

Metacognitive training "Through the Glass": performing arts education in high-dropout apulian schools

Training metacognitivo "Attraverso lo Specchio": performing arts education in scuole pugliesi con alto tasso di dropout

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#### Abstract

The study presents the results of the Metacognitive Training "Through the Glass" (MTTG), which incorporates Performing Arts Education (PAE) enhancing motivation and self-assessment among students. The participants, from technical schools and vocational institutes with high-dropout rates in Puglia, were divided into randomized workshops groups. The quantitative data analysis focused on variables measured through the pre- and post-intervention questionnaire. The observed variables were awareness of metacognitive process and students' interpretation of the construct *self-assessment* related to PAE. The MTTG is based on Student Voice and combines a democratic teaching, inspired by Pier Paolo Pasolini's 1968 "Manifesto per un nuovo teatro".

<u>Keywords</u>: metacognition; Student Voice; Performing Arts Education; self-assessment; Metacognitive Training Through the Glass.

## Sintesi

Lo studio presenta gli esiti del training metacognitivo "Attraverso lo Specchio" (TMAS), che utilizza le arti performative per migliorare motivazione e autovalutazione negli studenti. I partecipanti, provenienti da scuole tecniche e istituti professionali pugliesi con alto tasso di abbandono scolastico, sono stati suddivisi in gruppi laboratoriali randomizzati. L'analisi quantitativa si concentra sulle variabili identificate mediante un questionario somministrato pre- e post-intervento. Le variabili osservate misurano la consapevolezza degli studenti sulla metacognizione e la loro interpretazione del costrutto *autovalutazione* in relazione alla Performing Arts Education. Il TMAS, basato su Student Voice, combina una didattica democratica, ispirata dal "Manifesto per un nuovo teatro" di Pier Paolo Pasolini del 1968.

<u>Parole chiave</u>: metacognizione; Student Voice; Performing Arts Education; autovalutazione; training metacognitivo "Attraverso lo Specchio".

<sup>&</sup>lt;sup>1</sup> Both authors contributed equally to the research. Irene Gianeselli authored all sections under the supervision of Andrea Bosco, who designed the methodological-empirical framework and oversaw the statistical analysis. The empirical investigation involved establishing a network of schools as part of the "Manifesto for Diversity: Shaping New Society" project, funded through the Regional Council of Puglia's "Futura. La Puglia per la parità – 2022" edition grant.





# 1. Introduction: the inquiry educational setting

This paper presents the results of an exploratory investigation conducted during a pedagogical experiment involving the Metacognitive Training "Through the Glass" (MTTG) (Gianeselli & Bosco, 2024), which integrates performing arts education. The MTTG is inspired by the principles of educational philosophy and teaching practices outlined in Pier Paolo Pasolini's "Manifesto for a New Theatre" (1968). To empirically test the training, the project was implemented in schools with high dropout rates, where performing arts are typically not regarded as essential for the development of students' professional skills. These institutions are often characterised by teachers who are influenced by a high level of negative prejudice towards the student community, and the students themselves are generally low in motivation due to the impact of social backgrounds and inherent attributes on school transitions (Bonvini et al., 2023). To better clarify the educational context in which the research was conducted, it is important to note that the initial target population was expected to consist of 300 students, based on the enrolments forecasted by the institutions. However, prior to the start of the research, the actual number of enrolled students had decreased due to school dropout, and the final sample settled at 237 students (F=102, M=134, NB=1). The dropout rate of the potential sample was around 21%, indicating the proportion of students who, despite initial enrolment, did not remain in the school educational program when the project started. The analysis of the pre- and post-intervention questionnaires on the final sample of 237 students showed no missing data.

This specific proportion aligns with the pre-existing situation described in the Italian National Istitute of Statistics (Istat) report named "Rapporto SDGs July 2023: Informazioni statistiche per l'Agenda 2030 in Italia" (Istat, 2023), which highlights that, in 2023, 11.5% of young people aged 18 to 24 were without a diploma and no longer engaged in the education and training system. The Istat report also points out that, in the 2021/2022 school year, 48.5% of final-year secondary school students had not achieved an adequate level of literacy, a figure which remained stable compared to the previous year (48.2%) but was still significantly higher than pre-pandemic levels (35.7% in the 2018/2019 school year). Regional disparities, particularly to the disadvantage of Southern Italy, remain substantial: indeed, school dropout rates were higher among males (13.6%) compared to females (9.1%), and in the Southern regions (15.1%) compared to the Central (8.2%) and Northern regions (9.9%). The dropout rate among male students aged 14 to 15 years was 7.7% in vocational institutions, compared to 4.3% in technical institutes. On a European level, despite significant improvement, Italy remains among the countries with the highest rates of early school leaving, followed by Germany, Hungary, Spain, and Romania.

