

STUDIO MANAGEMENT MODEL FOR STUDENTS' SUCCESS: EMPLOYING TECHNOLOGY, NEW DESIGN METHODOLOGY AND ENCOURAGING STUDIO CULTURE

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Abstract

In 2013-2014 spring semester an 2nd year interior architecture design class, consisting of underachievement students, a new management model comprising three-layered strategy is implemented. Continuous motivation and counseling; knowledge support with new design teaching methodology within friendly and interactive class culture comprise the three layers.

Evaluation method of the model constitutes of testing three issues; students' semester grades and their comparison with average of their previous grades, students' attendances, moreover success of this studio management model assessed through students' opinions and their evaluation. . All 11 students who are interviewed, found this model of management very successful (4.77 in likert scale) and except one, almost all students' design jury grade is higher than his/her previous design average grade. Furthermore query of 45 other design studio students as a control group for faculty-students relations, proves the model's success. The employed "**Design Studio Management Model**", have helped them psychologically, enhance their motivation, as well as their academic knowledge and study methodology.

Keywords: *Design Studio Management, Reasons of low academic performance, Studio Culture, Interior Architecture Studio, Design Teaching Strategies, Effect of Peers, Personality Traits, Student Guidance*

I. Introduction

Students' high achievement is the primary goal of many teachers and faculty while conducting their courses. There are various factors affecting student achievement from conditions of physical and psychological environment to classroom culture, from teacher's class management to teaching methods, from implementation of various learning styles to affect of peers are some.

Students of Interior Architecture demonstrate great variety in their interest, enthusiasm and motivation in education. Student selection or in other words student allocation model of Turkey gives almost no chance to low achievement students to select and register to their preferred profession. Therefore some students found themselves in an unexpected department, even with no wish or enthusiasm towards this profession. In the beginning years this situation effect their performance in schools. Early surveys which have been carried out by the author demonstrated that around one third of students had no intention in studying interior architecture at the beginning. Almost none of the students had a test finding out the preferences/inclination of professions basing on Holland's personality theory. (Yesilyaprak, 2013) High achievement students prefer and can enter government schools with very low school fees. Therefore usually families force low achievement students to enter any university to have a university diploma and sacrifice economically to finance student's high school fees. Therefore from the very beginning the level of students is low in Foundation Universities comparing to government Universities. Some students have some prior educational deficiencies, such as lack of study habits, lack of self-discipline, difficulty in problem solving ability, moreover perceiving and transferring three dimensional objects/spaces, which pull down the overall level of students. Besides due to high school education curriculum of the Country they all have lack of aesthetic values and tastes, which is a must for an art and/or design based schools. Faculty members always complain about these problems and work very hard to bring up these problematic students to a certain level and furnish them with all necessary information, enhance their capabilities with practices. Our primary concern is to teach "design" in "Interior Architecture Studio" classes, where in Cankaya University Department of Interior Architecture, design courses occupy nearly half of total credits for graduation. Boyer and Mitgang states (p. 73) at virtually all schools, design is quite rightly considered the heart of the curriculum.

I had a chance to teach classes comprising with even more problematic students within previous past three semesters. All of them at least once failed in design courses and their cumulative average was low. I had tried “Composite Learning Method” (Gokhan, 2013) which proves its success. In 2014 Spring (second) semester, a small group of students of 14 had registered the course Inar 201 Interior Architecture Studio I, which in fact is a second year 1st semester’s course. The students were below average, either has repeated in the 1st year design studios and/or repeating the same course Inar 201. Their age range is 20 to 28, which is high and, 4 female and 10 male. From the beginning special attention seemed a must. The design courses last for 5 hours as a block course twice a week. The first day was quite surprising, only 6 students were present, who came quite late, which requires further investigation needed apart from implementing the “Composite Learning Method” for below average students practiced previously. Small class provides an opportunity for an experiment of managing the studio and conducting the lessons and the works.

2. Tasks to be Handled

Like many schools, in Cankaya University Interior Architecture department a group of teachers lead the design courses and one of them assigned as a coordinator. I was the coordinator as one of the two faculties. Tasks to be handled at the beginning of the course are as follows:

1. “**Academic Problems of the students**” mainly related to students’ previous performances
2. “**Personal Problems**” rooted from family, environment, personality of students
3. “**Design Course Methodology to Meet Learning Objectives of the Course**” – teaching and fulfilling objectives of the course

2.1. Tackling Academic Problems of the Students:

Since it is the beginning of second year, some students may not understood the necessary study discipline of studio classes, therefore class had started with an open discussion about their preferences of Interior Architecture as a profession and possible reasons of their academic unsuccessfulness. In order to develop warm and encouraging studio environment students are asked to organize the studio so that they feel that they belong to the space, so that they may study during nights more willingly. (In most of the design schools long hour work is necessary therefore usually during exam-jury times students stay in the classrooms/studios during night.) However they were very reluctant to organize and decorate the studio as it should be, which was another surprise after their absence problem.

Previously practiced Composite Learning Method (Gokhan, 2013) is developed and decided to be implemented which is developed basing on SODAP¹ (Gokhan, 2001) education method course within the past few semesters. The system was utilized to introduce new semester’s project subject and early works about knowing the subject through researches and class discussions.

