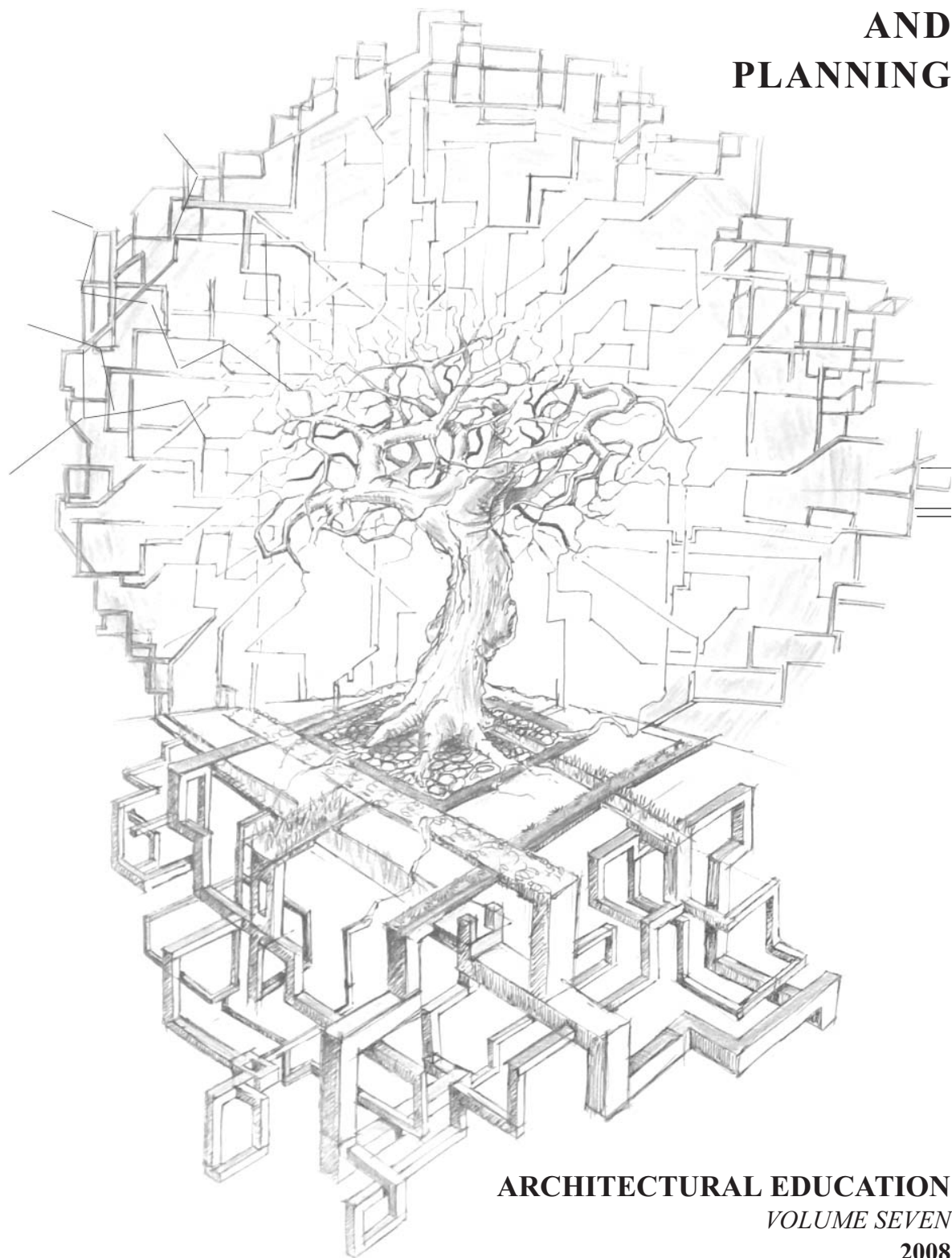


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EDITOR'S NOTE

Like several other academic domains, challenges faced by architectural education are becoming complex. The issue of choosing and articulating contents from a burgeoning wealth of information is a matter that concerns professors, curriculum setters, studio masters and even the recipients of these inputs. Introduction and expansion of digital technology is posing challenges to the validity and relevance of conventional techniques in communication. For enhancing the understanding about global transformations, the appropriate course packages have to be devised to educate budding architects for an increasingly unpredictable future. And the changing role of architects is yet another labyrinth that needs corresponding knowledge input that is essential to be imparted at the undergraduate level. This volume of JRAP attempts to focus on few of the issues pertinent to architectural education in the contemporary realm of time and space.

In the domain contemporary architectural education, bulk of the input is centred around the urban context. A down effect of this reality is the limited existence of vernacular and traditional concepts in the various ingredients of pedagogy. The paper by Regina Mapua Lim ably focuses on the catalytical impacts of vernacular traditions towards the process of creativity. In a thought provoking manner, the paper sets its arguments around case examples from Philippines and elsewhere. Moving into the micro details of pedagogical work, Professor Polatoglu et. al. signify the various teaching issues in the foundation year, using Yildiz Technical University – Istanbul as the platform. Without compromising on the strength of basic skill and channels of knowledge, the curriculum and approach focuses on the merits of enhancing thinking abilities amongst the students. The paper by Harsha Munasinghe questions the orthodox approach of studio teaching. On the basis of critical examination, she analyses the eventualities where diversity and radical ideas are often not encouraged in studio processes. In her paper, she outlines various competencies that are vital in studio teaching from the perspective of accommodating and encouraging diversity. Emel Ardaman et. al., in their paper on the impacts of globalization on architectural education, examine the reflections with a comprehensive approach. This paper derives many facts on the basis of quantitative and institutional reference with Mimar Sinan University as the core example. The journal also contains a paper by eminent educationist Professor Ashraf Salama which is re-published under permission. Review paper by Esther Charlesworth on post war reconstruction is a useful piece that highlights the role of architecture in promotion of peace. Raising environmental awareness through a conscious approach is the topic of a review article by Yonca Erkan where Turkish examples are focused.

It is hoped that this slim volume shall add some value to the ongoing discourse on architectural education in Pakistan and other contexts across the world.

Editorial Board

TRADITION AS MAGIC: INVOLVING TRADITION IN THE CREATIVE PROCESS FOR CONTEMPORARY ARCHITECTURE

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ABSTRACT

This paper draws on the relationship between traditional ways of building and vernacular architecture and the creative processes involved in architecture. By tracing the links between creativity and the values it provides towards the development of architectural concepts, relating this to the architect's ability to recognise contemporary issues and problems linked to the built environment, the paper is able to analyse the relevance of traditional building and vernacular architecture in today's architectural pedagogy. In order to do this, concepts of creativity, problem identification and tradition shall be defined within the confines of this paper and how these concepts have been used in the process for creating contemporary built environments which are culturally sensitive to people and place. This process has been supported by case studies wherein traditional building and all that it entails have been used by communities and individual architects alike to produce buildings and places that are appropriate to their cultural context whilst addressing relevant social, economic, environmental and political issues.

CREATIVITY

The emphasis of architectural education remains focused on creativity often defined by the production of original ideas taking the form of iconic buildings that define the modern identity. Schools encourage students to embrace the modern identity and to create built forms that would define what this is. But neither the concept of identity nor the concept of the modern can be so unilaterally defined because these concepts are in fact culturally rooted (Butina Watson and Bentley, 2006). For as many different cultures as there are, there would be as many varying concepts of

identity and modernity (Bourdier, 1989; Lim, 2007; Zetter and Butina Watson, 2006). If identity provides a notion of who we are, then it is definitely rooted to a past, a culture, a heritage (Boas, 1911; Geertz, 1973; Oliver, 2003, 1997a). Likewise, the concept of the modern, of future aspirations and all the meanings these would entail are rooted to a cultural past (Rapoport, 1989; Castells, 1997; Lim, 2006). How does the creative process for developing appropriate built environments deal with this? This paper attempts to shed some light on this discussion.

CREATIVITY, TRADITION AND PROBLEM IDENTIFICATION

First, it must come to terms with defining creativity as a process for developing innovative approaches to problem solving. With this comes the ability to recognise issues and problems that have implications on architecture, places and people. Broadening one's perspective on



Fig-1: Constructing a Gabbra dwelling (Oliver 2003:30). It is the women that are in charge of constructing the dwellings. Lightweight and flexible poles from plant material are woven into a shell to be covered with fabric. The role of men would be to tend to the all-important source of livelihood which are the grazing animals.

the various aspects regarding the built environment is essential in understanding how places can be created appropriately for their cultural context. Surely we can draw an all-inclusive list of almost everything that bears on the built environment but this paper focuses on how tradition offers a means of understanding the past, in order to define the future, and with this the ability to recognise and analyse relevant aspects of a culture which affect the built environment (Lim, 2007).

It is here where vernacular architecture becomes relevant to architectural study because it relates the built environment and traditional settlements with culture.

Vernacular architecture comprises the dwellings and all other buildings of the people. Related to their environmental contexts and available resources, they are customarily owner- or community-built, utilizing traditional technologies. All forms of vernacular architecture are built to meet specific needs, accommodating values, economies and ways of living of the cultures that produce them (Oliver, 1997:ii).

If as architects and designers we are able to intuitively recognise the genius of a traditional settlement, on closer look, it would take the analytical framework of how a traditional settlement took form to understand it thoroughly.

Paul Oliver's definition of vernacular architecture would be a good starting point for developing an analytical framework for the study of traditional settlements because it relates the built form to the people that built and use it, to the environment and available resources including the skills of the people, the local economy, ways of living and the social values particular of a culture. It could take into consideration how religion and belief systems, economy, cultural interaction with other groups, politics, family structures, kinship, gender roles and the ecological environment are essential factors which had bearing on how the place evolved and that its success and apparent beauty lies in how well it has addressed these issues and resolved the problems they



Fig-2: Camels of the Gabbra people of northern Kenya carrying building materials for their dwellings (Oliver 2003:29). The Gabbra people survive in semi-desert conditions and are nomadic pastoralists. The design of their dwellings, its manner of construction and the lightweight materials they use sensitively relate to these conditions. An entire settlement can be transported on camel backs when it becomes necessary to move.



Fig-3: The Badjao settlement of Bangau Bangau in Southeastern Sabah (Sather 1997:175). The Badjao culture is spread out in the seas of southern Philippines, Malaysia, Indonesia and Brunei. The sea is a principal resource for their livelihood hence their permanent dwellings are built with immediate access to it.

encountered.

TRADITION AND RESOLUTION

By using this broad approach for understanding vernacular architecture, that of examining it within its cultural context we are also able to draw lessons on how problems and issues have been resolved. In a traditional settlement dependent on the values of tradition, this is done over time. At times over the course of several generations through a process of handing down and transmitting information through people (Oliver, 1989): It gives relevance to the meaning and value of carrying on with particular traditions and allows for the incremental changes that occur over long periods of time. These characteristics of tradition allow us to understand how past is carried on to the future and how problems are identified and resolved over time with the values of tradition (Bentley, 1999).

FUEL FOR AN ARCHITECT'S CREATIVE PROCESS

In this section we shall consider how traditional building and vernacular architecture can become a premise for an architect's creative process. First it provides an approach towards the understanding of architecture and the built environment which is holistic. An approach which considers: social, economic, environmental and cultural issues and one which does not separate architecture from its cultural context. Architecture and therefore the process of building, the society it benefits, the ecological and environmental context it exists in are carefully analysed for the issues and problems which must be addressed. Even in the production of iconic architecture, the appropriateness of a building is achieved when a comprehensive understanding of people's cultural identity is imbued in the building. The meanings attached to the creation of the building all come hand in hand.

Second, in the process of valuing tradition and with it, traditional building and vernacular architecture, we are able to look backwards in history for solutions to problems which have been tweaked over time and yet open to

change and improvements. It is a case of learning from the past, building upon this knowledge and improving on it and creating relevant change for the future.

Third, traditional building and the vernacular architecture challenges the architect's creativity because the processes involved in understanding the cultural context of buildings and places, allows for the recognition of new problems and contemporary issues such as geographically sensitive global warming issues, religiously defined gender places and building use (Punekar, 2006), economic benefits of traditional building skills and practices, social implications of regeneration projects (Handal, 2006) and many more. The challenge of the architect extends towards creating solutions, which although rooted in the wisdom of tradition, is currently being tweaked and changed to address these contemporary issues (Zetter, 2006).

INSPIRATION FROM TRADITION

In order to clarify the three concepts mentioned above on how traditional building and vernacular architecture can be of value to an architect's creative process this paper shall



Fig-4: Bayu rice terraces and settlement in Northern Luzon, Philippines (Oshima, N). The many rice centred mountain cultures in the Philippines are built and inhabited by different cultural groups which share the common heritage of creating naturally irrigated rice paddies. The surrounding watersheds are essential for the continued sustenance of these people. Although private rice plots may be owned the watershed remains communal property.

analyse case studies from various cultures and regions of the world which engage with these concepts. The case studies may be particular to place and culture but there is a general criteria for which they have been chosen. The second part of this paper analyses case studies which in general consider:

(1) The creative process engaging with tradition, culture and identity

(2) Problem identification: recognizing and addressing contemporary issues relating to architecture and the built environment, and

(3) The values that traditional building and vernacular architecture offer. Common to the case studies are lessons to be learned relating to points 1, 2 and 3. There will be two types of case studies: those involved with

(a) traditional building and the community.
(b) those involving architects working with tradition.

Each of the case studies presented offer valuable lessons for architects which can be applied in the production of contemporary architecture and built environments which deal with tradition whilst fully engaging with the present and looking at the future with healthy reassurance of knowing the past.

(A) TRADITIONAL BUILDING AND COMMUNITY

Kasbah du Toubkal, Morocco

The Kasbah du Toubkal in Morocco is a tourism partnership between European entrepreneurs and the local Berber community of Imlil. The site is located at the foot of Jbel Toubkal and is surrounded with views of the High Atlas Mountains. The Kasbah has been transformed using traditional building methods, from the home of a feudal *Caid* or Lord to a mountain refuge offering visitors comfortable accommodations. From the building process to the tourist services extended, the benefits to the local community have been part of the design and decision making process in the project's reconstruction. Although



Fig-5: Before restoration, the Kasbah was a derelict building on a beautiful site. (Kasbah du Toubkal website)



Fig-6: Working in partnership with European builders and partners, traditional building techniques were reinforced with new building methods such as the use of concrete and steel bars to stabilise what would have been mud and stone walls. (Kasbah du Toubkal website)



Fig-7: The local builders were involved from the very beginning. Local skills and materials were used in developing the design of the Kasbah. (Kasbah du Toubkal website)

the project used much which can be considered traditional such as the use of mud construction, the courtyard and terraces as traditional architectural elements, it introduced new building processes which were not part of the original Kasbah such as plumbing and electrical wiring, reinforced concrete columns and beams for structural stability, and multiple rooms and service areas necessary for running a modern hotel. The partnership between European technology and traditional Berber construction techniques and community building processes were developed hand in hand. It is important to point out the role the local community had in the entire construction process. The brass plaque at the main gate places emphasis on this (picture of plaque), 'Dreams are only the plans of the reasonable. La Kasbah du Toubkal, October 1995. Dreamt by Discover, realised by Omar and the workers of Imlil, entirely by hand.' The project of involving the community brought economic benefits as well as the positive social impact on the concept of ownership and responsibility through participation.

The resulting built form is one which represents local identity and which seems to be appropriate to the local context even if the building type is one that addresses a contemporary need – modern tourism which bring economic benefits to the local Imlil community.

Examples from Bhutan

In Bhutan there is a conscious effort to retain the nation's cultural identity which is closely associated with the Drukpa cultural lineage (Aris and Hutt, 1994).

Cultural laws and planning policies are enforced in order to achieve this. The *Dzongs* or fortress monasteries as well as the dwellings are forms of vernacular architecture which embody Bhutanese cultural identity (Dujardin, 1994, 1997).

The processes involved in the building process from restoration, regeneration and



Fig-8: The interior gardens within the Kasbah. (Lim, R)

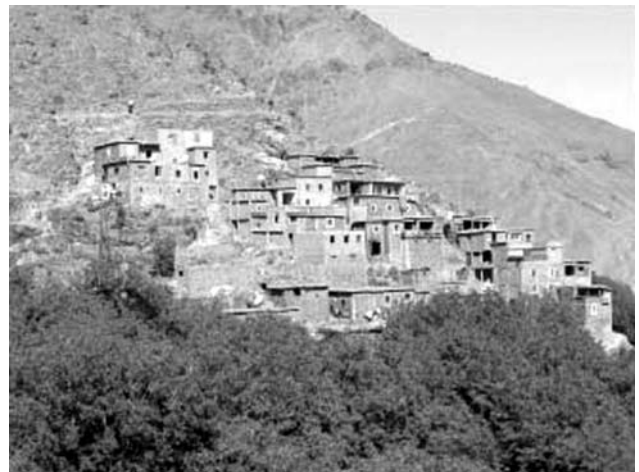


Fig-9: The traditional settlement neighbouring the Kasbah. (Lim, R)



Fig-10: Punakha Dzong is located at the confluence of two rivers is shown here undergoing restoration in 1999. The central tower is where the mummified remains of the *Shabdrung*, Bhutan's first King lies. (Lim, 1999)

the creation of new buildings involves various aspects of Bhutanese life and have bearing on the local economy, religion – in this case Buddhism, social structures such as family and gender roles (Lim, 2006). For instance the King has established an art school for the training of artisans on the skills and iconography of Buddhist building decoration. Because new buildings must be imbued with these decorative traits, these artisans are in great demand and will be assured of employment hence the whole process bearing positive economic contributions.

Because of the Mahayana tradition which promotes the close association between religious and secular life, the secular community benefits from the transfer of building technology developed in the building of the religious *dzongs*. This is evident in the similarity in form and construction between the *dzong* and the dwelling.

The religion and gender roles likewise influence the built environment. Because men as monks have religious roles and responsibilities it is towards the women that temporal responsibility falls. They have building roles and contribute labour in the construction of a woman's house in the community. The eldest daughter holds great responsibility for family and is most likely to retain possession and ownerships of ancestral land. The attention paid to various cultural aspects has significant bearing in the iconic buildings that have evolved in Bhutan's modern era. Here iconic meaning distinctly representing Bhutanese culture. The airport, schools, hotels and inns, the urban blocks of Paro, hospitals are new building types introduced in the modern era but carry an unmistakably Bhutanese character.

It would be a misconception if the idea of tradition in architectural practice becomes romanticised as only possible if projects exist in a pre-modern era or in a vernacular setting lying within the confines of a developing country or when traditional building techniques are used to perpetuate the past as in many restoration projects. It is important to focus on how the values of tradition and lessons learned from the way vernacular architecture is created and how



Fig-11: Tongsa *Dzong* was first constructed in 1650. The building became the provincial capital of central and eastern Bhutan and became the power base of the Bhutanese monarchy. King Ugyen Wangchuk was the governor of Tongsa before being unanimously voted as the first hereditary monarch in 1907. (Lim, 1999)



Fig-12: Ura *Lakhang* in Bumthang is a building of religious significance. The building technology used in religious buildings is modified and adapted to the scale of the farmhouse. The basic building techniques in carpentry remain the same but the design and scale of the components may change. (Lim, 1999)



Fig-13: Dwellings in Jakar Valley in Bumthang show similarities in terms of construction and building detailing with Ura *Lakhang*. (Lim, 1999)

traditional settlements are formed in a contemporary setting and in a culture from within the developed world. For this we will site an example which applies concepts of tradition in a community setting in the United States of America. Samuel Mockbee was an architectural educator who 'was spurred on by a love of architecture, which he saw both as an engine for social change and an art that enabled people to create great beauty'. He worked with architecture students from Auburn University to provide the impoverished clientele of Alabama's Hale County with an 'architecture of decency' (Dean and Hursley, 2002). Mockbee believed 'that the architectural profession has an ethical responsibility to help improve living conditions for the poor and that the profession should challenge the status quo into making responsible environmental and social changes.' (Dean and Hurlsey, 2002).

