

Bridging the Gap Between School and Workplaces: Vocational Teachers' Experiences of Digital Technology as Boundary Objects

Ann-Britt Enochsson, Nina Kilbrink, Linda Söderlund
Karlstad University, Sweden

Presenting Author: **Enochsson, Ann-Britt**

Introduction

This study concerns how teachers in upper secondary school experience that they can work with connecting school with workplace learning (APL in Swedish) in vocational education using digital technologies as learning tools. In vocational education, a gap between different learning arenas such as school and workplaces is often emphasized. Different ways to bridge this gap in order to create wholeness in students' learning are discussed in research (cf. Illeris, 2009; Kilbrink & Bjurulf, 2013; Tuomi-Gröhn, & Engeström, 2003; Tynjälä, 2009). One way is to discuss different kinds of boundary objects, which has been done in research on boundary crossing, where the value of learning in different arenas is highlighted (Akkerman & Bakker, 2011; 2012). Digital technology can work as boundary objects to connect learning in different arenas (Baartman, Gravemeijer, & de Bruijn, 2013; Schwendimann, Cattaneo, Dehler Zufferey, Gurtner, Bétrancourt & Dillenbourg, 2015). However, there is a lack of research on how teachers can work with digital technology as boundary objects and thereby help students in their learning process. Therefore, in this study we focus on teachers' work with digital technology, such as apps, blogs and video, as boundary objects in upper secondary vocational education.

Methodology, Methods, Research Instruments or Sources Used

The study has a narrative approach to study the role and identity of the teachers in this work (Mishler, 1999). The research question is: How do teachers work with digital technology as boundary objects in their teaching and what narratives on digital technology as boundary objects emerge among those teachers? In order to learn more about how this work can be done in a meaningful way, we have conducted interviews with teachers who already work with digital technology in vocational education. The teachers' narratives have thereafter been analysed thematically with focus on what they told (cf. Lieblich, Tuval Maschiach & Zilber, 1998; Polkinghorne, 1995).

Conclusions, Expected Outcomes or Findings

The results show that there are many possibilities for learning when using digital technologies in vocational education and especially in relation to oral presentations and motivation. However, there are also obstacles to overcome in relation to for example organizational factors and individual interest. The results can contribute to a research area where there is a need for more research. It could also contribute to an understanding of how to improve teaching with digital technology as boundary objects in vocational education. Furthermore, the results can be used both in teacher education and by teachers teaching in vocational education.

References

- Akkerman, S., & Bakker, A. (2011). Boundary Crossing and Boundary Objects. *Review of Educational Research* 81(2), 132–169.
- Akkerman, S., & Bakker, A. (2012). Crossing boundaries between school and work during apprenticeships. *Vocations and Learning*, 5(2), 153-173.
- Baartman, L., Gravemeijer, K., & de Bruijn, E. (2013). Nurses' and Technicians' communication and learning at the boundary. In H. Middleton, & L. Baartman (Eds.), *Transfer, transitions and transformations of learning* (pp. 49-68). Rotterdam: Sense Publishers.
- Illeris, K. (2009). Transfer of learning in the learning society: How can the barriers between different learning spaces be surmounted, and how can the gap between learning inside and outside schools be bridged? *International Journal of Lifelong Education* 28(2), 137-148.
- Kilbrink, N., & Bjurulf, V. (2013). Transfer in technical vocational education: A narrative study in Swedish upper secondary school. *International Journal of Technology & Design Education*. 23(3), 519–535.
- Lieblich, A., Tuval-Mashiach, R., & Zilber, T. (1998). *Narrative research: Reading, analysis, and interpretation*. Thousand Oaks, CA: Sage.
- Mishler, E. G. (1999). *Storylines: Craftartists' narratives of identity*. Cambridge, MA: Harvard University Press.
- Polkinghorne, D. E. (1995). Narrative configuration in qualitative analysis. In J. A. Hatch, & R. Wisniewski (Red.), *Life history and narrative* (ss. 5-23). London: Falmer Press.
- Schwendimann, B., Cattaneo, A., Dehler Zufferey, J., Gurtner, J., Bétrancourt, M., & Dillenbourg, P. (2015). The 'Erfahrraum': a pedagogical model for designing educational technologies in dual vocational systems. *Journal of Vocational Education & Training*, 67(3), 367-396
- Tuomi-Gröhn, T., & Engeström, Y. (2003). *Between school and work: New perspectives on transfer and boundary-crossing*. Oxford: Pergamon.
- Tynjälä, P. (2009). Connectivity and transformation in work-related learning: Theoretical foundations. In M. Stenström, & P. Tynjälä (Eds.), *Towards integration of work and learning* (pp. 11-37). Dordrecht: Springer Netherlands.