

FACEBOOK-ENHANCED FACE TO FACE LEARNING: THE ARCHITECTURE STUDIO

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ABSTRACT: Architectural design learning happens in a studio – as it has for almost a century. This is the place where conversation and interaction happens; an environment conducive to critical thinking, conceptualisation and design development. This paper presents work that is part of a current doctoral study by the author, entitled “The online architecture studio: towards an instructional-design framework for design-learning.” The study addresses three types of conversation that facilitate design learning, namely the conversation with the self (internal dialogue), the conversation between peers (horizontal dialogue) and the conversation between student and tutor (vertical dialogue). The use of facebook to facilitate these three relationships for conversation is investigated in this paper. A participatory action research methodology is used to reflect on the use of facebook in the final year of an undergraduate programme in Architectural Technology at the Cape Peninsula University of Technology, Cape Town. Quantitative data collected through two focus groups was related to relevant literature, in order to understand the significance of the use of facebook as a tool to facilitate reflective, collaborative and apprenticeship learning in support of the physical face to face studio.

Keywords: Facebook in education, online architecture studio, facebook enhanced learning, design-learning

1. ARCHITECTURE STUDIO

The architecture studio as we know it today, originates from two past models, the Ecole Des Beaux Arts and the Bauhaus (Broadfoot and Bennett 2003:9). The studios at the Ecole Des Beaux Arts (1819-1914), known as “ateliers”, introduced a pedagogical method that is still the focus of design and architectural education. Broadfoot and Bennet (2003:10) describe how students were led by a tutor or senior students, in a “learning by doing” process.

In the period 1919 -1932 the concept of the design studio was reinforced by the creation of the Bauhaus by Walter Gropius. The Bauhaus program aimed to develop the students’ personality as well as technical skills. Bauhaus students were either *apprentices* or *journeymen*. According to Broadfoot and Bennet (2003:10), journeymen provided a link with professional practice outside the school. “What differentiated the Bauhaus was a tandem system of workshop teaching that attempted to equate craft with art, and equip graduates with as much technical expertise as theoretical and creative” (Broadfoot and Bennet, 2003:10).

Despite increasing diversification of the student cohort, worsening staff to student ratios, under-preparedness of students for studies in architecture, the introduction of computer technologies and changes in architectural practice, for the last number of decades the physical studio has mostly remained unchanged (Kuhn 2001:349). The architecture studio of today, characterized by “project-based work on complex and open-ended problems, very rapid iteration of design solutions, frequent formal and informal critique, consideration of a heterogeneous range of issues, the use of precedent and thinking about the whole, the creative use of constraints, and the central importance of design media” (Sarah Kuhn 2001:349), has not changed substantially from these historical models.

2. SOCIAL LEARNING SPACE

Studio learning and teaching relies on the interaction between people (Smith, 2003). In fact, one of the main reasons of the success of studio teaching in design education is often attributed to its social nature (Gross, 1997; Chen and You 2010:152). “The studio model has fostered the type of enculturation into practice that modern schemes for distributed situated learning are just coming to understand.” (Schadewitz, N. and Zamenopoulos, T. 2009:1).

Studio-based learning is traditionally situated in a physical design studio environment. Through a range of conversations (Pask, 1976 in Laurillard, 2008; Schadewitz, N. and Zamenopoulos, T. 2009: 2) or arguments (Hasirici & Demirkan, 2007) with themselves, their peers and tutors, students work towards

producing a design proposal. This proposal is presented in the form of process diagrams, working models, scale drawings in two and three dimensions as well as scale models and a verbal presentation. Such conversations or arguments take the form of various media including actions, words (written and spoken) and the sketch diagram.