The architecture projects that are spread out over Hale County address these problems where students define the social context of the built form and are able to recognise issues for which solutions are designed. In the practice of building with available resources even if in this case materials range from a variety of discarded items such as old rubber tires, automobile windshields, rammed earth, discarded bottles, retrofitted abandoned buildings, baled hay, used timber, these projects portray a quality of traditional building.

In this case it offers the beginning of tradition as many of the design solutions so ably and creatively address the problems of the place. In Mockbee's view,

"The best way to make real architecture is by letting a building evolve out of the culture and place. These small projects designed by students at the studio remind us what it means to have an American architecture without pretence. They offer us a simple glimpse into what is essential to the future of American architecture, its honesty" (Dean and Hursley, 2002:2).



Fig-14: A newly constructed farmhouse in Paro valley built of rammed earth. (Lim, 1999)



Fig-15: A house in Paro valley being reconstructed with the help of the community. The wooden windows are assembled on the ground before being held in place by the rammed earth. Professional carpenters or *zopons* build the *rabse* or timber framed walling and the women and men of the village help in building the rammed earth walling. (Lim, 1999)



Fig-16: (all images on this page): The newly constructed Paro airport seeks to find a Bhutanese architectural identity by adopting architectural forms with historical precedents. The buildings are given a prestigious identity by the double *jabzhi* or double layered roof. The main structure is built of concrete but the windows and fenestrations use the traditional timber framing. Elaborate use of carved elements and paintings show the importance given to such a building which has become symbolic of the progressive changes that the country is undergoing. (Lim, 1999)





Fig-17: The Bryant Hay Bale House was the first house designed and built by Rural Studio in 1994 for Shepherd and Alberta Bryant who lived with their grandchildren. The students used eightypound hay bales wrapped in polyurethane piled as bricks to create super-insulated walls of cheap material. The Hale County's Department of Human Services had linked Mockbee's architecture class with the Bryants who were then living in rickety shacks and in need of a much improved home. (Hursely)



Fig-18: A separate structure was created as a smokehouse using discarded road signs for the roof and embedded glass bottles in the walls to admit light in and the walls of concrete rubble from a demolished silo. The main house features a porch reminiscent of local antebellum mansions. (Hursely)

By working with students: in understanding the cultural context of buildings; recognising relevant social and environmental problems in relation to architecture; building with available resources and developing new building techniques that respond to these recognised issues, Mockbee's Alabama project was certainly working with



Fig-19: As in all of Rural Studio's projects, the community centre is a lesson in resourcefulness. The trusses and benches were created from laminated cypress donated by a studio supporter. The steel trusses were likewise a material donation. (Hursely)



Fig-20: Mason's Bend Community Centre built in 2000 was constructed of rammed earth and recycled automobile windshields. The low, close to the ground form is in keeping with the community's vernacular forms and shapes. (Hursely)

concepts of tradition using the same sensibilities and values that have created traditional settlements and are used in the production of vernacular architecture. The design and building process that Mockbee's Rural Studio developed as a teaching and learning process for architecture students considers: (1) the creative process engaging with cultural traditions and identity (2) problem identification: recognizing and addressing contemporary issues relating to people, architecture and the built environment. As a process, Rural Studio embodies the third general concept presented in this paper which values the very same processes used in the



Fig-21: The Harris Butterfly House designed and built by Rural Studio architecture students in 1977. The steeply sloping roof, like butterfly wings were designed to channel rainwater to a cistern to be used for toilet and laundry and also to channel cool breezes into the house. (Hursely)

production of traditional settlements and vernacular architecture; i.e. sensitivity to the cultural context of place, participation and partnerships between builder, designer and users, and perhaps most importantly the buildings address the specific needs of the users. In a contemporary sense, Mockbee's pedagogical process is in close agreement with the concepts of how vernacular architecture is created.

(B) ARCHITECTS WORKING WITH TRADITION

In designing the Tjibao cultural centre in New Caledonia, Renzo Piano, 'had to delve into Elders the past, talk to the about traditions, and research a multitude of plant species some of which are also a link with the culture, ecology and geography of other Pacific nations'. The project successfully blends the architect's 'personal architectural vision, and striven to reconcile his own aesthetic priorities which included the importance of insubstantial elements such as light, air, transparency, natural forms as well as the human values of the communities in which his creations are set'. The project developed a partnership between the architects, engineers and the Kanak people resulting in the combined use of high technology and traditional values. By traditional values it is meant that the resulting architecture accommodates the: need to



Fig-22: The ventilated porch opens up to the rest of the house. Costs for construction were kept down with the use of a tin roofing and recycled pine from an old church that was being razed nearby. (Hursely)

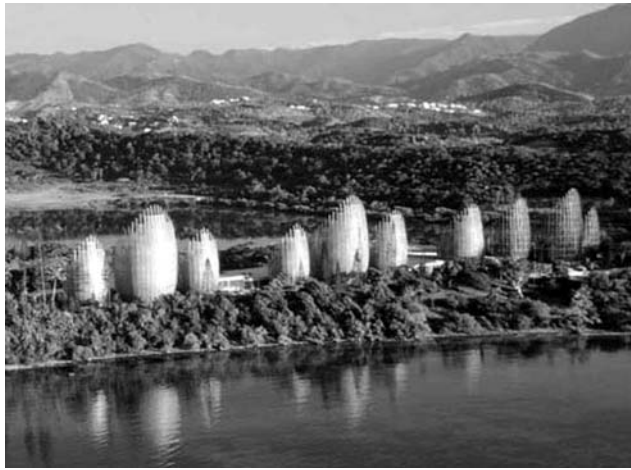


Fig-23: The Tjibao Cultural Centre. Renzo Piano picked up intangible qualities of Kanak culture and translated it to physical form. The form of the Great Houses was inspired by traditional Kanak house forms which are of different height and surface treatment and given a deliberate unfinished aspect as a reminder that Kanak culture is still in the process of becoming.

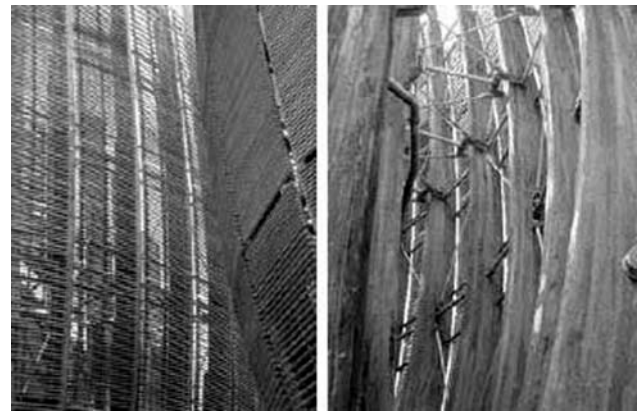
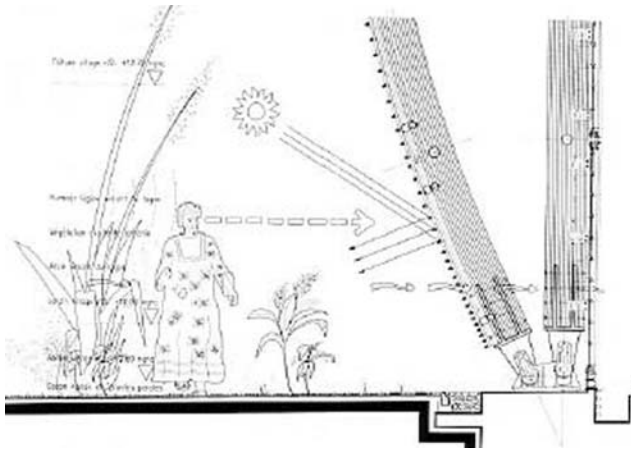


Fig-24: The Tjibao Cultural Centre. An inner façade of glass louvers which open or close according to wind speed, allowing wind to flow through the building for passive ventilation.



Fig-25: The Guadua Cathedral at Pereira, Colombia. The architect Simon Velez works with the specie of giant bamboo *guadua* creating large, structures by incorporating innovative joinery techniques. (Ajay Khanna)

represent Kanak identity; the use and meaning of space to the Kanak people; the natural environment and climatic conditions of the site; and draws a relationship between the Kanak culture's past and its future.

The work of Simon Velez is a 'successful synthesis of traditional Colombian structural designs, ecological processes, and avant-garde technology.' (Kries, 2000: 9). The architecture of Velez takes bamboo into the 21st century pushing the limits of traditional processes and building techniques by infusing these with current structural engineering principles, innovative joinery and a newly urgent environmental consciousness. These processes allow for the construction of buildings and structures that are



Fig-26: The Jenny Garzon Bridge in Bogota by Velez is a large scale hanging bridge capable of carrying the weight of pedestrians and cyclists. (Ajay Khanna)

recognizably rooted in the past, but are in fact extremely contemporary. They may seem familiar but are refreshingly new and are able to address contemporary functions and needs. Many of these buildings have pushed the structural limits of bamboo to levels never before achieved by traditional building methods. Despite the brave forage into unexplored engineering feats, the buildings retain the warmth and intimacy that comes with the traditional use of bamboo.

Bamboo is a material grown and used in many different parts of the world with building techniques developed by different cultures responding to diverse conditions and aesthetics. In Japan, the traditional use of bamboo has a rich history which continues in the work of contemporary artists and architects who like Velez draw on tradition but infuse their work with current creative processes in an attempt to produce built forms for today. The architect Shoji Yoh had intended that the Naiju Residential Centre and Nursery School to be built with community participation and to use locally available materials. Yoh's biography describes this project as 'uniting disparate elements – local craftsmanship with advanced technology, bamboo with poured concrete in order to create a bending, folding and undulating form that reflects the cultural position of the community and functions as a monument to their lives and works'.

Here, local basket weavers and the design team create a bamboo grid which is suspended over the site. The pliant and netlike grid was then formed into the undulating shape and covered with a steel mesh and poured concrete. A temporary post was removed after four weeks but the bamboo form was retained as part of the structure and ceiling. The resulting building and the process of construction, although reliant on tradition pushed its limits in a creative partnership between the architectural designers, local craftsmen and builders to come up with a form and process both new and appropriate for Naiju.



Fig-27: Construction process for this building involved the weaving of a bamboo grid by the local craftsmen which was suspended over the site and formed into the undulating shape which was then covered with a steel mesh and poured concrete. An important part of the process was the participation of the local craftsmen in the building process. The collaboration between the basket weavers, the architects, engineers and builders allowed for the development of an innovatively designed building.



Fig-28: Building process showing the collaboration of local craftsmen in creating the bamboo woven interior ceiling. (Shoei Yoh website)

The expansive portfolio of Geoffrey Bawa is an expression of timelessness where the merging of traditional practices with contemporary processes and ideas fuse resulting in built environments that transcend the ravages of time. Because Bawa's buildings were created not so much from the prevailing fashion or style of the era but out of concern for available resources and building techniques; climatic conditions, the landscape and

surrounding environment, and its relevance to the cultural identity of the people and place. Because of this, they have been able to retain their value and meaning longer than fashionable and stylish buildings. In his works, Bawa shows a masterful approach to working creatively with tradition. He is able to identify key design issues and problems, and resolve these through design principles that merge contemporary concepts and traditional practices and values.



Fig-29: Institute for Integral Education by Geoffrey Bawa in Piliyandela, Sri Lanka built between 1978-81 was a school created by the Catholic Church aimed mainly for school leavers and young people. The site is a steep valley running down through a gorge of rubber trees. The buildings created by Bawa respond to the shape of the two opposing valey sides and was conceived as a 'promenade through an ever-changing sequence of loggias, links and open spaces. The buildings show Bawa's skill for manipulating elements in a landscape to exploit the terrain and potential views (Robson:156)'. (Robson, D)

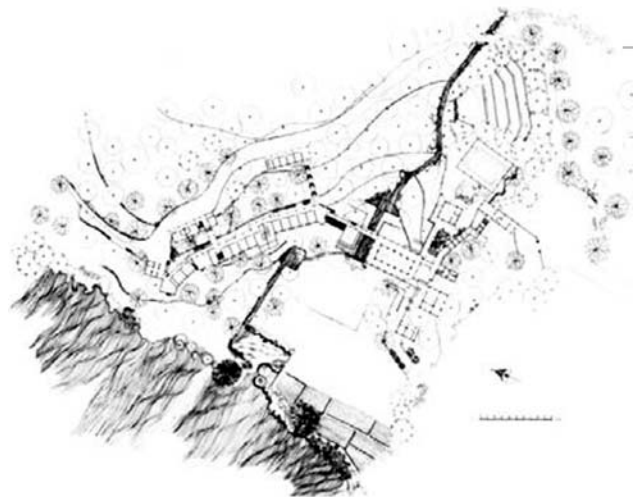


Fig-30: Plan of the Institute for Integral Education by Geoffrey Bawa in Piliyandela, Sri Lanka (Bawa Archive)

CONCLUSIONS AND RECOMMENDATIONS

All the case studies cited in the paper address identity issues in the built environment particular to their cultural context. This process is achieved by bridging traditional skills with contemporary design to deliver architecture and built environments which are culturally sensitive. The cases present various approaches for creatively engaging with tradition. They address different issues and problems; and apply design solutions which take from tradition and infuse contemporary principles and building practices for creating buildings, spaces and places which are not only new and refreshing but also provide meaning and true value for their users – the community and the people. These projects move beyond the aesthetic values of good design, though this is inherent, and consider the social, economic, environmental and cultural values that bring benefit to the people and the community. Collectively, the examples present us with the value of how working with traditional building skills often done, outside the classroom of architectural schools can offer new incentives for creating contemporary built environments which are culturally sensitive to people and place. There are however key pointers for carrying out this value in terms of architectural pedagogy and this may require a paradigm shift in terms of learning:

- Architects must be open to learning beyond the classroom, engaging and collaborating with traditional craftsmen in the design process.
- The partnership between the local community, architects and building professionals must be valued as a learning process between parties resulting in refreshing and vibrant forms of appropriate architecture which may be the start of new traditions.
- Professionals need to focus on processes which address the cultural context of building and living by giving importance to social, economic, environmental and cultural factors that have a bearing on the built environment.



Fig-31: Aerial view of the Kandalama Hotel.. (Richters)



Fig-32: Sectional elevation of the Kandalama Hotel designed by Geoffrey Bawa in Dambulla, Sri Lanka built between 1991-94. This elevation shows the relationship of the building to the cliff. It was designed not so much as a building to look at but a building to enjoy the views from. (Bawa Archive)

- Understand how the process of engaging with tradition and infusing it with contemporary practice and values becomes relevant to identity building through active community participation defining ownership by contribution in creating contemporary built environments and how this process may in turn create new cycles of tradition.

This paper is meant to inspire both students and professionals to further engage with the process of working with tradition as a way into the future. To do this one must fully engage with the creative processes because the future is indeed a difficult prediction. Since working with tradition mean can also being rooted in the past but being fully engaged with the present in order to responsively create a meaningful future.

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FOUNDATION OF ARCHITECTURAL DESIGN EDUCATION: AN EVALUATION OF THE CONTENTS AND APPROACH IN ARCHITECTURE DEPARTMENT, AT THE YILDIZ TECHNICAL UNIVERSITY, ISTANBUL

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ABSTRACT

This paper deals with the concepts and the methods used in architectural design education in the first year first semester of YTU architecture department. The program of the department is 240 ECTS in 4 years as undergraduate. The courses of Basic Design, Building Theory, Design 1 and Introduction to Architectural Design in first semester forms the core of the program. The outcomes of the courses were evaluated through examples from various practices studied in the courses. All the courses were conducted by the authors between 2004-2008 academic years.

Keywords: *Architecture, design, education, problem solving.*

INTRODUCTION

Architecture has a dynamic structure. The dynamics of architectural discipline has been signified by the practices of architecture as well as design theory researches. Within this reference, first year education in architecture comes with different aspects of design education. Many problems are faced that act as obstacles to design thinking. One of the major problems is the lack of student's background of creative and design thinking. Without any awareness or preparedness about these subjects and as a consequence of a rather questionable choosing method for architecture departments, concepts often fall into an environment of ambiguity. In this sense, developing a system of design thinking is a challenge. Primary structure for design thinking begins to be built in the first-year education, especially in the 'the introduction

to architectural design' course. This paper deals with the concepts and the methods used in design training in the first year first semester with the practices of the courses; Basic Design, Building Theory and Design 1 and Introduction to Architectural Design.

DESIGN EDUCATION

To plan the architectural design education is a difficult matter. As there is not a single problem that must be focused on but there are too many related problems that must be solved at the same time. A variety of design education approaches emerge and this phenomenon plays an important role in the determination of the educational strategies. There are two important steps to constitute and carry on a contemporary architectural design education. These are;

- To analyze and to define architectural knowledge accurately,
- The transmission forms of the knowledge,

The teaching ability of the design action; designers, from early design phase till the end production phase use different knowledge and knowledge sets in every step of the design process. Beside the past experiences, perceptions and choices with the concept that knowledge is gained from experience, this knowledge is constituted from interaction, experiences and cross-disciplinary sharing in the design process. Taking into account the architectural design knowledge is continuously changing and developing is a fact that can never be completely defined or taught. Therefore, the important thing is to make the necessary arrangements

so that the brain, fed by continuous stimulus, can connect, synthesize and stabilize the knowledge it receives.

Candidates of Architecture have been prepared to the architectural environment in the design studio. Knowledge using in the design process, approaches of design problem solving, working styles on design problem take form in the design studio. The examination of design behavior approaches in the early design phase has considerable contribution to the development of architectural practice. A research done by Heylighen, Neuckermans and Bouwen (1999) shows that different knowledge forms can be categorized as active knowledge and passive knowledge. It is used in order to produce design concept. It is concluded that students use the categorized knowledge during design process. Moreover, this study shows an interactive design studio environment helps to improve the design concepts of students.

In the early design phase of architectural work, architects begin to produce various concepts which are based on their personal and professional knowledge and experiences. In this phase, the designer tries to oppose and link this knowledge and knowledge groups with the process and tries to begin to create a new knowledge. There is a similar approach in the design studio. During the whole design process in the design studio, students continue to interconnect the divergent thinking process and the convergent thinking process. In the divergent thinking, many concepts are produced to see which one of them is the starting point of the design. In the convergent thinking phase, the aim is to try to focus the defined concepts and bind them together coherently.

Knowledge groups belonging to the basic concepts that should be conveyed in architectural education come into prominence as building, construction and design. In building design, the place of cultural environment, physical environment and technological environment factors and considering the design of the buildings in accordance with these factors constitute the building knowledge group.

In this context, the objectives of the first year architectural design education appear as;

- Design theory and concept formation,
- Visualization in design,
- Language in design,
- Design cognition.

This list makes the background issue more of a problem than any other department of the higher education. Within these objectives developing "creative problem solving skills" of the students come forward. Studying on problems is most commonly preferred method in design education. The quality of the problem would be a key of many other problems and/or probable solutions. In YTU, first year design education is based on solutions rather than problem itself so problem solving approach is on demand.

Studying on Problems

It is possible to examine approaches of problem solving as three subcategories (Rowe, 1987).

- Trial and error approach: A very familiar example of this category is jigsaw puzzle. In the design area, to form/create floor plans of a building or to arrange a room can be given as an example. (Building Theory and Design 1).
- Generate and test approach: This is a variant of trial and error approach. Many designers and architects solve problems while using this approach. (Basic Design and Design Studios)
- Means-ends approach: In this approach, first means and then probable ends (set of goals) are prescribed. Means and ends connect together via appropriate logical system. (An analytical approach).

