

Learning to learn in tertiary education: a systematic literature review on assessment tools and interventions to support students' agency

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"Learning to learn (L2L) is a key competence for the 21st century (Ajello, 2018; Binkley et al., 2012; Italian National Commission for UNESCO, 2020; Deakin Crick, Stringher, & Ren, 2014; European Council, 2006; 2018; European Political Strategy Centre, 2017; Hoskins & Fredriksson, 2008; OECD, 2019; Smith et al., 1990; Wells & Claxton, 2002) because it enables the development of the whole person across different life stages and contexts, such as education, work, and personal life (European Commission, 2006; Sala et al., 2020; Stringher, 2014). At its core, L2L values learner autonomy, mobilising a range of innate, cognitive, metacognitive, socio-affective, and physical resources for enhanced lifelong learning. However, how this hyper-competence is acquired throughout life largely remains unknown, making it essential to evaluate and promote it, especially considering that not all students enter tertiary education already equipped with this competence. Previous studies on L2L in Italy are scant and generally more frequent in primary and secondary education (Marcuccio, 2016; Stringher, 2014; 2021). Our research interest is to understand how tertiary education addresses this issue and how universities assess and propose interventions to support incoming students. Therefore, we aim to answer these research questions:

1. What are the most significant and recent studies (2020-2024) that address L2L measurement and intervention in ISCED Levels 5-8?
2. Which are the instruments for L2L measurement?
3. How do studies address L2L interventions in HE?
4. According to the literature, what are the definitions of learning (how) to learn at tertiary education level?
5. What are the main L2L components in the selected studies?

Consistent with these questions, we adopt a systematic literature review methodology to scan the available engines (in EBSCO Host) in search for scientific literature published in electronic format worldwide in the 2020-2024 period. Our search has been inspired by the PICO guidelines with the following initial string: "learning to learn" IN title AND tertiary education or university or college or tertiary institutions.

The primary criterion for selecting studies is that they must address L2L as the main theme and

include a definition (second criterion). Studies that generically address learning and do not focus on L2L are discarded. A third criterion for inclusion is that the content should include both L2L assessment tools and methods or interventions in tertiary education (ISCED >4) or both. The criteria for selecting scientific contributions are also based on the number of studies initially collected and quality of the references, evaluated according to AMSTAR2 guidelines (Shea et al., 2017), and the language of publication (English, Spanish, Italian, French, NOT other languages). Results have been organized according to PRISMA guidelines (Maraolo, 2021). A qualitative content analysis is being conducted on the included studies and their assessment tools and intervention protocols, following a theory-driven deductive coding scheme (Stringher et al., 2020; Stringher, 2021).

Our study is still in progress; therefore, results are only preliminary. We found 248 entries in total of which 27 are included in our review. None of the selected studies comes from Italian researchers, while Gargallo-Lopez and colleagues in Spain seem to configure a school of thought in this field, with 5 studies published recently, including a validated assessment tool named Cecapeu. A theoretically consistent study is that by Hensley and colleagues (2021), who identified instructional practices that support autonomy, competence, and relatedness in a learning-to-learn course.

So far, the considerable number of studies retrieved in tertiary education suggests a conscious effort to promote L2L primarily at this level, albeit not exclusively. This consideration carries several implications: tertiary education is not mandatory, hence L2L appears to be an elitist concept if primarily addressed to those students accessing this education level. Conversely, if universities find it important to promote it, this implies that primary and secondary schooling may not be effective in equipping students with this hyper-competence. Lastly, students lacking proficiency in L2L may be at risk of dropping out of university, but also out of school. Our review therefore underlines the need to work with this concept early in the education system, not just from tertiary education.

Our study seems the first international review on L2L assessment tools and interventions in tertiary education. Therefore, we contribute fresh insights into how L2L may be promoted in tertiary education contexts. Our study has limitations. Firstly, it is still ongoing, and changes to these results are possible. Secondly, if we were to expand the search engines or research string, including components of L2L such as motivation and self-regulation, our results could differ. We could indeed expand our search to ISCED level 0-4. It was a deliberate choice of the authors not to explore L2L components, so to remain focused on L2L as a whole, but educational institutions might find it useful to deepen their understanding of such components, based on an analysis of their students' strengths and weaknesses in L2L."