However, the aim of the research was not to explore the educational context, but to assess the effectiveness of the metacognitive training in terms of its ability to stimulate study motivation among participants and measure their perception of self-assessment within the educational context, considering that such processes have a decisive impact on students' psychological well-being, and therefore on their ability to complete their academic journey with greater ease (Affuso et al., 2025; Zeb et al., 2025).

We also acknowledge that Maric and colleagues (2011) emphasize the importance of further research into the role of cognition in the development, maintenance, and treatment of anxiety-based school refusal. Meanwhile, Gonzálvez and colleagues (2025) recently aimed to identify profiles of School Refusal Behaviour (SRB) in a community sample of Spanish children, analysing how these profiles differ across four dimensions of metacognition. Furthermore, other research, such as the study by Mokhtari and colleagues



(2019) on the effects of a metacognitive training program on the motivational structure and performance of dropout university students, suggests that metacognitive skills, when enhanced through appropriate training, can significantly impact both the motivational structure and academic performance of students.

In general, the literature on the effect of metacognitive skills on school attendance is limited (Gonzálvez et al., 2025), and, as suggested by Perry and colleagues (2018) metacognition is a neglected area of school policy and practice.

Since the need for metacognitive teaching is still recognized at the academic level, it should be applied already in schools, where the dropout phenomenon is most evident.

# 2. Theoretical background: metacognition and assessment

To begin, it may be useful to consider a standard definition of "metacognition" (Fodor, 1983); we should also refer to the APA Dictionary of Psychology: "awareness of one's own cognitive processes, often involving a conscious attempt to control them". When properly guided and activated, metacognition is a process that ensures inclusive teaching (Ianes, 1996) and democratic behaviours (Reininger et al., 2025).

As recently emphasized by Guamanga and colleagues (2025), moreover, metacognition and critical thinking (Pastore et al., 2019) promote empathy and personal well-being, while cognitive, metacognitive, emotional and motivational self-regulation may influence school performance in adolescence and early adulthood (Bakracevic Vukman & Licardo, 2009), and should predict school achievement (Džinović et al., 2019). The activation of this metathinking process, therefore, is not only pedagogically effective—facilitating learning and potentially reducing social inequalities (De Vincenzo, 2024)—but also prepares the student community to manage classroom relationships more effectively by stimulating cooperative learning (Suprijono et al., 2025).

Metacognition in learning is strictly related to self-assessment which is, before being practice, a concept that deserves attention in the education of contemporary students. As early as 1996, Stallings and Tascione demonstrated how self-assessment, and self-evaluation can be effective tools for learning mathematics. In recent years, research has increasingly regarded feedback as an integral part of a dialogic process with teachers and peers, through which students actively construct, monitor, and evaluate their own learning (Nicol, 2010; Nicol & MacFarlane-Dick, 2006; Price et al., 2010).

Being actively involved in the feedback process allows students to better understand and apply the guidance provided by teachers (Grion & Serbati, 2019), and at the same time, it can activate self-assessment processes for acquiring autonomous and independent evaluative skills (Doria & Grion, 2020; Nicol, 2010). However, as shown by the research of Doria and colleagues (2025), the recent literature in the national context (Doria et al., 2023; Doria & Picasso, 2024; Picasso et al., 2023) has highlighted the limited use of feedback practices, despite the potential for these to be enhanced by technology. This is the case even though there is a growing international interest and demand to develop pedagogical competencies in using assessments that actively involve students and are enhanced by digital systems (Doria & Picasso, 2024; Redecker & Punie, 2017).

Assessment should, therefore, be fully considered as a fundamental educational and formative process, to be developed through peer practice starting from primary school, to support both specific disciplinary learning and relational and social skills (Grion et al.,



2025).

#### 2.1. The reason for a framework: Student Voice for a novel educational perspective

Student Voice is an international educational movement rooted in the United Kingdom, the United States, Canada, and Australia, aimed at transforming schools through the full involvement of the student community in the educational processes (Grion & Cook-Sather, 2013). Since 2002, Alison Cook-Sather urged the international community to evaluate how, within formal education systems, numerous reforms had been implemented across different geographical contexts, based exclusively and unilaterally on an approach that had never involved the subjects directly engaged in education, the student community (Cook-Sather, 2002).