FIRST YEAR FIRST SEMESTER; THE DESIGN COURSES

Building Theory and Design 1

The course consists of three hours study, one for theoretical knowledge and two hours for practice. The course is continuing in forthcoming

semesters as Building Theory and Design 2-3 and 4 with the scope of various themes in building science. The main theme of Building Theory and Design 1 is "House" and human dimensions, man-environment relations, user requirements, architectural planning process and architectural concepts are additional subjects.

- House is handled with the sub subjects of house and culture such as life in house, activities, activity areas, activity types, postures, furniture, furniture-activity relations and the close environment of house. In this context, to determine the proper furniture's according to the fundamental and partial functions and organize these in a space forms the main aim of the course. This aim is realized through theoretical and practical studies. However, the process of being informed is not working in one way that is a flow only from instructor to students. To achieve interactivity in the course, the students are asked to prepare researches and express them whether written-verbal or visual format and share their knowledge with entire class. So, it could be possible to observe how the students interpret new knowledge that they gathered from theoretical and practical information in the course with the foreknowledge already learned by experiences about the most known function of their lives; "house life". The

teaching style is formulated on induction approach; firstly the house is divided and studied partially and at the last stage the parts come together and form whole house. The course is concluded with a final study; Pioneer Architects and Housing. The aim of this study can be summarized as;

- To evaluate the approaches of architects on housing
- To emphasize the importance of architectural heritage
- To emphasize the relations between house form and space organization.

Basic Design

Basic Design is also a course consists of three hours study, One for theoretical knowledge and two hours for practice. Although the course hours are not sufficient students are motivated to work hard with a dense program. The course is fundamental in design education and the basic concepts of the course are;

- The elements of basic design: Point, line, plane, shape, volume, size, interval, texture, color, light- shadow,
- Visual Perception: Foreground-background relationships
- The principles of basic design: Rhythm, harmony, contrast, gradation, dominance,

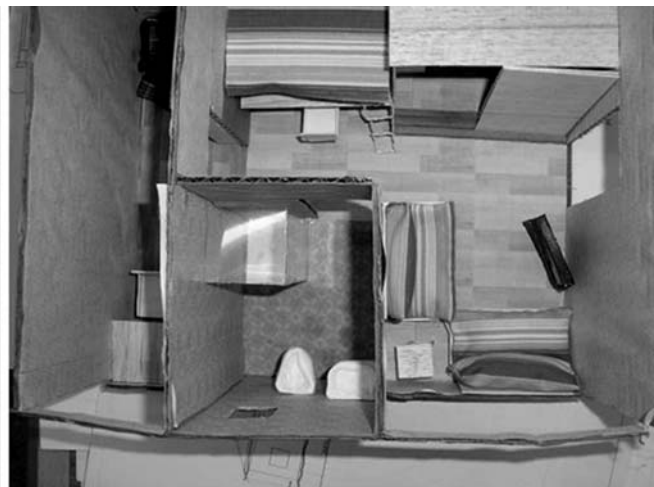
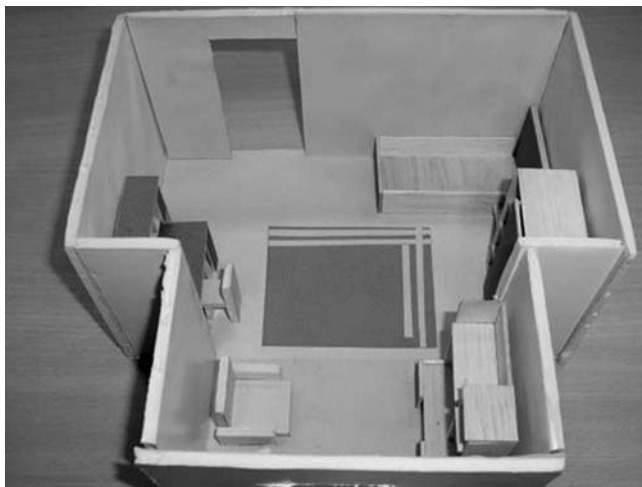


Figure-1: Every thing starts with the room; basic requirements and more ...

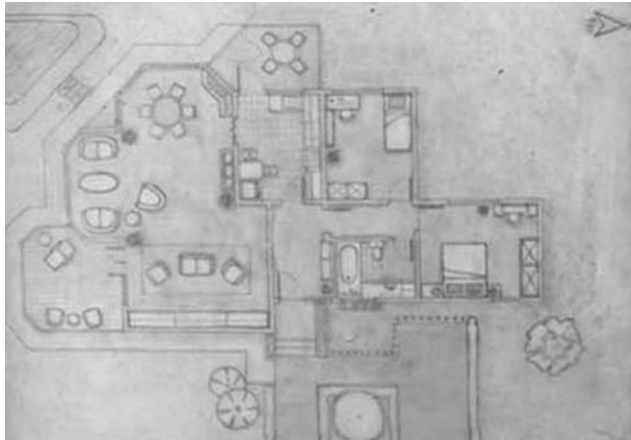


Figure-2: The organization of fundamental functions in a family house.

- balance, unity.
- Form: Form organization, addition and subtraction.
- Space; space concept, elements of space.

The weekly studies are organized as modules where each module has phases of preparing-presenting and evaluating process. Every problem is defined, analyzed and exemplified. The problems are balanced from abstract to concrete

or concrete to abstract so students could have opportunity to recognize real and virtual world. Different presentation techniques are encouraged in the course especially freehand drawings and any material around life could be used. Participatory workshops are organized.

Introduction to Architectural Design

The course is consists of six hours study, two for theoretical knowledge and four hours for practice. The presentation of architecture and culture, architectural presentation techniques, architectural analyses techniques, studies on the ability to see and think about the environment and explanations about the architectural design activities and the structure systems in general are the main themes of the studio.

The aim stands as; emphasizing the importance of the architectural presentation techniques, developing design-centered problem-solving ability and design skills, creative thinking skills and rising the awareness of cultural distinctions.

The goals to be reached in order to success these aims can be listed as;

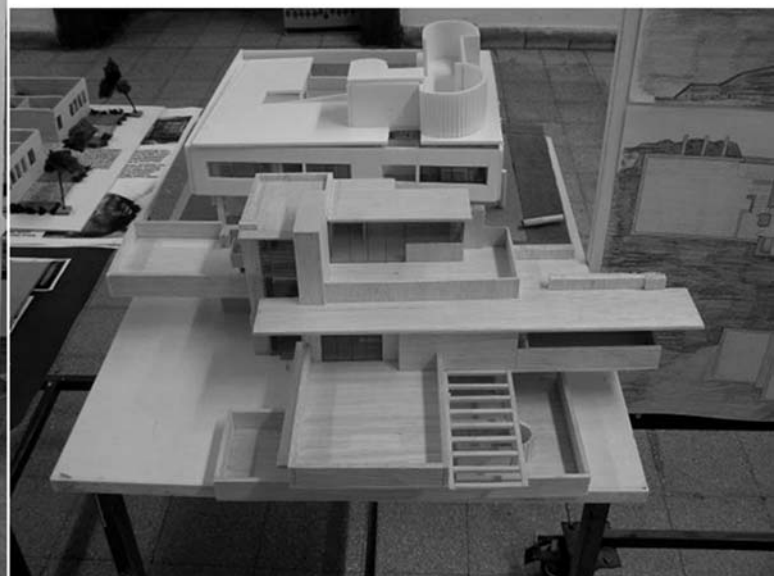
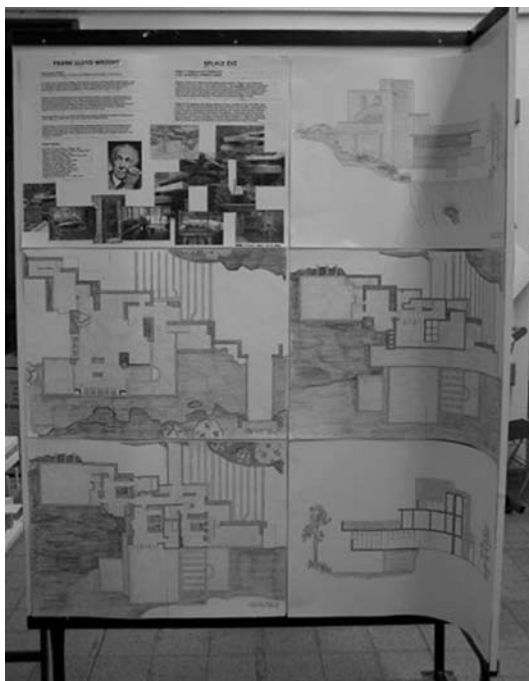


Figure-3: Final study; PIONEER ARCHITECTS AND HOUSING.

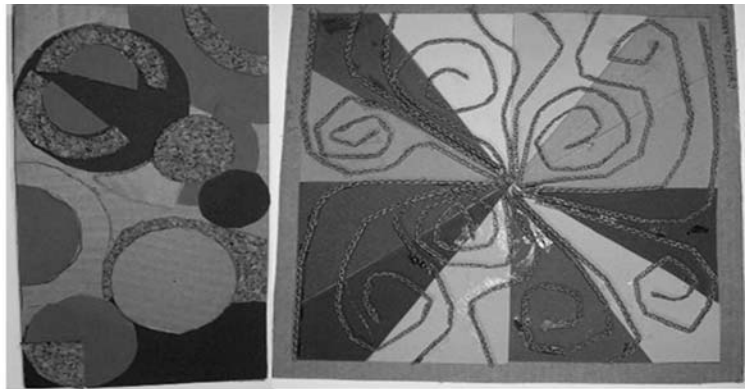
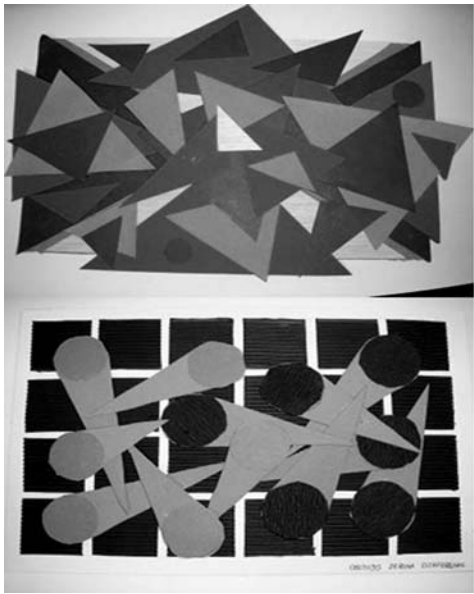


Figure-4: Visual perception, Gestalt Theory.

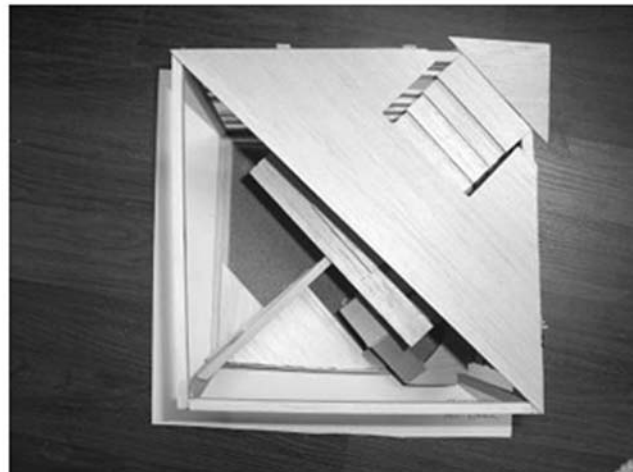
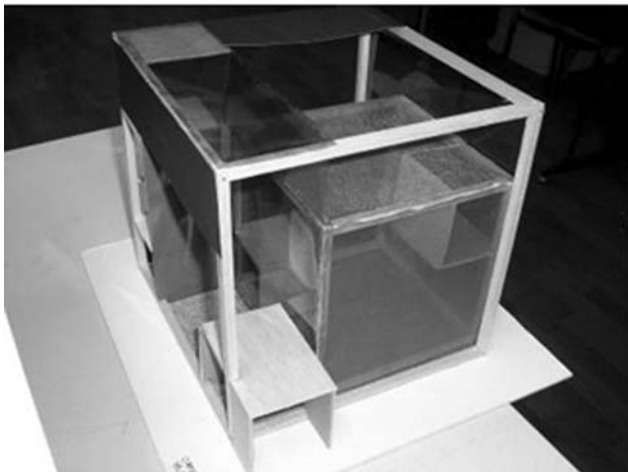
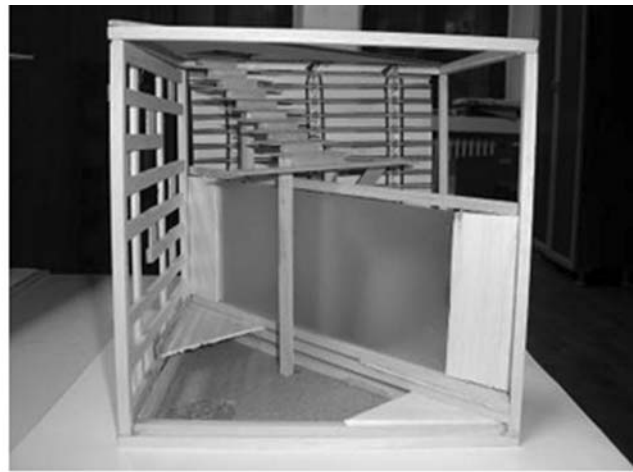
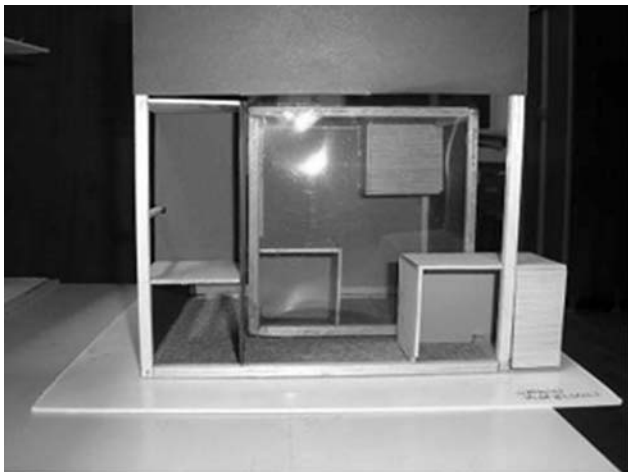


Figure-5: Arrangement of Planes in a space defined by a cube.

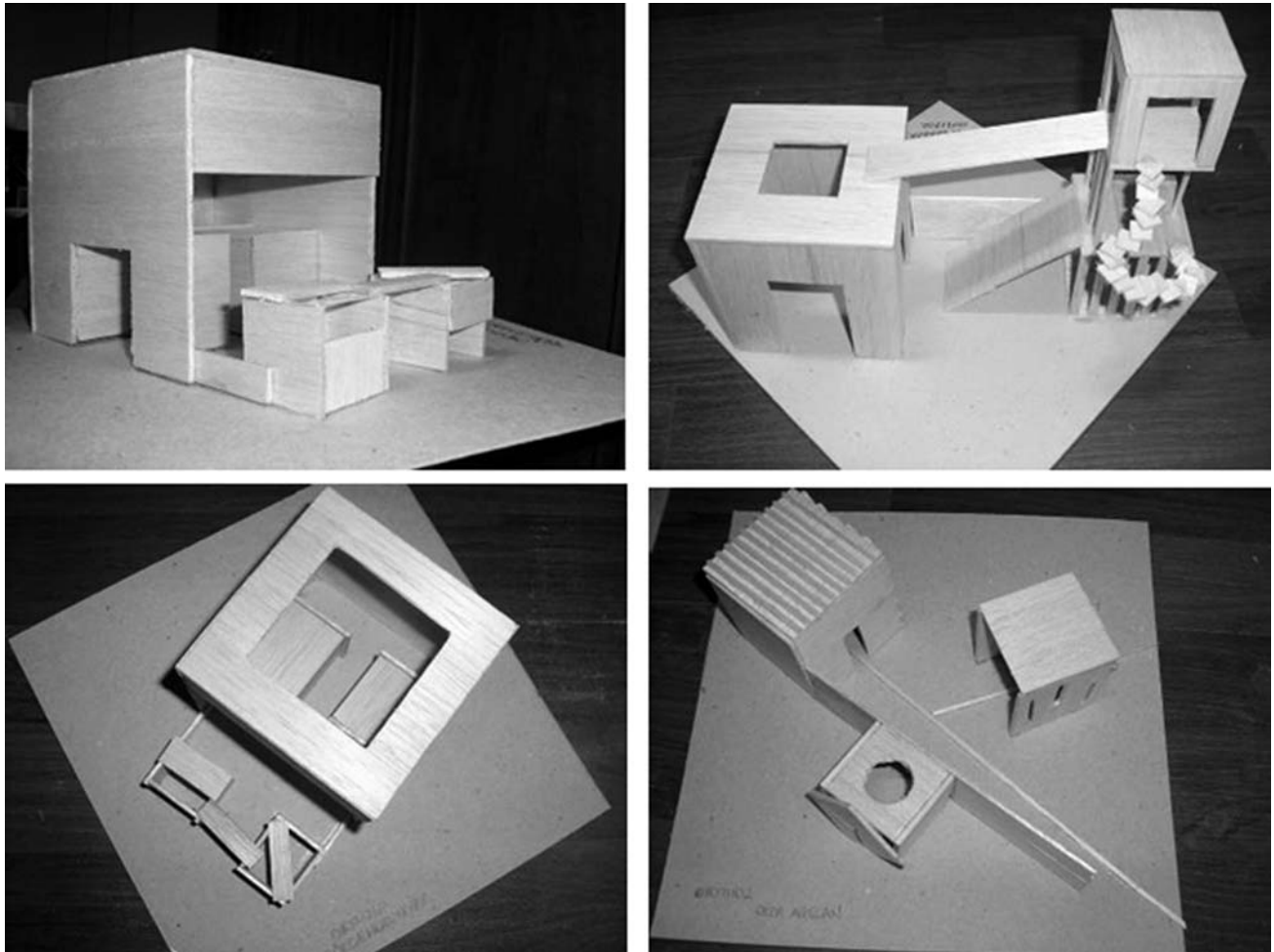


Figure-6: The organization of activities with 3 cubes; Access – Passing – Stay.

- To make the students gain the ability of documenting, analyzing and interpreting the cases, to have the knowledge and ability to use-present architectural elements and compositions in creative problem-solving studies,
- To realize an approach to teach the 'design phenomenon via studying on various different problems in different levels in the first semester.

The 'Introduction to Architectural Design' course consists of; Studies; Problems and Presentation / Evaluation Techniques.

A. The **studies** in the course are grouped into three as;

1. Studies both **abstract and concrete**, in 2D-3D forms aiming to lead to the expressions of the existing forms and environments;
2. **Abstract** studies in 2D-3D forms aiming to lead to the expressions of the student's ideas and solutions to design problems;
3. **Concrete** studies both as 3D models and 2D sketches aiming to reveal the outcomes of the first two groups of studies.

B. The general outline of the **problems** is;

In general, developing the ability of problem-solving is;

1. Defining the problem (with its content and

- scope);
2. Solving the problem (with analytical thinking, abstract thinking, analyses techniques);
 3. Presenting the outcome project (with an emphasize on the importance on 2-3 dimensional presentation techniques)
- C. The general outline of the presentation / evaluation process is;**

Developing the graphic language of architecture via presenting drawing techniques and building

models and their equipments, forming sketches and drawings with pen, collage, lines, tones and shades, different kinds of perspectives and theoretical sketches. At the end of each activity/problem solving, is a discussion, a jury in the semester and a final jury at the end of the semester. Design studio is used as a tool to combine all knowledge that gained in the other design courses.



Figure-7: Observing the environment; recognizing the environment and paying attention to urban and natural forms and landmarks in the environment. Seminar on the concepts of architecture; architecture in different cultures and a visit to Istanbul Historical Peninsula, Hagias Sophia and Blue Mosque.