Dismissive and procrastination of the students required a better method must be developed to teach and educate them academically/cognitively and also to improve their personality. Personality traits is defined as neurophysiological structures, underlying relatively enduring patterns of thoughts, feelings, and behaviors that represent a readiness to respond in particular ways to specific environmental cues (Roberts and Jackson, 2008; Tellegen, 1991). Behavior, thought and emotion of students must be evaluated and they must be guided in a way that their personality trait must not interfere their academic success. Jackson (2011) also suggests in his study that educational context are important for the development of personality traits, and he adds, one learn more in school than in just class material.

Semester lasts 14 weeks, one usually is gone for national days, and therefore we had 13 weeks, 26 lessons/sessions. Utilizing technological advancements, we established a Yahoo group to exchange our opinions, teaching material and needs, besides we exchange our cell-phone numbers, and let students to interact freely. I must understand the personality traits, capabilities and knowledge level acquired by the students, therefore in depth interviews in leisurely manner have been carried out, with private talks and on Internet chat.

Students’ Behavioral Aspects: Peer effect is emphasized by numerous studies (Friesen and Krauth, 2008; Burke and Sass, 2008; Sadler and Good, 2006), almost all agree on the peers have an important role on student’s achievement. The results are consistent with a simple model of peer effects in which the academic achievement of peers is much more

¹ (The author developed SODAP method of education in 2000 and implemented it in Interior Architecture Studios and Workshop courses of the first and second year. SODAP is an abbreviation: See ; Observe /Organise; Draw/Design/Discuss ; Analyse/Apply; Produce/Practice/Participate The method bases 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 Brain (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. (Gokhan, 2001)

important than their home language. Friesen and Krauth, (2008) Sadler and Good (2006) depending on their study, comparing grades of the teachers with peer grading, argue that a very high correlation was obtained between students and their teacher on test questions ($r = 0.91$ to 0.94) though they found patterns of biased grading of students of their peers. However, students who corrected their own tests improve dramatically. “The results indicate that peer achievement has a positive effect on achievement growth. Moreover, students throughout the school test score distribution appear to benefit from higher achieving Schoolmates” (Hanushek et al. 2001, p.542) This research findings suggested the difficulty in managing academically poor students through good students, since almost all were below average.

2.2. Understanding Students’ Personal Problems and Trying to Create a Personality Trait Taxonomy List

In order to identify the personalities and habits of students, they are asked to fill out/answer several questionnaires, especially to point out the main reason of their low academic achievement. The questions are arranged to find out, “The big Five Trait Taxonomy” as John and Srivastava (1999), Goldberg (1993) and others in the literature stated.

	PERSONALITY TRAITS	1S	2B	3E	4E	5G	6H	7IL	8I	9K	10M	11R
Extraversion /	Outgoing											
	Talkative											
	Energetic											
Introversion	Reserved											
	Solitary											
	Keep in the background											
conscientiousness	Being efficient											
	Organized											
	Neat											
	Systematic											
Agreeableness	Friendly											
	Generous											
	Kind											
	Sympathetic											
	Willing to compromise											
Neuroticism	anxiety											
	moodiness											
	worry											
	envy											
	jealousy											
Openness to experience	Aesthetic sensitivity											
	Active imagination											
	Attentiveness to inner feelings											
	preference for variety											
	intellectual curiosity											

Fig. 1 Evaluation of Students’ Big Five Personality traits
 1 -very low 3- low medium 5 -high
 2- low 4 - medium 6 -Very high
 Codes of the Columns represent each student and corresponding his/her response to trait

A brief study about personality traits factors to find out students’ behavior characteristics is summarized in Fig.1. Study carried out formal – with set questionnaire, and informal-with private talks, besides their behavior observed in studio work hours and as it can be seen in Fig 1. personality trait factors are marked. More dark shades are the strong traits and the white means, that trait is not effective. The result defines some traits, not very clear though, however these were not as effective as one might expect to explain students’ unsuccessfulness and habits. During all these early weeks while academic work was continuing, in depth interviews and observation of students continued. Their problematic situations are analyzed as a source of “stress” under 5 main groups, which is developed by the author, basing on the interviews and organizing them under a taxonomy. The major headings are:

- Academic performance history of the student;
- Academic deficiencies;
- Family Problems;
- Behavioral/psychological Problems;
- Health Problems;
- Financial problems (student has to work); Fig 2 summarizes the students’ problems and interferences to their academic life.

STRESS AREAS	STRESS SOURCES	Numb. of Students	Percentage
Previous unsuccessfulness	In this school	11	100
	In previous schools or in university entrance exam	8	72
Health Problems	Hyperactivity	3	27
	Chronic Depression (one is under medical attention)	3	27
	Serious heart problem	1	9
	Chronic allergies	2	18
Working to earn money	At night and extra school times	1	9
Family problems	Separation or divorce	1	9
	Family lives in another town	2	18
	Incompatibility with the family	1	9
	Financial problems	3	27
Academic problems related to department	Difficulty in perceiving three dimension	6	54
	Lack of previous knowledge	11	100
	Lack of discipline of studying	9	82
	Difficulty in concentration	8	72
	Memory problem - Difficulty in remembering previous knowledge given (according to their given account	9	82
	Lack of self confidence	11	100
This semester's problem behaviors	High inattentiveness to the courses, lectures and submissions	5	45
	Low or no attendance problems	4	36
	Study disorders	10	91
	Behavior disorders	2	18
	Lack of motivation	3	27

