



RETHINKING ARCHITECTURAL STUDIO CULTURE – REFLECTIONS FROM STUDENTS' LEARNING EXPERIENCES

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ABSTRACT

This paper presents an insight into the learning experiences of the design studio in a specific time-space axis. Variable and ambiguous meanings of architectural design studio culture concept are tried to be made visible in the institutional culture ground of Istanbul Technical University, Faculty of Architecture. Assuming that learner centered on its nature, and proposing an integrative and inclusive model for our era, the studio-based education environment is investigated, focused on its intangible dynamics. First, analysis of present studio culture policies from overseas NAAB and national M AK, in the light of a software-based research tool MAXQDA, led to identify the prior principles of the 21st-century studio culture as; (1)critical thinking, (2)communication and interaction, (3)multiplicity, (4)individuality in collaboration, (5)social responsibility, (6)self-regulation. These allowed comparisons of formal approaches to the concept, and moreover, provided data for the interview study. Subsequently, the semi-structured in-depth interviews, analyzed with the same tool, enabled evaluations on informal being of the institution's studio cultures as a fragment. The main critical finding is that the emphasis on the last principle in overseas accreditation documents lacks in national ones, and the last two principles are hard to achieve for the participated students. Widened on these findings, the interrelations of the principles and potentials of studio culture is discussed, aiming for providing intangible data onto architectural design education.

Keywords: Accreditation, Architectural design education, Learning-centered pedagogy, Student experience, Studio culture.

1. INTRODUCTION

In the field of architecture, there was a growing interest in the post-1960 period when the designer has a strong focus on responsibility for the needs of contemporary society. According to Erdem (2007), while the architect profile in the middle of the 20th century "has the power to design all things about a project, to take all decisions" It is the general profile of a 21st-century architect who "tends to optimally combine the components that industry or technology makes possible in order to come from the top of that situation in the discovery of any requirement situation." Consequently, a turning point has emerged in the discourse of architecture design education at which the problem of how we learn strengthened relative to what we learn. The literature (Dutton 1991; Nicol and Pilling 2000; Findeli 2001) underscores the importance of research, development, and application of expertise in psychological, social and cultural issues as well as technical

skills in design studio pedagogy. In this context of multi- inter- and trans-disciplinarity of domains, not only architects but also every professional should be able to “respond to complex requests using various skills and behaviors; interact with various means; communicate with different areas”, as defined in OECD's (Organisation for Economic Co-operation and Development) (2005) criteria. This kind of competencies wouldn't be gained through using a proposed method when any situation is encountered; but elements of individual development involving abilities such as dealing with change, learning from experience and critical thinking. It can be assumed that the design studios, where architectural undergraduate education programs reflect the accumulation of formal and informal learning experiences, are an environment where both professional development and other individual developments are intense. The hypothesis of this research acknowledges that the concept of studio culture incorporates the relationship between animate actors, i.e. instructors, students, guest educators and peers, and the hidden curriculum¹. The formal curriculum, course learning objectives and learning outputs, studio space and school's working environments as other inanimate actors have a great effect on the operation of the studio culture as well. However, beyond formal descriptions of course content and objectives, studio-based learning brings ever changing activities and understandings. In this context, for studio-based education, it is considered inevitably critical to open and discuss topics that are not measurable or difficult to measure instead of measurable and tangible ones. Nonaka (1994) explains that this type of information cannot be considered without contexts by nature and is based on individual actions, dedication, and engagement. In this context, the aim of this study has been turned towards searching for subjectivity within the cultural spheres of the studio as multiplicity environments.

2. THE EVALUATION OF “STUDIO CULTURE” IN ARCHITECTURAL EDUCATION

The concept of studio culture, which can be used to describe the direct impact of the "learning culture" of institutions in the design studio pedagogy, is handled in this investigation as referring to the above mentioned relational environment. It is noteworthy that this concept's formalization on paper has started with the students creating a feedback-based participatory discussion ground. The works of AIAS (The American Institute of Architectural Students) from the year 2000 on concluded with the decision to place the “Studio Culture Policy” as a condition of accreditation in 2003 NAAB (National Architectural Accrediting Board) Validation Conference (AIAS, 2008). This type of accreditation assures the mutual recognition of national and international institutions, controlling and easing the relations of individuals, institutions, and the profession. In addition, it provides a means of documentation for the institutional memory.

