

# Why Designers cannot be Agnostic about Pedagogy: The Influence of Constructivist Thinking in Design of e-Learning for HE

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## 1 Introduction

When instructional designers design online learning environments, they, like all other designers, call on prior knowledge and experience [1]. They call to mind previous solutions and strategies they have used, have experienced, or have seen that fit the particular constraints of the current situation [2]. These previous experiences play a central role in specifying the structure, contents and delivery strategies. Consequently, if the pedagogical component of the design is not consciously considered and planned, the instructional designer tends to incorporate his/her own model of learning into the environment. This may be inappropriate and even conflict with the learning processes which are intended to be supported by Information and Communication Technologies (ICT). Furthermore, the lack of an overall pedagogical strategy implies an absence of a consistent and adequate educational approach throughout the whole online learning environment [3].

As a result, when producing learning materials, assumptions are made about the type of learning and the process of learning that it is hoped will take place [4]. For this reason, online learning environments will always incorporate some form of learning model, which may or may not have been intentionally considered. So, one of the crucial factors to the success of an educational environment is that any assumptions that are made about the

learner and the learning process, are incorporated into the design process in an explicit and consistent manner. In fact, unless carefully planned from a pedagogical point of view, learning environments could result in a mix of eventually conflicting techniques from different theoretical perspectives [5].

Only with a clear sense of the theoretical foundations that underpin assumptions about learning and cognition, can an efficient online learning environment be appropriately designed. These theoretical foundations provide the means to choose an appropriate educational approach. The selection of an approach can be seen as a *pre-design concern* and is the result of answering basic questions such as: *why* is the environment being developed; *what* is the focus of the environment; and *who* the learners are [3].

Failure to address questions regarding learning theories, pedagogical approaches and explicit learning outcomes, results in the *Everest Syndrome* – using technology just because it is there. This attitude among educationa-lists is potentially responsible for the apparent failure to establish e-Learning as a creditable educational technology [6]. In fact, this approach to the technology focuses undue attention on questions about what educational technology can be made to do, thus distracting researchers, instructional designers and educationalists from asking the more crucial questions about what this technology should accomplish and what its role should be in the teaching and learning process [7].

The consequences of an inappropriate emphasis on what technology can be made to do, rather than on how this technology can empower the learning process, results in neglecting educational and pedagogical issues, and the systematic analysis and design of the technologies for specific learning purposes [7]. Consequently, ICT-based learning environments often consist of poor and ineffective applications. McKendree uses an analogy with the camcorder to characterise the resulting situation:

It lets amateurs make movies about themselves which they and their immediate family and friends can enjoy. However, it is unlikely that you or I will want to rent it from the video-store and watch it. The professionals are much better able to design and make something, for a wider audience. [...] It is fine if some lec-turers want to take time to hack together some online material for themselves and their students. They will probably have the pride and commitment to get them to use it. However, the material they produce will possibly not be as flexible or as widely applicable as something crafted professionally. [8]