FACTORS FOR SUCCESSFUL DESIGN & IMPLEMENTATION OF HYBRID LEARNING ENVIRONMENTS

INTRODUCTION

In the past 5 years Fontys University of Applied Science in the Netherlands invested heavily in setting up hybrid learning environments: environments at the school-work boundary. In order to learn from these initial practices, a university-wide research project was initiated.

Research question:

"Which factors are crucial in successful design and implementation of the hybrid learning environments of Fontys?"

Theoretical framework

This study builds on earlier knowledge by giving concrete suggestions for the design and implementation of learning environments from a materialistic, spatial, temporal and social perspective, in line with Zitter's (2010) design perspectives. This helps to build conceptual consistency on the design of hybrid learning environments. Despite earlier efforts, knowledge on successful characteristics of learning environments at the school-work boundary is limited. This study fills that knowledge gap and therewith contributes to the effectiveness of these environments in which Dutch higher education heavily invests.

MATERIALISTIC

SOCIAL

SPATIAL

TEMPORAL

QUESTION FOR DISCUSSION:

In how far can the five principles for successful design and implementation of hybrid learning environments at Fontys University of Applied Science be applied to environments at the school-work boundary that you know?

METHODS

- Multiple case study
- 5 social labs (in the domains: education, health, economy and technique).
- Crosscase analysis

Data gathering:
Four data gathering methods were used:

1. OBSERVATIONS
2. DOCUMENT ANALYSIS
3. INTERVIEWS
4. PHOTOVOICE

Participants n=125

67 STUDENTS

32 INVOLVED FONTYS EMPLOYEES
(teachers, coaches, educational designers, managers)

26 EXTERNAL PARTNERS

Data analysis:

- Inductive analysis.
- Critical creative hermeneutic data analysis (Van Lieshout & Cardiff, 2011): a visualization technique was starting point for a dialogue.
- In a new cycle of analysis, raw data was connected and grouped according to Zitter's design perspectives (2010).
- This resulted in five design principles, accompanied by specific guidelines for implementation, categorized alongside the four design perspectives by Zitter (2010): artefacts, roles, space and time.

RESULTS/CONCLUSIONS:

Five design principles were identified. Each design principle is supported by concrete suggestions for the social, material, temporal and spatial design. Here examples of the 'social dimension' are presented.

Design principle	Short explanation	Example 'social dimension'
1. Apply the equality principal	Expressed in shared norms and values, being part of the team, respect and a sense of equality.	E.g. working with 360 degree (including peer) feedback is advised as well as abandoning the idea of a lecturer being the only assessor.
2. Facilitate ownership	Reflected by freedom of choice, autonomy and self-direction.	E.g. students should formulate their own learning goals instead of working with pre-set goals.
3. Foster social knowledge creation in action	Consisting of collective learning processes, knowledge creation, informal learning and learning by doing.	E.g. students should always work in groups and a design based on individual assignments should be abandoned.
4. Support boundary crossing	Encompassing transfer from school to work and vice versa, having 'brokers' on board and working in multidisciplinary groups.	E.g. every stakeholder should be encouraged to be a 'broker', someone who crosses the school-work boundary.
5. Work with authentic questions and situations	Expressed in working with real questions, gaining experience in the context of work and being confronted with the complexity of real-life issues.	E.g. educational partners should provide real-life questions. Case studies/simulations designed by lecturers might support learning, but authentic problems form the starting point for learning.

Fontys

List of references:
Van Lieshout, F. & Cardiff, S. (2011). Dancing outside the ballroom: Innovative ways of analysing data with practictioners as co-researchers. In J. Higgs, A. Titchen, H.D. & B.D. (Eds.), Creative Spaces for Qualitative Researching: Living Research (pp. 223-234). Rotterdam: Sense Publishers.

Zitter, I. (2010). Designing for learning: Studying learning environments in higher professional education from a design perspective (Doctoral dissertation). Utrecht: Utrecht University.

Researchers:
Maria Custers, Miranda Snoeren, Maud Hendrickx, Sofie Moresi & Jeroen Bovens. Contact: m.custers@fontys.nl