Fig. 2. In accordance with the students' given account problems of students at the beginning of the semester. After couple of weeks 3 students did not come to studio at all, their attendance were already in problematic stage, therefore all the study carried out with 11 students until the end. Thus the values in Fig. 2 covers only 11 students. Analysis of the Fig 2 demonstrates striking results statistically, all 11 have academic problems in this school, and 8 had previous academic problems, 8 student has some sort have health problems; Academic problems related to department of Interior Architecture is even more striking, as all have memory/attention problem (cannot remember the technical information given in previous years even weeks – this may be due to their weak technical background, may not correlate the given information therefore cannot remember); 8 students have concentration problem they get bored or distracted easily; all of them lack self-confidence, probably due to previous low academic performance; 6 of them have difficulty in perceiving three dimensions which is a must in architectural studies; the previous knowledge did not retain in their minds, probably due to lack of background knowledge from high school and low working habits; 9, nearly all students have difficulty in time management and study discipline, (a habit must be gained during early childhood (Belsky, J. et al, 2007)); Behavioral problems are, inattentiveness to the lectures given and expected class studies and homework; 2 of the students are ill mannered, 4 students have attendance problems but did not give up due to tolerance demonstrated. Astonishingly almost all followed the private communication on internet but did not read thoroughly the given home-works or tasks related to the course.

3. Design Course Methodology

Design education is a difficult task, since designing needs variety of capabilities, as drawing what you have in your mind, namely, transferring ideas into drawings, besides three dimensional perception and abilities as problem solving, modeling, moreover good level of academic knowledge as mathematics, art, social sciences which students must have been acquired during undergraduate education. Therefore students who have some deficiencies about these tasks needed extra effort to meet the required background in time. Furthermore if the studio is composed of good and academically poor students where usually academically poor students follow their successful peers more easily, as observing and mimicking examples. Watching the good performance students and observing good sample works created within the studio helped them to visualize the problem and possible solutions.

Attoe and Mugarauer (1991, pp41-51) stated fourteen teaching traits: Vitality, Genuine and energetic, Belief teaching as a mission, A strong bond between teachers under the teacher's qualities; Matching personal interest and style to the course, Role as couch, counselor, and parent, Instilling curiosity, Socratic method as personal style; and Use student's interest as course content, High expectations, Dropping students in the middle of problems, Encourage collegiality among students, Hard work in preparing course, Having high standard traits under course format. The formulae suggested may not apply for all design schools or as for all cultures. Tyson and Chung (2010) state in their book explain their research about design process and design teaching on variety of design groups and analyze them under the

headings Process, Reflections, Tools and Actions and propose several methods of design course teaching method with no considerations of students qualities and studio environment and culture. Kahvecioglu (2008 , p 8) states that of components of studio teaching are issues “*about group organization; teamwork; design studio medium; roles of student-designer and studio instructor; communication; knowledge and information acquisition and transfer; representation tools; risk and motivation management*” and adds, other components are “*design problem contents or task*”, “*individual creativity styles and design thinking processes*”, and “*design knowledge*” and emphasizing various aspects of design studio management. And she also stresses on roles of design actors (as student and studio instructor) communication and design studio medium. Kahvecioglu puts creativity as a major aim of design studios.

An architectural design studio should be more than a place of knowledge transfer and acquisition for students as active participants, and for the studio tutor as a moderator, and should become a medium for improvisation. In this approach, the *studio tutor* is more of a ‘mediator’ or ‘moderator’ than a director or manager. In other words, a “*coach for a creative climate*”. (Kahvecioglu, 2007, p. 23)

Under these circumstances two assumptions are accepted: Firstly, there must be a comprehensive new studio management model is a necessity and secondly, studio atmosphere must be enhanced physically and psychologically to improve students’ moods, especially their self-confidence, particularly without having the advantage of being with “good student” examples. A studio management model is therefore developed and implemented to counterfeit the existing situation of Design I class. (Fig 3) The tasks would include creating a studio culture which usually described as a ‘nightmare’ for a poor student, “Late nights, exciting projects, extreme dedication, lasting friendships, long hours, punishing critiques, unpredictable events, a sense of community, and personal sacrifice” (Koch et al. 2002, p.3) Moreover “these myths influence the mentality of students and promote certain behaviors and patterns.” (p.5)

Koch and others (2002) in their study criticize studio culture and emphasize its effect on learning, creativity, exploration of ideas, critical discussions and risk taking, and they add “studio culture must change”. They quote from Hegels stating cultures progress by process of polarities and history is moving towards freedom.

Koch and others (2002) stated the following principles for a new design studio culture: Students should lead balanced lives, time is a more than a constantly endangered resource; There is a world outside of design studio; design is the integration of many parts; Design process is as important as product; collaboration is the art of design; design is inherently an interdisciplinary act; even educators can learn; the good of students must prevail; grades can impede productive assessment; critiques are learning experiences, not target practice; to design for many, parts of all must be included; New visions, shared values; Culture of optimism; Culture of respect; Culture of sharing; Culture of engagement (with the community); Culture of innovation.