Cook-Sather further pointed out the possibility of a total repositioning of the role of students in research and in the reform of education to fully concrete democracy. In Italy, Student Voice arrived in 2013 through the research of Valentina Grion and colleagues who deepened the study of the framework (Cook-Sather, 2013; Gemma & Grion, 2015; Grion, 2017; Grion & Cook-Sather, 2013; Grion & De Vecchi, 2014; Grion & Dettori, 2015; Grion & Manca, 2015; Manca & Grion, 2017).

Although this research was well-structured, the educational proposal in Italy is still far from becoming a widely adopted practice in schools at all levels. Grion and Maretto (2017) emphasized that the perspective of participatory democracy is an essential condition for rethinking education and pedagogy, which must absolutely invest in practices that encourage cooperation, inclusion, and listening to the voice of students, empowering them to actively participate in programming, decision-making actions, and strategies related to their educational journey.

The need to consider students as "expert members" of educational communities, rather than mere consumers of services provided by a predetermined system (Grion & Maretto, 2017), and particularly as "political subjects" (Smyth, 2006; Smyth & McInerney, 2012), is the foundation of this empirical investigation.

Indeed, the cognitive and metacognitive reflection with the participants involved in the workshops led to an exploration of the idea that in democratic organizations, organizational forms cannot simply be realized as top-down processes, but rather as forms of commitment and involvement of all participants in the organization itself. So, this leadership does not derive from coercion and manipulation, but from relational collaboration and participatory processes (Angus, 2006).

This research adopted Student Voice as the conceptual framework, also considering recent literature that has highlighted its effectiveness in Higher Education (Mitra, 2018) and in informing the design and implementation of universal school-based mental health interventions, as recently outlined by Carter (2025).

### 3. The research design: method, sample and variables analysis

The selected sample of statistical units consisted of students aged 16-21, within the context of formal learning. The empirical phase of the research included a training project (6 hours per workshop, for a total of 72 hours) across the four Technical and Vocational Institutes in Puglia within the network and involved 237 students (F=102, M=134, NB=1) between October and November 2023.



Participants were divided into three randomized groups (Teddlie & Yu, 2007) to avoid cohort effects typical of studies conducted with entire classes. Group 1 and Group 2 use an innovative teaching method, and Group 3 (control group) uses a traditional method. The content of the workshops for the experimental groups focused on the analysis of theatrical language (Group 1) and cinematic language (Group 2).

In these experimental workshops, metacognitive stimulation was constant through the planned use of prompting questions for cognitive restructuring (Beck, 2019) during the activities (e.g. "What do you think of the dramaturgy I'm proposing?", "How do you feel about these cinematic sequences?", i.e. "What emotions and sensations are you experiencing right now watching this scene?", "What is the evidence for or against your interpretation?").

This program was supported by a symmetrical and equitable pedagogical relationship based on dialogue and active listening between students and facilitators, as well as among peers. The structure of the workshops was based on the pedagogical and school laboratory model proposed by Frabboni (2015) and on the Pasolinian teaching model (1968), which integrates performative arts as tools for the "re-educational linguistic" reshaping of society (Gianeselli, 2022).

The control group (Group 3) was exposed to a hybrid product (theatrical and cinematic) without the mediation of the expert facilitator and in the absence of metacognitive stimulation and of the support of specific disciplinary teaching aimed at aiding comprehension of the contents and languages of the performing arts.

To measure metacognitive awareness and the perception of the role of self-assessment, the same pre- and post-intervention questionnaire was administered to all three groups. For the "metacognitive awareness" variable a repeated measures Anova was performed, comparing the pre- and post-intervention results of the three groups; while for the question regarding the perception of the "self-assessment" construct, a descriptive study of response frequencies pre- and post-intervention was conducted, again comparing the three groups.

### 4. Results

The pre- and post-intervention questionnaire was specifically developed to measure the latent construct of "metacognitive awareness", and "self-assessment" in the participants. Cronbach's  $\alpha$  (1951) for the questionnaire (used as an indicator of the reliability of the items, which are considered to belong to a unified construct for assessing the effectiveness of the training in relation to psychosocial well-being and metacognitive activation within the context of the sample analysed) was found to be .639 (T1) and .763 (T2), both of which are considered acceptable values for a tool that was not initially designed for subsequent standardization.

Responses to the questions are based on a Likert-like scale (Likert, 1932), ranged from 1 to 5, and verbal anchors for both the minimum and maximum. These questions were developed separately for the two empirical indicators of the construct "metacognitive awareness" examined here: "mind wandering" and "motivation". As Muthipeedika and colleagues (2025) recently suggest, an inhibitory control may moderate the relationship between academic stress and mind wandering. Therefore, MTTG is consistent with this analysis, as it constantly encourages participants in the experimental groups to inhibit mind wandering during the workshop, after briefly introducing the construct.

