



## **A NEW COMPOSITE LEARNING AND TEACHING METHOD TO ACHIEVE SUCCESS FOR THE ACADEMICALLY UNSUCCESSFUL STUDENTS**

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### **ABSTRACT**

This article is about adult students' learning of Interior Architecture design course and efficacy and efficiency of new method of instructional design experience employed in 2011-2012 spring semester. A student group of 14 whom were all consist of irregular students, who at least once experienced unsuccessfulness in their university education. The aim of the instructional design was to achieve CC average grade for the class, which was expected to encourage students for their further studies with confidence moreover would demonstrate the success of the experience. Instructional design consisted of two main methods, personal SWOT analysis with in depth interviews and unprofessional counselling, and as education style Constructionists' approach of self improvement and development within Active Learning environment. 2,15 pt out of 4 point grading system demonstrated the success besides where students' assessments averaging 4,4 out of 5 likert scale reinforced the results and students' approval of the new instructional design implemented.

**Keywords:** Active learning and constructivism, Unsuccessful Students; Personal SWOT Analysis, Instructional Design for Design Courses

### **INTRODUCTION**

Design courses are not similar to lecture courses like history or language courses, which held in studios with more interaction with students. They are more like painting or drawing courses but somewhat different than those, which holds creativity, technology and routine drawing work and knowledge in itself. This composite character is a challenging task for the instructors who are teaching and conducting the course. Design is creative, innovative, and technical solution to life problem and express the solution on paper/digital medium to be produced in life environment. In the past it is accepted that the courses are conducted as master-apprentice system of education however in time many design and design education methods have been developed and employed. (Cairns, 1997) Design courses are the backbones of interior architecture education similar to other design education lines, like architecture, graphic design, fashion design and art education, in which these courses in these curriculums usually have the higher credits and the highest contact hours comparing to other courses. In our school, Çankaya University Interior Architecture Department, design courses are 7 credits and occupy 10 contact hours a week, which are chain courses being prerequisite to one another run 8 semesters sequentially. However this type of curriculum layout creates problems for the students who are unsuccessful in design course even if once, whose education period increases at the end, means time and finance loss for the students. This year in order to solve the problem, policy of the school has been changed and all design courses began to be given both in fall and in spring semesters. In the previous system the classes were comprising of both successful and unsuccessful students, where the most successful ones lead the studios and the others try to



catch them, resulted in better educational standards. However with the new policy, academically unsuccessful students accumulated in repeating courses.

The design III (third year first semester) course which was given in spring semester of 2011-2012 had all irregular students which were academically unsuccessful in design courses at least once or having low cumulative grades. It was a challenge to teach this group and also an opportunity to see the reasons behind being academically unsuccessful. Therefore as expected, in order to achieve a good education level, a special emphasis must be given to programming and methodology of the course. Several methods and theories have implemented where Constructivist learning theory is one of the base of this approach.

### **Hypothesis of the study**

The importance of personal life and studio environment are important key factors for students' success besides educational programming, therefore instructional designs should include conveying knowledge and personal development of students at the same time. Active learning and constructivist style education methodology can be applied in design courses which would be useful methods for students' better learning.

Instructional design of Design 301 course basically consisted of two methods which have been employed, "Personal Development Of Students" which has started with analysis of students, underlying factors of their unsuccessfulness and the other method is "Course Development" of the design course. Aim of these methods are to increase intrinsic motivation of students' personal development and academic success.

In this paper while trying to understand the reasons behind academic unsuccessfulness, the methodologies employed to improve professional knowledge, skill and motivation of students, which was expected to lead to their success will be explained and discussed. Success of the methodology is tested primarily by students themselves which they evaluate the instructional design and course management employed. . In our school evaluation of students final work is made by a group of faculty, both by course instructors and invited ones in a jury. Therefore the students' grade average of design 301, which is consisted of unsuccessful students is compared with the grade average of design 302 course which is comprised of successful students give a good assessment of the instructional design implemented.

### **Instructional Design of 3rd year Design Course in 2011-2012 Spring**

#### **Method I. Personal Development of Students**

The method comprised of 'In depth interview with the students to find out their problematic' , 'Personal SWOT analysis', 'Counselling, how to handle personal problems and school tasks together' Collaboration and participation with students are the key factors while conducting the course. They are told to overcome



difficulties they had confronted before and if possible solve them with our aid. However students did not concentrate on the main reasons of their unsuccessfulness until the interviews and discussions held.