2.1 The research method

Depending on the actors and the acts, studio culture as an everchanging concept but looking into the studio culture policies helps to define the general position of the subject institutions. However, it is a fundamental problem whether or not these policies reflect the actuality of the institutions' studio environments. With this research, that problem is

¹ The term hidden curriculum defines “unstated norms, values, and beliefs embedded in and transmitted to students through the underlying rules that structure the routines and social relationships in school and classroom life.” (Giroux, 2001: 47)

tried to be handled with an investigation on NAAB-substantial accredited² program of ITU (Istanbul Technical University) Department of Architecture. Learning experiences of the program's students are investigated to inform on what kinds of studio organizations the main principles of the 21st-century studio culture operate or don't. The investigation made it possible to document data including student feedbacks on the vision and learning environment of the institution in general, along with diverse studio cultures within. The investigation ground analyses are carried out with using the MAXQDA12 software, which is a data analysis tool for qualitative and mixed methods. The written data is organized through coding on the software for assisting the comparative evaluation of the research. For the document analysis in Chapter 2.2, NAAB is preferred as the overseas reference because of its role on the terminology of the studio culture concept and as the guide for the Turkish architectural accreditation system M AK (Architectural Accrediting Board). First, with the help of the software tool, the documents are reviewed. The explanatory texts are summarized as interrelated concepts came across, which resulted in a list of priority principles of 21st-century studio culture. Henceforth, interpretations are made looking through the main scopes collated. Critical issues and differences between NAAB-referenced institutions and M AK-referenced ones are pointed to discuss further in the interview analysis. In Chapter 2.3, a series of fourteen interviews were held with the senior students of ITU Department of Architecture in order to obtain data on studio pedagogy and culture. Mature students are chosen in the prospect of leading to fruitful analyses. The participants took most of the lessons in the curriculum, have incorporated various experiences through working with various educators with diverse pedagogies, and have participated in internships and/or informal learning environments. Semi-structured interviews conducted by the researcher on an individual basis with fourteen students, including ten main questions elaborated by follow-up questions on the answers, enabled a comprehensive phenomenological study. The model time for interviews was forty minutes. All interviews were voice recorded and transcribed verbatim. The MAXQDA12 software provided the ground for managing the process of sorting and analyzing the written text in excess through coding, so as to evaluate the data primarily without comments.

2.2 Analysis of studio culture policies in different accredited architectural education programs

In the research conducted within the scope of the study, it was seen that there were one hundred and fifty programs available in a total of one hundred thirty-two architectural schools, with forty years of undergraduate level, with NAAB accreditation in the USA in 2016 (Url-3). From those, seven renowned reference schools (Url-4) with a degree program (Pratt University, Princeton University, University of Southern California, Cornell University, The University of Texas at Austin, Virginia Tech, California State Polytechnic University Pamona) were chosen to elicit descriptions of studio culture concepts on paper. As a result of software-based analysis of these seven policy documents (Url-5; -6; -7; -8; -9; -10; -11), it was possible to infer a list of priority principles of architectural design studio according to these references, which are; (1) critical thinking, (2) communication and interaction, (3) multiplicity, (4) individuality in collaboration, (5) social responsibility, (6) self-regulation.

²ITU Faculty of Architecture, Architecture Undergraduate Program and Architecture Non-thesis Graduate Program from Turkey have NAAB substantial equivalency, i.e. overseas accreditation from 2007 on. The institution is the first one to be accredited by NAAB outside of the USA (Url-2).