Participants were therefore asked to assess their tendency to experience mind-wandering (Banks et al., 2025; Zanesco et al., 2024) in relation to their academic activities (starting with curricular ones) and their motivation for studying, both at the beginning and at the end of the workshop intervention to determine the role of the novel teaching method proposed to experimental groups.

The analysis suggests that the interaction between "Time" (pre- and post- intervention) and "Group" (Group 1, Gorup 2 or Control Group 3) is statistically significant (F = 3.7622, p = .025). In essence, the changes observed over time are reliable depending on the specific group to which participants belong. For instance, in this experimental context, the results might indicate that groups respond differently to the treatment. The partial eta squared value ( $\eta^2 = .004$ ; with a partial eta squared  $\eta^2 = .032$ ), though small, highlights the relevant presence of a measurable effect, modest as it may be. This result suggests potential relevance in the explorative empirical phase (Figure 1).

Within Subjects Effects

	Sum of Squares	df	Mean Square	F	р	η² <sub>G</sub>	η²	η²p
TIME	0.1882	1	0.1882	0.2923	0.589	0.000	0.000	0.001
TIME * GROUP	4.8458	2	2.4229	3.7622	0.025	0.004	0.002	0.032
TIME * AGE	0.0908	1	0.0908	0.1411	0.708	0.000	0.000	0.001
Residual	144.9032	225	0.6440					
METACOGNITION	0.1347	1	0.1347	0.0675	0.795	0.000	0.000	0.000
METACOGNITION * GROUP	1.0808	2	0.5404	0.2708	0.763	0.001	0.001	0.002
METACOGNITION ★ AGE	0.0537	1	0.0537	0.0269	0.870	0.000	0.000	0.000
Residual	449.0695	225	1.9959					
TIME * METACOGNITION	0.1683	1	0.1683	0.3536	0.553	0.000	0.000	0.002
TIME * METACOGNITION * GROUP	1.3275	2	0.6637	1.3941	0.250	0.001	0.001	0.012
TIME * METACOGNITION * AGE	0.0749	1	0.0749	0.1573	0.692	0.000	0.000	0.001
Residual	107.1204	225	0.4761					

Note. Type 3 Sums of Squares

Figure 1. Table of Interactions within Subjects Effects from the Repeated Measures ANOVA for the Metacognition Latent Construct.

The graph of the estimated marginal means<sup>2</sup> for the *Time\*Group* interaction (Figure 2) shows that, starting from congruent baseline marginal means across the three groups, the intervention significantly benefits the experimental groups (Group 1, Group 2) compared to the control group (Group 3). Group 1 which actively engages with the theatrical mediator and its language, benefits significantly from the intervention compared to the control group, with a larger increase also compared to Group 2 (which analyses and studies the cinematic mediator).

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<sup>&</sup>lt;sup>2</sup> The confidence interval was set at 95%. The analysis was conducted using the free software Jamovi.



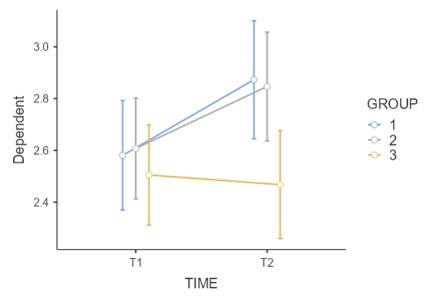


Figure 2. Graph of the estimated marginal means *Time\*Group* interaction for the the Metacognition Latent Construct.

The graph of the estimated marginal means for the *Time\*Group\*Metacognition* interaction (Figure 3) suggests that, once again starting from congruent baseline means, the experimental groups benefit from the intervention, as their perception of the negative mindwandering phenomena improve in comparison to the control group. In other words, the participants in the experimental groups, stimulated by the MTTG to recognise their negative tendency to mind-wander during both academic and daily activities, can self-assess the phenomenon more effectively and record it after the workshop.

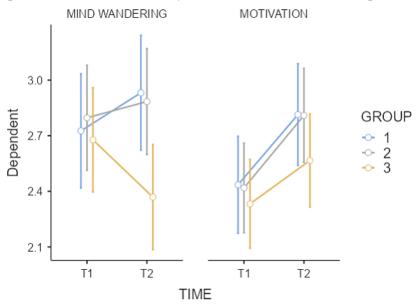


Figure 3. Graph of the estimated marginal means Time\*Group\*Metacognition interaction for the variable metacognition.