These three relationships are presented in the work of Brown, Collins and Duguid (1988:23), as “reflection” (an internal relationship), “collaboration” (a horizontal relationship of peer to peer learning) and “apprenticeship” (Brown, Collins and Duguid 1988:23; Kvan, 2001; Lackey 1999, in Ellmers, Brown and Bennet, 2009), a vertical relationship. “In this sequence, apprenticeship and coaching begin by providing modeling *in situ* and scaffolding for students to get started in an authentic activity. Van Aalst (2009:3) refers to three methods of discourse, that is Knowledge-sharing, knowledge construction and knowledge creation As the students gain more self-confidence and control, they move into a more autonomous phase of collaborative learning, where they begin to participate consciously in the culture. The social network within the culture helps them develop its language and the belief systems and promotes the process of enculturation” (Brown et al, 1988:23).

3. TRANSFORMING TODAY’S STUDIO

The physical dimension of the face to face studio is currently being challenged (Forsyth, Zehner and McDermott 2007:4; Broadfoot and Bennett 2003). In his report on the 2003 Studio Culture conference, Henderson (2004, in Ellmers 2005:2) highlights the increasing difficulty of higher education institutions to sustain vibrant studio culture. Studio in the traditional sense appears to be in decline. Factors contributing to this situation include “pressures on staff time, diminishing resources, increasing student to staff ratios, changing student work and study patterns, health and safety issues, and increasing reliance on computer aided design” (Ellmers, 2005:2) and hence more time spent in computer labs. These spaces are not conducive to interaction, collaboration and social constructivism associated with the constructing of meaning based on learning that occurs in a social environment.

With the rapid development of the internet and information technology (IT) and the globalization of business, design practices have changed (Chen, W. and You, M. 2010: 151; Chen and You 2010:154). This is also true for architectural practice and consequently, architectural education. Ivala and Gachago (2010) maintain that individuals create learning contexts for themselves within and across settings (Barron 2006 in Ivala and Gachago, 2010). Learning therefore extends beyond the studio, and increasingly off the university campus, resulting in more permeable boundaries between settings (Ivala and Gachago, 2010).

4. METHOD

A face to face architecture studio in final year of an undergraduate programme in architecture at a South African University of Technology was supported with a closed facebook group, for a period of six months. At the same time, support was also provided through optional (text and image-based – not audio or video) Skype chats and material shared online through blogging. This study focuses on the use and impact of facebook only and does not discuss the use of the other online tools.

The extent to which the facebook intervention provided for a social learning environment beyond the physical studio, was investigated by studying two student focus group transcripts. The focus groups were conducted by the University Teaching and Learning Unit who provided the author with the transcripts. On average, the focus groups comprised of six students each. The transcripts were reviewed in terms of the three key learning relationships (reflection, collaboration and apprenticeship) and resulting conversations, and with reference to related key themes identified in the literature on studio and studio culture, such as Key Responses of the Studio Teaching Project by the Studio Design Forum (Forsyth, G., Zehner, B. and McDermott, R. (eds.) 2007:7). This Forum involved more than a hundred academics from Australia and New Zealand in discussion on challenges and opportunities they encounter in studio teaching in architecture, art and design (<http://www.theworldcafe.com>).

5. FACEBOOK ENHANCED FACE-TO-FACE LEARNING

Broadfoot and Bennet (2003:9) argue that the World Wide Web offers new ways to connect people and to nurture, foster, and enable a sense of community. “It reflects on the social nature, qualities and characteristics of contemporary studio learning specifically the interactive learning experience” (Broadfoot and Bennet, 2003:9).

The internet as a tool for mass communication allows for educational design studios to be offered online.

The online or *virtual* studio as it is often termed, ideally involves a “community” rather than isolated, one-on-one communication. Online studios are now perceived as an increasingly attractive supplement and, in extreme cases but not exclusively, provide an alternative to traditional studio teaching. The online learning environment explored in this study serves to reinforce existing face to face relationships between people and does not aim to replace the physical studio.

The *online design studio* refers to a networked studio, distributed across space and time. The participants are in various locations, and the design process and communication are computer mediated and computer supported. Often referred to as ‘Virtual Design Studios’ (VDS), they allow designers to be located anywhere yet still participate in collaborative work. There have been many varied formats in the relatively short history of online studios. The major differences often manifest themselves in the areas of communication and collaboration.