In the majority of these schools, studio culture policy is seen as the goal of putting the experiences, behaviors, and responsibilities in the learning environment into a general framework. In short, this learning environment is primarily based on the above-mentioned principles. What is explained broadly in the policies is the roles of the studios' main actors, the educators, and students. It seems very important for the studio environment to allow respectful dialogues, discussions, and group works. The reference schools mention that grades are only one measure for evaluating student performance. The educator should guide the student through oral and written assessments, including coaching her/him to self-regulate, such as being able to take risks, have fun, find her/his own voice. It is emphasized that students should not be exposed to excessive stress in the classes, juries or classes. Every student works value for the profession is a matter of importance. In return, students need to respect the educators, other students, and the courses. There is a serious dwell on students' responsibilities upon studio spaces and other spaces, services, and materials. While being open to digital and portable possibilities, it is underlined that working in the studio space nurtures the studio culture. However, according to these institutions, time management is a skill that must be achieved both in and out the studio courses. The quality of the time spent on studio work is more important than quantity. Additionally, categorized under the principles "multiplicity" and "social responsibility" in this analysis, concepts of inter-disciplinarity, trans-disciplinarity and informality show great importance in all policy documents. Informal activities articulated to the formal education program are believed to be sources of dynamism and creativity.

In the research conducted within the scope of the study, it was seen that there are seven schools in Turkey and Northern Cyprus with M AK accreditation for undergraduate architecture program in 2016. From those, six schools ((AU (Anadolu University), YTU (Yıldız Technical University), IKU (Istanbul Kültür University), EMU (Eastern Mediterranean University), UU (Uluda University), and CIU (Cyprus International University)) (M AK archive) were available to elicit descriptions of studio culture concepts on paper, because the documents of MSFAU (Mimar Sinan Fine Arts University) were inaccessible. The studio culture policies presented to M AK show similarities and differences against the ones in NAAB references. The most different point is seen where the programs' suggestions and evaluations are mostly based on epistemological and/or methodological objectives of a studio. Issues such as course content, studio organization, educator-student ratio, quantity and quality of juries, percentages of grades for evaluation are denoted. Furthermore, the programs have extra explanations upon graduate studios and first-year studios, only except YTU have only the first one and UU the latter. In comparison to the NAAB-based programs, objective elements of the studio or different education levels are not issued. Another important difference is that from the guiding principles emerging in the NAAB analysis, students' self-regulation ability is very little emphasized. Schools in prior analysis showed interest in psychological positions as well as the cognitive positions of the learners. M AK accredited institutions' reports do not generally address the responsibilities of students against space and equipment usage. As the similarity, it is seen that every M AK accredited program mentioned competencies superimposing with NAAB accredited ones in their studio culture policies. However, the significance of these lacks if read with corresponding NAAB reports. For example, in six reports, other than the title educator, the names instructor, advisor, and coordinator are given. But the namings don't include any follow-up explanations on the role of the educator, which is the main issue for the meaning of cultural environment. UU states that not only the students but

all the actors participating in the learning environment have responsibilities. However, implied content is undetermined.

When the report on the studio culture policy of ITU Architecture Department with NAAB substantial equivalency accreditation is handled, the heading “studio values” is explained under eight sub-headings, following as; creativity, commitment, collaboration, interdisciplinary integration, diversity, design innovation, social and environmental awareness, and ethics. The program’s vision underlines the studios’ role as a life-long learning process seed. Under the topic commitment, using quality time in the studio and managing their schedule to complete all of their work are specified as required for the students (ITU, 2014). Any other self-regulation competencies are not mentioned.

In this research section, the studio culture reports of reference schools from Turkey and Northern Cyprus showed similarities to the ones from the USA in the context of student competencies, learning values and learning environment. As a result of these seven policy documents’ software-based analyses, a list of priority principles of architectural design studio is inferred, including the following concepts; (1) critical thinking, (2) communication and interaction, (3) multiplicity, (4) individuality in collaboration, (5) social responsibility.