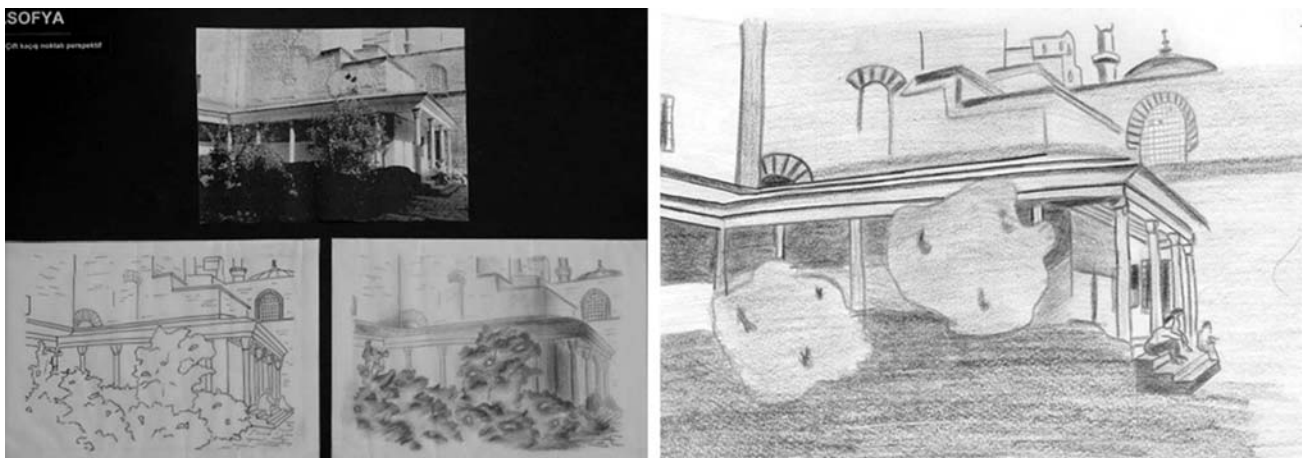


Figure-8: Emphasizing the importance of presentation techniques; Graphic Expressions with different presentation techniques.

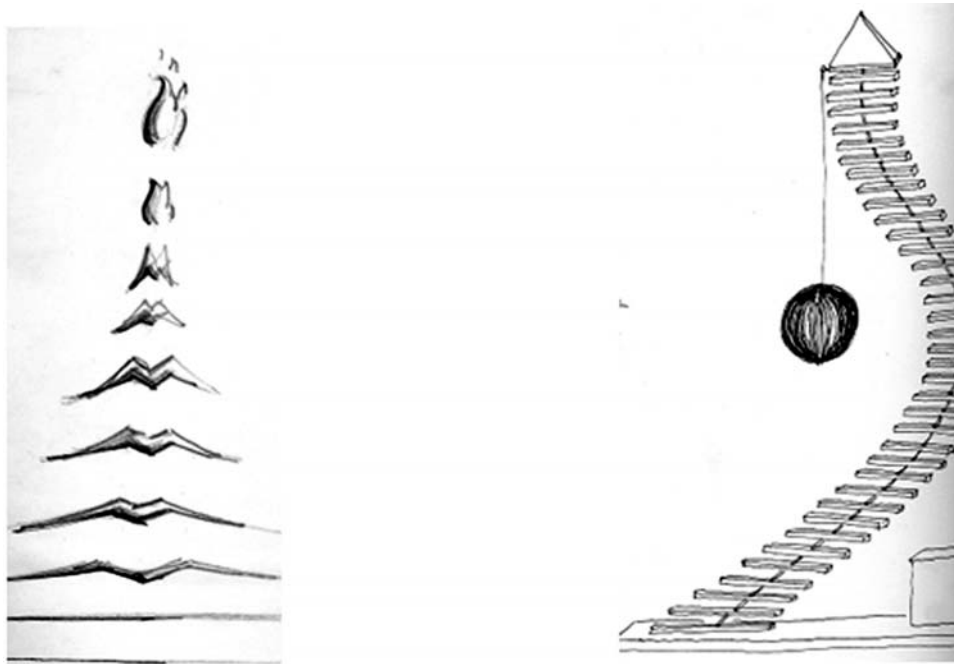


Figure-9: Studies on Design Communication; Conceptual Expression Sketches.

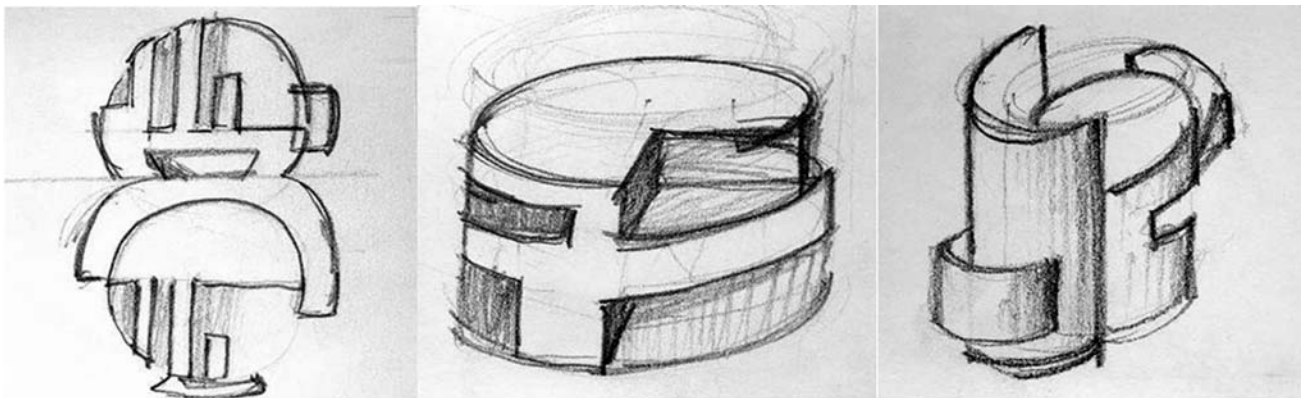
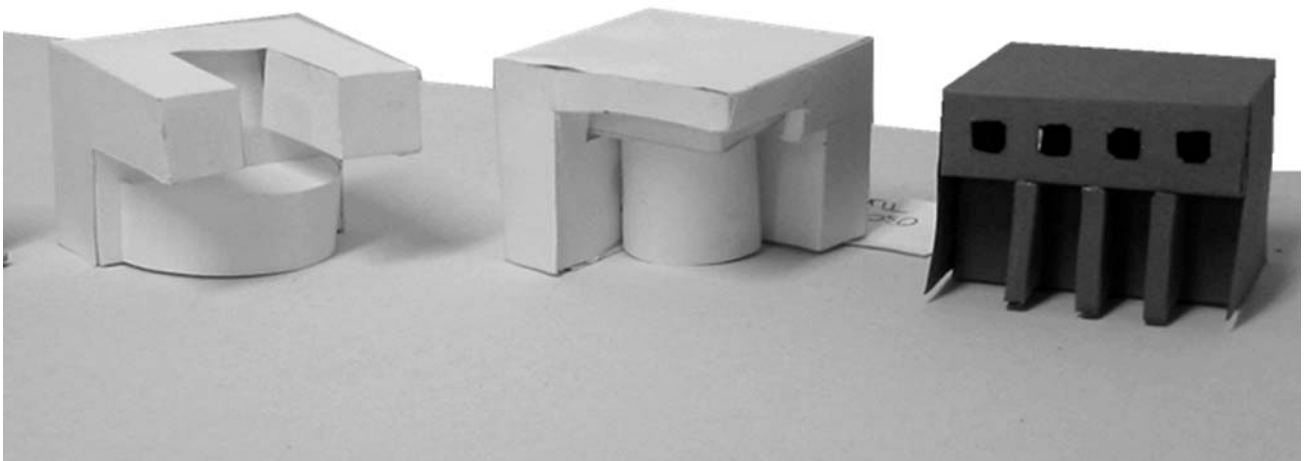


Figure-10: Transforming Forms; Design thinking; obtaining new images (creative images) via using images; ways of changing the imagination and abstract forms like; addition, extraction, dividing and enlarging.

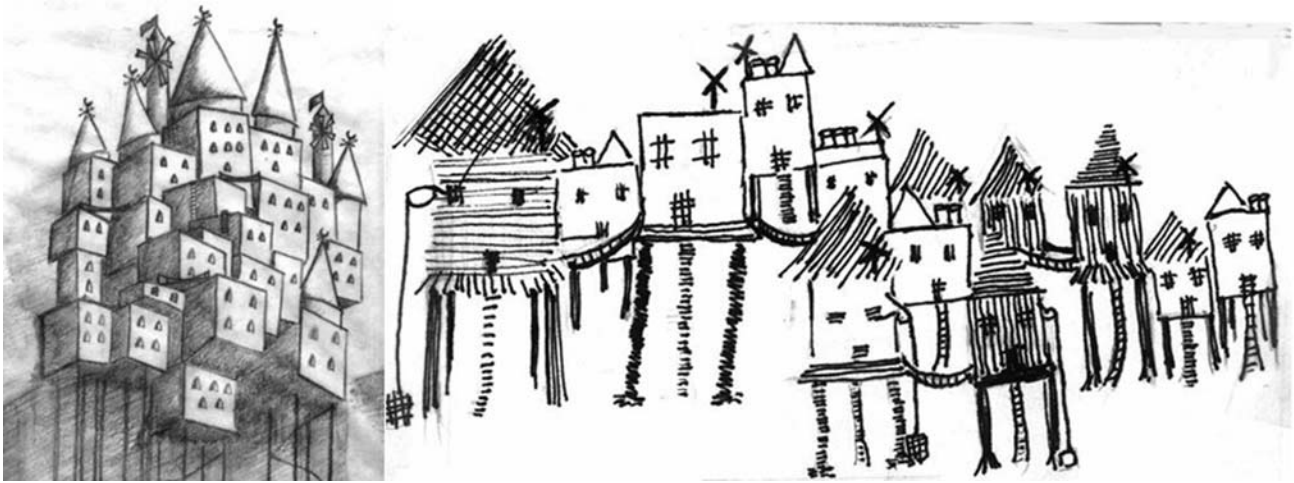


Figure-11: From abstract to concrete; Gaining the ability of converting written forms of descriptions into visual expression, Starting the imaginative design process, Reading 'Invisible Cities'.

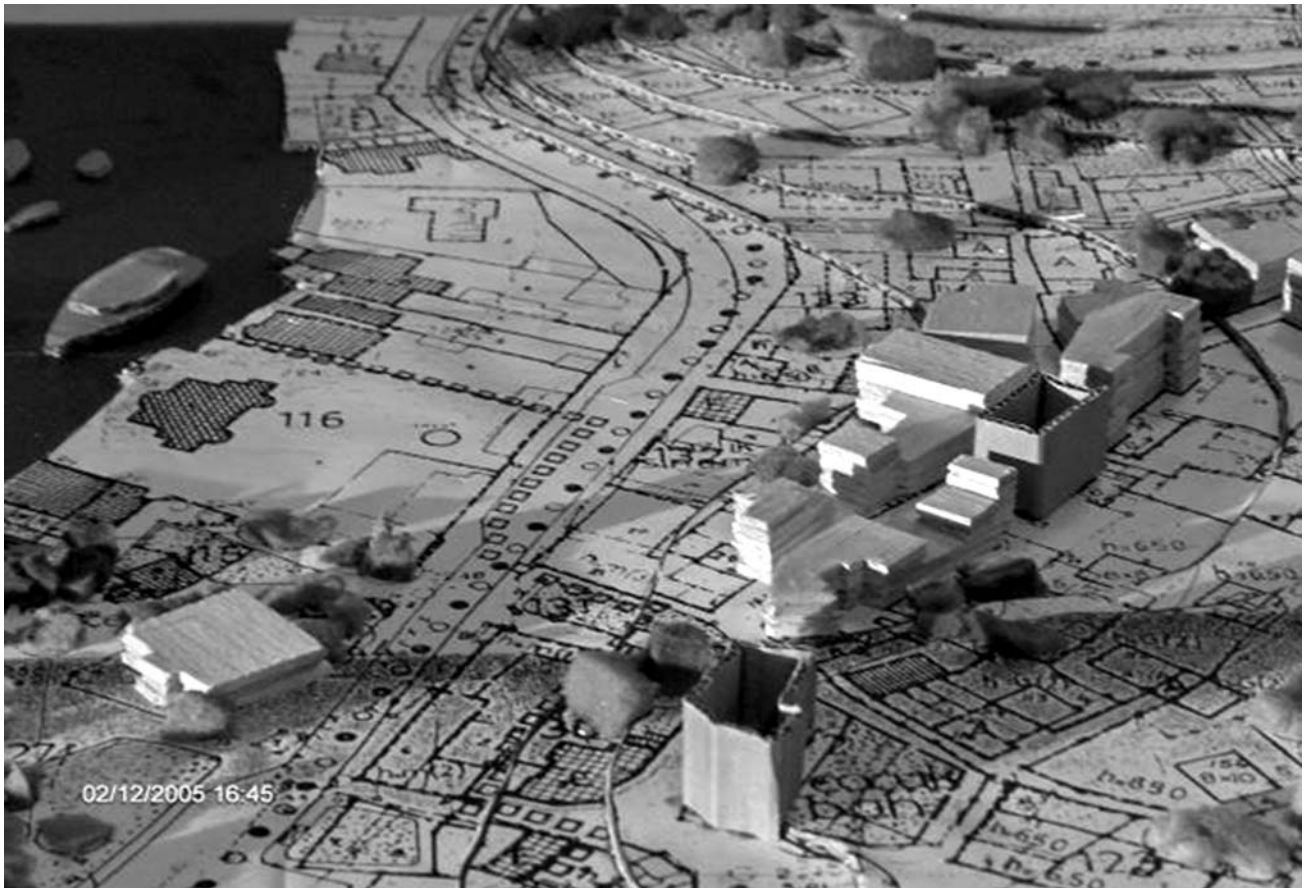


Figure-12: Designing in an Existing Environment; the aim is to introduce the architectural design, define the areas in need. to get to know and interpret the environment. The cultural, aesthetical, functional, economic and social dimension of the context is taken into consideration when developing a new design and rising awareness. Teaching the relationships between interior and the exterior space; relationships between the architectural product and its urban and natural environment, explaining user needs, functional requirements, idea/concept-form relations in a design and the concept of 'space'.

CONCLUSION

First year architectural design education puts forward many problems that affect design thinking in the field of design education. The major problem is the lack of sufficient background that has to support student's creative design and thinking activity. In Turkey the students attend to higher education without any preparation in previous stages of their academic career. Depending on this background, first year education differs in various architectural schools. The content of the education may differ but the main theme is to formulate and transmit architectural design thinking as a systematical thinking method to the students.

From this point of view, in YTU the aim stands as; emphasizing the importance of the architectural presentation techniques, developing design-centered problem-solving ability and design skills, creative thinking skills and rising the awareness of cultural distinctions via practices from abstract to concrete, concrete to abstract in the courses of Basic Design, Introduction to Architectural Design and Building Theory and Design 1. As a result, the basic structure of design thinking in the first year architectural design education is tried and achieved by integrated studies held in these courses.



Figure-13: Design studios; various spaces with different equipment for the studies.

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ARCHITECTURAL EDUCATION AND DESIGN STUDIO TRADITION: CRITICAL PEDAGOGY AS PRAXIS

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ABSTRACT

Educating an architect is as complex as any other professional. The student, apart from design itself, learns many other relevant things and composes all that knowledge in the design studio, which is the most tested pedagogical practice in architectural education. The design studio is dominated by the design tutor, and this power structure has resulted in a particular dynamics that makes the student to treat the designer-trained tutor as a mentor. This 'guild-culture training', in which the student is not free from the biases of the mentor, silences the creativity of the student. The observation of a lack of self-styled approaches to design among the students is a result of this silenced studio tradition, which is defined as the research problem. By testing the strength of critical educational theory as a way of resurrecting the mystique of designing, we aim at contributing towards the development of comprehensive pedagogical tools for architectural education. We, taking samples of students from different years, have used observation, participatory observation and unstructured interviews as methods to collect data. The students are encouraged to perpetuate the intellectual and cultural biases of their colleagues and tutors in the learning critiques, peer critiques, design workshops, lectures, and peer discussions. Facilitating the making of a reflective practitioner, who sets own norms and objectives, is our objective, and this has proven to be a neutral process of learning in order to reform design education.

Keywords: *Student, profession, culture, value, and world view.*

BACKGROUND

Design studio has been the most widely used tool in teaching architectural design. It is a fact that the design studio has the potential to become the ideal experimental lab, in which both tutor and student could be facilitated with the learning and sharpening of a design process. However, the usual practice has proved otherwise as the practice-oriented design tutor often telling the student of design solutions, rather than preparing the grounds for the student to develop his/her own solutions. By presenting several alternatives, the tutor could use his/her experience to argue that the solutions put forward by the student would fail. This approach to design teaching is termed by Sri Nammuni (1991a:22) as- if I were you approach- for tutor assuming the role of a student to solve a design problem¹. As a result, there is no facilitation for creative thinking or for the development of a design process, but continuing of the ideology developed by the tutor who often is a successful practitioner. The design studio thus becomes a guild-culture training to turn the student in to an architect through enculturation rather than education. The loss of creativity in students' work could largely be attributed to this education. This is most noteworthy in the case of a diversifying student population².

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- 1 Sri Nammuni claiming this as a process of cloning rather than teaching notes, "In the cloning approach, we continue to treat students as apprentices teaching by example through giving of alternatives; if I were you solutions".
 - 2 Our survey finds that they represent different social, economic and cultural backgrounds as they come from different parts of the country.

In the conventional sense and application, the design studio has become a process of *knowledge transfer without new knowledge construction*, thus becoming as threatening as a cloning process. Teaching is transmitting knowledge but how far this higher education is relevant to the community and economy is not clear as the assuming of roles by the tutor does not facilitate student's quest to sharpen his/her own way of thinking. The tutor, without preparing the grounds for the student to find solutions, gives solutions himself/herself. The design teaching as such has become a non-research based education, heavily shaped by an embedded epistemology and social relationships that are often irrelevant to the said community and economy.

If we are to reform the design studio, in which students learn by doing, to educate architects with diverse skills, one has to note its capacity as an experimental laboratory. At the Faculty of Architecture, University of Moratuwa, we use the studio as the primary tool to teach design with added features, such as learning critiques, peer critiques, design workshops, lectures, and peer discussions. This is a response to our observation of the degradation of diversity in the design coursework. We have tested the new tool in which the student's work is discussed by teachers as well as his/her colleagues for an extended time. This revised mode of design studio may put immense pressure on students to come up with more rationalized solutions-rather than satisfying his/her tutor since now s/he is to defend against a larger crowd. In addition, the student is expected to philosophically-underpin his/her solutions thus questioning the process of making decisions rather than the solutions in order to defend among the peers. As a result, knowledge construction seems to take place, education dominating enculturation. At the same time, the power structure maintained in the studio is notably changed thus shattering the hidden dynamics that silences the student.

Learning critiques, which also act as a continuous

assessment of the design work, notes the identified shortcomings of the design studio as they are more than mere design studio. The workshops draw supporting knowledge on the specialization in design development. The peer discussions and critiques as well as group work provide the students with knowledge and confidence. As a whole these steps facilitate the process that turns the student into a self-critique of his/her own judgments. We find a notable improvement in their intension to develop an own design process. This research was carried out to scale the success or otherwise of these tools in order to further develop our way of improving the design studio- the mostly tested tool to educate future architects.

