EDITORIAL

Change for the sake of innovation. Or not?

Education constantly demands change, both at the legislative level and in the everyday life of the classroom.

At the ministerial level, we've recently seen changes in the training of secondary school teachers, the evaluation system in primary education, the reintroduction of conduct grades in lower secondary schools, and the upcoming revision of the national curriculum guidelines for the first cycle of education… and we could continue.

Even in the classroom, teachers are continuously reinventing their practices in response to evolving circumstances and the diverse needs of their students.

Innovation as a path to improvement

This editorial does not aim to delve into the specifics of the recent, and often controversial, ministerial reforms, nor to analyse the wide array of proposed teaching strategies presented as innovative. Instead, starting by reflecting on the broader necessity of change, this editorial's aim is to stress change's not inherently positive impact: not everything new is truly innovative, for change can also lead to decline.

So when does change truly foster innovation? What are the indicators?

These are complex questions that require deep reflection. For the purposes of this editorial, we adopt a perhaps simplistic definition: a change is innovative when it leads to meaningful improvement. In education, this could mean enhancing the personalization of learning for each student, within environments that are welcoming and enriching for all. This orientation, precisely because it is not prescriptive, requires continuous re-examination within institutional and professional practice. Whether in legislation, professional choices, or personal actions, decisions should be guided by the pursuit of a good life for every individual within a society committed to the common good. This is the ethical foundation of meaningful change[1].

As a contribution, we seek to offer insights to help distinguish between change that genuinely drives innovation and change that simply chases novelty, sometimes to the detriment of actual progress.

1. A deeper exploration of the relationship between school/education and ethics has been developed by Luigina Mortari. Some of her significant contributions include: Mortari, L. (2024), *Emotions and Virtues. Affective Education, Ethical Education.* Milan: Raffaello Cortina; Mortari, L. (2008). *Learning Freedom. Education and Independent Thinking.* Milan: Raffaello Cortina; Mortari, L. (2015). *Philosophy of Care*. Milan: Raffaello Cortina; Mortari, L. and Ubbiali, M. (eds.) (2021). *Educating at School. Theories and Practices for Primary Education*. Milan: Pearson.

Every school has its own time

We are living through an era marked by multiple crises: the lingering effects of the pandemic on public health, the climate emergency, economic instability, geopolitical conflict, and the erosion of civil rights. These crises leave deep scars in the form of inequities that the school system often fails to address[2]. Education is frequently presented as the key to building a better future[3]. However, the deepening shadows of today's challenges threaten to reduce this promise to mere utopia. Nonetheless, change, both at the institutional level and in teaching practices, is essential if schools are to drive social innovation in the direction of equity and inclusion. On a personal level, change is needed to foster opportunities for everyone to realize their potential.

Reimagining school means rethinking its foundational design. Built on a factory model conceived at the start of the 20th century, the current system often fails to support meaningful relationships, provide holistic approaches to learners, offer personalized support, or ensure equitable access to opportunities[4].

Take assessment, for instance: when used primarily as a tool for control, rather than for fostering learning, and when it relies on extrinsic motivation, it tends to breed competition, encourage conformity, and hinder personal engagement and talent development[5].

A school for our time

The recent pandemic revealed the shortcomings of a certain model of schooling, just as the rapid rise of artificial intelligence is transforming the fabric of society and the economy. Many of today's jobs will soon vanish, while new ones will emerge.

In this context, the school must move beyond the development of manual or rote cognitive skills and instead provide opportunities for students to acquire higher-order thinking competencies—both critical and creative—essential for navigating complex realities[6]. Skills that are easiest to teach and test will also be the easiest to digitize and automate. Persisting along that path risks rendering the school increasingly irrelevant.

Instead, we need a model of schooling and instruction that promotes the development of

