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## Digital Pedagogy Using Social Network Tools in Architectural Education

**Havva Alkan Bala \***, Faculty of Engineering and Architecture, Department of Architecture, Selçuk University, Konya, 42003, Turkey.

**Yavuz Arat**, Faculty of Engineering and Architecture, Department of Architecture, Selçuk University, Konya, 42003, Turkey.

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### Abstract

The aim of this study is to focus on social network communications as an alternative media that supports the traditional studio method in architectural education. Since the early 2000s, architecture has evolved into a multi-disciplinary and international business by means of the development of the Internet. In particular, social media and the world-wide-web have resulted in new methods of working. In turn, architectural education has been pedagogically affected by these technological developments. Instructors and students may use the same social network tools that students around the world are familiar with: Microsoft Windows Messenger, Net Meeting, SKYPE and Facebook as not informal but formal educational media.

Keywords: Virtual studio, architectural education, social media, e-learning, information and communication technologies;

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\* ADDRESS FOR CORRESPONDENCE: **Havva Alkan Bala**, Faculty of Engineering and Architecture, Department of Architecture, Selçuk University, Konya, 42003, Turkey, *E-mail address:* [halkanbala@gmail.com](mailto:halkanbala@gmail.com) / Tel: +90-332-223-1044

## 1. Introduction

During the 1980s, new visions were developed by computer technology and with the widespread development of the Internet were even more enhanced in the 1990s. By means of this development, architecture has evolved into a multi-disciplinary and international business since the early 2000s. In particular, social media and the world-wide-web have resulted in new methods of working. Architects and professionals involved with the built environment from all parts of the world come together to complete designs, either in person-to-person contact, or via the Internet. In turn, architectural education has been pedagogically affected by these technological developments.

There exists a multitude of terminologies – “virtual design studio”, “online studio”, “tele-collaborative design”, “web-based design”, “cyber-studio”, “distance education” – and acronyms – IRDE (International Reciprocal Distance Education), ODLE (Online Design Learning Environment), OLE (Online Learning Environment), REAL (Rich Environment for Active Learning), and WYSIWIS (What You See Is What I See) to describe this situation. The Architectural Design Studio (ADS) is a pedagogical method used in architecture schools around the world that is based on designing space. Schön [1] defines ADS as an organization within the framework of the concept “knowing in action”. Similar to Schön, Boyer and Mitgang [2] define ADS as an arrangement that combines theory with practice. The activities of the ADS typically involve individual design proposals, group works, formal criticism and/or informal interactions. The aim of the current study is to focus on social network communications as an alternative media that supports the traditional ADS method in architectural education.

## 2. Digital Pedagogy in Architectural Education

To think of the Internet as a place is an important method in understanding and improving the usage of it. Using this architectural metaphor, people communicate with each other at a “virtual place” which allows for communication and interaction [3], [4]. Digital technology creates simultaneous, fast, and flexible educational circumstances that can be called Virtual Architectural Design Studios (VADS). The first virtual distance studios, where students collaborated over the Internet with other students in physically remote locations, relied on web-based databases to store shared design information. In the review literature on the topic, the virtual architectural design studio has been analyzed generally as: 1) building a basis for a digital future, 2) using digital tools while designing, 3) digital visualization and digital practices, 4) digital thinking and “computer-aided architectural design”, and 5) methods of network communication.

The current study is focused on category 5 rather than categories 1, 2, 3, and 4. Munoz et al. [5] believe that little empirical research has been conducted on the value of Web 2.0 in education [6]. Some researchers have begun to examine social network sites, but few studies have specifically addressed its role in pedagogy, except for notable exceptions [6], [7], [8], [9], [10], [11]. Literature on the education of teachers has also started to address this area [12], [13], [14]. VADS experiences generally began in the late 1980s with the proliferation of network communication systems. The first important VADS experience was between the University of British Columbia, Canada, and Harvard University, USA, in 1992 and called “Distance Collaboration” [15]. Afterwards, many different architectural schools and similar institutions carried out similar projects.

İstanbul Technical University (İTU) Faculty of Architecture is the pioneer of VADS experiences in Turkey, when in 2000 Gülen Çağdaş and colleagues collaborated with Sydney University. According to Duru [16], Net-Meeting and Active Worlds were used efficiently for this project. Later, other İTU academic staff organized similar paperless studios with names like Cocoon, PG.W[kutu], the Cyber-Museum Atelier and a collaboration with Zurich University organized by Arzu Erdem and Burak Pak [17]. In the rest of Turkey, other Departments of Architecture, like at Anadolu University in Eskisehir, followed İTU. In 2007, an E-Design Studio was organized by Leyla Tokman and colleagues with architecture and interior design students from Anadolu University (<http://v3.arkitera.com>). Tayfun

Yıldırım at Gazi University, Togan Tong at Yıldız Technical University are also architectural educators who are dealing with VADS in Turkey.

