# The Influence of the Personal Learning Environment Concept in the Educational Research Field:
## A 2010-2020 Systematized Review

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## ABSTRACT

Almost 15 years after the start of the debate over personal learning environments (PLE), the concept would still appear to be influential and even intrinsic to discussion over the future of educational technology and education in general. This paper aims to establish a clear thematic link between the concept of PLEs and educational academic literature over the last decade, exploring the influence of the PLE concept in the education research papers. To do this, it uses a systematized review of academic literature that relates the PLE concept to three themes identified as most relevant in that field during the last decade: emerging pedagogical practices, professional teacher development, and self-regulated learning. The analysis is focused on whether (and how) the PLE concept has intersected each of the themes, the level of importance of that intersection in each one of them, and the way in which the concept is 'materialized'. The purpose is to understand how (and if) a concept that has its origin in educational technology has been adapted to other areas of educational research.

## KEYWORDS

## INTRODUCTION

The term "Personal Learning Environment" appears to have emerged at the annual JISC-CETIS (Joint Information Systems Committee Centre for Educational Technology Interoperability Standards) conference in 2004 (Martindale & Dowdy, 2010) and attracted more prominence from Scott Wilson's (2005) presentation of "VLE of the future" at the following year's conference where PLEs emerged

as a major theme. PLEs were the focus of the series of PLE conferences held between 2010 and 2014. PLEs also became a subject for academic research including the publication of a number of Special Editions of journals focused on the topic (e.g., eLearning Papers 2007, 2013, Digital Education Review 2010, 2011 and 2015, International Journal of Virtual and Personal Learning Environments 2011 and 2013, Journal of Literacy and Technology 2014, Cultura y Educación 2014, Edutec-e 2016, Journal of New Approaches in Educational Research 2017) as well as individual papers, conference presentations, literature reviews and meta-analyses.

However, as a socio-technical field of debate in education, the definition of Personal Learning Environments has been contested. One focus has been on the platforms and tools used by learners: Petrushyna (2009) says the "Personal Learning Environment describes the tools, communities, and services that constitute the individual educational platforms learners use to direct their own learning and pursue educational goals." Mark van Harmelen (2006) defines Personal Learning Environments as "systems that help learners take control of and manage their own learning. This includes providing support for learners to set their own learning goals, manage their learning; managing both content and process, communicate with others in the process of learning and thereby achieve learning goals. A PLE may be composed of one or more sub-systems: As such it may be a desktop application or composed of one or more web-based services." Others have seen PLEs in terms of access to learning resources: "An ecosystem of connected educational resources facilitated by a (large) set of tools and fuelled by collaboration opportunities facilitating the consumption of content that enables an increased understanding of specific knowledge domains" (Kraus, 2007). A further idea sees PLEs in terms of personal knowledge networks including non-digital resources: "it includes my wife, friends and work colleagues, my tennis coach, my books, magazines and newspapers, the TV I watch, the films I see, the radio programmes that I listen to" (Shepherd, 2007). The idea of personal spaces has been raised by Mohamed Amine Chatti et al (2010): "A PLE is not only a personal space, which belongs to and is controlled by the learner, but is also a social landscape that offers means to connect with other personal spaces in order to leverage knowledge within open and emergent knowledge ecologies." They go on to say: "The distributed PLEs can be loosely connected to build a knowledge ecology (which) is open, distributed, diverse, emergent, self-organized, and learner-controlled." Attwell (2007) also focuses on the idea of learner agency: "the most compelling argument for the PLE", he said, "is to develop educational technology which can respond to the way people are using technology for learning and which allows them to themselves shape their own learning spaces, to form and join communities and to create, consume, remix, and share material." That is also reflected in the Castañeda & Adell (2013) perspective of "a combination of tools, sources of information, connections and activities each person uses regularly to learn, as well as the attitudes and cognitive mechanisms that uses to do it".

The idea of PLEs has often been contrasted to that of the Virtual Learning Environment (VLE). Yet Castañeda and Selwyn (2018) see PLE as essentially a pedagogic approach to using technology for learning while VLEs are an educational management system, implemented in the context of the steady corporatization of higher education.

Attwell (2019) says there has been confusion over the differences between PLEs and personalised learning. "Personalised learning refers to the development of recommender systems and the increasing use of Artificial Intelligence in education to provide different learning pathways and materials for individual leaners within the curriculum. Yet these technologies have potential for assisting learners in developing their PLE."

As we have tried to show in this illustrative but not exhaustive approach, the definitions of the PLE cover a wide range of ideas, including educational technology, the use of social networks for learning, new pedagogic approaches to learning, including the role of teachers, personal learning networks, informal and non-formal learning and the different contexts in which learning takes place and the agency of individuals within the learning process.

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