Above summary suggests two fold education method, enhanced design teaching and good studio management model for this group of students. Also the literature studied explains the difficulty of studio management especially with low performance students. Usually students and teaching staff are placed as opponents of the class, “faculty members ask and students obey” as one of the student stated. Students were using their cell phones freely for speaking, writing messages and playing games, however they hardly bring their computers to study in the classroom. Therefore the following proposals developed and put as 2 hypotheses to be tested.

2.1. Hypothesizes

1. “**Three Layered Design Studio Management Model**” enhances student’s academic performances.
2. “**A studio culture of soft disciplined, friendly, interactive, sharing, understanding, counseling with teachers in technological environment and academic support is necessary for better design productivity**” is stated to be tested.

Previous experiences and students’ expectations of a new “Design Studio Management Model” is developed to enhance performance of students: in terms of increased attendance, increase in academic performance as grades. Students’ participation within the classroom (Fig. 3) This simple method’s objective is handling all problems together in reference to main principles, which is explained below. Studio work must carried out continuously as three streams at the same time: Counseling support; Continuous information and knowledge support and Enhanced design teaching methods employing all new age technology available. In 2013-2014 Spring semester this management model put into trial in Cankaya University Department of Interior Architecture.

3.1. Three Layered Class Management Strategy

- a. **Close faculty-student relations:** Focusing on student’s general or daily problems positive encouragement with unprofessional guidance and counseling run throughout the semester with face to face or in technical medium. A family atmosphere within the studio yet with discipline.

- b. **Repetitive Information and Knowledge Flow:** Almost all students stated that their deficiency in previous technical knowledge necessary for designing. Since they have almost no background of design and aesthetics during their high school education, students could not obtain the required level in these aspects. Students are taught, explained technical knowledge as ‘understanding of space’, meaning of good design’, ‘Creativity and innovation’, ‘meaning of user needs’, ‘necessity of knowing orientation and site analysis as an interior architect’ ‘ergonomics’, ‘structures’, ‘materials’, ‘color in Interior Architecture’, ‘how to make research’, and furnished with technical skills as ‘drawing techniques in various scales’, ‘presentation techniques’, ‘model making’, ‘verbal presentation techniques for jury exams’ throughout the semester through slide shows, internet web addresses exchanges, and document sharing on virtual medium, whenever necessary.
- c. **Enhanced teaching methods utilizing new technical opportunities, as “using internet as knowledge source, information sharing, for communication”:** Design process usually is attained by students in time and which takes quite some time for students to find out their own way. Any design must be creative and usually innovative yet functional, technically suitable and buildable. A design studio method implemented must cover all these aspects and issues of design. Also the information and skills conveyed must retain with the students, therefore according to active learning style and constructivist methods, students are taught about ‘the design process’, ‘practiced at every stage’, at school and at home as well, and to enhance their learning and ability of problem solving methods, critical thinking, and overcoming barriers of creativity SODAP (Gokhan, 2001) *See ; Observe/Organise; Draw/Design/Discuss ; Analyse/Apply; Produce/Practice/Participate*) method is implemented. In accordance with the method either real-life examples are visited or buildings analyzed on internet as live examples which are beyond reach, in order to understand the design problem and variations of solutions, good and bad interior architecture examples. All these study and research carried out on Internet, and the subjects discussed rigorously with direct interaction of students and faculties. Creativity and innovativeness in design are all expected in design classes, which is found rather difficult by the students. A new “concept creating process” is introduced which has been developed in the past years also employed. This technically supported new design methodology, which has been used for the last three semesters for creative design solutions also demonstrated its success.

In Fig 3 three stream design teaching methodology is explained. These three streams run in parallel to each other, moreover while implementing the streams some principles are pursued which makes in a sense studio culture. Studio culture is important its perception make students either willing or unwilling to come to studios and work and study wistfully.

