Applying a conceptual design framework to study teachers’ use of educational technology

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## Sample

Eight experienced upper secondary teachers of English as a foreign language (EFL) in four Swedish municipal schools with one-to-one laptop programmes.

## Implications For Educators About

## Implications For Stakeholders About

Researchers

# Abstract

Theoretical outcomes of design-based research (DBR) are often presented in the form of local theory design principles. This article suggests a complementary theoretical construction in DBR, in the form of a design framework at a higher abstract level, to study and inform educational design with ICT in different situated contexts. Laurillard's Conversational Framework (CF) is used as a conceptual lens to analyse how eight teachers use or envisage using technology to support learning in one-to-one environments. The findings demonstrate how the researcher uses the CF to discern different aspects of the teachers' situated design practices. In the study, ICT is primarily used to support communication and the exchange of knowledge representations between the teachers and their students. Considerably fewer examples are found where ICT is used to support communication, collaborative creation and modelling between peers. However, the interview analyses reveal that the teachers' intentions to apply ICT to support learning often include this second type of ICT use. Reasons for this discrepancy between the expressed intentions and de facto use of ICT include limitations in technical know-how and a perceived conflict between collaborative learning, existing school cultures and individual assessment. The findings suggest that in DBR, an analytical design framework could be an important tool for researchers and teachers when analysing and discussing educational uses of ICT. The CF provides a promising basis for a design framework, but should be expanded to include interactions with actors outside the classroom.

# Outcome

"This analysis revealed that the teachers primarily used ICT to support communication and the exchange of knowledge artefacts between themselves and their students. To a much lesser extent, ICT was used to support meaning making through the exchange of knowledge artefacts for discussion and modelling between peers across the boundaries of time and space. However, when the researcher used the CF to analyse what the teachers had said and written about using ICT to support teaching and learning, its use for peer discussion and modelling was often mentioned. Reasons for the discrepancy between the teachers’ expressed intentions and de facto use of ICT include limitations in their technology knowledge and a perceived conflict between the use of ICT to support collaborative meaning making, existing school cultures and individual assessment.." (Author, in Conclusion)