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Different pedagogical ways of using hypervideo for teaching and learning: effectiveness evidence from vocational and higher education

Relevant literature:
Hypervideo or interactive videos are quite an interesting tool to be exploited in different educational contexts, as they provide multiple affordances to sustain teaching-and-learning processes. Namely, hypervideo provides (Sauli, Cattaneo, & van der Meij, 2018)
- advanced control features (Merkt, et al., 2001; Schwan & Riempp, 2004),
- hyperlinks (Stahl, Finke, & Zahn, 2006; Tiellet et al., 2010; Sadallah, Aubert, & Prié, 2014)
- quizzes (Vural, 2013; Stigler, Geller, & Givvin, 2015), and
- video-annotation tools (Rich & Hannafin, 2009; Rich & Trip, 2011; Colasante, 2011).

All these features can be exploited in both teacher- and learner-centered instructional scenarios (Cattaneo, et al., 2018; Cattaneo & Sauli, 2017).

Research methodology.
iVideo.education, a hypervideo system developed in Switzerland, has been tested in a variety of instructional scenarios and in several contexts, ranging from vocational education (e.g. with apprentice clothing designers, chefs, butchers, office clerks,…) to professional and higher education (e.g. nurses, surgical room technicians, teachers,…).
Many of such experiences have been monitored and investigated through an appropriate research design as individual experiences (Cattaneo, van der Meij, & Sauli, 2018) or alternatively as multiple case studies (Cattaneo, Nguyen, & Aprea, 2016; Cattaneo & Sauli, 2016).

Key finding:
In a nutshell, the results obtained across experiences show that
1. Hypervideo is at least as effective as videos to support teaching-and-learning.
2. When used consistently with research-based design principles, hypervideo are even more effective than raw videos in supporting learning.
3. Effectiveness concerns both knowledge acquisition and the motivational aspects of learning.
4. Learning-by-design instructional choices (Cavanagh & Peté, 2017; Zahn, et al., 2010) as well as collaborative video-annotation strategies to support feedback management (e.g. Boldrini, Cattaneo, & Lubinu, 2017) constitute a promising approach also in higher education.

We will present cases from the above-mentioned studies from both a research- and a practice-oriented point of view.

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