

DEVELOPMENT AND FACILITATING MULTIDISCIPLINARY STRUCTURAL DESIGN SESSIONS.

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ABSTRACT

This research involves developing a learning method intended for various types of structural designers wishing to make a joint design in order to achieve a coherent and integrated result. The idea behind this is that participating in a joint design process requires competencies that can be learnt in practice.

Problem

Buildings and their construction processes usually have to be designed by different types of designers. These structural designers work in sequence. They follow up the work of the preceding designer before passing on their own results to the next one. When problems arise with the design, the designers interact to re-design the building or the construction process.

In innovative and complex buildings and construction processes, e.g. in densely populated areas or those involving industrial, flexible and demountable (IFD) technologies, the sequential method of designing may result in excessively expensive buildings of inferior quality.



To hold a design session on the construction site seems to be necessary to figure out the assembly process.

Solution

Co-operating with the relevant designers at an early stage is a prerequisite for achieving the right price and quality. This means that the designers require competencies to enable them to design in multidisciplinary sessions. The following ideas may provide a solution:

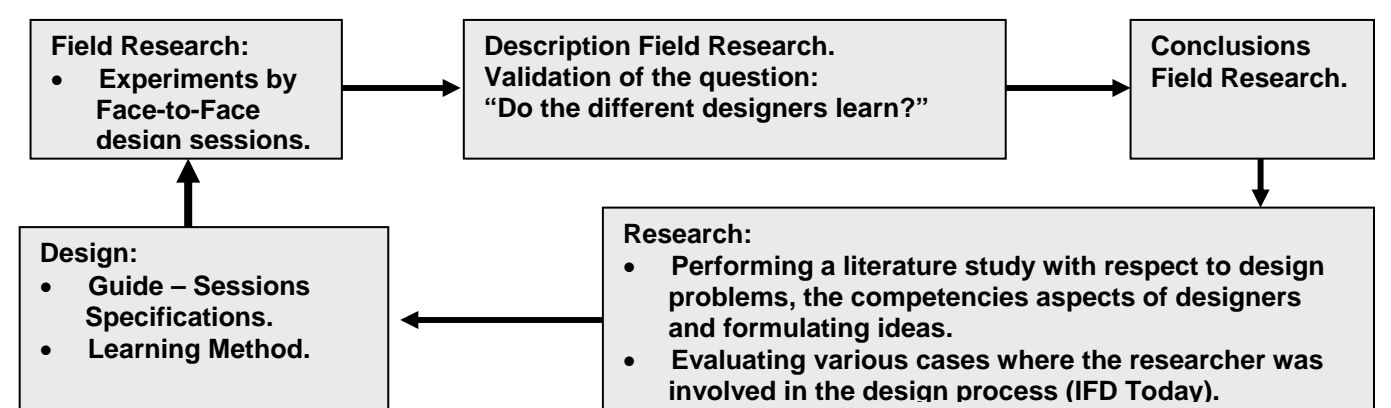
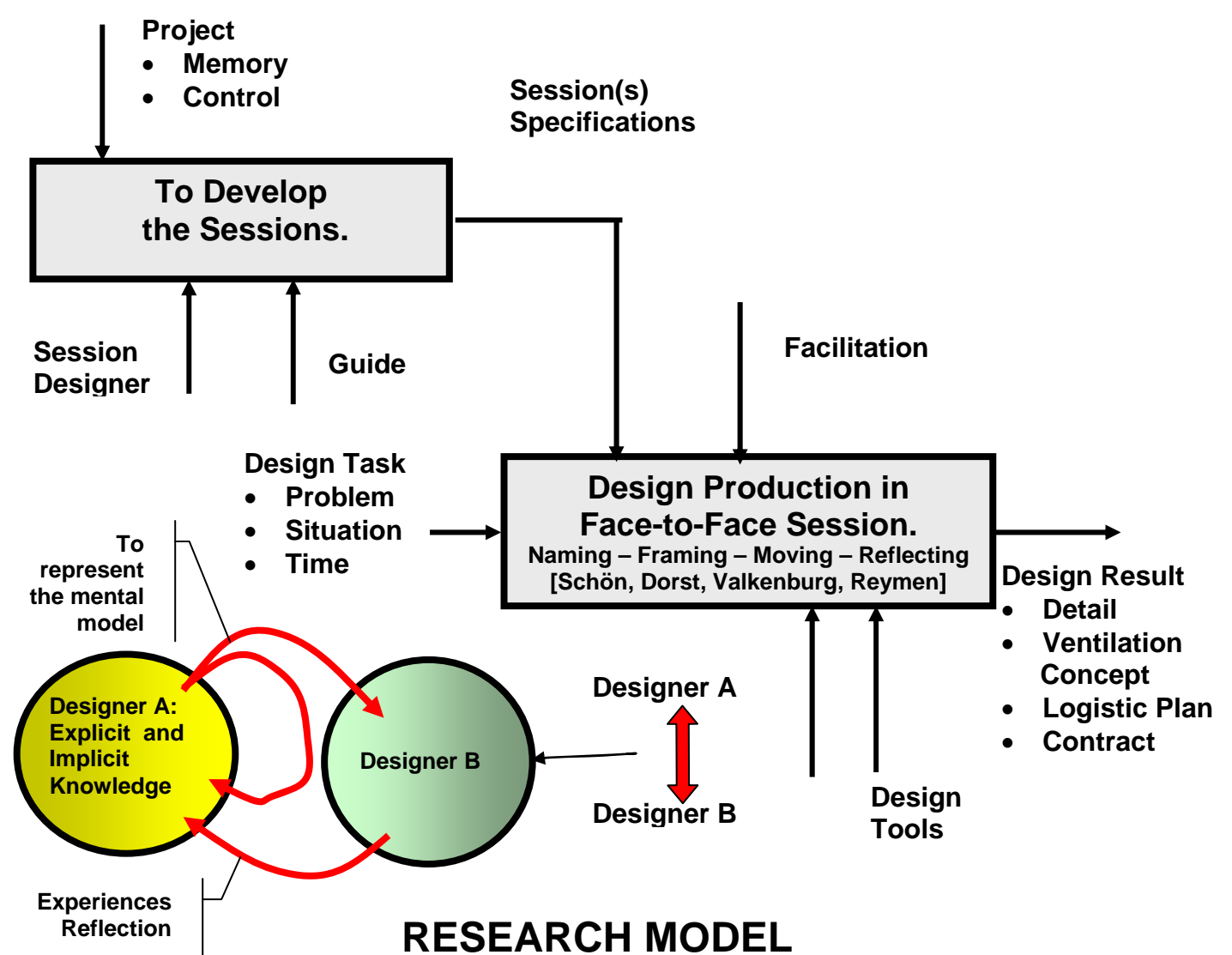
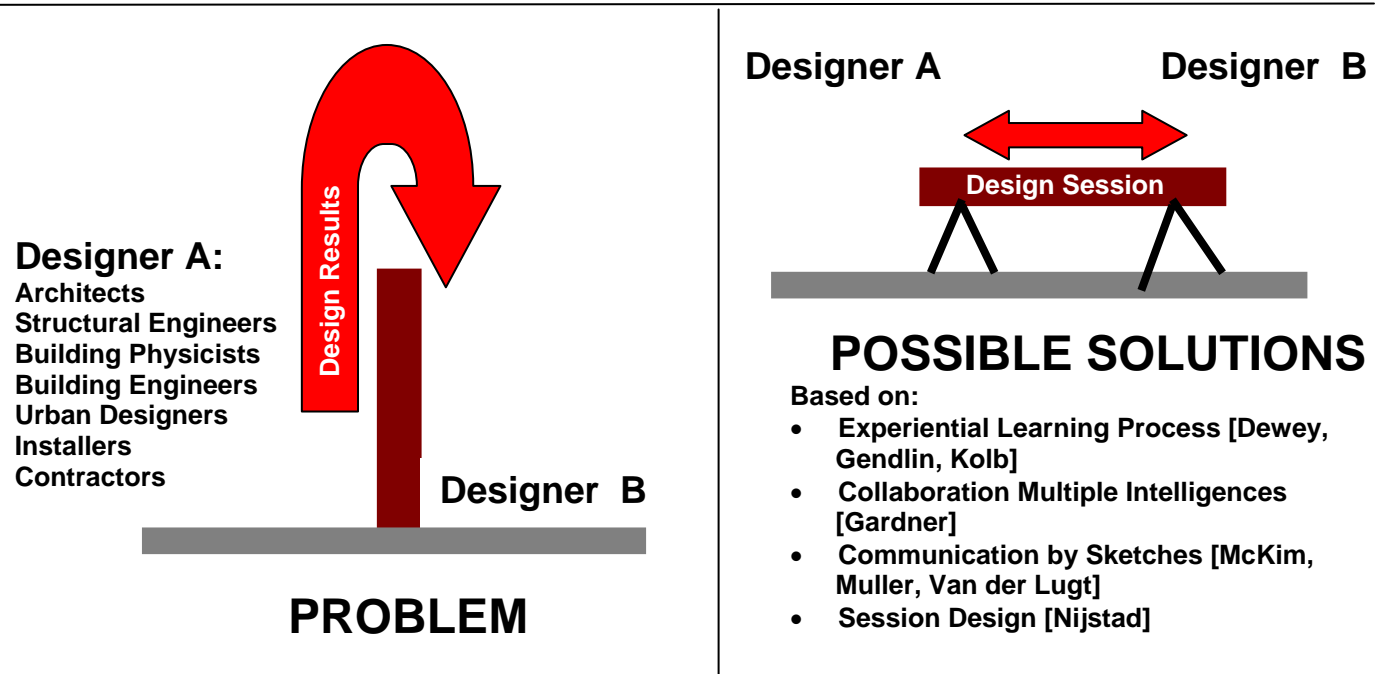
- Face-to-face design sessions can function as experiential learning processes; the designers support one another in developing their own specific competencies. The competencies involve creative thinking, group work, deliberation, negotiation, collaboration, knowledge management, multiple intelligences, etc.
- Generating ideas in structural design sessions using sketches is necessary to compare the design concepts of various types of designers.
- It is also important to consider how a design session has to be organised: formulating problems, creative tools, competency designers, result, session flow, etc.

Result

This PhD research is intended to result in a teaching method for project managers, design managers, designers, etc., who are responsible for developing and initiating structural design sessions. It is particularly geared towards architecture, installations and construction management.

Key concepts

Collaboration, Creativity Tools, Reflection, Experiential Learning, Multidisciplinary Design Process, Design Teams, Design Sessions, Idea Formulation.



RESEARCH PLANNING