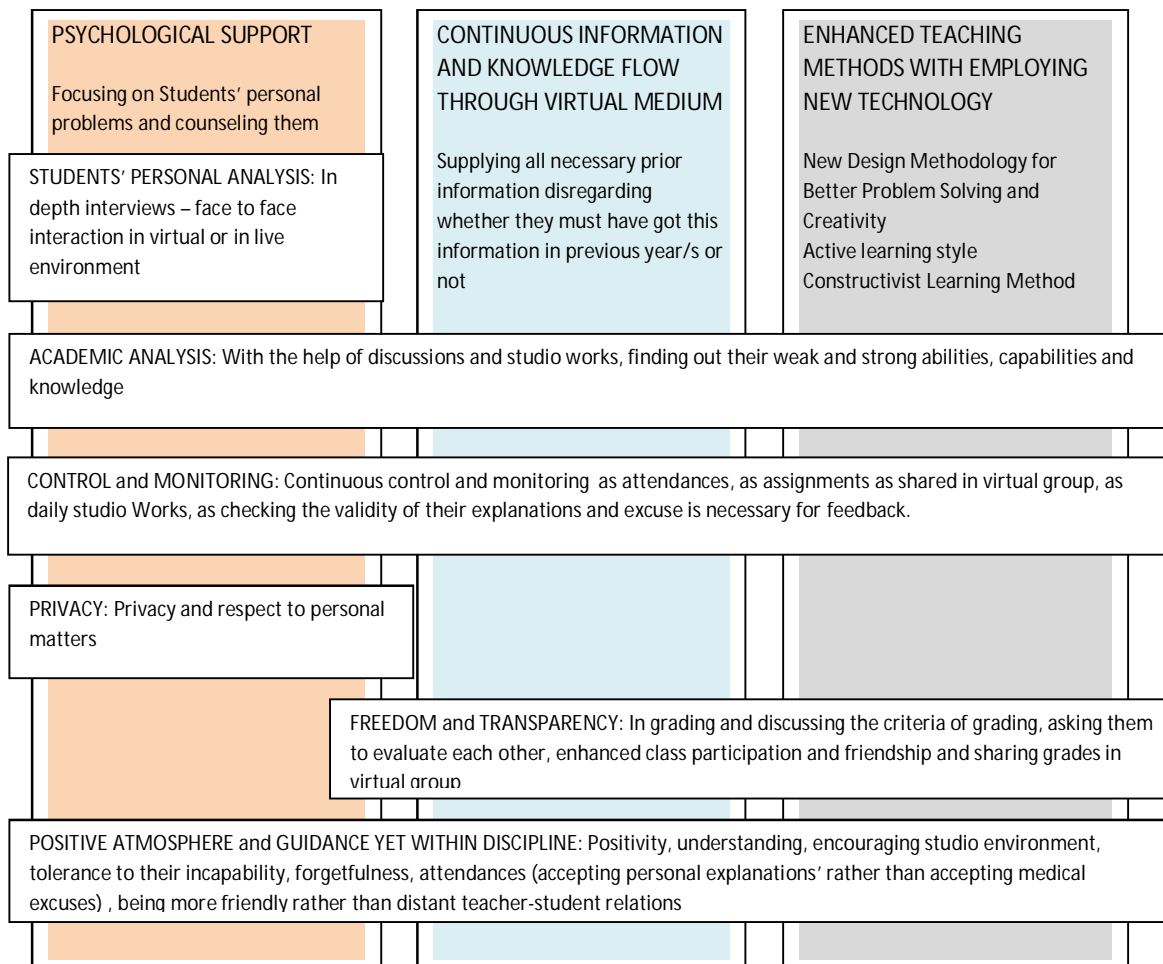


Fig. 3. Three Layered Design Studio Management Strategy Model (Developed by C.B. Gokhan)

3.2. The principles during pursuing the Three Layered Strategy are as follows:

1. **Students' personal analysis:** Students are interviewed and understood their previous problems, capabilities, abilities and discrepancies besides all interferences to their study. Analysis is carried out by the author however students are asked to visit psychologists or psychiatrists if necessary. In today's environment students have their own personal life and other achievements (Koch et al. 2002) and their responsibilities and or duties to their families may interfere their school life. This semester three of the students had difficulty to cope up with due to family issues and one of the student had to drop the course in very early stages. Some tolerance to this kind of students would help their academic performances, as in the case of the other two students could continue the design course.
2. **Academic Analysis:** Students' prior and future knowledge and its interference with his/her aptitude and psychological situation must be understood and must be monitored throughout the semester. A student who has difficulty handling three dimension must be supported psychologically besides with prior knowledge and explaining the new information given in detail. Graduates of any design school works as a designer besides works in the jobs of its implementation and auxiliary sectors which needs this profession's knowledge. Therefore weak ability in perception of three dimension does not mean that the student cannot be an architect, interior architect or a designer. Controversy is during their education period they should not lose their self-confidence.

3. **Control and Monitoring:** This rule is the key factor of success of the studio management model. It may be through keeping attendance lists, through class discussions, following up students' work and follow up through messages or video calls and phone calls. Moreover following up students' moods, psychological situation and their lack of information to complete the given tasks must guide teachers to give informative lectures. Monitoring and control gives feedback to faculty while accomplishing the design studio management to get immediate action. Students all and always needed encouragement and needed convincement to become successful students.
4. **Privacy** and respect to personal information is a must not to lose students' respect and trust to teachers. Personal deficiencies, family lives and/or other personal problems must be kept confidential. Some students are wary about their personal lives to be known by others and this may prevent them to continue face to face study in classes however the level of confidentiality depends on the personality of students
5. **Freedom and transparency:** Students perform better in the environments when they feel free. (Koch et al. 2002) Continuous communication with the students during the semester demonstrates their concern about their friends' performances if they are treated equally, graded justly. Therefore explaining the grades openly, grading criteria and asking them to evaluate each other make them feel confident about being treated equally. Moreover the common academic problems may be discussed openly and while finding ways to overcome it can be decided by consensus. Furthermore freedom of speech, freedom of having different opinion, putting different ideas into discussion makes students to share their ideas easily and open their ways to creativity and better design solutions and understanding of culture of Interior Architecture Studio.
6. **Positive atmosphere principle:** Sincerely yet disciplined, friendly, interactive, sharing, understanding, counseling, and humorous classroom environment and tolerance to their mistakes, forgetfulness and even attendances (accepting personal explanations' rather than accepting (may be fraud) medical excuses) create studio culture with positive atmosphere.