2.3 Analysis of student interviews around the concept of studio culture

For the development of the interview structure, the aforementioned six outcome areas have been taken into account from the analysis of the studio culture policy documents. Continuing this analysis, which is derived from concrete data on the perception of studio culture, intangible and pedagogy-based socio-cultural information requires a phenomenological investigation. The aim here is to look at the cultural structures of the studios from a different side than the manager-educators, from the side of the students of ITU Department of Architecture, selected as the study area. The lack of formal documentation of architectural students’ voices in Turkey, similar to the AIAS example, has triggered this aim. During the preparation of interview questions, the main questions were first addressed to inform on the learning experiences related to the situations and events in the design studio, within the six output fields of the research. Within the second output field defined as “communication and interaction”, three questions are prepared on the role of the instructor, juries and other guests in the studio and their dialogue with students. Because of the emphasis on NAAB documents, the use of physical space and working equipment has been turned into a separate question title, asking for their interaction with creative experiences. Within the “multiplicity” field, three questions are prepared. The questions aimed not just informing on diverse design course contents and tools but also the on the effects of the knowledge gained from the formal and informal curriculums and activities not directly related to the courses, on students’ development concerning individual and social skills. With the intention of not guiding the interviewees, various skills such as critical thinking, respectful dialogue, self-confidence, and motivation, which are detected as critical in document analysis and intended to be clarified through the interviews, are not mentioned directly. The last two questions were asked in order to allow the student to review the points he/she wants to emphasize and to summarize the interview. These ask about; the most important experiences during the architecture education, and the prospective influences of this process on future student life and/or professional life.

Given the answers coming forward in Table1, all participating students have defined the concept of "studio culture" as a working environment in communication and interaction with peers. Studio organizations where students go to the educator for dialog and leave the studio afterward or wait somewhere before, or just work individually and wait for the educator to come by are defined by some students as "classroom-like", "very closed" or "as if there is no studio". Dynamic structure of first-year studio organization is emphasized by almost every student; including activities like a variety of small projects during a semester, or rapid productions in a day, short-time group workshops, or individual works on the same topic in a grand and crowded studio, open to discussion.

Question Themes	Answer Quotes
DEFINITION OF "STUDIO CULTURE"	"In different semesters different things are introduced(...) because people are changing. And that is what determines culture in a society."
	"Mostly sharing focused. This is also related to the teacher."
	"(...) a more effective working environment."
	"The relationship between the instructor and the students(...) or between students."
	"It's like, 'I did this, what do you think? Let me look what you've done.'"
	"(...) a course done in a very free environment in a very free way."
	"(...) if everyone is helping each other, learning together."
	"An environment where ideas and production, theory and practice are thought together(...) I don't think that what we're trying to do can progress individually. So, how many inputs you have(...)it ascends as it is shared with many people, the jury, the instructor(...)"
VARIETY OF STUDIO ORGANIZATIONS	"3400 [first-year studio] comes to mind directly. This [roof4 studio] is much like a classroom."
	"[in first-year studio] there's a completely open space. You can look at everyone's project if you want to. We can observe."
	"At first-year(...) project models we presented were very nice, on boards and such. (...)We did a work together."
	"At first-year, [instructors] tried to made us use many representation tools.(...)It was very good, in a way of trying each and learning their names."
	"I don't like [the studio] where everyone sits around a table and explain their projects one by one. That is too slow. We can't really talk very meaningful on each others projects.(...) when the teacher talks we listen, that is efficient."
	"Everyone tries to talk to the instructor first and leave. And that is something without any project aura."
	"It gives more pleasure to use [multiple representational tools] together. But I realized that it slows me down. But it nurtures the project."
	"It was a collective project. Even though I didn't made a good project I did developed myself a lot."
	"Architecture is a new realm of knowledge.(...) after this four years, we need to get the knowledge of our instructors. I think we exaggerated learning everything by experiencing."
	"When everything is left to me (...) it becomes a project completely depending on my words. (...) If they asked me before i would probably say that this will make me more creative, but it definitely challenges me a lot."

Table 1. Prominent students' quotes on studio organizations.

It is understood that this dynamism also triggered working there together after studio hours. In following semesters, it is seen that even with mainly individual-work-based studio organizations, studio space use allowing interaction and sharing result in positive experiences. The direct relation of the multiplicity and spatial organization of first-year with student self-development, and some other noteworthy studio experiences in relation to collaboration and critical thinking can be also read in Table 1. In the studio organizations similar to the first-year organization, which concentrate on group work or

