

THE TRIALOGICAL LEARNING APPROACH AS A TOOL FOR SUPPORTING LIFELONG LEARNING

Eleonora Perrone Capano

Department of Human Sciences, University of L'Aquila (Italy)

Abstract

The present project aims to promote innovative educational practices for both students and organizations. The theoretical framework is centered around the Trialological Learning Approach (TLA). This integrated model is further supported by Assessment for Learning (AfL) and Sustainable Assessment (SA). The trialological approach acknowledges the multifaceted nature of learning by integrating "monological" processes—the individual construction of conceptual knowledge—with "dialogical" processes that emphasize social interaction, intersubjective exchange, and the collaborative production of tangible knowledge artefacts that benefit the entire community. By implementing this approach, the project aims to introduce the use of Artificial Intelligence (AI) to develop essential competencies for lifelong learning, both in the training of university students and in the professional development of individuals in the corporate environment. This paper will focus on the training experiences currently being undertaken within the organization (10 participants, duration of 6 months, 30 hours), outlining the various steps involved and the initial results achieved.

Keywords: *Trialological Learning Approach, artificial intelligence, lifelong learning, corporate professional, university students.*

1. Introduction

The present work outlines the progress of a project aimed at promoting collaborative reflective processes, drawing on the theoretical framework of the Trialological Learning & Assessment Approach (TLA) (Grion & Sansone, 2023).

Particularly, Assessment for Learning (AfL) and Sustainable Assessment (SA) redefine evaluation as a core learning activity rather than a final step. By integrating teaching, learning, and assessment (TLA), AfL and SA emphasize the student's active role through peer-assessment, collaborative work, and the use of exemplars. The synergy promotes self-regulation and evaluative judgement, bridging the gap between formal education and lifelong learning. Ultimately, the teacher acts as a mediator in a stimulus-rich environment designed to foster the continuous "framing and reframing" of knowledge necessary for long-term professional and personal growth (Sansone & Grion, 2022).

The present research aims to explore which elements of a training model can facilitate learning and/or the consolidation of competencies in several contexts, such as universities and corporate settings. The key challenge lies in identifying the phases and aspects in which Artificial Intelligence (AI) can support learning without supplanting it. When used wisely, AI can catalyze individual agency, fostering the freedom to act and create value (Poquet & de Laat, 2021). Consequently, in exploring the pedagogical and didactic implications of democratic AI within academic contexts, we might envision AI-augmented personalized learning. Such a framework should operate holistically and sustainably, discerning when to apply or restrict personalization and when to integrate it with pluralistic approaches. In the corporate sphere, democratic application of AI could likewise facilitate educational pathways designed to mitigate job displacement. This approach prioritizes the cultivation of unique human competencies, such as creativity and intuition, the latter understood as an emotional and constructive process.

The hypothesis is that the training model can be applicable in several contexts, ranging from schools to businesses and leveraging practices known as "active methods with adults," as promoted by Mezirow (2016a) within the framework of transformative learning theory. The theoretical principle behind active methods with adults entails changing and "transforming" minds—not to condition them, but to liberate them. In particular, transformative learning describes the process of overcoming a critical moment in which an adult is forced to face their fears and uncertainties. By confronting and overcoming them, the individual "transforms" into a new and more aware person. Andragogy, as Mezirow himself puts it (2016b), comes to our aid in this arduous process, as an organized effort to assist adults with the learning process through methods that enhance self-directed learning (Demetrio, 2003).

The training project is currently underway with an Italian company, and a parallel training pathway with university students will commence in the coming months. These two cases are intended to serve as distinct yet comparable case studies.

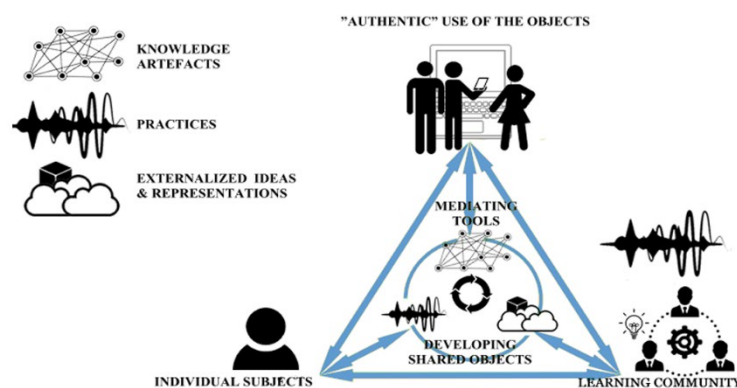
2. Design

The work-in-progress research's objectives and methodology are underpinned by the principle of lifelong learning, defined as a continuous and voluntary process of acquiring knowledge and competencies throughout one's life. A foundational premise of the present work is the recognition of AI's central role in the education of both university students and adult professionals. The AI's centrality is poised to radically reshape learning practices, from the design of instructional pathways to the development of competencies that foster professional growth.