CRITICAL PEDAGOGY

Giroux (1993:81) notes that pedagogy is central to any political practice that takes up questions of how individuals learn, how knowledge is produced, and how the subject positions are constructed. In this context, pedagogical practice refers to forms of cultural productions that are inextricably historical and political. This assumption means a wider context of culture and society, and at the same time, empowering individuals of diverse backgrounds, achieving the development of human capacities and social betterment. Our very reason to fancy the critical pedagogy lies in its potential to empowering the student. The educationist shall understand the particular background of the student, thus bringing the cultural evolution of the student in to the centre of discussion, in order to direct the particular knowledge construction and to understand the particular knowledge transfer. This is becoming rather difficult in the context of student population representing a wider cross section of the society³. A design studio that promotes group work facilitates the formation of peers, thus opening up a forum for the students to identify their own values and appreciate others'. As such, this prepares the grounds for a broader pedagogical tool that assists the development of a design process,

3 The difference in the value systems among our students at the University of Moratuwa is rather wide as the gaps between rural and urban are rather great in the developing world.

over design solutions by bringing the evolved value systems into the centre of decision making.

Critical pedagogy is shaped by different schools of thought. These can be categorized in to two different approaches in order to clarify the distinctive nature of critical pedagogy. One is to look at how educational theories relate themselves to the wider socio-cultural context in terms of doing research and what the research is about. The other is to categorize the approaches to see the different educational theories posit the researcher in relation to the object of the research. The education shall adopt the student to the *world*, not just as a *good citizen* but more as a *critical citizen*: who has the ability to critically assess the status quo as well as the self disposition in that status quo to contribute towards its transformation. The design studio of guild-training, in which the tutor dominates the thinking process of students, may not successfully nurture the critical citizen. The particular notion that design teaching means informing the students how the tutor designs him/herself does not support the knowledge construction for failing to grasp the said wider socio-cultural context. The student may become a clone of the teacher and his/her designed built spaces will be rather inconceivable even for him/herself since the student, being forced to accept an *assumed-culture* in the process of enculturation, leaving behind his/her own way of diversifying architectural space.

Some critical pedagogues are concerned of the social vision in education, while the others are interested in specific pedagogical contexts and their instructional practices. Once this is applied in Sri Lanka, where gaps between teacher and student are rather significant, developing a practice that facilitates the empowerment of students is vital. Sole practical engagement in the individual and collective struggle for emancipation and transformation is not sufficient for this purpose. In an architecture school where we deal with a social enterprise, theory and practice play a key and an interdependent role. The educationists shall thus be informed of the

individual and the student-society both, and without the transformation of the both the knowledge construction may not take place. The design studio of one-to-one teaching hence shall be supported by group tutoring in which the tutor becomes a member of the group to facilitate this transformation. The critical pedagogy becomes highly illustrative with this respect and goes on to discuss the need to empower the student through education.

By looking at the epistemological foundation and view of the world that they construct is another way of looking at the present-day educational theories. There are three different approaches, concerning the knower and the known that can be distinguished as positivistic, interpretive, and critical. The positivistic views the world as *out there*, thus demanding the knower to gain objective knowledge; the knower is separated from the known. The interpretive approach argues that what we see about the world depends on how we look at the world, and as such strengthening the links between the knower and the known. The critical theory notes that both positivistic and interpretive fail to take into account that all research is based on a certain set of values, and therefore it may reinforce or undermine the status quo. The critical theory demands the research on education and pedagogical practices to be of self-reflective of its own presumptions, to have a moral imperative, to assess knowledge in its own context in which it is produced, and to be aware of its potential contribution to the transformation of the society towards a greater justice and emancipation. It is clear that the critical educational theory is committed to emancipatory transformation and social action, not only to categories facts. A critical educationist is therefore engaged in a *praxis* in which we take responsibility for history and for a vision of the world⁴. An educationist who follows the critical theory supports empowerment of each student. The peer discussions allowing the student to mingle with his/her colleagues as well as with the tutor without a strict power structure facilitates the building of self-confidence in the student.

4 Mc Laren & Hammer, 1989:50

Critical pedagogy also argues that educational theory and practice must take a definite stance against oppression, inequality, and injustice in the society. We encounter different issues in Sri Lanka with the student intake is increasingly becoming non-urban yet their architectural education discourses are more urban-oriented. They may be aware of their architectural heritage but, at the university, they are trained to value these from an alien point of view, which may be called *universal significance*. These students may not have had any firsthand experience of the built spaces they are required to design at the school. As a result, they look up to the tutor who assumes the role of the knower. The tutor, thus becoming a mentor rather than a facilitator as the field is totally unknown to the student, may not be benefited through teaching either. The students would not expect him/her to know anything new, and therefore the tutor is hardly challenged by the encounter with the student. Education seems to have lost its primary intension - knowledge construction⁵.

Our premeditated system makes the tutors to be somewhat critical pedagogues who are ready to learn too. As Eble (1988:9) notes, "Learning and Teaching are constantly interchanging activities. One learns by teaching; one cannot teach except by constantly learning". The design studio run by these tutors assimilate the students into the new society without challenging the students' own socio-cultural backgrounds and forcing them to accept the one that is claimed by the tutor as suitable for him/her to practice the profession. In these design studios the students learn to tackle the oppression, inequality and injustice. Their voices are heard, and their abilities to critically look at the world that they are about to enter are strengthened. This has resulted in a subtle power structure that allows the knowledge construction in both tutor and student. This improved strength to look at the status quo critically lays the foundation for the

facilitation of more creative and diversified architects.

EMPOWERING THE STUDENT

The critical theory notes the role of the school as producing and reproducing the status quo of culture and society. The question of how we constitute ourselves as human beings is central to the theoretical discussion of critical pedagogy. If modernism saw constituting ourselves through the acts of will alone, critical pedagogy informed by postmodernism, sees that human beings are partly constituted by their consciousness and partly by the conditions which are outside their consciousness⁶. Although the structural determinants are understood to have a significant role in an individual's life by limiting and shaping human action, an individual's task is not to passively adapt to the status quo. Among the tasks of critical pedagogy is to increase our understanding of how the self is constituted and to develop a critical language that enables us to both identify and create ourselves as active subjects in history and distinguish between our real needs and the manufactured desire⁷. The design studio should be improved to facilitate the tutor to become a critical pedagogue, who facilitates the aforementioned transformation.

Critical pedagogy recognizes that the empowerment of the oppressed as essential. Our challenge has been finding ways and means of empowering the different expressions of students, who may necessarily of different races or ethnicities but of more delicate social and cultural differences. As such, the tutor may not clearly understand the different cultural capital at his/her dispose. This is why we also discussed this issue with the tutors and time to time arrange seminars and discussions among them of design teaching. For example, we often discuss the size of a design tutoring team, time period, and the form of tutoring- mostly based on a continuous assessment basis⁸.

5 Many former tutors who quit design tutoring confessed to the fact that there were slim chances for their development, and that they were basically bored with teaching the same thing for years.

6 Mc Laren & Hammer 1989:49

7 *Ibid* p.49

8 The course book that is given to the tutors at the beginning of the academic year details out the breakdown of the continuous assessment.

An educationist of critical pedagogy would ensure the non-existence of oppression. As such, s/he understands the external as well as internal oppression, and how they shape social situations and communicative interactions. The most significant problem had been the backwardness of the students resulted by their lack of knowledge of the subject that is largely urban oriented. In Sri Lanka, where about 40% of the population lives in urban areas, our student population is largely rural⁹. As the teacher often pretends to represent urban and cultured in terms of his/her behavior or language or the appreciated value system as urban, the lack of knowledge of the discourse prevents the students from participating in discussions. The students tend to believe or forced to believe that they attend the design studio to receive knowledge from the tutor who knows everything. Our recent improvements find alternatives to this one-way traffic of knowledge through peer reviews, and group works. This also generates the feeling that there are opportunities to express their views so that there is no oppression. The opportunities given to the students to present their assignments and precedent studies in the class steadily strengthen their self confidence. This empowerment of the students, without losing their socio-cultural views and their venturing into a new era of their life, allows them to be as innovative as they want to be¹⁰.

It is important to note that the moral imperative of critical pedagogy is also a motif in discussion about the position, possibilities and responsibilities of an individual within the school. Our research data establishes that the oppression can be tackled through class room arrangements and through means of discussions among smaller groups. We also have observed that the group assignments bringing better results than the individual assignments. These new techniques did surface a wider array of diversity of opinions among students, thus preparing the grounds for the resurrection of mystique of creativity in architecture. Our test results suggest that the tutors who practice such group classes are often

popular among the students, and these students perform well. More importantly, the tutors have informed that they enjoy the design studio of this nature as they are forced learn more and more new things. On contrary, those students of the design studios that are dominated by tutors often lack self confidence and do not perform well at the examinations and afterwards. In addition, these tutors also find it hard to continue with their teaching assignments as they find it more or less like a dead-end.

If the tutor is ready to accept the existence of diversities and to appreciate the fact that the knowledge base is changing with the socio-cultural diversification, the empowerment could be easily accomplished. The issue would be the balance of power rather than completely surrendering the teacher's role as the catalyst of student empowering. The traditional transmission of knowledge or the pedagogy of disconnection is based on fundamental divisions of the elements: actors, processes and contexts. The school and the student are often disconnected from the world. What the student learns is predefined before the pedagogical interaction begins. The student's past, background, values, needs, etc. may not have any relevance. In this pedagogy of disconnection, the student is mostly uprooted from his/ her self in order to be *cultured* to become an architect. In the conventional one-way flow of knowledge, the disconnection between the actors is not only evident but also determined. Here, the student is not empowered at all but just given a knowledge which may not be relevant to his aspirations.

Critical pedagogy defines an alternative approach- the pedagogy of belonging. It is characterized by the connection between central activities, actors and contexts. School is seen as an integral part of culture and society. The student has a voice of his own, continuously evolved with his maturing. The school belongs to the world, student's past and future to him/her and the mutual communication makes

9 This situation has aggravated at the University of Moratuwa with more and more students joining from rural schools.

10 Empowerment of the self without regard to the transformation of those social structures which shape the very lineaments of the self is not empowerment at all writes Mc Laren (1988:76).

the student belonging to pedagogical interaction as an active agent. Our attempt has been developing a closer relationship in which both the teacher and the student as active partners in knowledge construction and transfer. This alternative approach will assist empowering both partners through educating each other.

EDUCATION AND SOCIETY

The key difference between traditional and critical educational theories is in their understanding of the relationship between education and society. Education is an agent of social and cultural reproduction. *Reproduction theory* is concerned with the processes through which existing social structures maintain and reproduce themselves. The main concern of the theory of reproduction is in how dominant classes are able to reproduce existing power relations in an unjust and unequal society¹¹. The idea of reproduction is based on the observation that educational research is not value-neutral activities, and therefore do not promote value-neutral knowledge. Hence the knowledge transferred represents the dominant society. The two main domains of the theories of reproduction are social reproduction that is concerned with the relationship between schooling and capitalist society in terms of the consequences of schooling, and cultural reproduction that deals with the school curricular and practices as a cultural field which mediates to reproduce class culture¹². Importantly, one's belief in producing an architect through a guild culture or through enculturation is the essential area re-emphasized by the critical theory. Our intensions have been to use the design studio as a key for the reproduction based on the cultural capital possessed by the student. We have directly dealt with the existing power structure of the design studio so that the student society becomes more vibrant and diversified. The strengthened student society has allowed the student to grow on his/her own, or develop his/her own design process.

The *Production Theory* on the other hand, recognizes the role of the school in social and cultural production. The theory does not see this process as solely determined by material and ideological structures, and therefore without the possibility for transformation by human action. This transformation is called social and cultural production. As the human beings are not passive subjects but can resist and accommodate themselves in a dialectical relationship to dominant structures, we find the fostering of individual self allowing sharing knowledge among students and teachers. The attempts to accommodate the power of each individual human agent: his / her self-consciousness, critique and action, brings better results in terms of rising enthusiasm among the students and the diverse qualities of their designs. In addition, we have also noted the growing confidence among the students, thus improving their capabilities of gaining the practical training and securing jobs. Their ability to make the correct judgments with regards to improving knowledge itself is a witness to the success of the paradigm shift in our architectural education.

Giroux (1983: 18) believes that it is not only the structure which determines us, but also that we, as agents, are capable of transforming the structure. The school, according to him, is the site where the struggle over production and reproduction takes place, and the power of human activity and human knowledge as both a product of and force in the shaping of social reality. Following his contribution in the name of border pedagogy, we find the means of producing heterogeneous and complex sphere of design teaching. Since these borders are more cultural and social than physical, the role of the teacher becomes clearer and constructive thus letting the students crossing over to other realms. In a Sinhalese-Buddhist dominated student population, we promote border crossing as our intension of demarcating the borders is to encourage critically understanding of the

11 Giroux 1981: 13

12 Giroux, 1983:86

cultural codes of others. The border crossing allows a better assimilation of the student to the world thus turning them into better-equipped professionals. Our attempts is to change the positioning of the student and teacher within the design studio, long-critiques in which students engage in peer reviewing, and group assignments have been introduced to reinterpret the power struggle in the design studio with much success.

CONCLUSIONS: MAKING OF A REFLECTIVE PRACTITIONER

It is obvious that design is a problem solving process. the designer has to be equipped with concurrent knowledge to address the assigned problems with an open mind. Training in an architecture programme through studio can help build an appreciative attitude.

The book *Reflective Practitioner* by Schon (1983) started a lively debate on architectural pedagogy. He argues that the common instrumental understanding of the professional knowledge is that general principles are applied to solve specific problems. However, it is difficult to describe the wide range of activities that a professional is involved in within this instrumental definition. It is not adequate for describing how professionals actually process and use their knowledge in a context that is inherently instable and not ideally organized. The lack of research in the field of architecture is the other concern, with the means of knowledge construction becoming rather uncertain. One may thus argue that the design studio can easily be the site of knowledge construction and transfer. We note that it is essential to reinterpret the design studio as a site of equal partnership of students and teachers to achieve this goal, thus empowering the student at the same time. The change of location of teacher and students as well as engaging in some projects together, the teacher could inspire the student but not necessarily mentoring.

Also, the gaps between the concept of professional knowledge and actual competencies required of practitioners in the field can be bridged up through such a reinterpretation. The

teacher of the design studio thus cannot be a pure academic, but more like an all-rounder in cricketing terms. The role of the educationist could then change towards the making the so-called reflective practitioner, who would quickly adapt to the situation using his/her own shared knowledge. This quality of the educationist, who brings his/her own experience as a practitioner, would be the force of inspiring and as such transferring knowledge in learning-by-doing.

The relevant professional knowledge is including something to enable an architect to be reflective in indeterminate zone of practice in an effective way. Schon argues that these can be ideally learned in a 'practicum', which is a setting where students learn by doing projects that stimulate to a certain extent the real-world practice. For Schon, the tradition of architectural studio is an example of epistemology and pedagogy which demonstrates the substance of his theory of reflective practice. Since architecture is a profession rooted in the artistry of designing, a competence all professionals shall possess, the best place for the training of the reflective practitioner or the practitioner who reflects-in-action is the design studio. The pedagogy of learning-by-doing in the design studio facilitates the best possible context for this type of training. The need to understand the power struggle and to modify the existing one-way learning system may be changed to face the uncertainty and the unpredictability of the world- thus enabling the student to reflect-in-action.

The day we understand our role more as a curator of a flower bed, watering, fertilizing and taking care of the plants, and appreciating their flowering, rather than fixing our own flower on those plants, the mystique of architecture could be resurrected. The addition of new features has been a result of this way of thinking. We have witnessed an empowered student body, development of diverse design process, and more creative designs.

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ARCHITECTURAL EDUCATION IN MIMAR SINAN FINE ARTS UNIVERSITY IN GLOBALIZING TURKEY

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ABSTRACT

Due to the changing parameters of global economy and information technologies within the last two decades, both life and architecture are increasingly becoming multi-actored, more complex and instable¹. Accordingly, the need for redefinition of the profession has emerged. Global and continental economy based organisations, essentially enabling free movement of services internationally, gave rise to discussions on change and transformation in architectural discourse and education. The topics were professional practice, provision of services and the way they were applied, as well as improvement of profession in terms of the quality of life. International architectural organizations carried on discussions and published the consequent agreements and recommendations².

This article aims at examining the reflections of these changes in the concepts of architectural education, within the framework of the international agreements and programmes, due to the EU membership process in particular, in the Department of Architecture, Faculty of

Architecture, Mimar Sinan Fine Arts University - MSGSU, the oldest architecture school in Turkey. Although the processes of change have not been completed yet, in order to survey the perception of changes and the level of awareness, questionnaires were conducted with 100 architecture students and 40 academics of the Department of Architecture in MSGSU.

CHANGING ARCHITECTURAL EDUCATION IN EU AND INFLUENCES IN GLOBALIZING TURKEY

Global Changes, EU Membership Process of Turkey and Architectural Education

The first global process affecting Turkey, is 'The General Agreement on Trade in Services-GATS'³, carried out by World Trade Organization-WTO and the second is the 'European Union-EU' Process⁴. Following the EU process in a more effective and technical way is easier than GATS⁵. The restrictiveness of the EU regulations started a very dynamic process in member countries, recent members, candidates and those in

- 1 CAE-Conseil des Architectes Europeens-Documents de reference lors de L'Assemblee Generale de Novembre 2003, Brussels, via Dengiz, N., Tercan A., Kuruc A., 'Virtual and Physical Realms Creating a Joint Studio Environment', Architectural Education Forum 3, Global Architectural Education Area, 15-17.11.2006, ITU, published in Arkitekt, 2006/6, p.47.
- 2 Tagmat, T., AB'de Mimarlik Alanini Ilgilendiren Güncel Konular, Belgeler 8, TMMOB Mimarlar Odasi Belgeler Bülteni, Kasim 2006, Recommended Guidelines for the UIA Accord on Recommended International Standards of Professionalism in Architectural Practice, http://www.uia-architectes.org/image/PDF/UIA-Accord%20full_def.pdf, 12.12.2008, http://www.mimarlarodasi.org.tr/UIKDocs/architecture_practice.pdf, 12.12.2008, Architecture & Quality of Life ACE Policy Book, <http://www.mimarlarodasi.org.tr/UIKDocs/policybook.pdf>, 12.12.2008, ACE Strategy-Political Agenda, <http://www.mimarlarodasi.org.tr/UIKDocs/politicalagenda.pdf>, 12.12.2008.
- 3 15.04.1994/ The Turkish National Assembly, Official Gazette dated 25.02.1995 no: 22213 via Tagmat, T., AB'de Mimarlik Alanini Ilgilendiren Güncel Konular, Belgeler 8, TMMOB Mimarlar Odasi Belgeler Bülteni, Kasim 2006.
- 4 Accession Negotiations of Turkey have been launched on October 3, 2005 with the adoption of the ' by the Council of the European Union. The ' lasted about a year from October 20, 2005 until October 13, 2006. <http://www.abgs.gov.tr/index.php?p=37&l=2>, 12.12.2008.
- 5 WTO brings frameworks, while EU sets up a law system. http://www.wto.org/english/tratop_e/serv_e/serv_e.htm, 20.12.2008, http://europa.eu/scadplus/scad_en.htm, 20.12.2008.

harmonization process. Globalization in trade of services and the customs union protocol⁶ with the EU makes Turkey's partnership process irreversible and the continuity of the harmonization of the legislation seems to be unavoidable⁷.

These changes have officially influenced the architectural education in Turkey mainly in two directions. The first was the governmental procedures mainly due to the EU membership process of Turkey; the EU directives on professions and education forced the change. The second was the recommendations of the Bologna Process, the collectivization process of higher education in Europe⁸. Both of them accessed to the higher education institutions in Turkey through the regulations of the Presidential Council of Higher Education of the Republic of Turkey-YOK⁹. As an important part of the change, civil initiatives were very active in Turkey, aiming at being closely involved in the process, in order to moderate the influences of the rapid change

and direct it for the benefits of the architectural discourse and education.