3.2. Testing Problem Statements

Two main problem statements are tested:

1. *"Three Layered Class Management Strategy Model"* enhances student's academic performances."

Testing areas and the method implemented:

- a. High ratio of class attendance level would prove the positivity in class culture employed. (Fig. 2)
 - b. Faculties' assessment of the students' progress and behavior improvement would approve the model. (According to class observation during the semester, sketch exams, quizzes, and private talks with the students (Table 2.)
 - c. Students' assessment basing on five point likert scale, about the academic method employed would be an affirmation of the model. (Table 3)
 - d. Students' better academic performances would prove the statement, which is tested through comparison of their average design grades of previous years and grade performances of this semester's design 201. (Fig. 3)
2. *"A studio culture consisting of an approach of sincerely yet disciplined, friendly, interactive, sharing, understanding, humorous, and motivating environment with ease of counsel to faculty is necessary for better student performance."*

Testing:

- a. Students' assessments (Table 3) and their attendance performances (Fig.2) would affirm the *studio culture implemented*.

Design 201 (N=11) and other design studio students (N=45) are questioned about their preferences on student-faculty relations in design studios on five point likert scale would also support the strategy employed. (Table 4)

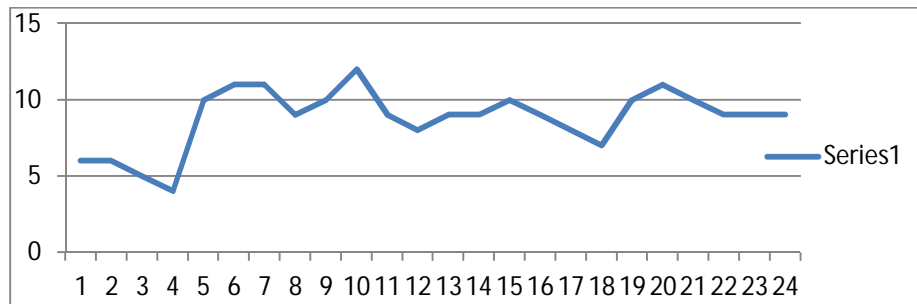


Fig.4. Attendance performance of Design 201 students in 2012-2013 Spring Semester

14 weeks 24 attendance lists’ analysis demonstrates the class performance of attendances. Class achieve almost 79.9 % fullness throughout the semester except first 2 weeks where the fullness is 40%. This concludes that the private talks (as talks, messages and chats) with the students and motivation and counseling convince them to either continue to class or drop out. 3 students left two with excuse: one of them has a mother of open heart surgery who needs attention, other one has serious liver problem and the one showed up only once never seen again with no reason. The students had serious attendance problems in their previous courses, therefore the management model made them to be more regular students, which is mentioned many times by the students and thanked to the faculty.

	Achievements	Numb. of Students	Percentages
This semester’s achievements	Improvements in designing ability	8-9	78 %
	Improvements in study habits	8	72 %
	Improvements in learning – catch up with the curricula	10	91 %
	Improvement in personality traits – as self-confidence and mannered behavior	10	91 %
Overall Success			83 %

Fig.5. Instructors’ opinion about students’ achievements – overall success 83 %

Students’ achievement and progress seems tremendous according to instructors’ opinion. Designing ability needs longer times of study, visual culture and practice, therefore it is very difficult to enhance this ability in only one semester. However according to narration of students they took a large step and feel quite confident about themselves. Their study habits however interfered with tiny influences from families, from health problems from unexpected success within the course. During the semester it is observed that good grades make students relaxed and content with the grades taken, therefore they get into lethargy of working, which might be a result of thinking that no need to getting higher grades, they are satisfied with mediocre grades for passing.

	Questions for Studio management Evaluations by students	Fully Agreed	Agreed	Undecisive	Not agreed	Not agreed at all
11	Do you find the design methodology practiced this semester is beneficial and educatory	0,8	0,2	0	0	0
12	Do you find the design course management practiced this semester is beneficial	0,9	0,1	0	0	0
13	Overall course teaching evaluation	0,9	0,1	0	0	0
Overall evaluation is 4,8 out of 5 likert scale						

Fig. 6. Design 201 Overall evaluation of “Three Stream Design Studio Management Model” by students

Procrastination of students is a result of previous study habits obtained during their childhood and high school period which needs further studies to explain the reasons behind it. Dismissiveness is found mainly as a result of lack of motivation either due to some psychological disorder or do not understand what he/she is going to be. During the semester students are explained about the profession and given examples furthermore with site

visits enhanced their motivation. They became more confident about themselves. The one has just started to feel confident about what he is doing astonishingly.

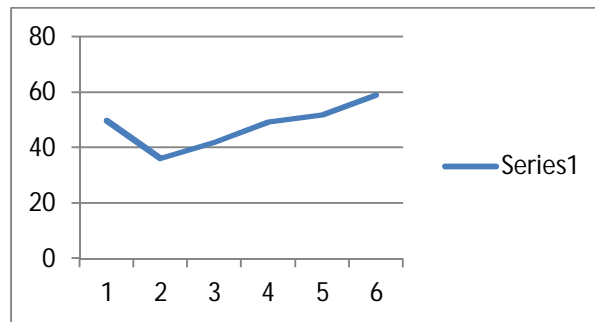


Fig.7. Students' grade performances: in Research(1), Design analysis(2), Pre-jury I(3), Midterm I (4), Midterm II (5), and Final (6) (grades are given by the class faculty and graphic represents average grades of all students).