2. See Girelli, C. & Arici, M., *Making a Difference by Reimagining School, Every Day, RicercAzione* / Vol. 13, no. 2 / December 2021, https://ricercazione.iprase.tn.it/article/view/20/14.
3. UNESCO (2021), *Reimagining our futures together. A new social contract for education*. Available at: https://unesdoc.unesco.org/ark:/48223/pf0000379381_ita.
4. Darling-Hammond, L. (2024). *Reinventing Systems for Equity. ECNU Review of Education,* 7(2), 214-229. https://doi.org/10.1177/20965311241237238.
5. Regarding assessment, see: Corsini, C. (2023). *Assessment that Educates. Freeing Teaching and Learning from the Tyranny of Grades*. Milan: FrancoAngeli. On the topic of assessment across different school levels, consult: Girelli, C. (2022). *Assessment in Primary School. From Grades to Descriptive Judgments*. Rome: Carocci and Grio, V., Serbati, A., Cecchinato, G. (2022). *From Grades to Assessment for Learning. Tools and Technologies for Secondary School.* Rome: Carocci. For reviews of these volumes in RicercAzione, see https://ricercazione.iprase.tn.it/article/view/227/217.
6. The GreenComp document outlines the European framework of competences for sustainability. (G. Bianchi, U. Pisiotis, M. Cabrera) *GreenComp - The European Sustainability Competence Framework*, edited by M. Bacigalupo, Y. Punie, EUR 30955 IT, Publications Office of the European Union, Luxembourg, 2022; doi: 10.2760/172626, JRC128040). A review can be read in *RicercAzione*, December 2023, vol. 15, no. 2, pp. 273–276 (https://ricercazione.iprase.tn.it/article/view/372/311).

skills such as:
transferring and applying knowledge;
analysing, evaluating, and integrating information;
communicating and collaborating effectively;
taking initiative;
finding and utilizing resources;
planning and implementing actions;
self-management and continuous self-improvement;
learning to learn…

… this is not an exhaustive list, but it clearly points to the kind of transformation required if schools are to provide meaningful innovation for students navigating a rapidly changing world.

Promoting meaningful learning

Insights from learning psychology and neuroscience offer valuable guidance to schools, highlighting both the pitfalls to avoid and the pathways to pursue in the quest to foster meaningful learning[7].

These contributions can help assess whether proposed changes genuinely promote innovation in support of learning—at the level of institutional frameworks as well as educational practices.

In fact, learning is undermined by school environments that generate chronic stress and anxiety, especially when students experience isolation. Similarly, material or educational poverty and unhealthy lifestyles in family settings can hinder learning.

Conversely, meaningful learning is facilitated when students grow up in supportive family contexts that recognize their developmental needs, and when they encounter school experiences rich in opportunities for inquiry and self-expression through various languages. Such environments should promote positive social interaction and prioritize emotional well-being[8].

The principles emerging from the learning and developmental sciences can be summarized as follows:

- the brain develops as a product of the individual's lived relationships and experiences—their quality matters;
- learning is deeply social and emotional, other than academic;
- students actively construct knowledge by connecting new learning to their prior understanding within their cultural contexts;
- students' perception of their own competence significantly influences learning outcomes;
- trauma and adversity can negatively affect learning, while supportive relationships can

7. Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B.J., & Osher, D. (2019). *Implications for educational practice of the science of learning and development. Applied Developmental Science*, 24(2), 97–140. https://doi.org/10.1080/10888691.2018.1537791.
8. For further exploration, the following articles can be consulted: Cantor, P., Osher, D., Berg, J., Steyer, L., & Rose, T. (2018). *Malleability, plasticity, and individuality: How children learn and develop in context. Applied Developmental Science*, 23(4), 307–337. https://doi.org/10.1080/10888691.2017.1398649.
Osher, D., Cantor, P., Berg, J., Steyer, L., & Rose, T. (2020). *Drivers of human development: How relationships and context shape learning and development, Applied Developmental Science*, 24(1), 6–36. https://doi.org/10.1080/10888691.2017.1398650.

help overcome these barriers and sustain education;
– students perform best in low-threat environments where they feel accepted, respected, and supported in developing their abilities.

Promoting social and emotional learning (SEL)

Internationally, the importance of attending to students' social and emotional learning (SEL) is increasingly recognized as a key driver of meaningful school transformation—one capable of responding to students' developmental needs while enhancing both the quality and depth of their learning experiences[9].

SEL should not be conceived as a new academic discipline, but rather as a cultural and pedagogical approach—an ethos of schooling to be supported institutionally and embedded in the daily life of the classroom.

Attention to the quality of social and emotional dynamics fosters learning environments in which students feel safe and recognized, enabling a sense of belonging to the group. These are contexts where behaviors rooted in mutual respect, social responsibility, and commitment to self and collective improvement can flourish.

Understanding school not merely as a site for knowledge acquisition, but as an emotional and relational space, allows for the promotion of meaningful learning and the cultivation of civic competences essential for lifelong learning and active democratic participation.

Ten directions to generate real innovation

In the face of the critical issues that the reality of schools presents—often starkly revealed when minors are at the centre of public discourse—urgent change is necessary. However, there is a risk of resorting to simplistic, common-sense solutions that fail to address the root causes of problems and, perhaps, do not even resolve their negative manifestations[10]. Punitive approaches, coercive pedagogies, and top-down enforcement of rules do not lead to true innovation, either institutionally or pedagogically. They fall short in addressing the need for inclusive social innovation and for nurturing each student's potential. Drawing on a recent report by the Learning Policy Institute[11], the following ten strategic directions are offered as guiding criteria to evaluate whether proposed educational changes genuinely support innovation.