Effects of the Bologna Process and Impacts on Turkey

In 2000, EU chose an articulate target known as Lisbon Strategy¹⁰ aiming at making the European Union the most competitive knowledge-based economy in the world within ten years. This development brought new directive recommendations, which directly influence the movement of architectural services and therefore education within Europe¹¹.

The developments influencing architectural education continued with the goal of 'European Higher Education Area-EHEA'¹² that became concrete with 'Sorbonne Declaration' in 1998¹³. In 1999, the process started with and named after 'Bologna Declaration' with the intention of completing the collectivisation in education by 2010¹⁴. Aims of Bologna Process were: (1999).

- 6 According to the protocol dated 23.11.1970, customs union was predetermined.
http://www.belgenet.com/arsiv/ab/ab_kprotokol.html, 20.12.2008. Customs union was completed on 01.01.1996 in EU, and it means passing to the third stage of Ankara Agreement of 1963. <http://www.ikv.org.tr/gumrubirliigi.php>, 20.12.2008.
- 7 Tagmat, T., AB'de Mimarlik Alanini Ilgilendiren Güncel Konular, Belgeler 8, TMMOB Mimarlar Odasy Belgeler Bülteni, Kasym 2006.
- 8 This meant the transformation of European universities, in order to prepare them for competition, considering globalisation in higher education that accelerated in the Age of the Internet that brings interactive relations with the rest of the world. In fact, the Bologna Process is the European part of the globalisation in higher education. Luc E. Weber, James J. Duderstadt, The Globalization of Higher Education, Economica, France, 2008, Black Sea Universities Network- There are similar efforts all over the world in order not be left out of the competition. As an example, the BSUN was founded in order to develop 'educational, scientific, and cultural cooperation and exchanges among the universities of Black Sea Economic Cooperation-BSEC (1992) Member States and other institutions with similar concern.' At the aims and purposes of BSUN 'harmonization, comparable conditions and compatibility of systems of university management' are mentioned. That means compatibility with European Higher Education Area-EHEA, because some of BSEC members are EU members or candidates.
http://www.bsun.org/index.php?option=com_content&task=section&id=4&Itemid=27, 17.02.2009.
- 9 YOK was founded in 1981, when Turkey was adopting the global economical system.
<http://www.yok.gov.tr/hakkinda/hakkinda.htm>, 06.12.2008.
- 10 http://europa.eu/scadplus/glossary/lisbon_strategy_en.htm, 15.12.2008.
- 11 Directive 2006/123/EC on Services in the Internal Market (SIM) Guide, published on EU Official Gazette on 12.12.2006, via Tagmat, T., AB'de Mimarlik Alanini Ilgilendiren Güncel Konular, Belgeler 8, TMMOB Mimarlar Odasy Belgeler Bülteni, Kasym 2006, http://www.ace-cae.org/MemberN/Downloadcae/tool/SIMGuide_Ver6_1.pdf, 15.12.2008.
- 12 <http://www.ond.vlaanderen.be/hogeronderwijs/bologna/>, 18.12.2008.
- 13 Sorbonne Joint Declaration Joint declaration on harmonisation of the architecture of the European higher education system by the four Ministers in charge for France, Germany, Italy and the United Kingdom Paris, the Sorbonne, May 25 1998 http://www.ond.vlaanderen.be/hogeronderwijs/bologna/documents/MDC/SORBONNE_DECLARATION1.pdf, 14.12.2008
- 14 It was signed by the ministers of education of sixteen member countries of EU, in 1999. The Bologna Declaration of 19 June 1999 Joint declaration of the European Ministers of Education
http://www.ond.vlaanderen.be/hogeronderwijs/bologna/documents/MDC/BOLOGNA_DECLARATION1.pdf, 12.12.2008.

- 'Developing easily readable and comparable degrees,
- Adoption of a system essentially based on two main cycles, undergraduate and graduate,
- Establishing of a system of credits,
- Promotion of mobility,
- Promotion of European co-operation in quality assurance and
- Promotion of the necessary European dimensions in higher education'¹⁵.

The Process has continued with additional criteria in following meetings. As is the case in international processes, the Bologna effort continued and transformed into subsequent declarations and diplomatic protocols.

Aiming at the involvement of the universities at each step in the Process, European Universities

Association - EUA, provides the fundamental information and analysis of Trends in Higher Education in Europe to be discussed upon in biennial ministerial meetings¹⁶. The effects on architectural education can be followed in publications of European Association for Architectural Education - EAAE¹⁷ and European Network of Heads of Schools of Architecture - ENHSA¹⁸.

In 2001, two years after signing the Bologna Declaration, Turkey became full member of the Bologna Process¹⁹. The Process has operated in international, national and institutional levels. The international level includes biennial ministerial meetings, and Bologna Follow-up Group -BFUG²⁰ works, and Bologna seminars. In Turkey, the national level consists of YOK, National Agency²¹, and the National Team of Bologna Promoters²². The institutional level refers to the institutions of higher education²³.

- 15 www.bologna.gov.tr/Bologna/documents/files/990719BOLOGNA_DECLARATION.pdf, 14.12.2008.
- 16 <http://www.eua.be>, 01.12.2008. At the moment, it is a matter of curiosity how the change of members of both European Parliament and EUA in 2009 will affect the developments.
- 17 <http://www.eaae.be/eaae2/info.php?mainType=about&help=about>, 20.12.2008.
- 18 Two architecture schools are partners of ENHSA. <http://www.enhsa.net/schools.htm>, 20.12.2008. <http://www.enhsa.net/profil.htm>, 20.12.2008.
- 19 <http://www.ond.vlaanderen.be/hogeronderwijs/bologna/links/Turkey.htm>, 14.12.2008.
- 20 BFUG was established in 2001 in Prague. http://www.ond.vlaanderen.be/hogeronderwijs/bologna/BolognaSeminars/documents/Athens_FinalReport.pdf, 21.01.2009.
- 21 T.R. Prime ministerial State Planning Organization, Centre for European Union Education and Youth Programmes, National Agency of Turkey, which was founded in 2002, runs and controls EU programmes such as Lifetime Learning Programme. Lifetime Learning Programme include Comenius(Preschool, primary school, and high school), Erasmus(higher education), Junior Technical College, Leonardo da Vinci(Professional education), Grundtvig(adult education) projects. In every country in the EU, national agencies were constituted in order to introduce EO education and youth programmes, www.ua.gov.tr/index.cfm?action=detay&yayinID=47573EF7ADCDE893DFFFECCD93D3076D25116.
- 22 In 2003, in Berlin, National Teams of Bologna Promoters were set up as subgroups of European Team of Bologna Promoters, intoffice.uludag.edu.tr/docs/bologna/20071207_bursa_giris_sunumu.ppt, 14.12.2008, Implementation of the Bologna Process should be overseen by National Teams of Bologna Promoters which is a semi-governmental body, The National Team of Bologna Promoters consists of Senior Academics, (Vice-) Rectors, Ministry Representative and Student Representatives, who are successful in introducing the Bologna principles in their institutions. <http://www.bologna.msmt.cz/files/B2B050204RestrictedCall.pdf>, 14.12.2008, The members of NTBP of Turkey are promoted by YOK, with approval of the European Council, intoffice.uludag.edu.tr/docs/bologna/20071207_bursa_giris_sunumu.ppt, 14.12.2008, The team is supported by T.R. Prime ministerial Secretariat General for European Union Affairs. Since 2004, The National Team of Bologna Promoters has organized area, city meetings, university visits, national conferences, prepared introductory documents and a report following an evaluation conference and established the Bologna Process website, <http://www.bologna.gov.tr/>, 14.12.2008.
- 23 Mehmet Durman presentation at 28 April 2008 Bologna Process National Evaluation Meeting, <http://www.bologna.gov.tr/index.cfm?action=detay&id=94&publish=131&lang=TR>, 20.12.2008, Commission for Academic Evaluation and Quality Improvement in Higher Education - YODEK was founded due to the YOK 'Regulation on Academic Evaluation and Quality Improvement in the Institutions of Higher Education' which was based on the 'Higher Education Law' (dated 04.11.198, no: 2547), and published in the Official Gazette dated 20.09.2005, no: 25942, <http://www.yok.gov.tr/mevzuat/yenimevzuat.htm>, 30.12.2008.

In parallel with the developments, YOK started to establish new regulations for reforming higher education institutions in 2001. YOK also produced relevant regulations and founded the Student Councils and the National Student Council of Higher Education Institutions²⁴ and Higher Education Academic Evaluation and Quality Improvement Commission -YODEK²⁵. Higher Education National Qualifications Framework Commission²⁶ was again set by YOK.

EU Directives and Eleven Criteria of Architecture in Turkey

As in the Bologna Process, the regulations of YOK are the route of the EU directives to the universities in Turkey, after being transposed into the national law. Recognition of professional qualifications is the most significant step towards the collectivisation of EHEA. Directive on Recognition of Professional Qualifications (2005/36/EC)²⁷ which was replaced with the Architects' Directive (85/384/CEE)²⁸ is a general directive for 402 professional areas and includes

special regulations for seven professions including architecture. This directive aimed at a common measurable valuation system between EU members, and architecture is included in the automatic recognition²⁹. In both directives, it is agreed that architectural education should meet the eleven criteria, which was also stated in the UIA/UNESCO Charter for Architectural Education dated 1996 and revised in 2004³⁰. That means the primary objective of architectural education is developing professionals who can cope with the conflicts between different necessities³¹. It also determines the common minimum duration of architectural education.

In Turkey, YOK completed the 'Regulations for Determination of the Minimum Conditions of Education for the Programmes of Doctors of Medicine, Nurses, Midwives, Dental Practitioners, Veterinary Surgeons, Pharmacists and Architects' in 2008³². In terms of architectural education, having included the eleven criteria, these regulations mostly overlap the Directive on Recognition of Professional Qualifications (2005/36/EC):

- 24 'Regulations on Student Councils of Higher Education Institutions and the National Student Council of Higher Education Institutions' published in the Official Gazette dated 20.09.2005, no: 25942, <http://www.yok.gov.tr/mevzuat/yenimevzuat.htm>, 31.12.2008, <http://www.mevzuat.adalet.gov.tr/html/23369.html>, 31.12.2008.
- 25 'Regulations on Academic Evaluation and Quality Improvement Commission in Higher Education Institutions' published in the Official Gazette dated 20.09.2005no:25942, <http://www.yodek.org.tr/>, 01.02.2009, <http://www.yok.gov.tr/mevzuat/yenimevzuat.htm>, 02.01.2009.
- 26 Turkey joined Lisbon Recognition Act in 2004 and established and carried out it in 2007. In parallel with this development, the process of establishing a national qualifications framework was started by a commission set by YOK in 2006. http://www.yok.gov.tr/duyuru/tyuyc_ara_raporu.pdf, 04.02.2009.
- 27 Architects' Directive of 1985 became invalid when Qualifications Directive was published in EU Official Gazette on 07.09. 2005. DIRECTIVE 2005/36/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 7 September 2005 on the recognition of professional qualifications, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:255:0022:0142:EN:PDF>, 12.12.2008.
- 28 Architects' Directive was COUNCIL DIRECTIVE of 10 June 1985 on the mutual recognition of diplomas, certificates and other evidence of formal qualifications in architecture, including measures to facilitate the effective exercise of the right of establishment and freedom to provide services (85/384/CEE), http://www.ace-cae.org/MemberN/Content/EN/download/links/85_384_EEC.pdf, 12.12.2008.
- 29 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:255:0022:0142:EN:PDF>, 12.12.2008.
- 30 <http://www.mimarlarodasi.org.tr/UIKDocs/charterforarchitecturaleducation.pdf>, 01.12.2008.
- 31 The Directive 2005/36/EC of the European Parliament and of the Council, of 7 September 2005 on the recognition of professional qualifications (Text with EEA relevance), Article 46. <http://www.mimarlarodasi.org.tr/index.cfm?sayfa=Ubelge&sub=17>, 12.12.2008.
- 32 Prime Ministerial Secretariat General for European Union Affairs-EUSG (Prime ministerial Secretariat General for European Union Affairs-EUSG is a governmental body, which has been functioning within T.R. Ministry of Foreign Affairs, follows the harmonization process. Approved by the Turkish Grand National Assembly on 27 June 2000 and published in the Official Gazette No.24099 on 4 July 2000, <http://www.abgs.gov.tr/index.php?p=289&l=1>, 14.12.2008.) has transferred the 'Draft of Law on Formation and Recognition of Professional Qualifications' to the related ministry and it was discussed on the university level, yet, it was not legitimized. Instead, the relevant YÖK regulations were published in the Official Gazette dated 02.02.2008 No. 26775.

**THE DIRECTIVE 2005/36/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
OF 7 September 2005 ON THE RECOGNITION OF PROFESSIONAL QUALIFICATIONS
(Text with EEA relevance), Article 46:**

1. Training as an architect shall comprise a total of at least four years of full-time study or six years of study, at least three years of which on a full-time basis, at a university or comparable teaching institution. The training must lead to successful completion of a university-level examination. That training, which must be of university level, and of which architecture is the principal component, must maintain a balance between theoretical and practical aspects of architectural training and guarantee the acquisition of the following knowledge and skills:
- (a) ability to create architectural designs that satisfy both aesthetic and technical requirements;
30.9.2005 EN Official Journal of the European Union L 255/47
 - (b) adequate knowledge of the history and theories of architecture and the related arts, technologies and human sciences;
 - (c) knowledge of the fine arts as an influence on the quality of architectural design;
 - (d) adequate knowledge of urban design, planning and the skills involved in the planning process;
 - (e) understanding of the relationship between people and buildings, and between buildings and their environment, and of the need to relate buildings and the spaces between them to human needs and scale;
 - (f) understanding of the profession of architecture and the role of the architect in society, in particular in preparing briefs that take account of social factors;
 - (g) understanding of the methods of investigation and preparation of the brief for a design project;
 - (h) understanding of the structural design, constructional and engineering problems associated with building design;
 - (i) adequate knowledge of physical problems and technologies and of the function of buildings so as to provide them with internal conditions of comfort and protection against the climate;
 - (j) the necessary design skills to meet building users' requirements within the constraints imposed by cost factors and building regulations;
 - (k) adequate knowledge of the industries, organisations, regulations and procedures involved in translating design concepts into buildings and integrating plans into overall planning.
2. The knowledge and skills listed in paragraph 1 may be amended in accordance with the procedure referred to in Article 58(2) with a view to adapting them to scientific and technical progress. Such updates must not entail, for any Member State, any amendment of existing legislative principles relating to the structure of professions as regards training and the conditions of access by natural persons.'

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- (1) It is prerequisite to be graduated from high school at minimum, to be able to be accepted to the architectural education.
- (2) Architectural education covers a full time university education for four years at minimum.
- (3) The architects graduated from an architecture programme should have:
- An ability to create architectural designs that satisfy both aesthetic and technical requirements.
 - An adequate knowledge of the history and theories of architecture and the related arts, technologies and human sciences.
 - A knowledge of the fine arts as an influence on the quality of architectural design.
 - an adequate knowledge of urban design, planning and the skills involved in the planning process.
 - An understanding of the relationship between people and buildings, and between buildings and their environment, and of the need to relate buildings and the spaces between them to human needs and scale.
 - An understanding of the profession of architecture and the role of the architect in society, in particular in preparing briefs that take account of social factors.
 - An understanding of the methods of investigation and preparation of the brief for a design project.
 - An understanding of the structural design, constructional and engineering problems associated with building design.
 - An adequate knowledge of physical problems

and technologies and of the function of buildings so as to provide them with internal conditions of comfort and protection against the climate.

- The necessary design skills to meet building users' requirements within the constraints imposed by cost factors and building regulations.
- An adequate knowledge of the industries, organisations, regulations and procedures involved in translating design concepts into buildings and integrating plans into overall planning.³³

Civil Initiatives in Architectural Education in Turkey via Regulations of YÖK

Architectural education institutions and the Chamber of Architects, developed strategies for the duration and the quality of architectural education, by improving their relations with organizations such as Architects' Council of Europe-ACE, International Union of Architects-UIA, European Association for Architectural Education-EAAE, European Network of Heads of Schools of Architecture-ENHSA, and partly with students' contribution³⁴. This process brought up biennial assemblies of 'Architecture and Education', which was held four times since 2001³⁵. These assemblies helped accumulating knowledge and therefore creating a basis for the formation of some institutions.

Preparations started in 2000, setting up five work groups: Graduate and Postgraduate Education in Architecture, Accreditation in Architecture, Educational Practice and

33 The institutional bodies which was in charge of examining the 'Draft for Determination and Recognition of Professional Qualifications', four deans, MOBBIG, MIDEKON, The Chamber of Architects of Turkey, agreed to add four more criteria specific to Turkey. Yet, even before the draft was legitimized, YÖK authorized the regulation on 02.02.2008, without the four additional criteria.

Neslihan Dostoglu, 'Mimarlık Lisans ve Lisansüstü Eğitimi', Mimarlık ve Eğitim Kurultayı IV, Aralık 2007, Ankara, p.84.

34 Neslihan Dostoglu, 'Mimarlık Lisans ve Lisansüstü Eğitimi', Mimarlık ve Eğitim Kurultayı IV, Aralık 2007, Ankara, p.84.

35 The fifth Assembly will be held towards the end of 2009.

Professional Practice, Continuous Professional Development, Professional Practice within the EU and GATS Processes. As a result, the Architectural Accrediting Board – MIAK³⁶ was founded and the 'Draft for Architectural Policy of Turkey' was produced³⁷. The Communication Group of Heads of Schools of Architecture – MOBBIG³⁸ and Chamber of Architects of Turkey together supported the formations of the Architectural Accrediting Board - MİYAK and the Council of Deans of Faculties of Architecture - MİDEKONM³⁹.

ARCHITECTURAL EDUCATION IN MIMAR SINAN FINE ARTS UNIVERSITY AND EU STANDARDS

Brief History of Architectural Education in MSGSU

In 1882, 'Mekteb-i Sanayi-i Nefise-i Şahane' was founded by Osman Hamdi Bey, who was an art historian, an archaeologist, a museologist

and a painter. The education started in 1883. The institution was the first art (painting and sculpture) and architecture school in western means. In 1886 it was handed over to the Ministry of Education from the Ministry of Commerce. The architectural education was adopted from the French Beaux Arts system. As both teachers and students were few in number, the master and students system functioned efficiently⁴⁰. The architectural education had a four year programme⁴¹. The first year programme consisted of simple plan and project drawings and modelling. The programme continued with projects in Roman and Greek styles; third year Renaissance and the last year Turkish architecture⁴². In 1914, The Girls' School (İnas Sanayi-i Nefise Mektebi) was opened without the architecture department⁴³.

In 1926, three years after the foundation of the republic, girls and boys started to study together. In 1928, it became Academy of Fine Arts⁴⁴.

36 <http://www.miak.org/>, 20.12.2008.

37 <http://www.mimarlarodasi.org.tr/UIKDocs/turkey.pdf>, 02. 01.2009.

38 MOBBIG was first held on 15.03.1996 <http://mobbig.emu.edu.tr/toplantilar/mobbig4/main.htm>, 02.12.2008.

39 MİDEKON was founded by YÖK and first held on 07.07.2006 and its actual objective was exchanging of ideas among faculties of architecture on management, education, research issues of the disciplines within the discourse of architecture (architecture, design, planning), considering the developments in EU and in global scale www.arkitera.com/g59-midekon---mimarlik-fakultesi-dekanlari-konseyi, html, [midekon.org/](http://www.midekon.org/), 08.12.2008, <http://www.arkitera.com/g59-midekon---mimarlik-fakultesi-dekanlari-konseyi.html?year=&aID=589>, 08.12.2008, Neslihan Dostoglu, 'Mimarlık Lisans ve Lisansüstü Eğitimi', Mimarlık ve Eğitim Kurultayı IV, Aralık 2007, Ankara, pp. 83-84. Yet, MİDEKON is not as active and effective as MOBBIG in the process of change.