Social software enables communities to form and find each other (Brown, 2006:24), to learn through remixing, and sharing ideas and artifacts using the rich media now available. According to Roos (2011), the term “social network” has been around since the 1950s, but the dramatic rise of social-networking Web sites like MySpace, Facebook and LinkedIn has “turned a dusty sociological phrase into the hottest buzzword of the internet age”.

Facebook, created in 2004 by Harvard student Mark Zuckerberg, is a Social Networking Site. Yudhi (2011) describes it as an “online community—a place where people can meet and interact; swap photos, videos, and other information; and generally connect with friends, family, co-workers, fellow students, fellow hobbyists and enthusiasts, and numerous others in their social network. Facebook connects people within cities or regions, work or school” (Yudhi, 2011).

Ivalo and Gachago (2010) who conducted the focus groups on which this study is based, maintain that “facebook groups enhance(ed) teaching and learning by improving communication between the lecturer and students, assist(ed) in accessing academic and moral support from their lecturers and peers and improve(d) the quality of their projects through feedback from students and lectures.”

Other significant findings of the Ivalo and Gachago (2010) study are that Facebook is an integral part of the students’ everyday life and that appropriate use of Facebook groups and blogs enhances students’ engagement in learning activities of an academic and social nature on-and off-campus, by blurring the boundaries between students’ academic and social lives. Facebook groups and blogs encourage peer to peer support, collaborative learning, creation of student-generated content and improve interaction between staff and students, which are powerful indicators for student engagement.

Shao et al (in Schadewitz, N. and Zamenopoulos T. 2009: 2) argue that the level of social engagement in Social Network Sites (SNS) mirrors the practices and patterns of traditional design studios. In both settings, dialogue among peers and with tutors takes a prominent role. The relatively limited published research on the topic of online design studios is often preoccupied with technology; consequently few examine the important issues of pedagogical content and student interaction (Broadfoot and Bennet 2003:9).

6. FINDINGS

6.1 Reflection

The first of the three relationships and consequent discussions or dialogues presented in the work of Brown, Collins and Duguid (1988:23), is “reflection”. It is an internal relationship (Brown, Collins and Duguid 1988:23; Kvan, 2001; Lackey 1999, in Ellmers, Brown and Bennet, 2009).

The concept of the ‘reflective practitioner’ outlined by Schön (1983; 1987) provides a framework for understanding and plotting the process of studio design practice and activity. Schön’s (1983, 1985) theory is based on a constructivist view of human perception and thought processes; the designer constructs her view of the world based on her experiences (Valkenburg and Dorst 1998, in Elmers 2005:3). Through the iterative process (Broadfoot and Bennet, 2003:18) of exploration a design proposal is formulated.

The focus group provides no data on this internal process of reflection, which is not surprising, considering the social nature of facebook as a social media tool. In the facebook interface, communication happens with at least one other person.

6.2 Collaboration

Interviewer: And has it [facebook] also helped in your interaction with fellow students?

STUDENT D2: Yes it has. No, yes definitely. It definitely has.

STUDENT G1: *"I think a large part of it (is) ... interactivity... you can upload a project or like post an idea and then people in our class could in this like electronic environment give feedback on it."*

STUDENT A2: *For me it feels like we are still in a class and we are interacting, ja.*

STUDENT B2: *It's just a digital way. Digital classroom.*

Forsyth et al (2007:19) identified the following as important topics in response to the answer "What does Studio mean in your discipline": interaction, being together in a group, incidental learning, group and collaborative learning, students teaching students (peer-to-peer learning). Collaborative learning is learning that happens because of the conversation with peers; it is a horizontal relationship.