Foster positive relationships to support development

A high-quality school is defined by caring relationships[12], as emotions and cognition are deeply

9. Greenberg, M.T. (2023). *Evidence for social and emotional learning in schools.* Learning Policy Institute. https://learningpolicyinstitute.org/product/evidence-social-emotional-learning-schools.
10. On this subject, see some reflections in the editorial: Girelli, C., & Arici, M., *La scuola tra fabbrica, caserma e comunità, RicercAzione* / Vol. 15, no. 2 / December 2023. https://ricercazione.iprase.tn.it/article/view/350/290.
11. Darling-Hammond, L., Alexander, M., & Hernández, L.E. (2024). *Redesigning high schools: 10 features for success.* Learning Policy Institute. https://www.redesigninghighschool.org/.
12. Mortari has proposed a *Manifesto for the school of care* (https://ricercazione.iprase.tn.it/article/view/441/360).

intertwined. These relationships form the foundation for developing the mental processes critical to meaningful learning.

Ensure a safe and inclusive school climate

While positive teacher-student relationships are essential, they must be situated within an environment that is both physically and psychologically safe and coherent. This cultivates trust and a sense of belonging.

Promote culturally responsive teaching

Building an educational community involves not only fostering care and psychological safety but also implementing pedagogies that respect diversity and value students' lived experiences, integrating them meaningfully into the curriculum.

Design a curriculum that supports meaningful learning

A content-heavy curriculum centred on memorization and reproduction fails to engage students or develop the cognitive abilities required for navigating complex and novel challenges. Students need curricula that stimulate inquiry and deep understanding.

Share a student-centred pedagogy

It's not enough to tailor the curriculum to students' needs and interests; teaching methods must also acknowledge the uniqueness of each learner, their individual learning styles, and the necessity of personalized support[13].

Implement authentic assessment practices

Rethinking both curriculum and pedagogy necessitates moving toward authentic assessment—approaches that highlight actual competences, foster reflective learning, and support student autonomy. In this way assessment becomes a formative, learning-oriented process rather than a mechanism of selection or ranking.

Provide quality initial teacher training and ongoing professional development

Teacher quality is a decisive factor in student success. If teachers are simply required to transmit content, their preparation may be limited to their knowledge of the content, but if they are to promote meaningful learning for students who learn in different ways, then they must become experts not only in their own subject, but also in teaching and be able to recognize the needs of their students and their learning processes. The focus is therefore on quality initial training, but also on effective support for continuous professional development.

13 Universal Design for Learning can support this perspective. For more information: https://www.cast.org/what-we-do/universal-design-for-learning/. Scaffolding for learning can also offer useful strategies. For some suggestions: https://www.edutopia.org/blog/scaffolding-lessons-six-strategies-rebecca-alber.

Engage families

While teachers play a central role in student achievement, they must not operate in isolation. Family involvement should extend beyond viewing digital gradebooks or test scores to engaging in meaningful dialogue about students' overall development.

Build partnerships with community resources

Students' lived experiences—often shaped by socioeconomic hardship, health challenges, or familial instability—impact their learning. Schools must collaborate with community networks to provide integrated supports that ensure equitable access to positive educational experiences. Situations of material poverty, housing or work difficulties, precarious health conditions at family level or situations of conflict and violence produce levels of stress that hinder the development of the potential of individuals and their learning.

Encourage distributed leadership and shared decision-making

Reimagining schools as communities requires shared responsibility. School climate and student outcomes improve when all stakeholders participate in decision-making processes. It is important that schools embody the values of democracy in their functioning so that students can experience them and become future aware and responsible citizens.

Building a vision of innovative schooling

Isolated change initiatives, whether legislative or pedagogical, often fail to produce lasting transformation. Their effectiveness is limited without alignment to a broader, shared vision of what school is for.

It becomes necessary to reflect, both at the institutional and school levels: What is the purpose of education? What should its priorities be?

There are no universal or final answers to these questions. Openness to dialogue and the coexistence of diverse educational philosophies can create fertile ground for local innovations capable of fostering students' full development and inclusive communities.