### **Personal SWOT Analysis**

The ideal achievements expected from students and interior architects are discussed in the classroom and a checklist of these criteria created. The checklist covers both academic knowledge and abilities which should be acquired and ideal personal behavior and attitudes which should be employed during their education and professional life. More than 100 criteria is listed upon general discussion with the students and with some elimination of similar and repetitive ones, though can be summarized around 20, in order to praise their participation a shortlist of 49 criteria are decided. To give some example: To be a good student: 'Student should have a programmed life', 'Must work in order', 'Must have good relation with teachers and other students'; In order to get good grades: 'Must work hard', 'must perceive three dimension', 'must have critics from teachers frequently', 'use time efficiently'; To be a good interior Architect: 'Must be an intellectual', 'Must be social', 'Must be creative and imaginative', 'Must understand human (clients' and users') psychology'. These criteria in hand students are asked to fill SWOT Analysis table. They are expected to fill the table whether they feel that they are strong (as Strength) in that criteria, or weak (as Weakness), whether they feel that that criteria is the one which make them superior to other students (Opportunities) and whether they see some threats regarding these criteria and holder (other friends) of these. Evaluation of SWOT analysis was not that successful since the students could not differentiate the threats and weaknesses, although it was explained in detail, and they were not interested in personal SWOT analysis, as not seeing its usefulness. However according to 3-point likert scale answers almost all of the students stated similar weaknesses, in 'hardworking', 'being a steady worker', 'using time effectively and efficiently', 'deficiency in long concentration time', 'getting unprofessional opinion on their project', 'being good at presentation of the project either by hand or by computer'. 'Being a good researcher', 'Being a curious person', 'Having good perception ability', 'Being a social person', 'Having good communication with friends and teachers', 'Thinking easily in three dimension', 'Having good information about new technologies', 'Understanding human psychology' are the criteria which they saw their strength.

### **Interview and Self Evaluation for Personal Development**

Personal SWOT (strengths, weaknesses, opportunities, threats) (Gizir, 2005; Kuzu, Uysal, 2008, Jakson, Joshi, Erhardt, 2003) analysis made by the students through questionnaire survey and evaluated individually with the instructors and how they would cope with the lack of knowledge and skills beside other problems. However personal SWOT analysis of students by itself did not demonstrate the reasons behind their weaknesses, therefore in depth interview with students held throughout the class. Each student was interviewed about their previous educational life and level of success, families, their economic conditions, their problematic habits, problems which interfere with their work performances.

This study demonstrates the real reasons behind their unsuccessfulness. Almost all of the students have some sort of problems which interfere in their studies. 4 out of 14 students had concentration problem



diagnosed during their early school ages and were given medicine to treat hyperactivity. One of the student have psychological disorder, and the other one had a personal health problem, in remission of after surgery. Three students' close relatives have health problems which adds up 9 students, 64%, which are affected by health issues. 10 students, 74 %, have economical problems, and 4 of them, 28,5 % must work professionally in order to pay school fee and help their families economically. 5 of them, 36% of students who have either divorced parents or whose parents are not in good moods. Almost all, indulges in internet chatting, computer games and especially the girls indulges in family affairs.

In depth interviews with students has helped to find out their rooted problems other than school, and adaptation to handle both school and family problems are discussed and with some tolerance and encouragement they could control some of the adverse effect of their nonschool related problems.

## **Method II: Instructional Design And Development**

Besides personal development methods applied to improve students' performances, better learning course education methodology and programming are also taken into consideration in instructional design of Design 301 course.

Design courses in general have certain routines, project subject is given, students are expected to get information about the subject, early sketches are expected to be developed by the students and step by step with the aid of the criticism of the faculty projects develop and as a final students are expected to complete the drawing and model making requirements, and final grade is given either by a jury or class instructor(s) depending on the university and its traditions. Generally students are expected to design and develop their projects by themselves and they are assumed to know all necessary supportive information either as cumulative knowledge given by other courses or from other academic sources, like libraries, etc. However years of experience showed that usually students can hardly convey the knowledge transferred in other courses to design courses and this difficulty usually arises throughout the course. This is also a known phenomena of educators. (<http://www.flaguide.org> ) Also courses are conducted in discipline with little flexibility and tolerance in congruency with the submission requirements, submission dates and attendances.