The five deans charged by YÖK received opinions of MOBBIG, MİDEKON and MIAK, while preparing the report on aforementioned 'Draft of Law on Formation and Recognition of Professional Qualifications'. The fourth assembly had the theme 'Continuity and Change' and simultaneous efforts for the database of Architectural Education in Turkey were started by surveying the architectural schools, Bülend Tuna, The Head of the Chamber of Architects of Turkey, Mimarlık ve Eğitim Kurultayı IV, Aralık 2007, Ankara, pp.18-21.

40 When the education started, there were eight teachers and twenty one students in all the departments. <http://www.msgsu.edu.tr/msu/pages/16.aspx>, 18.12.2008. Kemal Söylemezoglu stated that in 1930-31, they were 13 classmates accepted to study architecture in the 'Academy'. 'Güzel Sanatlar Akademisinden "Anılar ve Görüşler"', Prof. Orhan Pahinler, MSÜ Mimarlık Fakültesi Yayını No: 14, 1990, pp.12-13. Asım Mutlu mentions that they were only 9 students accepted in 1931. Ibid, p.18.

41 According to the 1911 Regulations, the duration of architectural education was four years. Cezar, M., 'Güzel Sanatlar Akademisi'nden 100. Yılda Mimar Sinan Üniversitesi'ne', "Güzel Sanatlar Eğitiminde 100 Yıl", Mimar Sinan Üniversitesi Yayını no: 3, 1983, p.20.

42 Ebru Özeke Tökmeci, presentation in meeting 2 'Mimarlık Eğitiminde Ulusal Gelişmeler ve Gelecek'(National Developments and Future in Architectural Education), Mimarlık ve Eğitim Kurultayı II December 2003, Kurultay Kitabı, pp.48-49.

43 <http://www.msgsu.edu.tr/msu/pages/16.aspx>, 29.12.2008.

44 <http://www.msgsu.edu.tr/msu/pages/16.aspx>, 29.12.2008.

Professor Ernest Egli invited by the Ministry of Public Works, started to teach in the 'Academy' once a week, then four days a week⁴⁵. He realised a revolutionary change in the curriculum by adopting a central European system⁴⁶. Architectural education became five years; first two years for the technical base for design. Sedat Hakkı Eldem's 'Construction Project' at the second year determined the character of the education as 'construction based'. Second two year period was for specialisation and architectural projects; and the last year for diploma project. This curriculum introduced the modernist ideology instead of the academic classicism; following the seminars of national architecture with Sedat Hakkı Eldem since 1934, in 1940's a new architectural style occurred⁴⁷. From 1938, the graduates of architecture were given the degree of 'Master of Architect'⁴⁸.

In 1936-1937, academic staff was renewed with teachers leaving Nazi Germany and famous

architects such as Bruno Taut and Robert Vorhölzer were appointed to be the head of the architecture department⁴⁹. All the invited teachers worked for the 'Architectural Application Office' (Mimarî Tatbikat Bürosu) which was founded by the Ministry of Education in 1937⁵⁰. The fire on 01.04.1948 destroyed many important documents and collections. The Academy could turn back to its own building again, in 1953⁵¹.

In 1957, all departments were semi-autonomous and heads of departments were elected⁵². In 1959, on initiative of the Minister of Education, the head of the Academy also started to be determined by the faculty⁵³. According to the regulations dated 1959⁵⁴, in 1960 'Architectural Application Project Studio' (Tatbikat Projesi Atölyesi) was established with participation of the tutors from all chairs. Unique to the 'Academy', the Architectural Application Project has been a synthesis of the units of construction and building design in the first year study⁵⁵. It

45 M. Cezar mentions the 'Architectural Application Office' which was founded in 1937. Cezar, M., 'Güzel Sanatlar Akademisi'nden 100. Yılda Mimar Sinan Üniversitesi'ne', "Güzel Sanatlar Egitiminde 100 Yıl", Mimar Sinan Üniversitesi Yayını no: 3, 1983, p.24.

46 <http://www.msgsu.edu.tr/msu/pages/16.aspx>, 29.12.2008, Kemalî Söylemezoglu describes this new system as a Turkish model oriented from Vienna Technical University. 'Güzel Sanatlar Akademisinden "Anılar ve Görüşler"', Prof. Orhan Bahinler, MSÜ Mimarlık Fakültesi Yayını No: 14, 1990, p.15.

47 This style was to be called 'Second National Architecture' <http://www.msgsu.edu.tr/msu/pages/16.aspx>, 29.12.2008, pp 49-50.

48 Cezar, M., 'Güzel Sanatlar Akademisi'nden 100. Yılda Mimar Sinan Üniversitesi'ne', "Güzel Sanatlar Eđitiminde 100 Yıl", Mimar Sinan Üniversitesi Yayını no: 3, 1983, p.25.

49 Ibid., http://www.msgsu.edu.tr/data/infopack/info_yeni/rektorluk.pdf, 29.12.2008, p.23.

50 There was the project office of the Ministry of Education in the 'Academy', and its chiefs worked there also taught. This office was responsible for preparing projects for educational buildings for the newly founded republic and contributed to the education as well as supplying jobs for new graduates. 'Güzel Sanatlar Akademisinden "Anılar ve Görüşler"', Prof. Orhan Bahinler, MSÜ Mimarlık Fakültesi Yayını No: 14, 1990, pp.11, 22, 13. While Prof. Egli was mentioned to be the head of the 'School Architecture Office' (Mektep Mimarisi Bürosu) of the Ministry of Education within the 'Academy' in the website of Ministry of Culture:

<http://www.eskisehirkulturturizm.gov.tr/BelgeGoster.aspx?F6E10F8892433CFF1279C58074C31537B39AF7D896DAF648>, 26.01.2009, M. Cezar mentions the 'Architectural Application Office' which was founded in 1937. Cezar, M., 'Güzel Sanatlar Akademisi'nden 100. Yılda Mimar Sinan Üniversitesi'ne', "Güzel Sanatlar Egitiminde 100 Yıl", Mimar Sinan Üniversitesi Yayını no: 3, 1983, pp.29-30.

51 http://www.msgsu.edu.tr/data/infopack/info_yeni/rektorluk.pdf, 29.12.2008, p.23.

52 Interview with Prof. Orhan Bahinler, the last Head of Istanbul State Academy of Fine Arts and the first rector of Mimar Sinan University, 27.01.2009.

53 Interview with Prof. Orhan Bahinler, the last Head of Istanbul State Academy of Fine Arts and the first rector of Mimar Sinan University, 27.01.2009, Cezar, M., 'Güzel Sanatlar Akademisi'nden 100. Yılda Mimar Sinan Üniversitesi'ne', "Güzel Sanatlar Egitiminde 100 Yıl", Mimar Sinan Üniversitesi Yayını no: 3, 1983, p.37.

54 Interview with Prof. Orhan Bahinler, the last Head of Istanbul State Academy of Fine Arts and the first rector of Mimar Sinan University, 27.01.2009.

55 Yüksek Mimarlık Bölümü Öğretim Kılavuzu 1960-1961 Öğretim Yılı, Güzel Sanatlar Akademisi İstanbul Publication, September 1960, Tophane, İstanbul, p.57.

was in the second year, of Construction Project that was introduced. The Architectural Application Project was the prerequisite for passing to the second phase of education and starting architectural projects. This emphasized 'Design' beside 'Construction' in terms of the character of architectural education.

In 1969, with legitimization of 'Law of State Fine Arts Academies' no: 1172, it gained scientific autonomy and the name became Istanbul State Academy of Fine Arts. Consequently, the curriculum of architectural education was reformed, based on research and student participation, without changing its three stage character⁵⁶. This reform was paralleled with 1968 student movements. Accordingly, student representatives started to join the senate meetings and many units were introduced due to the students' requirements. Meanwhile, Basic Design Education Chair was founded for serving all departments. Architecture students started to share the Basic Design Studio with fine arts students in their first year. Another important unit for design training was Architectural Basic Design (Mesleki Temel Egitim) at the second year. In 1971, the 'Academy' was bounded up the newly founded Ministry of Culture⁵⁷. In 1976, Urban Planning Research Institute and Turkish Architecture Research and Restoration Institute were founded within the Department of Architecture⁵⁸.

Due to the tradition of the 'Academy', the

teachers were talented and experienced architects who did professional practice and won competitions. The academic staff did not feel completed to do research for academic promotion⁵⁹. The 'Academy' was perceived only as an educational institution, and research was not considered together with it. Moreover, in accordance with the Law no: 1172, PhD or Proficiency in Art became compulsory for the teachers⁶⁰. After the preparation and approval of the relevant regulations, the assistants started to do PhD in 1974. The same law also limited the professional practice of the teachers with the condition of part-time work and that resulted in less professional work by the teachers.

In 1981, according to the 'Higher Education Law' no: 2547⁶¹, the Presidential Council of Higher Education of the Republic of Turkey-YÖK was founded. YÖK established the three-cycle higher education model (Bachelor, Master and Doctorate degrees of /4+2+4 years respectively to be carried out and centralised higher education by combining various former higher education institutions as universities. Accordingly, IDGSA became a university with the name Mimar Sinan University. Within departments, instead of the chair system, divisions and subdivisions were founded. By YÖK all Turkish universities became connected to the President. Starting from 1983 the duration of education in MSU became four years and the number of the students accepted to the Department of Architecture was doubled where the students were divided into two classes⁶².

56 According to Prof. Asim Mutlu, in time, the adopted central European system of architectural education developed in accordance with the needs of Turkey. 'Güzel Sanatlar Akademisinden "Anılar ve Görüşler"', Prof. Orhan Bahinler, MSÜ Mimarlık Fakültesi Yayını No: 14, 1990, p.55.

57 Interview with Prof. Orhan Bahinler, the last Head of Istanbul State Academy of Fine Arts and the first rector of Mimar Sinan University, 27.01.2009.

58 http://www.msgsu.edu.tr/msu/ana_duyuru/strateji/durum_analizi1.pdf, 28.12.2008.

59 Academic staff in IDGSA used to get their rises owing to the duration of their work in the institution. Assistants were called then teacher candidates, and they could be sent abroad for personal development and a book following this experience with giving a lecture would make them teachers, of course in addition to their professional experiences and success. It was also possible to become a teacher with accumulation of projects proving their talents and experience. According to the law no:1412, state workers could be sent abroad for their personal developments. Interview with Prof. Orhan Bahinler, the last Head of Istanbul State Academy of Fine Arts and the first rector of Mimar Sinan University, 27.01.2009.

60 Ibid, Cezar, M., 'Güzel Sanatlar Akademisi'nden 100. Yılda Mimar Sinan Üniversitesi'ne', 'Güzel Sanatlar Eğitiminde 100 Yıl', Mimar Sinan Üniversitesi Yayını no: 3, 1983, p.40.

61 Accepted on 04.11.1981 and published in the Official Gazette dated to 06.11.1981 no: 17506, <http://www.yok.gov.tr/mevzuat/yenimevzuat.htm>, 12.01.2009.

62 <http://www.msgsu.edu.tr/msu/pages/16.aspx>, 20.12.2008.

Meanwhile Law no: 2547 also introduced minor and double major programme possibilities.

While decreasing the duration of education to four years, preparing a new curriculum for the new system was never considered. Rather, efforts were made to fit the material of the five year curriculum into four years, by increasing the class hours and reducing hours of the units. The resulting curriculum was very dense and heavy. The first two years were still for technical base for design (losing Basic Design at the first year), second part was for the projects (one year was cut off from the projects), but some units were attended synchronically with the diploma project. Due to decreasing number of architectural projects, the diploma projects were started to be guided by a jury twice a term. In order to maintain the barrage application of the former system, prerequisites were used. These caused too much delay for graduation.

Science and Technology Institute and Social Sciences Institute were also founded in 1982, to carry out the postgraduate (Masters and Doctorate/Proficiency in Art degrees) programmes and MSc programmes were opened.

In order to let the academic staff do professional work and support the university budget the Revolving Fund was founded⁶³. Yet, it does not work efficiently as there is no regular work and its contribution to the budget is very low in MSGSU.

After Turkey became the member of the Bologna Process, in 2002, according to the instructions of the newly founded National Agency, a work group was set to understand the process and learn the procedure. This group later on became International Relations Office – ULİK⁶⁴ to manage the Socrates-Erasmus Programme funds. The new MSU Regulations on Graduate and

Postgraduate Education, completed in 2002⁶⁵, introduced the local credit system and electives. The credit system meant another change in the curriculum.

Only a few units were appropriate for the semester system and the rest were annual. Many of them were divided into two terms as sequential units; the first was prerequisite for the second. Some units were compressed to half time. Electives as compulsory requirement for the credit system took the place of the shrinking units. Again, the possibilities of the new system were not studied in advance and changing the curriculum in the last moment caused many problems. The possibility of minor programmes within the new regulations has not been utilized yet.

In 2004, MSGSU became a member of EUA by Erasmus University Charter and accordingly started to use EU exchange programmes within the Bologna Process. The name of Mimar Sinan University was changed as Mimar Sinan Fine Arts University on 22 Jan 2004. The renewed 2005 MSGSU Regulations on Graduate and Postgraduate Education⁶⁶ introduced double major programme, however it has not started yet. In 2006, The Strategy Development Committee was founded. The MSGSU Academic Evaluation and Quality Development Committee-ADEK and the Publication Committee were founded in 2007. MSGSU joined Erasmus University Charter Extended in 2007.

In 2008, the curriculum of the architectural education was changed again, when 'Regulations for Determination of the Minimum Conditions of Education for the Programmes of Doctors of Medicine, Nurses, Midwives, Dental Practitioners, Veterinary Surgeons, Pharmacists and Architects' of YÖK accessed to MSGSU.

63 MSGSU Regulations on Revolving Fund published in the Official Gazette dated 17.12.1984 no: 18608, <http://rega.basbakanlik.gov.tr/#>, 01.01.2009.

64 http://www.msgsu.edu.tr/msu/ana_duyuru/strateji/durum_analizi1.pdf, 28.12.2008. There is not a specific YÖK regulation describing international relations offices of universities.

65 Published in the Official Gazette dated 26.11.2002 no: 24948, 01.02.2009.

66 Published in the Official Gazette dated 02.06.2005 no: 25833, 01.02.2009.

Academic promotion conditions according to the 'Higher Education Law' no: 2547, gradually became more difficult. Consequently, in Turkey, most of the academics with PhD's are assistant professors and the number of higher degrees in general is less than expected. The new system does not allow academic promotion without research and publication. Despite the 'Academy' becoming a university, the tradition of research has not settled properly, and the number of associate professors is very low in the Department of Architecture.

How Far is Bologna Criteria Applied in MSGSU

In the Mimar Sinan Fine Arts University in the Infopack in the website, it is stated how the principles of the Bologna Process were adopted and then roughly explains how far the Bologna Criteria was achieved. While a detailed search was carried out through changing regulations, and detailed information was gained from the relevant offices, the picture has started to become clearer. Some of the criteria have been achieved, and some are on the way:

- **Easily readable and comparable degrees:** Parallel to the harmonisation process, in 2006, it was determined that the name of the department of graduator, and the degrees gained from the main branch of art or science should be written on diplomas, instead of professional titles⁶⁷. However, this created contradiction with the existing

legislation⁶⁸.

Diploma supplement, as an element of the Bologna Process, included to improve the transparency of the educational system, provides information of the quality, level, contents and the extent of the programme graduated from. In Turkish universities it is compulsory by YÖK regulations; it was planned to give diploma supplement with the graduates of 2005-2006 academic year⁶⁹. But in MSGSU such a document is only given on demand. For the sake of clarity, as for all universities in Turkey, Information Package -Infopack was published and is accessible at the university's website since 2008.

- **Adoption of a system essentially based on two main cycles, undergraduate and graduate:** The 4+2 system in practice in Turkey since 1982 was compatible with the Bologna Process⁷⁰. Accordingly, MSGSU, with the adoption of the 2/3 cycle system in 1982, had already met one of the Bologna criteria in advance. That means following the successful completion of BArch and MSc programmes, students can apply for the PhD programmes⁷¹. Recently, the Draft Report for Higher Education National Qualifications Framework, by the Higher Education National Qualifications Framework Commission and the Work Group, dated to January 2009, was sent to the universities for getting their comments by YÖK⁷².

67 In the YÖK document dated 09.02.2006 which was sent to the universities, there was the decision of the general assembly of 03.02.2006. It was stated that in some programmes the titles could not be determined by the date the diplomas were given (such as graduates of Law). Therefore, the professional practice should not be restricted by titles on the diploma in advance and it would be appropriate to write the name of the programme graduated on diplomas.

68 Presentation by Kerim Edinsel, National Team of Bologna Promoters, The Project of Application of Bologna Process in Turkey, 28.04.2008, <http://www.bologna.gov.tr/index.cfm?action=detay&id=94&publish=131&lang=TR>, 14.12.2008.

69 <http://www.yok.gov.tr/egitim/ab/ab.htm>, 10.01.2009.

70 Gülsüm Sağlamer, Member of EUA Directorate, Mimarlık ve Eğitim Kurultayı IV December 2007, Kurultay Kitabı, Ankara, p.31.

71 Erasmus University Charter 2003, European Policy Statement, <http://www.msgsu.edu.tr/msu/pages/426.aspx>, 30.12.2008.

72 The Commission of Higher Education National Qualifications Framework and the Work Group presented the first draft of NQF to the higher education institutions. The members of the commission were substituted and the Higher Education Qualifications Work Group was set to accelerate the work in 2008 and the draft report of January 2009 was sent to the universities. The Draft was prepared in accordance with Qualifications Framework for European Higher Education Area - QF-EHEA which accepted at the ministerial meeting in Bergen in 2005 and due to the decisions of London 2007 meetings. Report on Turkey Higher Education National Qualifications Framework January 2009, http://www.yok.gov.tr/duyuru/tyuyc_ara_raporu.pdf, 04.02.2009.

Yet, in Turkey, the system of 4+2 means that the four year architectural education programme is enough to gain the professional qualification due to the National Law. According to the aforementioned 'Regulations for Determination of the Minimum Conditions of Education for the Programmes of Doctors of Medicine, Nurses, Midwives, Dental Practitioners, Veterinary Surgeons, Pharmacists and Architects', the duration of architectural education is four years. Yet, the duration of architectural education is a crucial issue of discussion and most programmes focus on five year programmes both in Turkey and in Europe.

Joint Degree Programmes have not been constituted in MSGSU yet, although they are supported and expected based to the Bologna Process⁷³.

- **Establishing of a system of credits:** Application of the local credit system was started being applied in the Faculty of Architecture in 2003⁷⁴. This meant a crucial change in the curriculum as already mentioned. Universities in Turkey met on European Credit Transfer System-ECTS⁷⁵ that is, based on the studying hours of students they became members of

European University Association-EUA⁷⁶. The credit system, which has been in use since 2003, and during 2003-2004 academic year works for convertibility with ECTS were carried out. In MSGSU, the Vice Rector responsible for education is the ECTS Coordinator of the institution makes ECTS activated in the educational system⁷⁷. It is planned to replace the local credit system with ECTS. According to the extended Erasmus University Charter 2007, MSGSU promised to use ECTS as internal credit accumulation system⁷⁸, but the application has not been started yet.

- **Promotion of mobility:** Earlier on, going abroad for study or research was possible only by scholarships (State, YÖK or foreign scholarships) or on the researchers own budget. There was also a limited fund for that in MSGSU, and every year only a few academics could go abroad for a short while. Bologna Process brought additional opportunities for developing relations between European academics and students as well, that helps reinforced the shared 'European Culture'. For activating the mobility, EU has established and run Socrates (Erasmus) programme since 1997⁷⁹. In MSGSU the International Relations Office-ULIK started to carry out it

73 For the Joint Degree, YÖK has two regulations based on the Higher Education Law no: 2547: 'Regulations on establishment of Joint Degree Programmes of Higher Education Institutions with the Higher Education Institutions Abroad' published in the Official Gazette dated 28.12.2006 no: 26390 and 'Regulations on Establishment of Joint Graduate Programmes of Higher Education Institutions with Domestic Higher Education Institutions' published in the official Gazette dated: 22.02.2007 no: 26442.