### 2.1. Architectural design studio supported by Facebook

*"...Myself, I never joined Facebook. I've always felt that, especially in today's society, people should try to talk with each other in person – in a courteous and kind manner. But, it's not for me..."*

Most of the time, young people – university students – can easily adapt themselves to technology, and all over the world they are generally members of social media websites like Facebook. On the other hand, most university instructors find social media informal, not serious enough and useless. Those who engage with a technological medium are more likely to value that technological tool in their teaching [18]. In order to implement Facebook in the architectural studio, instructors must consider a pedagogical rationale for using Facebook as well as suggested course applications. Instructors and students may use the same social network tools that students around the world are familiar with – Microsoft Windows Messenger, Net Meeting, SKYPE and Facebook – but used not as informal but formal educational platforms. A positive learning community is crucial to making the computer effective in architectural education. But, there are some questions for using Facebook as an educational medium. For example, how can educators teach Facebook professional etiquette?

It is important for educators to introduce students to social networks. As an optional assignment, teachers can have students create their own Facebook account and “become friends” with at least one other member of the class. Then, the students should post appropriate, class-related images, messages about assignments and events, and course applications, such as “Design Course” or “Course Connection,” on Facebook. Teachers should encourage students to experiment with different features. The following is an outline of our Practice Policies below.

1- First, an instructor needs to create a Facebook profile for professional use only. This profile should be entirely separate from their social/personal Facebook profile, where privacy settings need to be implemented. Because it is important to maintain a level of professionalism that does not cross the boundary of the teaching-student relationship, this professional Facebook profile should contain contact information, specifically an email address, office address, and phone number relevant to the instructor’s institutional affiliation.

2- Next, instructors can simply list the web link of their Facebook profile in their course syllabus. In addition, instructors may also display their Facebook profile during class, inviting students to look at their profile.

3- A separate page can be created specifically for each course. Students can find other classmates’ Facebook profiles through this page, learn about their classmates, communicate with them and the instructor(s), and post/discuss relevant class information. Instructors can send announcements to the entire group and remind students about class events like reviews, critiques and juries.

4- Discussions that have traditionally taken place on web courseboards can also occur on Facebook discussion boards. Instant messaging functions are also available online. Instructors can post information and websites to their Facebook profile and group page for students to download and use/access during class.

5- It is recommended that instructors inform students that they will not be viewing their Facebook profiles and encourage students to designate them on their “limited profile” list (i.e. instructors will not be exposed to all of the student’s Facebook activities).

6-Lastly, if using the site as a course tool, it is suggested that instructors post podcasts, websites, and videos on Facebook, and, using Google Documents, link students to study guides, PowerPoint presentations, assignments, and tutorials. Instructors can contact students via Facebook by sending messages, posting comments on their “wall” or chatting with students during virtual office hours. By

increasing student involvement through communication and community, instructors can tailor their courses towards a variety of learning styles.

## 2.2. Advantages and disadvantages of using Facebook

Facebook has opened up the development of downloadable applications that can further supplement its educational functions. While many of these technological tools mirror those found in currently employed courseware content management programs (e.g. Blackboard, Moodle), the ability and ease with which an individual (instructor or student) can upload photo and videos, the frequent and seamless updates and maintenance, the generous 1024 MB limit on videos, and the compatibility with a wide variety of web browsers are superior to some courseware options [5]. Beyond high usage rates and obvious technological advantages, social networks, such as Facebook, can provide numerous other pedagogical advantages to both teachers and students. For example, Facebook provides instructors opportunities and structures by which students can help and support one another by building their courses within a community already established by the students themselves. Hamann and Wilson [19] have found that students who participated in a web-enhanced class outperformed those students in a traditional lecture format. This suggests that Internet-based learning modules actively engage students in a manner unique from the traditional class lecture.

The usage of Facebook seems to increase both teacher-student and student-student interaction in the form of web-based communication. Facebook helps instructors outside of the classroom connect with their students about assignments, upcoming events, useful links, and samples of work. Some concerns that have been expressed about using Facebook in an academic setting include privacy worries, anxiety about interacting with professors in such an environment [7], a belief that Facebook does not serve an academic purpose [15] and the opinion that faculty should simply avoid “educationally appropriating” these “backstage” social spaces [10]. In fact, the expression, “creepy tree house” has been appropriated to explain educators’ use of online social spaces like Facebook [20]. The current study has not found any of these to be a problem. In fact, the study is based on a very simple, pragmatic and modest idea that proposes such network communication as an alternative media supporting the traditional architectural education studio. The usage of Facebook may seem like a very small difference, however, it created big pedagogical differences (Figure 1).

