EXPLORING THE ROLE OF DIGITAL ASSISTANTS AND CHATBOTS AS LEARNING COMPANIONS IN OPEN AND DISTANCE LEARNING

L. Morgado¹, M.T.S. Oliveira¹, A.P. Afonso¹, I.C. Carvalho², N. Ferret¹

¹ LE@O, Universidade Aberta (PORTUGAL)
² CINC, WACG & LE@O, Universidade Aberta (PORTUGAL)

Digital assistants, virtual tutors or chatbots have significantly enhanced their support for teaching activities, especially in the case of distance learning. They have made it possible for these devices to be integrated into various platforms, particularly LMSs.

In distance learning, student support is crucial as this type of teaching is entirely mediated by technology. Based on the literature, students often encounter difficulties in comprehension of tasks and emotional factors related to their teachers and tutors (Oliveira & Morgado, 2020).

This communication reports on our experiences with integrating digital assistants (virtual tutors and chatbots) in academic, professional development contexts for learning students in ODL and teacher training.

The digital assistant (the Virtual Tutor) is a representation of a human teacher or tutor. It autonomously interprets each teaching-learning situation and integrates it according to a specific tutoring plan. The plan includes instructions received from the teacher/human tutor and is tailored to the field of knowledge and the student's needs.

The Virtual Tutor was developed by a Portuguese consortium of researchers to analyze the pedagogical impact of integrating anthropomorphic in characteristics, also known as Encapsulated Virtual Agents (ECA) or 'avatars', in online learning environments (OL) based on learning management systems (LMS) teaching. The main idea is to explore how ECAs can be modelled, adapted, and used as virtual tutors in LMS to provide individual online support and follow-up.

This presentation describes the implementation of this approach in a large ODL class for a degree in education. The course follows the institution's virtual platform and specific scenario was designed for this intervention.

Based on the analysis of student discourse and to improve and monitor the impact of the Virtual Tutor as a 'learning companion' (Kort et al, 2008), it was found to be effective as it provided a lack of proximity, involvement (voice, gaze, affection), dialogue, and guidance in the implementation. The feedback points that the design of “avatars” was efficient.

Keywords: Digital Assistants, Virtual Tutoring, Student support system, Open and Distance Learning.