancora and Grimaldi, 2024).

The study looked at governance patterns to talk about how and to what degree institutional settings, opportunity structures, and contextual conditions (Roberts, 2009) help to frame the arrangement of opportunities and limitations that young people face as they navigate their lives (Pandolfini *et al.*, 2022), taking into account educational environments as the larger framework of education, encompassing the community, institutional arrangements, and the out-of-school environment, in addition to the corporate and multilateral agendas (Freytag *et al.*, 2021). Schools face two key issues in managing SWP pathways: youth career orientation and educational vertical planning. On the one hand, they must plan training offers based on the availability of local resources while also exploring students' preferences and attitudes toward the job market. On the other, it is crucial to structure the school curriculum progressively, integrating skills year by year around strategic cultural axes, following the law provision, to connect in a systematic way school education with practical experience (see also Giancola and Salmieri, 2021).

Other two key challenging issues could be added: the coordination and the co-planning of SWPs paths. This requires strong integration between the languages and cultures of schools and labour markets' actors, balancing limited time resources and the need to personalize student plans while managing a high number of SWP pathways (Giancola and Salmieri, 2021). Strictly related to this last point, one of the major critical issues in planning PCTO is the identification of partners with whom schools can co-design activities effectively focused on the development of transversal skills, clearly documentable as well as usable by students in their life course development. Moreover, the identification of the transversal skills would presuppose a shared definition, which certainly cannot be taken for granted, between learning at school in a formal way and learning in work contexts in informal one. We could add that, particularly in Italy, the law

(92 in 2012 and Legislative decree 13 in 2013) assigns equal value and dignity to formal, non-formal and informal learning but this is not yet assimilated by the main institutions that provide formal learning (e.g. schools and university, see Palumbo and Startari, 2013; Palumbo and Proietti, 2022).

In order to address these persistent issues, the paper provided insight into organizational and implementation strategies by outlining the complex landscape of PCTO governance dynamics. The analysis emphasizes the intricacy of PCTOs and the necessity of efficient governance to strengthen educational policies by bringing education into line with the demands of society and the labour market. Overall, the study has demonstrated the importance of governance to PCTO success. At the same time, governance is often influenced by the socio-economic vitality of the territory and the capacity to leverage existing networks for PCTOs. In fact, the existence of networks and the economic vitality of the territory are, in turn, interrelated. However, this does not exclude the possibility that the proactivity of schools (whether individually or collectively, preferably with the active support of the Regional school office) can compensate for the weakness of existing local networks by creating new ones or strengthening those that may be weak but already exist. In this sense, the role of the School Principal appears to be decisive. According to the interviews conducted, other actors, such as the Chamber of Commerce, can also promote networks and therefore support PCTOs. However, even in this case, an active, if not proactive, attitude from schools is crucial. Therefore, from this perspective, incentives, whether material or symbolic, coming from the central level can be very important to strengthen the networks and their governance.

PCTOs have expanded learning models and methodologies, emphasizing the acquisition of transversal skills, offering a valuable opportunity for the Italian educational system to integrate work-based experiences into school curricula (see goal b) in the Legislative decree 77 in 2005. In conclusion, the findings emphasize the ongoing necessity to strengthen the integration between schools and the economic sector. This alignment not only improves the quality of education but also gives students the abilities and skills they need to succeed in their future careers.

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