In Fig.7 trend of students' an average grade they got in Research, Design Analysis, Pre-jury, 1st Midterm, 2nd Midterm stages and Final grades can be viewed. Graphic demonstrates continuous growth of average grade of the classroom. One can ignore the first Research grades since they consist of Internet research and mostly their chosen subjects related to their immediate environment with photograph presentations only, the remaining grades shows significance of Design Method employed.

In design schools, class instructors and/or visitor instructors in juries evaluate the work and presentation of the student's project that are pinned on boards. Usually within the semester, there are 2 midterm juries and a final jury at the end. Usually final juries have higher percentages and outsider instructors' evaluation considered more valuable.

In Table 8, "Average of final jury grade of the jurors", "Previous years last design passing grade" and previous years' average design grades" are compared, therefore any of the grades do not hold any bias. In the Table 8, the letters at the x axis state the students codes and vertical scale, y axis, depict grades out of 4, which is scaled as half point intervals. Except student "S" all students perform above their previous years' average. Student S has some attention problem besides some personal problems, moreover he has difficulty in seeing and understanding three dimensions, which is a necessity for an architectural design school. Comparison of Last passing design grades and this semester's jurors' grade averages except student 9K 3 student get the same design grade and 6 student get higher grade. This performance demonstrate, 9 out of 11, 82% success of this semester's performance. Final semester grades are slightly different than the final jury grades, depending on their performances within the semester, however did not affect the students' academic stature.

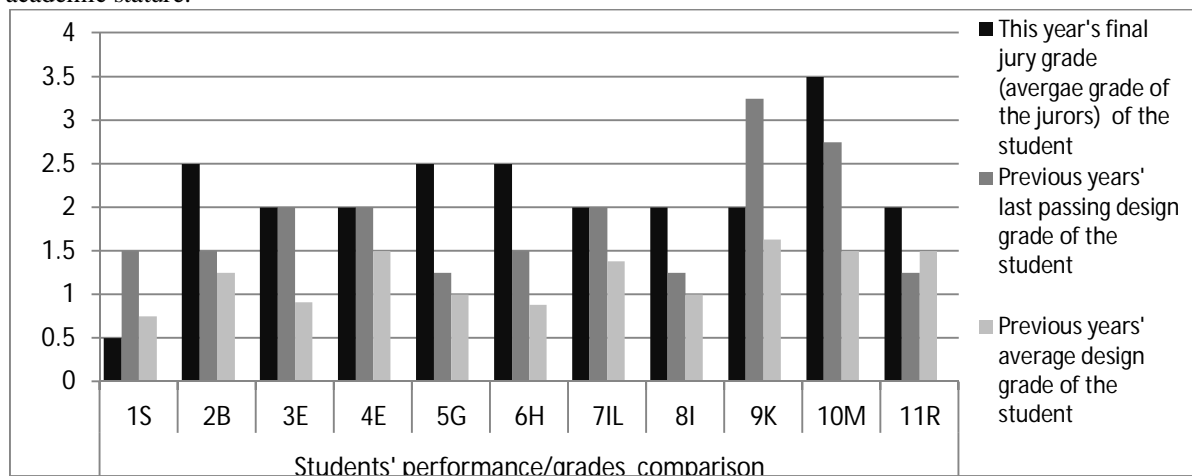


Fig.8. Comparison of 11 Students' design grades basing on the juror's average grade and transcripts of the students.

2.4.2. Testing Problem Statement 2: , students from other studios are questioned and compared with the class students' responses. (Fig.9) Responses are gathered with 5 point likert scale answers as "fully agreed, agreed, indecisive, not agreed, not agreed at all.

Students' of Design studios are asked about their opinion about studio management in terms of Faculty-Student relations. The table (Fig 9) demonstrates parallel opinions of two group of students: Students of this study, Design I students and Other Design Studios. Over all 45 students are asked from different levels, however nearly half is from fourth year, and Students of Basic design did not respond many of the questions of the questionnaire distributed, therefore their responses are not included within the analysis.

The prominent responses are: Design 1 students are more indecisive 60% about teachers disciplined behavior on the contrary other studio students have one third opinion of Fully agree, agree and indecisive. In other words all students agree on some sort of discipline of teachers. Discipline can be achieved by friendly approach is more preferred answer of Design I where as other students value is 78%, which are very close. "There must be distance between teacher and the students" is not agreed at all by Design I students, and is not agreed at all by 12 % other students.