## **Constructivism and SODAP Education Methods**

In this Inar 301 Design course knowing students' academic unsuccessfulness and considering the students' background several education methodologies are employed and conducted for better learning of students.

View of constructivists' approach basing on how people learn suggests students must learn by observation, and study so that construct their own way of learning. (Brooks & Brooks,1993; Paiget,1973), which is considered thoroughly throughout the instructional design of the design course. Students are guided and monitored with positive encouragement in which they are allowed to develop their own skills.



“Constructivism is basically a theory -- based on observation and scientific study -- about how people learn. It says that people construct their own understanding and knowledge of the world, through experiencing things and reflecting on those experience”, <http://www.thirteen.org/edonline> Active learning with constructivists’ learning style employed, especially group work, discussions, and encouraging students to learn through asking, researching and discussing.

SODAP Learning method developed in 2000s by the author: SODAP (Gokhan, 2001), (**See – Observe/Organise-Draw/Design/Discuss – Analyse/Apply – Produce/Practice/Participate**), which was based on the various learning methods. Social Cognition Learning Model (Vyogotsky, 1962); Social Learning Theory (Observational Learning)- ( Bandura, 1986); Behaviorism (Phillips and Soltis, 1994); Constructivism( Brooks & Brooks; Piaget); Multiple Intelligence Model- (Gardner); Brain Based Learning ( Caine ); Learning Styles Theory ( Kolb ); Right Brain Verses Left Bran ( Mc Carthy); Communities And Practice Approach- (Institute For Research And Learning); Aesthetic Realism Method ( Eli, 1967); are some of the learning styles and methods analyzed to develop SODAP. The courses were developed also basing on learning cone (Edgar,1969) which aim for better learning of students. SODAP method were practiced in Workshop courses once held in Cankaya University Interior Architecture Department, due to high credits which those courses occupy, all of them had somewhat made into transformation to classical courses with classical methods. However the experience demonstrated the benefit of different education methodology. In 2011-2012 Design course SODAP words tried to be implemented within the education method.

Continuous tracking of the students’ attendance and their work and assessment: An online group is established to communicate with students and expecting it to be interactive. Almost all information and announcements are made with the aid of this group. This group communication is also useful to encourage and to motivate them. Assessments are made with discussions and students are informed about their faults and missing works.

Students needed to be cultivated in terms of art, architecture and interiors, therefore continuous feeding of information is another process, either through visual means or explaining the things in detail to furnish them with knowledge, and skills. Some skills are developed by students with additional instructions and information

Design Studio Methodology can be followed in Fig 1. Studio is conducted with understanding, tolerance, respect, love of designing respect with high level of interaction but in discipline. Th,s medium encouraged students to perform better. (Table 2) Also as seen in Fig 1, design subject and study continued in stages, and in each stage necessary information was given with visual and physical instruments, some information was repeated few times until they would understand and implement the information correctly, and in each stage why they have to study that stage and do/draw such things are explained and with discussions they are convinced that whether we ask or not they suppose o do it for the sake of good design. Group work, and studying in the studio is encouraged and communication among students was also encouraged. Whenever there seems a problem of difficulty in continuing, , depending on their lack of



information we elaborate the subject with the aid of slide shows, definitely with interaction within the studio.

An internet discussion group was established, to increase communication. However it worked usually one way, conveying the information or announcement on internet. Moreover students are asked to use digital medium for their presentations, which had reduced their workload.

Students’ creativity has been achieved through encouraging them to start with basic design point of view, in other words starting with a non-functional design and transfer the developed ideas to functional one, which is new design methodology.

Three midterm and two main midterms are graded besides their attendances and participation in the classroom. Invited jury members grade the final products.