Conversely, the participants in the control group, who are not explicitly introduced to the



construct and are not prompted during the workshop to recognise the negative phenomenon of mind-wandering, show a deterioration in their ability to perceive it.

Therefore, those who participate in the training, in the post-intervention phase, demonstrate a greater effectiveness in perceiving the negative phenomenon of mind wandering compared to those who are not metacognitively stimulated to reflect on it. Furthermore, the experimental groups clearly show an increase in motivation compared to the control group, whose participants also demonstrate greater motivation following the intervention, and the complacency effect (Fornari, 2008) may explain this increase in the control group.

The pre- and post-intervention analysis of the "self-assessment" construct reveals differences between the experimental groups and the control group.

In Group 1 (the first experimental group which analysed the theatrical mediator) a clear shift was observed from pre- to post-intervention ratings. The item was: "Do you think it is possible to learn self-assessment by studying performing arts at school?" the respondent could choose the answer "Yes" or "No". In this instance, the dichotomous item was structured in this manner to ensure the formulation of a suggestive question, given its close relevance to the proposed training activity.

Before the workshop, in the first experimental group (Group 1, which analysed theatrical language), 21.9% selected "Yes". Post-intervention, the affirmative response increased to 27.1%, while the percentage of negative responses decreased from 8.9% to 3.8%.

In the pre-intervention questionnaire, 26.2% of participants of the second experimental group (Group 2), which analysed the cinematic language, selected "Yes", and 8.0% chose "No". After the workshop and the intervention, 28.4% registered the affirmative response and only 5.9% of participants selected "No". Although this shift in Group 2 is statistically less significant than the one observed in Group 1, it still suggests a change in perception regarding self-assessment, particularly in the reduction of the negative responses.

As predicted, the control group (Control Group 3), which is passively exposed to a hybrid mediator (both theatrical and cinematic) without the teaching and metacognitive stimulation, displayed minimal changes. 26.2% of these participants chose "Yes" in preintervention and 8.9% "No". In post-intervention, 26.3% still chose "Yes" and 8.5% "No". This lower variation suggests that, unlike the experimental groups, the control group did not experience after the workshop a significant transformation in personal beliefs on self-assessment.

## 5. Conclusions

The results of the analyses seem to suggest that participants in the two experimental groups benefited more from the intervention compared to the control group. It is Group 1, which uses the theatrical mediator for study, that shows, compared to the other groups, an increase in the perception of metacognitive skills and the potential for considering self-assessment as an educational and formative tool through the study of the languages of the performing arts

The advantage of Group 1 (theatre) over Group 2 (cinema) could be explained by the fact that, although both experimental groups are stimulated by the Metacognitive Training "Through the Glass" (MTTG) and the teaching methodology based on equal and democratic dialogue, only Group 1 can experience learning that is significantly grounded



in embodiment and direct active engagement with the performing mediator itself.

Participants analyzing theatrical language, for instance, can explore the ethical-political purposes and functions of the mediator by attempting to embody the dynamics of the characters that emerge from the study of dramaturgy. In this case, the primary medium for study is the embodied cognition of the student (Castro-Alonso et al., 2024), who focuses on their thoughts and emotions, listening to their body within the relational dynamic of the study group.

Group 2, on the other hand, must necessarily relate to an external device to their cognition, i.e., a screen displaying the cinematic discourse being projected. In this transfer of information, there is clearly a higher linguistic difficulty coefficient, as the device does not always present the cinematic discourse clearly, nor is this discourse always immediately contextualizable and understandable, as the physical experience of "pronouncing" and embodying the theatrical discourse is. The control group, furthermore, was not stimulated by metacognitive training and followed a standard teaching approach that made no attempt to mediate the mediators or foster relationships within the study group.

This lack of intervention suggests that, indeed, the difference in teaching approach between the two experimental groups is what leads to the change observed in the participants of Groups 1 and 2 compared to those in Group 3.

Why can this peculiar metacognitive teaching proposal be considered as a valid tool for an educational environment that has always been exposed to the risks of school dropout?

Based on these results, it is suggested that, overall, awareness of the daily negative phenomena of mind wandering and awareness of positive intrinsic motivation processes in students can be elicited through a workshop process that includes:

- a teaching method grounded in democratic and equal dialogue between teachers and students and among peers;
- metacognitive training that continuously stimulates students during classroom learning phases;
- the analysis and study of the specific disciplinary language of the performing arts. Participants in Group 1 also benefit the most in terms of awareness that evaluation should be capable of educating and training students for self-assessment, as the students' voice cannot be excluded from the pedagogical pact and curriculum planning.