the frequent sharing of individual works with multiple methods and representations, dialogues and other nonverbal communications like, learning through observation or just coexisting in the same physical space, have resulted in positive self-development for students. The in-city or out-of-city trips and other informal activities were included as replies both amusing and instructive sharing and production experiences. It is understood that these experiences encourage motivation, self-confidence, and self-discipline. In Table 2, it can be read that educators guiding students to research by giving architectural examples are counted as encouraging and respectful. In addition, several students exemplified the extension of the educators' knowledge sharing through suggestions like literary readings, films, exhibits positively. The data obtained from detailed narrations of the students showed that jury and guest educators are also very effective on self-development in terms of multiple criticisms and representation sharing. Jury and other triggering meetings taught the students to manage their design process and be open to criticisms, even if it was slow for some. The experiences that these students find challenging turned into positive self-developments over time. They claimed that multitude situations revitalize their minds and develop their designs. Resistance to the criticism lack of self-confidence during presentation, demoralization, and even giving up the project are experiences that are interpreted as negative self-development. It is noteworthy that the ability to manage time in general of all the interviewees' course of education is increasingly declining.

The answers to both educational and social issues like group works, jury meetings and adapting to different studio organization models, are often associated with the performance level of individual practices in the studio. Gaining self-development skills such as self-criticism and being open to criticism, respectful dialogue, situations of motivation and demotivation, and other situations in which self-development can not be achieved are frequently mentioned. Time management is also considered as a separate question title in the context of self-regulation due to its emphasis in the NAAB documents. Therefore, when interview texts are organized for coding, new outcomes were created from the six main principle outcomes. This operation is necessary for detailing and clarifying the results of the analysis, although they can be grouped as sub-outcomes or side-outcomes. As mentioned above in this chapter, the structure of the interview questions required segmentation of the outcome code 2 and 3. In addition, outcome code 6 is divided into five codes, because of the intensity of interview data onto "self-regulation". The reviewed outcome domains are the following thirteen: (1) critical thinking, (2a) communication and interaction with educators (studio instructor, juries and other guests), (2b) communication and interaction with physical space, (3a) multiplicity with informality, (3b) multiplicity with representation/method/content, (3c) multiplicity with integrated knowledge from other courses, (4) individuality in collaboration with peers, (5) social responsibility, (6a) self-development (+), (6b) self-development (-), (6c) time management (-), (6d) motivation, (6e) demotivation.

Question Themes	Answer Quotes
COMMUNICATION WITH THE INSTRUCTOR	"(...) that contributes a lot. If [the instructor] says, 'you can look at such and such [readings or projects] according your project."
	"[the instructor] says, 'do that and do this' and expects you to do it. This isn't fine."
	"(...) not dictating(...) not like 'you should do this', but a stimulative [instruction] should be there. If there's no environment of such, students won't do much."
	"I didnt experienced [a dialogue] where I was told 'you didn't did that, you are falling behind.' But in real life there's no such thing.(...) [criticisms] should be at that level. There shouldn't be any tension in the studio but it has to prepeare us to real life."
	"If [the instructor] is too directing(...) a defense mechanism may emerge."
	"Everyone shows their project. Then an assignment is given, [the instructor] 'Everyone will do this until this time, then we'll talk about it.'"
	"Sometimes there is something illuminating the mind...like a warm-up tour.(...) But that studio didnt have it.(...) I began with the site analysis just like that.(...) You return from summer holiday(...) moved far away in your mind. That was very challenging for me."
COMMUNICATION WITH THE GUEST EDUCATORS	"(...) like they always will judge you in a negative way.(...) It can be someone giving more ideas, someone you can consult."
	"It is nice that the criticisms are ambigous.(...) Because there's a difference between doing what someone told you and what you discovered."
	"(...) not talking in front of a community but one-to-one talks. It is more efficient."
	"During the jury, when you explain [the project] to someone from scratch(...) 'what was the project, how did I start?'(...) You criticize yourself."
	"Before the mid-term jury, you get into a very intense tempo.(...) It contributes by that and also jury members' crits may lead you to unexpected places."
	"How good my jury [meeting] goes by, even if I get criticized slightly(...) I demoralize. But that isn't a reason to give up my work. In fact, I get more ambitious."
COMMUNICATION WITH PEERS	"Group works(...) are good. You find out what you're good at, or head for developing your shortcomings."
	"What is negative about the jury is that they don't know anything about my project.(...) evaluations I get from my peers in the same studio are more valuable to me."
	"In group works(...) I take over more responsibility."
	"(...) respecting different thinking mind systems or handling the issue in a different way, talking with her/him, ability to discuss."
	"In group works(...) dialogues are mostly problematic.(...) That is because of people who can't recognize what a grupu work is."

