

# Educational triangulation. When social productivity overcomes relational duality and defeats the drift of isolation.

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**Abstract:** In an educational landscape marked by increasing complexity and pressures toward fragmentation, this paper intends to deconstruct the "dual reductionism" that continues to confine the educational relationship within an isolated dynamic between teacher and student. Such an atomistic vision is not only insufficient for explaining contemporary learning processes but also risks fostering new forms of exclusion by obscuring the social and political dimensions of the schooling practice. Through the theoretical-methodological proposal of algorithmic triangulation (Mancarella, 2026), the article explores how opening the pedagogical dyad toward the context—conceptualized as a network of artifacts, communities, and territories—constitutes a necessary condition for genuine school inclusion. Drawing upon the perspectives of the extended mind and situated learning, it is argued that the quality of integration does not reside in the management of a single asymmetrical relationship, but rather in the school system's capacity to generate distributed "social productivity." Tracing the evolution from a teacher-centered (magistrocentric) model toward one of co-evolutive ecologies, this work highlights how active participation and the overcoming of teachers' professional isolation are the pillars of a democratic governance of learning. In conclusion, educational triangulation is presented as a dispositif of social justice, capable of transforming the school into an open ecosystem where diversity is not an individual burden, but a difference that generates meaning within a collective and reticular mind.

**Keywords:** Triangulation, relationship, network ecosystems, extended mind.

## 1. Change between translation and dual reductionism

The efficacy of relationships among teachers, students, colleagues, and the school community at large is a decisive factor in learning quality, professional development, and the sustainability of educational change (Hargreaves & Fullan, 2012; Biesta, 2015; Covelli & De Anna, 2021).

Despite the growing attention directed toward the educational relationship, certain stereotypes persist, anchoring it to implicitly dualistic models. Consequently, these models adopt the teacher-student interaction as their privileged unit of analysis. While such frameworks have the merit of valorizing the dialogic and interpersonal dimensions of education, they risk obscuring the social, political, and transformative dimensions inherent in the relationship itself.

If we were to confine ourselves exclusively to the dual dimension of the relationship, it would be difficult to explain or sustain significant and lasting processes of educational change—unless one chooses to erase or ignore the contributions and stimuli arising from the social, cultural, and environmental context. To address these critical issues, this paper proposes the notion of relational triangulation—or, if pre-



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ferred, triangular relationship. This concept serves to highlight and emphasize what is frequently kept implicit, to the point of being ignored, even though the implicit remains consistently active and can prove decisive. It is a matter of valorizing the context and its contributions to reorient the educational relationship toward generative and socially productive dimensions.

If, in the past, attention was repeatedly drawn to what was long termed the educational rapport, it was done so with sound justification and appreciable results. It involved a transition from a magistrocentric school to a puerocentric one—as it was then called—with all that followed in terms of valorizing needs, interests, direct activity, and environmental exploration, as evidenced by early twentieth-century pedagogy starting from J. Dewey's *Learning by Doing* (Dewey, 1916).

The emphasis on the specific intentional and asymmetrical bond between educator and student led to a refinement that was first linguistic and subsequently substantial. In the 1980s, stimulated by C. Rogers' non-directivism (1950, it. trans. 1970), the discourse shifted from "rapport" to "educational relationship." Within the field of pedagogy, from the studies of A. Perucca—who explored its dynamic genesis (Perucca, 1987)—to the present day, there has been a flourishing of scholarship centered on the richness and specificity of the educational relationship.

It is worth noting, however, that over time this theme has not undergone revolutionary inversions or variations, but rather distinct, conspicuous, and intellectually demanding deepening—not by erasing the past, but by transcending it. The primary core originates from afar, from Socratic maieutics, and reaches us through diverse yet convergent emphases, passing through manifold insights such as the student's freedom in a scientifically prepared environment (M. Montessori) or recent studies on Individualized and Personalized Instruction, to name but a few examples. It is akin to a flourishing of offshoots around a vigorous plant laden with fruit.

Moreover, our proposal of triangulation does not depart from the common trunk; on the contrary, it shares the same lifeblood and, in some ways, articulates what was already present, though not yet fully evident.

The notion of the educational relationship has always been, and remains, fundamental to learning and growth. It has consistently been grounded in communication, empathy, and dialogue: it is not a mere transmission of notions, but a dynamic process involving affective, social, cultural, and environmental dimensions, aiming toward the student's autonomy.

From classical pedagogy to the most progressive and innovative currents, the educational relationship has always been interpreted as a privileged locus for cultural transmission and accompaniment along the path of personal development.

However, at certain points, the emphasis placed on the centrality of the educational relationship has—paradoxically—resulted in a reduction of complexity, leading it to be conceived as a dual and self-referential circuit. Even when discussing the needs of the other, the recognition of their subjectivity, and an authentic empathetic understanding of lived experiences, the relationship can, and sometimes has become inward-looking. In doing so, it loses its reference to broader horizons of meaning and its intrinsic educational and social goals, with outcomes particularly evident in certain operational stagnations or in manifold forms of dependency, conformism, or resistance to change. Ultimately, it sometimes happens that while the discourse focuses on relationship, practice continues to operate through the stereotypes of the educa-

tional rapport or rather, while effectiveness is preached, the process remains stalled at the level of mere efficiency.