A community of students that reclaims the democratic dimension of their learning through the performing arts, alongside an awareness of the importance of metacognitive processes in learning, is a community that will certainly not leave behind its peers and will strive to ensure that participation in the educational dynamic is equal and fair. This suggests that the training potentially serves as operational support to teaching practices, engaging in dialogue with the best practices already active within the school.

The limitations of this study are likely attributable to the limited sensitivity of the instrument used, as it is still tailored to an initial exploratory phase.

We cannot assert that the MTTG will *definitively* contrast and avoid school dropout *phenomena*, but given the improvements observed in the post-intervention phase related to the motivation variable, we can hypothesize that a repeated and continuous application of this metacognitive training and this pedagogical approach may benefit participants in the workshops fostering their intrinsic motivation and evaluate their tendencies towards mind wandering, by monitoring cognitive processes.



The MTTG should also help students to recognize the importance of their own voices, by fostering a democratic exchange of ideas and structuring an intellectual dialogue free from judgment and constraints. The MTTG may allow all members of the community access to the most useful and robust forms of self-assessment, to achieve significant autonomy and independence in both individual and collective learning.

A future direction for the study, based on the practical application of the Student Voice framework through performing arts education, could involve systematically measuring the changes within a learning community over time, structuring the intervention in such a way that the data collected also includes follow-up information specifically about dropout phenomena. This study is thus exploratory in nature and represents the first empirical application of this novel approach in that peculiar educational context, often excluded from exploratory training interventions, but one which does deserve attention given the dropout rates that characterize it. In conclusion, future studies in related educational settings could be conducted with a research design to allow the specific evaluation of a class that undergoes the MTTG during the five-year curricular programme to measure if it exhibits a lower dropout rate compared to a control class that does not receive the training.

#### Reference list

- Affuso, G., Zannone, A., Esposito, C., De Angelis, G., Dragone, M., Pannone, M., ... & Bacchini, D. (2025). The reciprocal effects of learning motivation, perceived academic self-efficacy and academic performance in adolescence: A four-wave longitudinal study. *European Journal of Psychology of Education*, 40(1), 6.
- Angus, L. (2006). Educational leadership and the imperative of including student voices, student interests, and students' lives in the mainstream. *International Journal of Leadership in Education*, 9(4), 369–379.
- Bakracevic Vukman, K., & Licardo, M. (2009). How cognitive, metacognitive, motivational and emotional self-regulation influence school performance in adolescence and early adulthood. *Educational Studies*, 36(3), 259–268.
- Banks, J. B., Brancaleone, P. J., & Holtzman, A. S. (2025). Mind wandering in daily life: The role of emotional valence and intentionality dimensions. *Journal of Experimental Psychology: Learning, Memory, and Cognition*. 51(10), 1606–1622.
- Beck, A. T. (2019). A 60-year evolution of cognitive theory and therapy. *Perspectives on Psychological Science*, 14(1), 16–20.
- Bonvini, E., Ghigi, R., & Impicciatore, R. (2023). Rappresentazioni degli insegnanti e disuguaglianze nell'orientamento scolastico. *Polis, Ricerche e Studi su Società e Politica*, 3, 357–392.
- Carter, E. (2025). Debate: Where to next for universal school-based mental health interventions? The value of student voices in informing the design and implementation of universal school-based mental health interventions. *Child and Adolescent Mental Health*, 30, 96–98. <a href="https://doi.org/10.1111/camh.12750">https://doi.org/10.1111/camh.12750</a>
- Castro-Alonso, J. C., Ayres, P., Zhang, S., de Koning, B. B., & Paas, F. (2024). Research avenues supporting embodied cognition in learning and instruction. *Educational Psychology Review*, 36(1), 10.