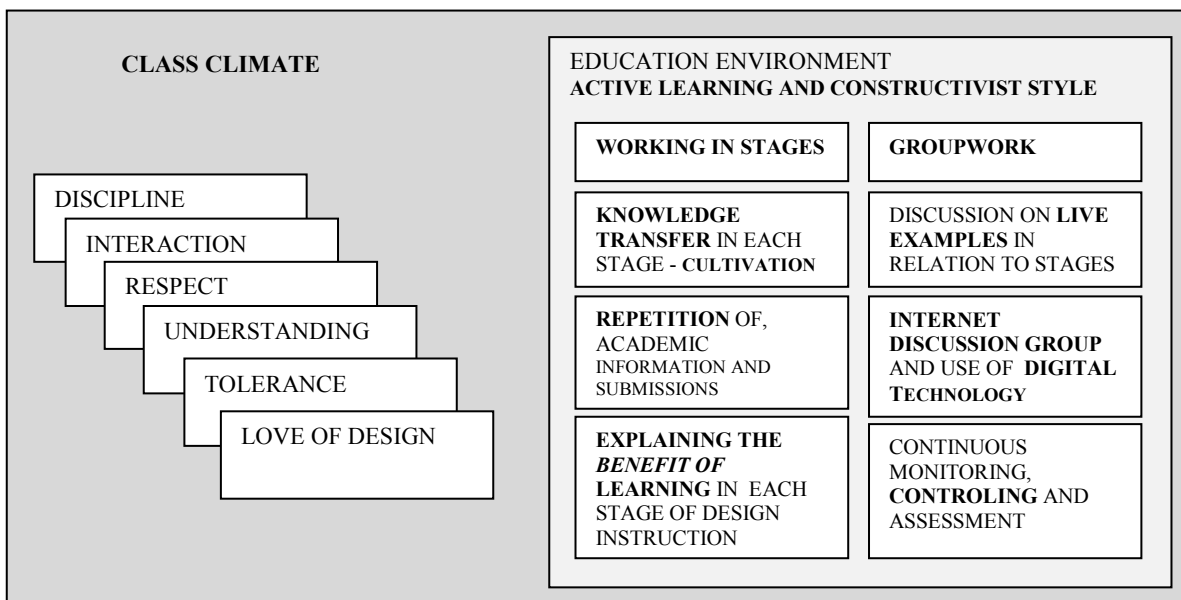


Figure.1. Principles of Composite instructional design method employed in design class Inar 301 in 2011-2012

## Findings

### *Final Grading and Comparison With Other Classes*

The above mentioned methods all, which I call “Composite Learning Method” helped most of the students. All 14 students who enrolled the design class attended and followed the course, however one of



the student did not submit final drawings therefore got NA grade. Two of the students made late submission with excuse, therefore their grades were lowered a degree. The grading system in our school is 4 point, and fractions system. AA - 4; BA - 3,5; BB -3; CB – 2,5; CC – 2; DC - 1,5; DD – 1; FD – 0,5; FF – 0; and NA is not attended. Therefore all the final grades of the students are converted to numbers in order to compare. Comparison is made with design 302 class which consist of all regular/successful students, at least past last semester. Grade averages are shown in Table 1.

**Table 1** Students who take design classes of Inar 301 and their average performances in previous design courses Inar 101, 102, 201, 202, the research subject 2011-2012 spring semester and group’s summer semester grade averages in Inar 302 and for comparison Spring 2011-2012 Inar 302 of regular successful students. (Calculated basing on the sources of Cankaya University Student Affairs Department)

	Fall Inar 101	Spring Inar 102	Fall Inar 201	Spring Inar 202	Spring Inar 301	Summer Inar 302	Spring Inar 302
Grade averages of the group studied	1,88	1,57	1,38	1,35	2,15	2,65	
Average of Inar 302 students who are all successful							2,16

The group of students who were irregular therefore became regular after following Inar 302 design course they took in Summer School. In table 1 the groups average grade can be followed which demonstrate direct raise in their design grades. In Summer School the following Inar 302 design course is given by me and same colleague faculty, in which we tried to employ similar instructional design method. Grade average of the study subject group demonstrate their positive reaction to the method employed with their higher average grade, which is the highest of the past 5 years’ average grades of design courses. Insert your heading text and choose the appropriate heading level from the style menu. Insert your heading text and choose the appropriate heading level from the style menu. Insert your heading text and choose the appropriate heading level from the style menu. Insert your heading text and choose the appropriate heading level from the style menu. Insert your heading text and choose the appropriate heading level from the style menu. Insert your heading text and choose the appropriate heading level from the style menu.