Brown, Collins and Duguid (1988:26) argue that collaborative learning is a process of enculturation that is supported through social interaction by members of a group. Broadfoot et al (2003:18) present "a collaborative context" as one of the Four Conditions for Effective Contemporary Design Studio Education. This view is supported by a number of contemporary academics, including Kvan (2001). Jean Lave's theory of situated cognition focuses on learning as enculturation into a practice, often through the process of "legitimate peripheral participation" in a laboratory, studio, or workplace setting. Learning happens seamlessly as part of an enculturation process as the learner moves from the periphery to a more central position in the community.

Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly (Wenger: 2006). Social scientists have used versions of the concept of community of practice for a variety of analytical purposes, but the origin and primary use of the concept has been in learning theory. The theoretical construct of communities of practice (Lave & Wenger, 1991; Wenger, 1998, 2001; Wenger, McDermott, & Snyder, 2002) is grounded in an anthropological perspective that examines how adults learn through everyday social practices rather than focusing on environments that are intentionally designed to support learning. A community of practice is defined as "a group of people who share an interest in a domain of human endeavour and engage in a process of collective learning that creates bonds between them" (Wenger, 2001:1; Grey, 2004:22).

Lave and Wengers' (1993:63-64) model of situated learning proposes that learning involves a process of engagement in a 'community of practice'. The basic argument made by Jean Lave and Etienne Wenger is that communities of practice are everywhere and that we are generally involved in a number of them - whether that is at work, school, home, or in our civic and leisure interests, online or offline. In some groups we are core members, in others we are not.

6.3 Apprenticeship

In an apprenticeship relationship, the student learns under a master by observing her behavior. This relationship is typical of the traditional studio tradition. It describes another of the Four Conditions for Effective Contemporary Design Studio Education that Broadfoot et al (2003:18) present, namely the *One-to-one dialogue* between teacher and student. This vertical dialogue is in the context of the student attempting to design, and may take the form of regular reviews during the design process. Both Schön and Kvan uphold that *one-on-one* communication is essential for exposure to the *tacit* knowledge inherent in designing, whether this occurs face to face or remote.

Cognitive apprenticeship (Brown et al 1988:26) describes the student to lecturer relationship (Brown, Collins and Duguid 1988: 25). Social interaction and collaboration play a central role in this sort of learning. One significant advantage with using online social media such as facebook, is that all students may benefit from the interaction between any other two (or more) persons.

Do you feel it [facebook] enhances the interactions with your Lecturer?

STUDENT C2: *...there is a thing I like about it which is to communicate with the Lecturers. Because when you are working on your project when you get stuck on something you can post it on Facebook and you actually get feedback to move on.*

STUDENTS: *Yes.*

STUDENT G: *Definitely.*

STUDENT I: *I think there's a better bond between the Lecturer and student whereas in the past it was very formal. It was like Lecturer student where now she's like a friend on the Facebook, so.*

STUDENT C2: *Yeah quick feedback that's what I like, that's where it comes in.*

STUDENT A2: *It's just like an open discussion, they are open to...*

STUDENT C2: *It's like they [the lecturers] stand with us.*

STUDENT C2: *And I think this is actually like making us gain confidence in our work, because actually you know where you are heading to and what is required from you.*

7. CONCLUSION

The findings of this study suggest that the online studio learning environment as an interactive space, should not be ignored. The online learning environment through facebook does seem to provide a place for interaction, communication and dialogue. The horizontal (peer to peer) and vertical (student to lecturer) relationships are enhanced in a meaningful way, resulting in an engaged learning experience.

Through facebook, students are effortlessly drawn into a rich virtual learning community. It brings the academic work into the students' social world. It is passion-based learning (Brown, 1988), intrinsically motivated by the desire to become a member of that community of practice. Both formal and informal learning happens through rich dialogue on both the levels of peer to peer and student to lecturer conversation. Meaningful reflection comes from being embedded in a virtual social "studio" milieu that supports the physical learning environment.

This paper focuses on the use of facebook to support face to face learning and teaching. The contribution made by the other online support instruments, such as Skype and blogging, should be addressed in following studies.

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