RP3015 MOBILE LEARNING

BUILDING DESIGN CULTURE, COLLABORATION AND LEARNING

RESEARCH QUESTIONS

How does a team of design professionals collaborate to design an Australian building? What are the conditions for learning in professional practice?
The research objective is to explore building design culture, collaboration and learning to identify opportunities to improve practice.

RESEARCH METHODOLOGY

This case study uses socio-cultural research methods with a practice based approach to explore the collaborative design and learning activities as they develop.

Ethnographic data collection methods (observer as a participant in a natural setting) were used to gather in-depth and contextual qualitative data from 2 groups:

1. Building design team – included 15 main roles representing 5 of the organisations as shown in Figure 1 demonstrating the diversity and complexity of the group.
2. National sustainability committee – tasked with advancing quality assurance, compliance and sustainability across four of the architectural company's offices.

Cultural historical activity theory (CHAT) is being used to analyse the data (Figure 2). This method uses the groups' activities as the unit of analysis. It is relevant because it enables an understanding of the interconnected culturally and historically mediated activities. The practices sit within a complex system that shapes the project outcomes through multiple stages of social interaction.

Figure 1: Project team 'round table'

This process enabled the development of a holistic understanding of the collective object of the design team, the tool mediated actions (sustainable methods and technologies) and the social context of actions (roles, responsibilities, community) guiding the practice. These integrated activities cross the boundaries of disciplinary, professional and organisational practice.

RESULTS

A collective goal to design a 'best practice sustainable building' as the object of the team's activities was established at the onset of the design development stage. However, the clients were also motivated by the potential market value of an opulent building as a competing goal.

The groups' interactions were situated within a complex inter-professional social system. The system was constrained and influenced by the organisations, institutions,

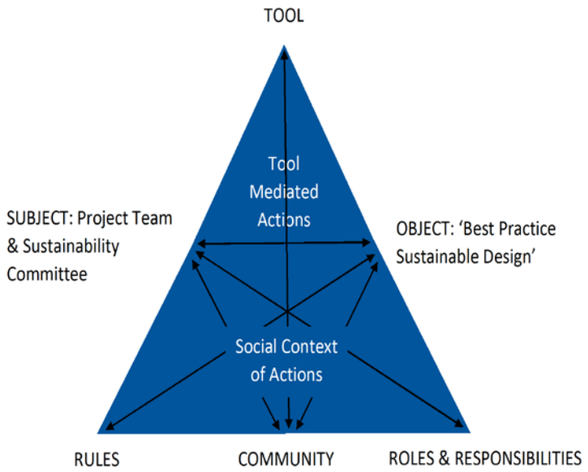

Figure 2: CHAT Analysis Model

groups and individuals. Each of these have variations of professional standards, cultures, learning support and knowledge sharing methods, as well as regulatory requirements.

The sustainability committee, within the architectural practice, was also a key group outside the design team that had the potential to influence the architectural design practices.

The analysis will help identify the potential learning intervention opportunities to support organisational and professional development and practice.

Analysis and outcomes will be released in 2018.

CONCLUSIONS

This empirically grounded insight into an Australian design team, is based on situated, cultural, historical activities, offering a holistic and in-depth understanding of the implicit and explicit practices and underpinning culture of learning and collaboration within a professional setting.

Although this type of in-depth research has generalisation limitations, the exploratory research indicates that social activities within professional practice can be both complementary and contradictory. This is due to the complexity and specialisation of the roles within the team, competing cultures, dynamics of power, as well as variations in established knowledge sharing and learning approaches.

These conditions can limit the team's intended activities, thereby impacting on the shared goal and preventing the desired outcomes.

ANTICIPATED IMPACTS

By gaining an in-depth understanding of the culture, collaborative methods and learning activities of a building design team in a natural context, we will be better positioned to inform support tools, learning interventions, & further research.

Lifelong learning, knowledge sharing, mentoring, innovation and collaboration are the key to low carbon building design.

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