## 2. The Structural Limits of the Dual Relationship

Regarding the distinction between relationship and rapport, it suffices here to refer to the extensive work of N. Paparella (Paparella, 2009). However, it is crucial to reiterate that a relationship potentially founded exclusively on a dual dimension would tend to evaluate its own effectiveness through purely internal parameters: mutual satisfaction, emotional equilibrium, and the stability of the bond. These parameters, while valuable, are undoubtedly insufficient within an educational project that truly aims for effective change.

Psychological and pedagogical studies confirm that self-contained relationships can produce effects of isolation and a loss of contact with the broader social reality. In the educational context, this closure disempowers learning, rendering it less effective in cultivating citizenship, responsibility, and social impact; furthermore, it makes it precarious, as it remains exposed to the erosion of time.

Precisely for this reason, the educational relationship must not collapse into mere affective or functional reciprocity between two subjects. As suggested by Martin Buber in *The Way of Man*, if the encounter does not open itself to the world, it risks becoming an egoism of two. Contemporary pedagogy must therefore interrogate the need for a dispositive capable of breaking the asphyxia of dualism.

To support teacher agency and foster educational innovation, it is necessary for the relationship to be structurally open and constantly oriented toward something that transcends the relationship itself.

## 3. Social productivity opens the duality, and triangulation serves as a validation of the bond.

To overcome the limits of dualism, we introduced the triangulation model (Mancarella, 2026). Initially conceived to provide security in the interchange with Artificial Intelligence, it is now employed to escape the reductive and asphyxiating isolation of relational duality within educational and formative processes.

Our intention is not to add a third subject to the educational relationship, nor do we aim for a mere multiplication of relational roles. Rather, we seek to extend anchoring ties, developmental spaces, and pathways for conditioning and verification. It is a matter of introducing a symbolic and operational third pole that functions as a dynamism for opening the relationship.

This third pole is identified with the social productivity of the educational relationship.



**Fig 1.** | RELATIONAL TRIANGULATION

The relationship is no longer conceived in terms of teacher(s)-student(s), but rather as a teacher(s)-student(s)-social horizon triad, in which interaction is oriented toward the production of value for others, the community, and the broader social and cultural context.

The health criterion of a relationship, therefore, does not reside in its internal stability, but in its social productivity. This term must not be interpreted in an economic sense, but rather as generativity (Erikson, 1968). A relationship (whether dyadic, educational, or professional) is fruitful if it produces value for the community:

- at a micro level: through the promotion of new forms of hospitality or domestic creativity;
- at a macro level: through political commitment, the transformation of the reference environment, the development of knowledge, and the potential of socio-cultural heritage.

As theorized by Hannah Arendt in *The Human Condition* (*Vita Activa*), action is such only if it takes place within the public sphere. Triangulation shifts the emphasis from the subjects' feeling to acting in the world, thereby transforming a private bond into a public resource.

#### **4. Social Productivity and Teacher Agency**

An important—though not exclusive—aspect of social productivity can be identified in those elements of professionalism that fall under the umbrella of teacher agency, which several authors identify as a fundamental lever for educational change (Priestley, Biesta, & Robinson, 2015). In this case as well, it is essential to safeguard the underlying principle: social productivity should not be attributed solely to the teacher, but to teachers and students together. Furthermore, the very notion of agency, as some call it using an Italian neologism—does not refer only to the degree of professional autonomy of teachers, but also to the active protagonism achieved by students, according to their specific age and level of schooling.

The teacher exercises their agency both when demonstrating efficiency and effectiveness in circumstances that require and permit autonomous decisions, and when directing and orienting their work toward socially significant objectives.

The social productivity of the educational relationship manifests, for example, when:

- learning is connected to real-world problems;
- students are involved in practices of social restitution;
- pedagogy generates positive and proactive impacts that go well beyond formal assessment.

In this perspective, teacher agency emerges as the capacity to keep the educational relationship open, rescuing it from self-referential closure.

Relational triangulation has significant implications for both initial and in-service teacher training. It is not enough to focus on communication skills, classroom management, and empathy, certainly useful and appropriate, one must go further. We could begin with laboratory-based moments of reflection and evaluation regarding the social productivity impacts of one's own school experience, subsequently moving toward design exercises centered on learning experiences that possess a recognizable and shared social meaning.

In any case, it is a matter of rethinking teacher professionalism by orienting it toward the capacity to connect relationship, knowledge, and social responsibility—or, even more so, toward the maturation of a social sensitivity that elevates the role and function of the teacher into a task of high ethical and social significance.

## 5. Relational Triangulation and Educational Change

One of the primary obstacles to educational change is the perception of reforms as external processes—imposed from above and largely insignificant to daily practice.

Relational triangulation offers an alternative analytical lens. When educational relationships are oriented toward shared social productivity, change is no longer experienced as a mere compliance requirement, but as internal coherence within the practice itself. In this sense, triangulation can contribute to reducing the gap between pedagogical innovation and professional motivation.

Numerous studies have highlighted how innovation, when conceived primarily as a normative or procedural dispositif, tends to generate resistance and forms of superficial adaptation, rather than authentic transformations of professional practices (Fullan, 2007; Hargreaves & Shirley, 2012). From this perspective, teachers often experience change as a bureaucratic obligation rather than an opportunity for reflective professional development (Schön, 1983).

Within this critical framework, relational triangulation proves capable of repositioning educational innovation within a network of meaningful relationships among subjects, practices, and the social goals of education.

Recalling the socio-constructivist and situated perspective of professional learning (Lave & Wenger, 1991; Wenger, 1998), triangulation allows us to interpret change not as an external event, but as an emergent process within communities of practice. In these contexts, professional knowledge is constructed through interaction, the negotiation of meaning, and shared participation.

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