Questions for Studio management Evaluations by students	DESIGN 201 -					OTHER DESIGN COURSES STUDENTS				
	Fully Agreed	Agreed	Indecisive	Not agreed	Not agreed at all	Fully Agreed	Agreed	Indecisive	Not agreed	Not agreed at all
1 Discipline is necessary in design studios	0	0,40	0,60	0	0	0,33	0,33	0,33	0,00	0,00
2 Discipline can be achieved by teachers friendly approach as well	0,80	0,20	0	0	0	0,76	0,18	0,00	0,06	0,00
3 Discipline can be achieved only if teacher is very serious	0	0	0,40	0,40	0,20	0,06	0,03	0,21	0,48	0,21
4 There must be a distance between teacher and the student	0	0,30	0,30	0,40	0	0,06	0,27	0,15	0,39	0,12
5 Internet must be used for communicating teachers and students	0	1,00	0	0	0	0,33	0,30	0,18	0,12	0,06
6 Each student may go to express personal problems to teachers	0,40	0,40	0,20	0	0	0,24	0,45	0,24	0,06	0,00
7 Each student may to ask help from teachers to solve their personal problems	0,70	0,20	0	0,10	0	0,36	0,36	0,24	0,03	0,00
8 In order to control the class sometimes it is necessary to use a firm hand with students	0,40	0,50	0	0,10	0	0,21	0,39	0,27	0,09	0,03
9 Students might be able to solve attendance problems by simply talking to teachers about their problems instead of getting fake health reports	0,90	0,10	0	0	0	0,67	0,18	0,09	0,03	0,03
10 Design course education can be achieved without attending classes	0	0	0,30	0,20	0,50	0,06	0,21	0,15	0,09	0,48

Fig.9. Comparison of Criteria of Students' preferences for Faculty-Student Relations : Design I students and Other Design Studio Students

Supporting to these answers each student may go and express his/her problems to the faculty has quite high score from both groups, around 80 %, and the next on stating "Each student may go and ask for help" get 90% agreed and totally agreed response from Design 1 students and 76% from other students demonstrates the students' need of close communication with faculty. However these answers do not have any unwanted intention, as misuse of the positive treatment of teachers. Teacher's firm hand behavior is accepted a necessary action whenever it is necessary, as the responses predicts, 90 5 to 60 % for respective groups. However other studios' students show their indecisiveness as 27 %. All above responses support guidance, counseling and direct interaction are necessary in design classes. The last two questions however demonstrate interesting opinions, which may not be expected. 2nd year Design 1 students would prefer to talk to faculty for their excuses instead of getting improper medical excuses. For other design groups majority support the same idea, as 85 %. In Turkey medical excuses are common starting from high schools

to universities. Usually there are other valid excuses rather than medical, however it is difficult to verify it, therefore students prefer to bring medical excuse reports from their acquaintances. This situation seems create inconvenience to students, they prefer to solve their attendance problem directly communicating with teachers. However quite a big group of students, reject to idea to not to attend classes in Design I but for others especially the 4th year students (according talks after the survey) agree, totally agree and indecisive by 42 %. Probably due to their feelings of high confidence.

4. Conclusion

All interviews, surveys made, prove both hypothesizes. In other words, Design Classes must not only concentrate to studio's design subject but also must dealt with student's personal problems and guide them, besides whether it was taught before or not whenever necessary students must be taught and informed again the subjects, at least the subjects must be reviewed. Repetition seems is a must.

Design Studio 1's, therefore the implemented Three Stream Model of Studio Management's success is proved by student's grades, attendances, class teachers' evaluation and students' opinions. Moreover warm, sincere, understanding, free but monitored studio environment with high technical support for a successful studio is proved both by students' performances and students' opinion as in fig 7.

Overall evaluation of Design I students is:

1. Only one student seems just below average, due to interfering family problem.
2. The highest grade is AB (3,5 out of 4)
3. The others are scattered between CC and BB. Jury grades demonstrate the success of the class where invited jury members' grade was above class faculty's grades.

Five factor personality traits does not help neither to students nor the teachers after students' entry to universities. This test and other profession inclination tests must be applied during high school in order to direct students, these tests must include not only students' preferences but also their aptitude, their working habits, concentration length, art vision, perception interferences and others, especially for architecture schools. If necessary some extra curricular activities must be provided to those student who prefer to continue in design and architecture schools.

Briefly:

- The experiment of the model running on three streams proof its success in this semester. However should be tested again in further courses
- The advantage of this class is its size (only 11 students) providing ease of implementation, for larger classes, model and method must be adjusted.
- Another advantage is the uniformity of students, all being below average performance students.
- University teachers must be informed about students' personality traits, and equilibrium between hard discipline verses friendly and tolerant atmosphere of the class.
- Virtual communication is a good tool to monitor students and student-teacher mutual understanding. Besides internet communication group creates studio class identity and helps to create a studio culture. Researches demonstrates studio culture is very important issue of student's success.
- SODAP method also shows its effect on student learning and understanding of the problems and issues of the subjects given
- All design classes must establish internet communication groups, design studios must be furnished with technical amenities such as overhead projector, internet connection, resident computer and if possible printer, and sufficient number of power outlets for computer connections are minimums for better learning environment.
- Considering design classes special situation, class faculty must evaluate students' previous academic level, their achievements and non-achievements and the reasons behind it, their personal and family situation and their missing knowledge and skills, so that they can advise students to get professional help. Besides being less formal with students improve their success and motivation in design classes.

I thank my colleague M. Yazıcıoğlu (M.A.) for her valuable co-crits to Design Course 201 and students of Design 201, 2013-2014 spring semester, for their endurance and effort; and Cankaya University Department of Student Affairs for providing me the transcripts of students.

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