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Impacts of technologies on learning engagement: shortening the gap between engagement and desirable or chosen outcomes

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Background

Learning is conceived as a range of processes. Child (1973) places these processes into three categories: internalization; internal cognition and externalization A number of studies that look at technologies, impacts on learning describe impacts within each of these categories. This paper will focus on the first (internalization), and discuss ways that technologies impact on the aspect of engagement. The paper also, by presenting evidence supporting the notion that features of technologies allow a shortening of the gap between engagement and outcomes enabling learners to recognize more easily their involvement with learning activities as meeting their interests.

Research Questions

Teachers seek to identify features of engagement that work for their pupils, allowing engagement with activity so that interaction results in assimilation and impacts on cognition. Child distinguishes between sensation and attention. Pupils can be involved at the level of sensation rather than attention, and technologies can impact upon either. Here engagement is referred to as a combination of these two features. Evidence presented will support the notion that technologies offer elements of both features, leading the learner engagement at a cognitive level

Methods

There are different factors which influence engagement, either external factors (intensity or novelty of stimulus,), or internal factors (interests, and personality). Technologies can support a range of external factors. Studies indicate the ways that specific technologies impact on external factors, for example, the role of interactive white boards (see Smith et al 2005). Studies also point to the role of technologies in supporting internal factors, e.g. aspects of interest: including social interest (Passey, In Press); societal interest (Passey, 2010); metacognitive interest (Hall and Higgins, 2005); or megacognitive interest (Underwood et al., 2005).

Frame

Whilst some learners engage in learning in order to match engagement with their interests at a cognitive level, other learners engage because of their desires to match interactions with other forms of outcome, e.g. practical, creative, or social outcomes. The notion of the linking of engagement with outcomes arising from learning activity is supported by the ways that a number of theorists have conceived the placing of engagement in terms of wider learning processes. Romiszowski (1981) places engagement within the area of perception, while Adams and Wallace (1990) within the area of gathering and organising, and Hauenstein (1998) within the area of acquisition. Engagement in learning, which goes beyond recognition of sensation, reaches into a number of potentially different areas of attention - cognition, social, societal, practical, emotional, creative, or a mix of these.

Research findings

This paper will take evidence from existing studies, looking at ways that pupils and young people use technologies, and will also take new evidence about the ways that teachers describe important features of learning, and how these match the ways that technologies provide access to learning through a range of resources. The range of evidence, considered through cognitive, practical,

creative, social and societal domains, will point to the ways that technologies are offering more direct links for the learner between engagement and learning outcomes or interests. The results will offer a new way of conceiving impact: identification of the ways that technologies allow links and the shortening of the thinking spaces between engagement, with cognitive, practical, creative, social and societal domains of interest

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