2.1. Objectives

The work aims to explore the potentialities and limitations of AI as support for university students and corporate workers in consolidating and/or developing specific and transversal competencies. The Trialogical Learning Approach (TLA) will be employed as an active, collaborative learning method grounded in intentional cognitive acts realized through participation in targeted activities (Figure 1). Within this framework, knowledge emerges as a construction shaped by interactions with peers and experts, mediated by cultural and social artefacts—a transversal process across all ages (Paavola & Hakkarainen, 2005).

Figure 1. The Trialogical Learning Approach.



2.2. Methods

The interplay between technology and education necessitates a paradigm shift in pedagogy, leading to the emergence of digital pedagogy in recent decades. In this context, it is essential to transcend the dichotomy between learning through technology and learning about technology, fostering instead a deep understanding of digital tools that enable learning experiences that promote independence, creativity, and curiosity.

Through the analysis of field experiences, the present project aims to investigate which elements of a training model can facilitate learning and/or the consolidation of competencies across several contexts, such as universities and corporate settings. It will evaluate emerging needs and novel learning modalities grounded in participation and collaboration. Specifically, two parallel case studies will examine whether and how the proposed training model strengthens, consolidates, and uncovers soft skills, as well as the role of generative AI as a supportive tool. A secondary research challenge is to explore parallels between university student training and professional development in corporate environments.

In the university setting, a training pathway titled "AI as Tutor and Mentor" will be implemented with students in the Education Sciences bachelor's degree (L-19) at the University of L'Aquila. This will encompass theoretical sessions addressing topics such as trust in AI, source verification, and response reliability, alongside practical laboratories, for instance, on text construction—all to enable critical and aware studying with AI.

The second case involves an Italian energy engineering firm, comprising approximately 10 employees and nearly 30 years of experience in the field. The energy engineering firm's name will not be disclosed for privacy reasons. Following a thorough needs assessment, the company has embarked on an AI introduction program to acquire initial comprehension tools and gradually approach practical utilization.

3. Conclusions

Expected outcomes of this work-in-progress project include enhancements in transversal competencies, empirical evidence from parallel case studies, and long-term pedagogical impacts. Desirable measurable improvements encompass the consolidation of soft skills—such as critical thinking, collaboration, creativity, and adaptability—alongside AI-specific proficiencies, enabling most participants to engage in critical and self-aware studying or working with generative AI, including source verification and response reliability. The case studies will provide comparative evidence on the TLA model's efficacy in university and corporate contexts, highlighting parallels and validating its transversality across ages and sectors. For the corporate intervention (10 participants; 30 hours over 6 months), tangible outputs are anticipated, including AI-assisted collaborative artefacts, reduced task completion times, and scalable AI adoption plans. In the long term, the project is expected to substantiate a "trialogical digital pedagogy" framework, yielding replicable guidelines for lifelong learning pathways and mixed-methods data (pre-post tests, interviews, artefact analyses) to guide future research and dissemination via publications and toolkits.

In conclusion, the present project advances a theoretical framework centered on the Triological Learning Approach (TLA), integrated with AI, to foster critical competencies in both universities and corporate contexts. By connecting digital pedagogy with lifelong learning principles through parallel case studies, the research sheds light on AI's supportive role in fostering collaborative reflection, soft skills, and professional growth, without supplanting human agency. Initial findings from the ongoing corporate intervention underscore the model's potential effectiveness, paving the way for innovative, scalable educational practices capable of addressing emerging technological paradigms.

References

- Black, P., & Wiliam, D. (1998). Assessment and classroom learning, assessment in education: Principles. *Policy & Practice*, 5(1), 7–68. <https://doi.org/10.1080/0969595980050102>
- Boud, D. (2000). Sustainable assessment: Rethinking assessment for learning society. *Studies in Continuing Education*, 22(2), 151–167. <https://doi.org/10.1080/713695728>
- Demetrio, D. (2003). *Manuale di Educazione degli Adulti*. Laterza.
- Mezirow, J. (2016a). *Apprendimento e Trasformazione*. Raffaello Cortina Editore.
- Mezirow, J. (2016b). *La Teoria dell'Apprendimento Trasformativo*. Raffaello Cortina Editore.
- Poquet, O., & de Laat, M. (2021). Developing capabilities: Lifelong learning in the age of AI. *British Journal of Educational Technology*, 52, 1695–1708.
- Sansone, N., & Grion, V. (2023). The triological learning & assessment approach: Design principles for higher education. *Qwerty*, 17(2), 10–28. <https://dx.doi.org/10.30557/QW000055>