Table 2. Prominent students' quotes on communication with the educators.

Figure 1 shows the co-occurrence frequency of these concepts expressed during the interviews. The matrix result of the coding indicates the close relationship of communication and interaction with the educators to the development of critical thinking, as seen with biggest intersection points. Student experiences in this context include; individual dialogues between the studio instructor and the student, dialogues between the jury members or other guests and the student, and interactive working models that the instructor has directed to strengthen the dialogue among the students.

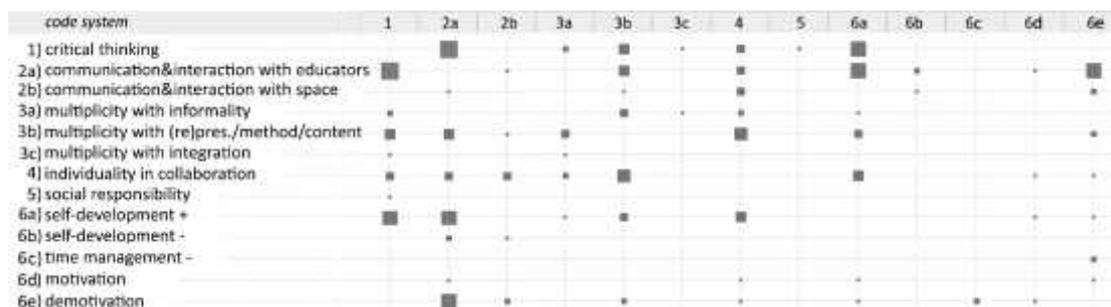


Figure 1. The co-occurrence matrix of studio culture concepts from interview data.

In order to look into second-, third- and fourth-level relations between subjected studio culture concepts, which can't be understood from the co-occurrence matrix referencing only frequencies, a network map is generated with the help of MAXQDA software. Illustrated in Figure 2, the thickest lines indicate that the elements on both ends are almost coincident. The co-occurrence relation diminishes from the thick lines to the thinner ones. The distances between the positions of the elements on the map are to be disregarded.