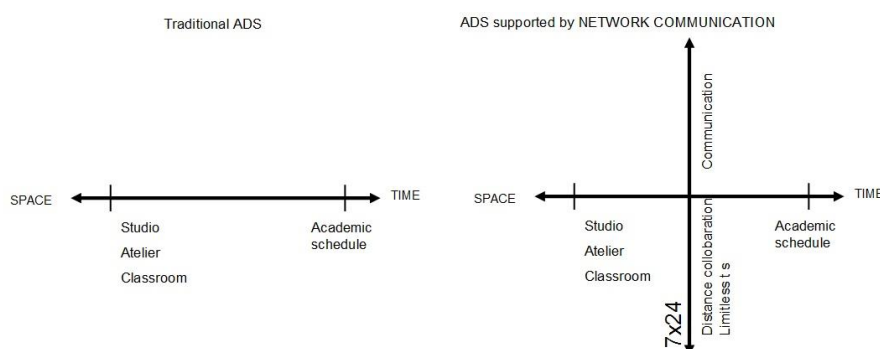


Figure 1. Traditional ADS and ADS supported by network communication

In a traditional architectural design studio, sketches, technical drawings, perspectives, renderings, models and mock-ups are the common items shared during the educational experience. Time flows in a linear manner as the knowledge flows from instructor to student during studio hours until finally a review is held with jury members from outside the faculty or contributions of other academic staff at the same institution (Figure 2a).

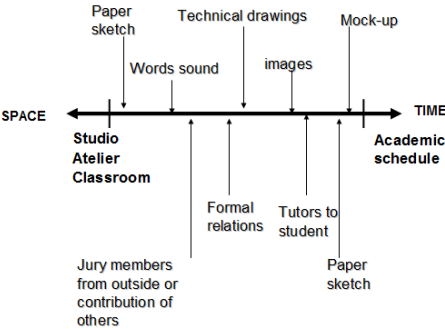


Figure 2a. Traditional studio items and relations

On the other hand, the architectural studio that is supported with a social network has more opportunity regarding information exchange and the variety of presenting it. In addition to sketches, technical drawings, perspectives, renderings, models and mock-ups, such a digital-social pedagogy additionally provides formal and informal video conferencing, cyber discussions and the opportunity to bring in new partners in other locations around the world (Figure 2b).

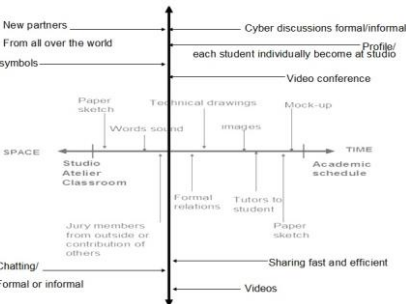


Figure 2b. Traditional ADS supported with a social network

**3. Conclusion**

The advantages and disadvantages of using social media as a teaching/learning experience are underlined as a guide for other architectural schools. Facebook’s networking and social communication capabilities can benefit both the instructor and the student by tapping into a greater number of learning styles, providing an alternative to the traditional lecture format, creating an online classroom community, and increasing teacher-student and student-student interaction. Efforts should be made by instructors to expand their pedagogical portfolio, promote active learning through a learning community, and to test the effectiveness of on-line learning communities through social networks such as Facebook. Scholars should continue their investigations into these alternative teaching tools to determine if there is actually a benefit of creating such cyber-learning communities (Figure 3a, 3b, 3c).

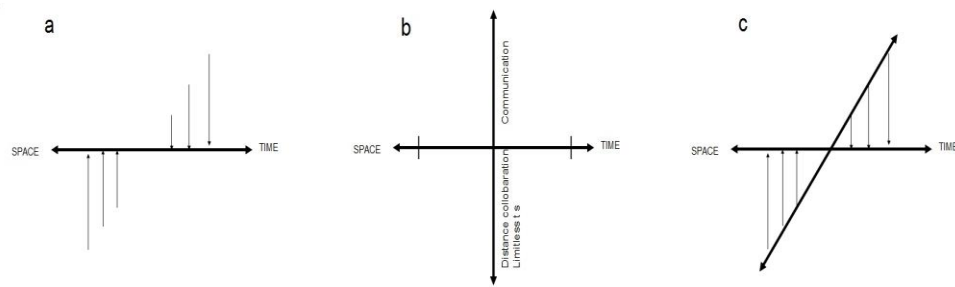


Figure 3. Traditional ADS contains inputs in a linear format (a) while the introduction of a social network creates a vertical dimension (b). The future expectation is the mixing of both (c).

Finally, we may say that the features of collaboration in design education include effective communication, reflection, appropriate tools, and the effective use of artefacts. The ICT present online applications for collaboration design that offers educators the possibility to change design pedagogy. Creating alternative environments for architecture education in the present system brings about a great amount of unpredictable architectural, cultural and universal value. It is possible to assert that architectural problems solved in an international context are more in-depth and layered than the conventional process.

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