### *Students’ Evaluation of the Course*

In order to assess the course instructional design students were surveyed in order to evaluate the method employed and the course. (Table 2) Questioned were prepared to obtain quick and direct opinions of the students and mean evaluation of their 5 point likert scale answers evaluated. They are expected to give written opinions about the subject, instructing methods, and general programming of the course. Almost all of the students demonstrate contentment in the course, they wrote notes stating that they had really enjoyed the process, and learned a lot, they were very pleased with the method employed, and interactive active learning backed up with visual material ended up with their own learning development in free discussion medium. Moreover they add “basic design” as a starting point for the projects helped them to design more creative projects. Furthermore they admit that if any discrepancy occurred it was due to their



personal problems and themselves. The only adverse opinion was about the group work enforced from the very first start of the studies, which they usually complaint about the difficulty in working as a group, creating a time schedule which would fit all. Unfortunately after the second stage of the design course students are freed from group work which was not in their tradition of studying. One of the student stated that he would prefer to study during classes more, during lecturing and discussion, which was the key part of the course method.

**Table 2** Student group’s average evaluation of the course and instructional method in likert scale 5 according to survey made

Questions	Mean	Questions	Mean
Are you content with: a. the subject of design	4,6	Your opinion about active learning method	4,8
b. Size of the building	4,4	You have been given many information during classes were they helpful?	4,3
c. Function studied	4,5	Drawing on the board?	4,1
d. Stages	4,1	Slide show about the subject with explanation and discussion?	4,8
e. FINAL Requirements	4,6	Visiting the existing building and similar functions in-situ?	4,2
Did you have enough tme to analyse and research about the project?	4,8	Exhibiting sample drawings as examples and discussing on them.?	4,5
Did analysis of the existing building, functional analysis of new program and allocation plan studies been helpful?	4,9	You have employed a personal SWOT analysis and questioned about your personal problems and how to handle them, were they helpful?	4,2
Has group study been helpful?	3,5	AVERAGE	4,42

The average of students’ evaluation is 4,4 in likert scale 5, which is quite high. The highest point is evaluated for the analysis and allocation plan studies. In traditional design studios students are expected to study and present their works by themselves while in this class it has been explained with examples and interactively discussed in depth so that every one of them understood what we are expecting as instructors from this level of projects designed. Which brings second highest point to discussions on live example slides.

Table 2 Student group’s average evaluation of the course and instructional method in likert scale 5 according to survey made. Students are expected to criticize the pictures of interiors shown and discussion follows. They said that this type of discussions about the design subject made them understand the critical points of design; a verification of constructivists’ and SODAP learning methods. In studio environment students were allowed to ask any question, criticize the process of design methodology implemented in the studio, made them feel in free and respectful environment, as they were no more degraded and humiliated. Usually they were discussing their personal problems openly to find solutions, or just sharing their problem.





## Conclusion

The students all had personal problems, which interfere to their educational life, while two have health problems, some other have family problems, four of them are working, but almost all of them could hardly prevent themselves from today's seducing digital environment, opportunities and lifestyle. For some students, their academically unsuccessfulness was a continuous aspect even rooted in their prior school periods, due to this fact their general knowledge is below average, though they are clever enough to get better grades. The study demonstrated that methods to raise self confidence and feel of success are the key factors to cope with the academically unsuccessful students. The Composite Learning Method comprised of two, the first one which is, analysis of students' personal problems and counsel them to manage class studies and course weight and the second one is comprised of SODAP and Constructivists' learning methods found successful in the Interior Architecture course conducted in 2011-2012 spring semester. Table1 and Table2 verifies the success of this experimental study.

Study demonstrated the main effects of academic environment on success of the students are: Effect of Previous high school education; Effect of number of students/number of faculty ratio; Effect of course load taken by the students; Effect of teaching methodology.

The changes in technology, science and free market provide opportunities to improve our lifestyle and comfort to today's modern life, while taking quite a large amount of time to catch these opportunities, as continuous working hours, traffic, and almost unlimited entertainment facilities in the town, on televisions and on digital media. There is too much to learn and too less time to do everything provided, moreover there are too many deceptive phenomena and activities which tempt everyone besides students. Struggle of families with the conditions of these fast changing environment affect their children, the students, who also are affected by the society and recent lifestyles as well. Furthermore economical crises which create earthquakes in societies effect families' economic conditions thus students'. Four of the students out of fourteen had to work or help their father's work.

Study proves the hypothesis set at the beginning of the design course therefore the value of this study. Moreover study demonstrated a necessity of a new instructional design which must consider students' self, besides conveying educational information and technology. Study also demonstrated that one of the reasons of unsuccessfulness is the opportunities of modern life, which requires more succinct and effective instruction and course development

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