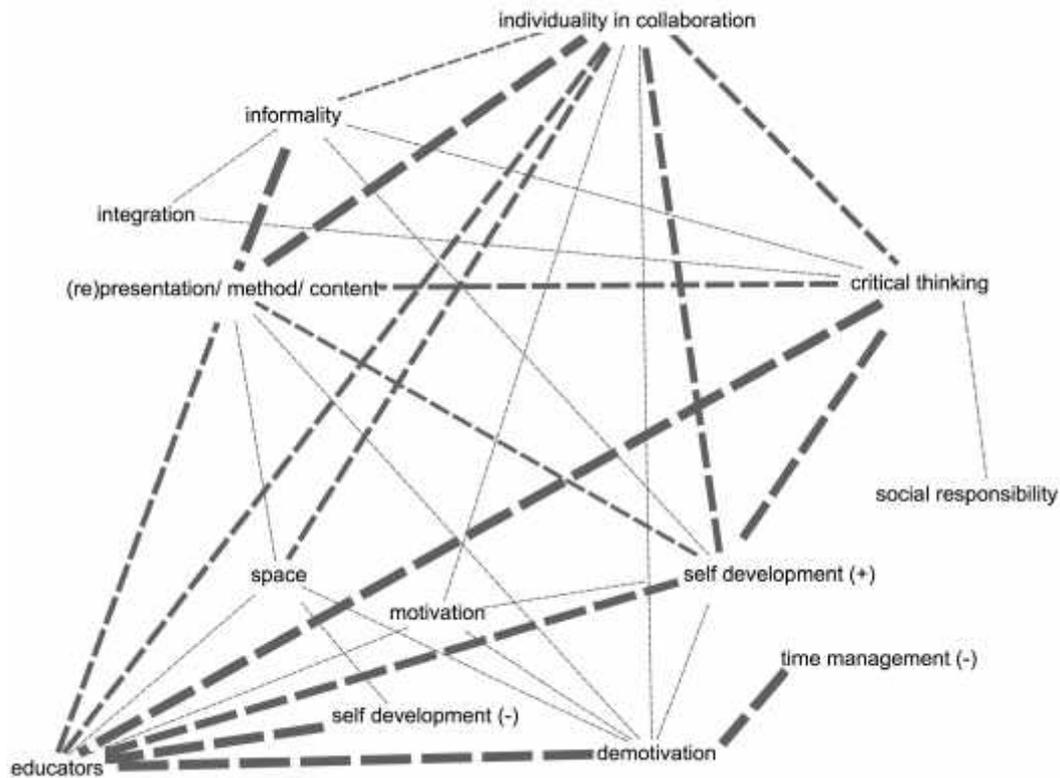


Figure 2. The network analysis of studio culture concepts from interview data.

In addition to the issue of critical thinking, communication with the educators seems to be also the main factor to self-regulation deficiency in general. Being unable to perform time management comes out as the first-degree proximity relationship with demotivation. Dissatisfaction with the physical environment of the studio, being unable to adapt to the various representation/ method/ content of the studio organization and lack of group work skills have third-degree proximity relationships with demotivation, as seen in Figure 2. Another emphasis made by NAAB-accredited institutions, integration of knowledge gained from other courses and also extracurricular activities is questioned. Almost every interviewee's opinion was that technical compulsory courses are not sufficient and/ or useful enough to integrate into the design project. Some students expressed that history and theory courses and elective courses help to build their culture and accordingly design thinking. Yet this issue isn't problematized in the framework of this analysis because to evaluate it, the need for more fundamental data occurs. Also, the contents of various studio organizations mentioned by the students are not investigated deeply. This limitation led to the lack of feedback on the students' abilities about dealing with social responsibility as the competency of the profession. However, a couple of students mentioned informal activities such as participating in a workshop with kids or working for an art exhibition organization, exciting and educative.

3. CONCLUSION

This research mediated to gain some specific data about the reflections of architectural design education's hidden curriculum on the learners and accordingly on the studio culture. As a result of the comparative document analyses, one of the inferred main principles of studio culture "self-regulation", is detected being not of common importance as in reviewed schools of Turkey and Northern Cyprus as in the ones of the USA. This brought along the question if it may have a critical importance for this work's problem area. Preparing for a student feedback-based research on the studio culture of ITU, the conclusions of those analyses guided the content of the interview questions. Even though the term self-regulation isn't directly used in the questionnaire, responses to questions related to critical thinking, roles of the actors and other issues pointed out in the document analyses also raised the significance of the problem in relation to student learning experiences and the cultural domain of mutual learning.

Experimenting with the policies' performance in a real time-space axis on an institutional culture ground, a representative map of dynamics of undergraduate architectural design studios in ITU was able to be illustrated. The definitions for accreditation give an insight into an institution's vision, values and opportunities, which contribute to the learning culture. Yet the interview data showed that the actuality of any studio culture puts the educator-student relation first. The constant one-on-one dialog between instructor and student can be considered as both strength and a weakness. A primary concern of this untraditional mode of teaching is the direct effect on levels of motivation or demotivation, accordingly the learning and production process. In this context, the extraordinary environment of first-year studios seems to be the first and foremost permanent learning experience for all students. However, after the first year, where they were organized to work in groups mostly, almost half of the interviewees find working in collaboration with peers challenging and nonfunctional for its aim to actually brainstorming and producing together. The other half find it advantageous in the sense of achieving abilities like fairness, time and process management, facing new methods and ideas, and self-criticism. The same students mentioned their interest in informal activities irrelevant from the course, like workshops and student competitions.

In that case, instructing the students to efficient group work, not only with friends but also with unfamiliar people, adjusting them to an education equivalent to 21st-century inter- and trans- disciplinary design act is designated in this research study as another concern. It is also related to the studio instructor but in a greater picture, it could depend on the controlling elements of institutional culture. Out of the scope of this research, but the momentousness of to work on the flexibility grounds of the formal curriculum, the integration of formal curriculum courses between themselves, and with informal activities and credited internships can be emphasized. It is also recommended for further research to conduct phenomenological investigations with students and also with the faculty members on the specified concerns.

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