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This paper attempts to demonstrate and compare challenges and opportunities in virtual and direct education in architecture in Iran, specifically in fundamental courses. Two different programs (direct and virtual education) have been run in two different branches of Shiraz University, in Shiraz and Dubai, for two successive fundamental courses. Both cases were observed accurately by the authors during two semesters and the result qualities were collected and assessed. The main questions of this paper are: what are the advantages and disadvantages of virtual and direct education? And which method ends to a better quality in result in architecture fundamental courses? The query is based on the case study method using a combination of strategies and content analysis techniques. The information is collected through library and fields studies, and completed through questionnaire and analyzing it's components by the statistical software.

Keywords: Architecture, virtual education, direct education, statistical software, Iran.

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Nowadays, the architecture and construction industry is facing enormous technological and institutional transformations with their resultant difficulties and challenges. Lack of time within technology development persuades the educators to adopt e-learning as a means of education. Enhancing creative thinking through virtual education is another vital and emerging trend in this subject. It seems to be without difficulty in many courses of the studies, but how it would be in architecture education, due to its theoretical and functional aspects?

As a lecturer at Shiraz University with 16 years' work experiences, especially on fundamental courses such as "Introduction to architecture design studio (1&2)", teaching these courses online was a challenge at the beginning. This paper discusses the author's experiences of these 2 successive courses during 2 years, in two branches of Shiraz university (Shiraz& Dubai), which is accomplished with learner's aspects of mind.

Since there is little empirical data regarding the short period of this curricula there are no benchmarks for further improvements; so a questionnaire survey methodology was implemented. In addition, the survey aimed to measure and understands the status of education quality and integration of multidisciplinary approaches to the teaching.

The survey was designed in a collaborative and iterative process between architecture students of two branches of Shiraz University.

The authors underwent two years of iteration regarding the type, amount and configuration of questions, between second September, 2012, and 20th June, 2013, and even second September, 2013, and 20th June, 2014. The authors structured the survey into multiple sections designed to elucidate the core question and to get to the main purpose, which is achieving a perfect education quality.

The survey focused on two main areas of education. These are:

Part I: Collaboration between teacher and learners.

Part II: Collaboration between learners.

Part I of the survey was structured to determine the level of collaboration between teacher and learners, which depends on two important items: class climate and eye contact.

Part I. of the survey was structured to determine the level of collaboration between teacher and learners, which depends on two important items: class climate and eye contact.

3.1. Classroom climate

Classroom climate refers to the atmosphere of the classroom- it's social, psychological, and emotional characteristics (Dunkin & Biddle, 1974). The importance of class climate as it relates to motivation derives from the notion that teaching is leadership intended to affect classroom behavior.

Classroom climate is often described using such terms as "warm", "cold", "permissive", "permissive", "democratic", "autocratic", and "learner-centered". The climate in the classroom is largely established through teacher-student interactions (Pintrich & Schunk, 2002).

Table 1. Leadership role in architecture education enhancement

Leadership	Yields ordering	Leader approach	Students function	Strength and weakness
Autocratic	1	• Cold • Taking control by leader • No permission to participate for students	• Following the orders • Good yields in leader presence, and drop in leader absence	• Good result but Showing Anxiety, stress, surrender and disobedience
Democratic	2	• Collaboration with students • Persuading students • Sharing ideas with others • Taking the responsibility of final result • Persuading students to solve problems and decision	• Tending to collaborate with each other • Friendship among students	• Taking more initiative to their works • Working actively even in leader absence • Bearing failures
Permissive	3	• Non-interference in students work • Not taking the responsibility of students work • No recommendation for finishing work	• Disagreement in goals • Working individually and without organizing	• Lack of leadership • Seems to be working with pleasure, but there is animosity between them.

3.2. Eye contact

It is well known that speech is only one part of the communication. One aspects of non-verbal communication is the use of the eyes to convey the messages. The eyes are a powerful tool for both the teacher and the learner (Ledbury et al., 2004). Indeed many communication experts believe that most interpersonal communication is nonverbal. People's faces disclose emotions and telegraph what really matters to them (Santrock, 2001). Two aspects of non-verbal communication are the use of eyes and the facial expressions; both of which are powerful tools to convey messages. Ergin and Birol (2005) indicate that the real communication between two persons begins when two of the persons establish eye contact; so, eye contact has an important role and meaning in communication. Part II of the survey focused on the way learners concern with each other, which is derived from instructional grouping.

3.3. Instructional grouping

A critical component of planning is deciding what activities students will work on, which also involves deciding how students will be grouped. Much research has examined the effects of grouping on student motivation (Webb & Palincsar, 1996). Three types of grouping structures are "competitive", "cooperative", and "individualistic".

Table 2. Instructional grouping, Ref: (Pintrich & Schunk, 2002)

Arrangement	Description	Example
Competitive	Students' goals negatively linked: one attains one's goal only if others do not attain theirs.	Teachers grades "on the curve" and gives 15% of the students A's, 25% of the students B's, and so on.
Cooperative	Students' goals positively linked: one attains one's goal if others attain theirs.	Teachers form small group to work on project; each student is responsible for completing a part and all students put part together to form final product.
Individualistic	Students' goals not linked: Attainment or nonattainment has no effect on goal attainment by others.	Students work on computer software programs individually and record completion on their progress sheets.

		Shiraz branch	Dubai branch
Gender	Male	48%	40%
	Female	52%	60%
Age	18-21 years	85%	38%
	21-25 years	15%	62%
Year	2012-2013	50%	60%
	2013-2014	50%	40%
Final Grade	A	60%	40%
	B	25%	30%
	C	11%	20%
	Less than C	4%	10%

To easily deal with the subject a tree diagram is defined. For easily assessing each part some keyword are described at the bottom of the diagram. Further, these keywords are given to the interviewees and they were asked to choose one of the five options of the defined *likert* spectrum, due to their point of view.

The answers to each question among students are demonstrated in percentage, and it is showed in table 4.

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Table 4. Likert exam result

Keyword number	Very important

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Overall, in architecture education field, friendship should be replaced with competition, so learners can move along without any concern.

Due to artistic aspects of architecture and its involvement in learners emotions, a need for a much comprehensive relationship between teacher and learners, and also between learners, is needed. So making "eye contact" and "Body gesture" would help to have a more effective communication.

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