- Cook-Sather, A. (2002). Authorizing student perspectives: Toward trust, dialogue, and change in education. *Educational Researcher*, 31(4), 3–14.
- Cook-Sather, A. (2013). Espressione, Presenza e Potere: "Student Voice" nella ricerca educativa e in educazione. In V. Grion & A. Cook-Sather (Eds.), *Student Voice*. *Prospettive internazionali e pratiche emergenti in Italia* (pp. 121–135). Guerini.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*, 297–334.
- De Vincenzo, C. (2024). Promuovere l'autoregolazione dell'apprendimento per ridurre le diseguaglianze educative. *Lifelong Lifewide Learning*, 21(44), 339–348.
- Doria, B., Foschi, L. C., Slaviero, G., Zaggia, C., & Grion, V. (2025). Feedback e Feedback Automatizzato: Pratiche e percezioni dei docenti universitari. *RTH Education & Philosophy*, 12(1), 25–42.
- Doria, B., & Grion, V. (2020). L'autovalutazione nel contesto universitario: una revisione sistematica della letteratura. Form@re Open Journal per la formazione in rete, 20(1), 78–92.
- Doria, B., & Picasso, F. (2024). Alternative assessment and technology-enhanced assessment practices: Research to inform faculty development processes. *Qwerty Interdisciplinary Journal of Technology, Culture and Education*, 19(1), 52–71.
- Doria, B., Grion, V., & Paccagnella, O. (2023). Pratiche valutative nelle università italiane: Una ricerca esplorativa a livello nazionale. *Italian Journal of Educational Research*, 30, 129–143.
- Džinović, V., Đević, R., & Đerić, I. (2019). The role of self-control, self-efficacy, metacognition, and motivation in predicting school achievement. *Psihologija*, 52(1), 35–52.
- Fodor, J. A. (1983). The modularity of mind: An essay on faculty psychology. MIT Press.
- Fornari, U. (2008). Trattato di psichiatria forense. UTET.
- Frabboni, F. (2015). La scuola comprensiva: Riflessioni su curricolo verticale e continuità educativa. Erickson.
- Gemma, C., & Grion, V. (2015). Student Voice. Pratiche di partecipazione degli studenti e nuove implicazioni educative. Cafagna.
- Gianeselli, I. (2022). Pasolini maestro della scena. Introduzione al "Manifesto per un nuovo Teatro" come programma per una scuola di rieducazione linguistica ed eticopolitica. *Nuova Secondaria*, 40, 188–197.
- Gianeselli, I., & Bosco, A. (2024). Through the Glass Training inspired by Pasolini's Manifesto Theatre: For a Transformative Performing Arts Education. In *Getting Transformation into Good Trouble: Making new spaces of possibility with community and in practice, Proceedings of the XV Biennial International Transformative Learning Conference* (pp. 386–389), September 11–13, University of Siena.
- Gonzálvez, C., Alfageme-González, M. B., & Cutanda-López, M. T. (2025). Effects of metacognition on school attendance: Assessing variation across latent profiles of school refusal behavior. *Thinking Skills and Creativity*, 56, 101733.



- Grion, V. (2017). 'Student Voice' in Italy: The state of the art. *Teaching and Learning Together in Higher Education*, *I*(20), 1–4.
- Grion, V., & Cook-Sather, A. (2013). Introduzione. Student Voice: Dal movimento internazionale alle prospettive emergenti in Italia. In V. Grion & A. Cook-Sather (Eds.), *Student Voice. Prospettive internazionali e pratiche emergenti in Italia* (pp. 136–152). Guerini.
- Grion, V., & Dettori, F. (2015). Student Voice: Nuove traiettorie della ricerca educativa. In M. Tomarchio & S. Ulivieri (Eds.), *Pedagogia militante. Diritti, culture, territori* (pp. 852–857). ETS.
- Grion, V., & De Vecchi, G. (2014). Il ruolo di bambini e bambine nei processi d'insegnamento-apprendimento: Student Voice e leadership educativa condivisa. *Educational Reflective Practices*, 1, 30–46.
- Grion, V., & Manca, S. (2015). Voci e silenzi in un'esperienza di Student Voice mediata dai social network. *TD Tecnologie Didattiche*, 23(2), 70–80.
- Grion, V., & Maretto, G. (2017). Student Voice e didattica partecipativa: Un valore aggiunto per l'innovazione scolastica. Form@re Open Journal per la formazione in rete, 17(3), 174–187.
- Grion, V., & Serbati, A. (2019). Valutazione sostenibile e feedback nei contesti universitari. Pensa MultiMedia.
- Grion, V., Restiglian, E., & Slaviero, G. (2025). La valutazione tra pari nella scuola Primaria: teorie e pratiche per sviluppare apprendimenti. Carocci.
- Guamanga, M. H., Saiz, C., Rivas, S. F., & Bueno, P. M. (2025). Critical Thinking and Metacognition: Pathways to Empathy and Psychological Well-Being. *Journal of Intelligence*, 13(3), 34.
- Ianes, D. (1996). L'approccio metacognitivo nell'insegnamento. In D. Ianes (Ed.), *Metacognizione e insegnamento* (pp. 13–50). Erickson.
- Istat. Italian National Institute of Statistics (2023). Rapporto SDGs 2023 (volume integrale). Letture statistiche Temi.
- Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology*, 22(140), 55.
- Manca, S., & Grion, V. (2017). Engaging students in school participatory practice through Facebook: The story of a failure. *British Journal of Educational Technology*, 48(3), 1153–1163.
- Maric, M., Heyne, D. A., de Heus, P., van Widenfelt, B. M., & Westenberg, P. M. (2011). The Role of Cognition in School Refusal: An Investigation of Automatic Thoughts and Cognitive Errors. *Behavioural and Cognitive Psychotherapy*, 40(3), 255–269.
- Mitra, D. (2018). Student voice in secondary schools: The possibility for deeper change. Journal of Educational Administration, 56(5), 473–487.
- Mokhtari, M., Hassanzadeh, R., & Mirzaeeyan, B. (2019). The Effectiveness of Metacognitive Skills Training on the Motivational Structure and Academic Performance of Drop-out Students. *International Clinical Neuroscience Journal*, 7(1), 46–51. <a href="https://journals.sbmu.ac.ir/neuroscience/article/view/25867">https://journals.sbmu.ac.ir/neuroscience/article/view/25867</a>