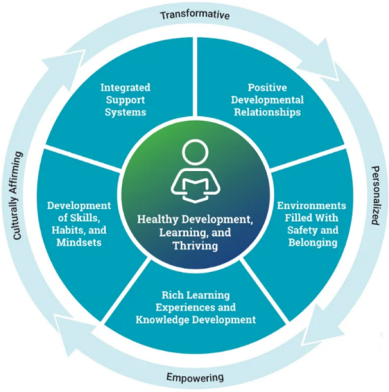
A recent model[14] underscores that student-centred education—attentive to individual growth and personalized support—can lead to real improvement. It calls for designing educational experiences that consider the whole student in a context of equity.

This model emphasizes how the school promotes student improvement when it places the student at the center of its actions—recognizing their individuality, supporting their growth, personalizing their learning experience, and strengthening their skills.

For schools to move toward these goals, it is necessary to act in harmony with students'

14. Guiding Principles for Equitable Whole Child Design in: Forum for Youth Investment (with Learning Policy Institute & Turnaround for Children). (2021). Design principles for community-based settings: Putting the science of learning and development into action, p. 9. See also: Boyd, M., Osher, D., Conway-Turner, J., & Hernandez, I. (2022). Science of Learning and Development Alliance Design Principles for Schools: Planning Tool for Developing a System for Thriving and Learning. American Institutes for Research. Available at: https://www.air.org/sites/default/files/2022-11/Planning-Tool-System-for-Thriving-Learning-SoLD-Design-Principles-rev3-Nov-2022.pdf.

learning and developmental needs by fostering positive relationships that create support and a sense of belonging in environments where everyone can see themselves as a valuable part of the school community. For this reason, it is important that students engage in learning experiences through authentic activities, in collaboration with peers, to develop social, emotional, and cognitive skills that support their holistic personal development[15]. Additionally, they should be able to rely on available support systems to overcome any obstacles to learning, thus promoting their academic success.



Continuing to question

There are many criteria to consider when evaluating whether a change can generate innovation and truly improve the opportunities for students to realize their potential in an inclusive environment.

There are no universal solutions at the legislative or teaching practice level. The only appropriate stance is to keep certain questions open:
What is the meaning of this change?
What improvement does it bring to the actual school experience?
What does it generate in terms of students' growth?
What kind of society does it help to shape?

What the best and wisest parent wants for their own child,
that must the community want for all of its children.
Any other goal is narrow and unworthy,
and pursuing it destroys our democracy...
Only by being faithful to the full development of all individuals within it
can society be faithful to itself.

John Dewey

15. For a deeper look into personal, social, and learning-to-learn competences: *LifeComp: The European Framework for Personal, Social and Learning to Learn Key Competence* (2020). The Italian translation was produced by IPRASE: https://ricercazione.iprase.tn.it/index.

We continue this editorial by highlighting the content of this volume: the thought-provoking suggestions in the "Reviews" section, the engaging contributions in the "Experiences and Reflections" section, and the depth and richness of the scientific articles in the "Research" section, briefly introduced below.

Valeria Cotza's contribution focuses on the structure, methodology, and outcomes of the Horizon2020 SwafS project "Communities for Sciences (C4S) - Towards promoting an inclusive approach in Science Education", which centers on variables that either support or hinder inclusion in science education activities for children aged 3 to 6.

The article by Emilia Restiglian and Sofia Maestrini offers a review of international literature using the scoping review method to explore the current state of research in pedagogy regarding the potential attributed to formative assessment practices implemented in primary schools.

Sara Zanella and Rocco Scolozzi present results from a doctoral thesis in didactics, focusing on the systemic thinking skills of lower secondary school students. The research utilizes tools such as Behavior Over Time Graphs, Connection Circles, and Stock and Flow Diagrams.

Ivan Traina *et al*. propose an in-depth focus on the technological tools used by teachers in lower and upper secondary schools to promote inclusion of students with disabilities and to support the development of new skills.

Chiara Azzollini *et al.* examine orientation programs conducted in upper secondary schools by the University of Perugia. These programs aim to facilitate personal identity reflection through narrative orientation methods and to foster the development of orientation-related competences.

Paolo Bonafede *et al.* explore the perception of time in the educational context, presenting how students and teachers experience and manage time, and how psychological and pedagogical factors shape these perceptions—with significant implications for educational practices and well-being.

Chiara Dalledonne Vandini *et al.* introduce a project developed by the SUSFOODEDU research group, centered on the practices, cultures, and knowledge present in school canteens, beginning with a reflection on literature analyzing cultural representations and actions around food education.

Lastly, Lorenzo Guasti *et al.* analyze the effectiveness of the Bifocal Modeling approach in science teaching through the use of hydroponic greenhouses in Italian schools. This methodology integrates experimental observation with digital modeling, promoting the acquisition of scientific, mathematical, and transversal competences.

Claudio Girelli and Maria Arici