- Muthipeedika, D. F., James, J. K., & Mathai, S. M. (2025). Academic stress, academic expectation, and mind wandering among college students: The moderating role of inhibitory control. *Psychology of Consciousness: Theory, Research, and Practice*. Advance online publication.
- Nicol, D. (2010). From monologue to dialogue: Improving written feedback processes in mass higher education. *Assessment & Evaluation in Higher Education*, 35(5), 501–517.
- Nicol, D. J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education*, 31(2), 199–218.
- Pasolini, P. P. (1968). Manifesto per un nuovo teatro. *Nuovi argomenti (ns)*, *IX*, gennaiomarzo, 6–22.
- Pastore, L., Dellantonio, S., & Job, R. (2019). Il critical thinking e l'arte di ragionare bene. *Giornale italiano di psicologia*, 46(4), 877–886.
- Perry, J., Lundie, D., & Golder, G. (2018). Metacognition in schools: what does the literature suggest about the effectiveness of teaching metacognition in schools?. *Educational Review*, 71(4), 483–500.
- Picasso, F., Doria, B., Grion, V., Venuti, P., & Serbati, A. (2023). What technology-enhanced assessment and feedback practices do Italian academics declare in their syllabi? Analysis and reflections to support academic development. In G. Fulantelli, D. Burgos, G. Casalino, M. Cimitile, G. Lo Bosco, & D. Taibi (Eds.), *Higher education learning methodologies and technologies online* (pp. 267–279). Springer.
- Price, M., Handley, K., Millar, J., & O'Donovan, B. (2010). Feedback: All that effort, but what is the effect? *Assessment & Evaluation in Higher Education*, 35(3), 277–289.
- Redecker, C., & Punie, Y. (2017). European framework for the digital competence of educators: DigCompEdu. Publications Office. <a href="https://data.europa.eu/doi/10.2760/159770">https://data.europa.eu/doi/10.2760/159770</a>
- Reininger, K. M., Brückner, T. F. P., Biel, H. M., Hennig, T., Kokot, M. R., Löwe, B., Briken, P., & Moritz, S. (2025). Metacognitive training in U.S. Republican leaners reduces polarization and fosters democratic behavior—intentions with liberals: Evidence from a randomized-controlled trial. *Peace and Conflict: Journal of Peace Psychology*, 31(1), 36–46. https://doi.org/10.1037/pac0000791
- Smyth, J. (2006). Educational leadership that fosters 'student voice'. *International Journal of Leadership in Education*, 9(4), 279–284.
- Smyth, J., & McInerney, P. (2012). From silent witnesses to active agents: Student voice in re-engaging with learning. Adolescent cultures, school, and society. Peter Lang.
- Stallings, V., & Tascione, C. (1996). Student self-assessment and self-evaluation. *Mathematics Teacher*, 89(7), 548–554.
- Suprijono, A., Abbas, E. W., & Riyadi. (2025). Metacognition and cooperative learning based on deliberative democracy moderated by learning style toward critical thinking skill in social studies learning. *Cogent Education*, 12(1), 2458915.
- Teddlie, C., & Yu, F. (2007). Mixed methods sampling: A typology with examples. Journal



of Mixed Methods Research, 1(1), 77–100.

- Zanesco, A. P., Denkova, E., Barry, J., & Jha, A. P. (2024). Mind wandering is associated with worsening attentional vigilance. *Journal of Experimental Psychology: Human Perception and Performance*, 50(11), 1049–1066.
- Zeb, I., Khan, A., & Yan, Z. (2025). Exploring the influence of core self-evaluation on students' academic self-efficacy: A qualitative study considering anxiety and interpersonal responses. *Journal of Applied Research in Higher Education*, 17(1), 526–541.