74 <http://www.msgsu.edu.tr/msu/pages/16.aspx>, 30.12.2008.

75 http://www.msgsu.edu.tr/data/infopack/info_yeni/rektorluk.pdf, 25.12.2008, p. 35, As Bologna Process was a student-centred system, on demands of ESIB(European Students' Union - ESU today), The European Credit Transfer System (ECTS) was introduced as a tool within the framework of the ERASMUS/SOCRATES programme between 1988 and 1995, to enable students mobility. ECTS is based on how long time the student need to spend for the unit. <http://www.eua.be/eua/jsp/en/upload/ESIB%20Policy%20Paper%20on%20ECTS.1068808486478.pdf>, 12.12.2008.

76 EUA is the result of a merger between the Association of European Universities (CRE) and the Confederation of European Union Rectors' Conferences, which took place in Salamanca, Spain on 31 March 2001. <http://www.eua.be/about-eua>, 28.12.2008.

77 The trouble with adopting the semester and credit system was particularly the studio hours and the education of arts to define the ECTS. Apart from the dense know-how traffic to solve these problems, there had been also some other difficulties as the studying hours of the students are focused by the necessity of the ECTS system instead of focusing the hours of the lessons in the former traditional education system. Dengiz,N., Konuk,G., Ergönül,S., Öztürk,A.,: 'Academical Cooperations and Restructuring Process Of Mimar Sinan Fine Arts University ' " Letters From The Black Sea "International Journal Of The Black Sea Universities Network Vol. 8 No. 2, August 2005, s:39-41.

78 Erasmus University Charter 2007, <http://www.msgsu.edu.tr/msu/pages/426.aspx>, 30.12.2008.

79 <http://www.eua.be/not-in-menu/search/?L=0>, 23.02.2009.

in 2004. The Guideline of ULIK was constituted in 2007 and is updated within the frame of Educational Programmes of EU⁸⁰.

The Mimar Sinan Fine Arts University joined 'Erasmus University Charter – EUC' in 2004, and was qualified with 'Lifelong Learning - Erasmus University Charter Extended – EUC' covering the years 2007-2014. Development of Student Mobility, Staff Mobility and Placement, and Intensive Programmes-IP, Curriculum Development-CD, development educational programmes are aimed⁸¹. By now, about 100 bilateral agreements have

been signed with the EU higher education institutions in bachelor and master levels in the fields of science, art, and design⁸². Since 2004, student, academic staff (teaching assignment), and staff training (for administrative staff) exchange has been realized with the EU universities⁸³:

The data for surveying the number of incoming academicians is not reliable, as they do not have to get their documents registered at ULIK during their visit. Finding of a solution for this problem is expected.

Academics' Mobility by Erasmus Programme in the Department of Architecture

Year	Outgoing Academics Total	Outgoing Academics of Architecture Department	Incoming Academics Total	Incoming Academics To Architecture Department
2004-2005	12	-	?	-
2005-2006	4	1	?	2
2006-2007	18	2	?	6
2007-2008	20	7	?	4
Total	54	10	?	12

Reference: International Relations Office, MSGSU, 08.01.2009.

Architecture Students' Mobility by Erasmus Programme in MSGSU

Year	Incoming Students Total	Incoming Architecture Students	Outgoing Students Total	Outgoing Architecture Students
2004-2005	7	-	11	3
2005-2006	14	1	25	4
2006-2007	19	4	31	11
2007-2008	43	10	41	7
Total	83	15	111	25

Reference: International Relations Office, MSGSU, 08.01.2009.

80 <http://www.msgsu.edu.tr/msu/pages/51.aspx>, 30.12.2008.

81 ULIK guideline, <http://www.msgsu.edu.tr/msu/pages/51.aspx#>, 30.12.2008.

82 In this context, there are bilateral agreements with the USA, Japan, Russia, Ukraine, China, South Korea, Kosovo and Azerbaijan as well. http://www.msgsu.edu.tr/data/infopack/info_yeni/rektorluk.pdf, 25.12.2008, p. 35.

83 <http://www.msgsu.edu.tr/msu/pages/51.aspx>, 31.12.2008.

Increasing the number of the students (20% outgoing, and 50% incoming) and the academic staff (50% in both ways) exchanged, the number of the institutions in contact, and that the projects run with them by 2010 are planned⁸⁴. In order to improve the level of use of the foreign languages, apart from the compulsory foreign language courses, elective foreign language courses in advanced level were established in the MSGSU and started in 2007 fall semester⁸⁵.

The placement contract gives students the opportunity of professional practice abroad during their studies or within two years following graduation⁸⁶. However, there were no architecture students among the seven who benefited the placement in 2007-2008⁸⁷.

In 2006, 'Regulations on Student and Faculty Member Exchange Programme Among Turkish Higher Education Institutions' was established by YÖK⁸⁸. Accordingly, MSGSU made an agreement with Eskişehir Anadolu University in 2007.

- **Promotion of European co-operation in quality assurance:** The quality assessment is a crucial component of the Bologna Process⁸⁹. For a higher education institution getting accredited means providing a certain level of quality in education and attracting better students. EUA has been building up the infrastructure of the quality assurance system in higher education and even the quality assessment institutions are evaluated⁹⁰.

European Universities Association has been doing external evaluation (institutional evaluation) to the member universities on their demands. Almost all Turkish universities are EUA members and 21 universities from Turkey⁹¹ have been evaluated by now. In Turkey, the Architectural Accrediting Board-MIAK completed its first programme accreditation in 2008⁹². Before these possibilities, some architecture schools had applied for other accrediting institutions⁹³.

In MSGSU, in accordance with Higher Education Academic Evaluation and Quality

84 ULİK, Strategic Plan, <http://www.msgsu.edu.tr/msu/pages/51.aspx>, 30.12.2008.

85 http://www.msgsu.edu.tr/data/infopack/info_yeni/katalog.htm, 30.12.2008.

86 ULİK guideline, <http://www.msgsu.edu.tr/msu/pages/51.aspx>, 30.12.2008.

87 International Relations Coordination Office, MSGSU, 08.01.2009.

88 Published in the Official Gazette dated 31.03.2006 no: 26125

<http://rega.basbakanlik.gov.tr/main.aspx?home=http://rega.basbakanlik.gov.tr/eskiler/2006/03/20060331.htm&main=http://rega.basbakanlik.gov.tr/eskiler/2006/03/20060331.htm>, 20.02.2009.

89 European Association for Quality Assurance in Higher Education – ENQA is significant in the system, accrediting all these organizations with European Quality Assurance Register for Higher Education – EQAR. ENQA regulations: Article 36: 'In accordance with its broad objective to function as a policy forum developing and proposing standards, procedures and guidelines on quality assurance in the EHEA, and to maintain and develop co-operation with other appropriate European stakeholder organisations, ENQA is committed to a continuing cooperation with key European partner organisations. These include the European University Association (EUA), the European Association of Institutions in Higher Education (EURASHE), the European Students' Union (ESU), Education International (EI), Business Europe and the European Commission (EC).' <http://www.enqa.eu/files/ENQA%20regulations%20version%20260908.pdf>, 13.12.2008. <http://www.eqar.eu/about/background.html>, 20.12.2008. Members of EQAR, which was founded recently, are the four founders, ENQA, ESU, EUA and EURASHE, as well as the social partner organisations represented in the Bologna Follow-Up Group (BFUG) and European governments that have decided to support the operation of EQAR and get involved in its governance. The diverse membership of the EQAR Association is reflected in different rights and responsibilities of the different categories of members. <http://www.eqar.eu/association.html>, 20.12.2008.

90 <http://www.eua.be/quality-assurance/>, 16.02.2009.

91 <http://www.eua.be/events/iep/who-has-participated/>, 29.12.2008.

92 <http://www.miak.org/index.cfm?sayfa=okullar>, 2.1.2009.

93 For example, Istanbul Technical University, Faculty of Architecture, Department of Architecture started the accreditation process with NAAB in 2002, and the process was completed in April 2008. <http://www.arkitera.com/news.php?action=displayNewsItem&ID=28576>, 12.12.2008.

Improvement Commission-YÖDEK regulations, in 09.01.2007, the Academic Evaluation and Quality Improvement Committee – ADEK was founded. The first internal evaluation report of the institution for 2005-2006 was completed in February 2006 and it was very simple. YÖDEK produced a more detailed and clearer format for 2006-2007 reports. The third is in the process at the moment. Based on the data of 2006-2007 Self Evaluation Report the SWOT (Strong & Weak Sides, Opportunities & Threats) analysis was made, and sequential institutional improvement strategies were prepared, but MSGSU has not been ready for external evaluation yet.

There are some difficulties in MSGSU for internal evaluation. Actually, due to the obscurity of some questions, the small number of participants (the questionnaires for the self-evaluation report was done with administrative duties) and the limited knowledge of the participants about the process lowers the viability of the results⁹⁴. Counting questionnaires by hand causes over-bureaucratisation⁹⁵. Using proper software is necessary for either questionnaires, or evaluation and consequent planning works. Although the internal evaluation actually targeted the improvement of the quality of education, this process has not started yet. Yet, these processes are quite new in MSGSU, and these problems can be expected to be solved in time.

- **Promotion of the necessary European dimensions in higher education:** As already mentioned, the architectural education in the Academy was based on European models in the foundation period. At the moment, the architectural education in MSGSU has been in transition process paralleled to the European universities. According to the European Policy Statement 2003 (Erasmus University Charter), 'MSU has transformed its leading position in the national art and architectural system depending on its historical background of 120 years to a candidacy in the general, international academic platforms. It has developed new strategies and policies in order to perform and maintain its competitive role and position within the new visionary approach. The historical background of the university is fully engaged with the social, economic, and cultural developments within the national, international and European context that has been reflected in the policies of education.'⁹⁶
- **Lifelong learning**⁹⁷: Although in the university some evening courses (computing courses) or certificate programmes (certificate in education) for professionals, or public courses (courses of arts for adults or children) are provided at times, in the Department of Architecture there has been none of them. Yet, two summer schools for professionals and students were opened in Birgi and Divrigi, where working there is accepted as a part of the compulsory professional practice for architecture students⁹⁸.

94 For example, according to MSGSU Self Evaluation Report for 2006-2007, the evaluation results of Research and Application Centre results are extremely higher than expected levels, much above the faculties institutes, and the average of MSGSU, although they started to function very recently. As very few works were produced by now, some questions must have been misunderstood.

95 According to the EUA 2007 Annual Report published recently, over-bureaucratisation should be avoided in quality assessment works. http://www.eua.be/fileadmin/user_upload/files/Publications/EUA_2007_annual_report_final.pdf, p.35.

96 Erasmus University Charter 2003, European Policy Statement, <http://www.msgsu.edu.tr/msu/pages/426.aspx>, 30.12.2008.

97 European Qualifications Framework for Life Long Learning - EQF-LLL was improved by European Council and Commission decisions between 2004-2006 and officially endorsed by European Parliament and European Union Council on 23.04.2008. Report on Turkey Higher Education National Qualifications Framework January 2009, http://www.yok.gov.tr/duyuru/tyuyc_ara_raporu.pdf, 04.02.2009.

98 http://www.msgsu.edu.tr/data/infopack/info_yeni/mim_ing.pdf, 30.12.2008.

- **Participation of higher education institutions and students:** In terms of participation in the governance, Turkish universities are organised by the centralising structure of YÖK. Each subdivision is represented in a division, each division is represented in a department, each department is represented in a faculty, each faculty is represented in the senate of the university, and each university is represented at YÖK by its rector. Each has a council (Division Council, Subdivision Council, Council of Department, Council of Faculty and the Senate of University) and the participation in the governance is realised by decisions of the councils.

As Bologna Process is student-centred, the students have a crucial effect on decisions⁹⁹. Paralleled to the Process, YÖK established the 'Regulations on Student Councils of Higher Education Institutions and the National Student Council of Higher Education Institutions' in 2005¹⁰⁰. In MSGSU a student council was founded accordingly. The students elect representatives at departments, faculties and the university every year. According to the regulations, faculty representatives can be invited to the faculty council meetings when topics related to the students are being discussed. Similarly, the university representative can be invited to the senate meetings. But, these have not been realised yet.

EUA measures student participation by their level of participation in the quality assessment process. Students are supposed to participate

in four processes: Management of national bodies related to Quality Assurance; as a member of the specialist team, as an expert in decision making, in the process of external evaluation of higher education; in consultation process for external evaluation process; internal evaluation¹⁰¹. In the average of Turkey, students are considered to join three of these processes. Yet, in MSGSU, it seems that student participation is mostly limited with internal evaluation.

- **Promotion of the Attractiveness of the European Higher Education Area:** Having a website, being the first architectural school and consequent accumulation of knowledge and experience, sharing the same building with Faculty of Fine Arts and being in a central area of Istanbul situated by the sea and other institutional facilities creates an attractive setting for the Department of Architecture¹⁰². The institution has become well known by national and international activities. The objectives in the 2009-2013 strategic plans of MSGSU are determined according to the competitive university understanding of EUA and the process will go on due to the annual Action plans.
- **Establishing European Higher Education Area and European Research Area as two pillars of the knowledge base society:** The postgraduate programmes of the Department of Architecture have been carried out by Science and Technology Institute since 1982. The Architecture Division of the institute has seven MSc and

99 The West European Student Information Bureau was created in 1982, and in 1990 the name was converted to European Student Information Bureau – ESIB. In 1999, 'Bologna Declaration' gave ESIB a European arena to act, and in Prague summit in 2001, ESIB, representing the students of Europe, became an official observer in the Bologna Process. <http://www.esib.org/index.php/About%20ESU/History>, 14.12.2008 In May 2007, ESIB was renamed as ESU. <http://www.esib.org/index.php/News/news-archive/187-esib-becomes-esu>, 14.12.2008. European Architecture Students Assembly – EASA is more concerned about the profession. <http://www.easa.tk/>, 20.12.2008.

100 Published in the Official Gazette dated 20.09.2005, no: 25942 <http://www.yok.gov.tr/mevzuat/yenimevzuat.htm>, 31.12.2008, <http://www.mevzuat.adalet.gov.tr/html/23369.html>, 31.12.2008.

101 Presentation by Mehmet Durman, National Team of Bologna Promoters, The Project of Application of Bologna Process in Turkey, 28.04.2008, <http://www.bologna.gov.tr/index.cfm?action=detay&id=94&publish=131&lang=TR>, 14.12.2008.

102 ADEK, MSGSU Self Evaluation Report for 2006-2007, <http://www.msgsu.edu.tr/data/doc/ozdeger0607.pdf>, 30.12.2008., p.15.

Year	Number of the thesis completed in MSc Programmes in Architecture	Number of the thesis completed in PhD Programmes in Architecture
1997 - 2007	119	35

Reference: Science and Technology Institute, MSGSU.

six PhD programmes. The graduates of architecture are also accepted to the programmes of the Construction Engineering and the Interior Design Division.

Mimar Sinan University Research Fund was founded in 1984 due to the YÖK regulations based on the Higher Education Law no: 2547. The reformation process in the university research funds started in 1997¹⁰³. In 2001, the name was changed as Scientific Research Projects¹⁰⁴ and the Commission of Scientific Research Projects was organized. Each unit

is represented in the commission which is administered by a vice rector and the Institutes of Science and Technology, and Social Sciences are members as of right¹⁰⁵. At the moment, Research Funds of Scientific Research Institution of Turkey-TÜBİTAK, Science Academy of Turkey-TÜBA, T.R. Prime Ministerial State Planning Organization-DPT have been used by a few people in MSGSU. Moreover, the budget for research projects in MSGSU is limited, and does not grow. The number of research projects approved in last five years is below:

Year	Number of Scientific Research Projects Approved in MSGSU	Number of Scientific Research Projects in Faculty of Architecture	Number of Scientific Research Projects in Department of Architecture
2004		9	9
2005	16	5	2
2006	15	7	7
2007	16	6	6
2008	11	2	2

Reference: Commission of Scientific Research Projects, MSGSU.

In MSGSU, there are twelve Research and Practice Centres connected to the rector, apart from the Commission of Scientific Research Projects. Architect Sinan Research and Practice Centre (founded in 1984) and the Construction Research and Practice Centre of Technology (founded in 2008) are related to architecture.

Supporting the academic staff to attend scientific conventions and increasing the number of research projects by getting the budget developed are planned¹⁰⁶. Yet, the budget for research in the institution has

been small and not growing because of low income of revolving fund.

In terms of the Bologna Criteria, in the Bologna Evaluation Report of EUA, in 2005, in Bergen, the level Turkey achieved was graded, in average, as good; and in 2007, in London, as very good. MSGSU Self Evaluation Report 2007 implies that, in terms of appropriation for the Bologna Criteria, MSGSU needs to improve research and quality assessment works. As the processes are new, and the speed is accelerating, the problems of the transition period can be solved in MSGSU.

103 <http://www.msgsu.edu.tr/msu/pages/35.aspx>, 12.12.2008.

104 By the announcement published in the Official Gazette dated 03.07.2001, no: 24451.

105 <http://www.msgsu.edu.tr/msu/pages/35.aspx>, 12.12.2008.

106 Strategic Plan, http://www.msgsu.edu.tr/msu/ana_duyuru/strateji/plan1.pdf, 9.01.2009.

Eleven Criteria of Architecture in MSGSU

In 2008 spring, YÖK regulations on minimum educational standards of seven professions including architecture accessed MSGSU, Faculty of Architecture, Department of Architecture. In May, the Head of Department organized some meetings for discussing the planned changes in the curriculum. In fact, the eleven criteria were mostly compatible with the actual curriculum. However, in the department, the adequacy and the appropriation of the curriculum and the units with the eleven criteria were not evaluated systematically in order to determine the weak, strong and unique characteristics of the programme.

In July 2008, in Department of Architecture, the new curriculum was already in force. Number of the electives was not enough, and room was made in the curriculum again by shrinking the compulsory units. In order to create space for the elective units, the percentage of compulsory lectures was reduced in the curriculum. While the ratio of the compulsory and the elective units within the curriculum were re-arranged, the eleven criteria were not considered due to the lack of a detailed analysis and evaluation of the existing situation. Although it could be an opportunity to rise the discussion on how to substitute the design based character of education that was crippled by the changes since 1982, it was almost seen as a mere operation for opening space for the electives. As mentioned before, this revision undermined Architectural Application Project and Urban

Design Unit which are very important components of architectural education. According to the eleven criteria, the units of social contents seem to be needed improvement at first sight. However, this revision did not provide a solution. In consideration, with the mission and vision of the department, a new formation with the goal of accreditation, through evaluating the actual curriculum, will help the improvement of the institution. Within the limits of this article, to survey the level of awareness of the eleven criteria and the other changes in MSGSU, some questionnaires were realised.

THE PERCEPTION OF THE CHANGE

In order to make a survey of the perception of the changes realized in the architectural education programme in MSGSU, a questionnaire was run with 40 academics and 100 students, in December 2008. The first students who replied the questionnaire were registered to MSGSU in 2006, and therefore experienced some of the changes during their study, with ages varied between 19-28.

Almost the half of the academic staff who replied the questionnaire was with PhD (60%), and the rest (40%) were the assistants writing their PhD dissertations who involve in the education sector. 28% of 40 academics have been involved were actively doing, or recently done administrative duties. The graduation years vary between 1956 and 2003, and most of them were graduates of MSU (IDGSA)¹⁰⁷.

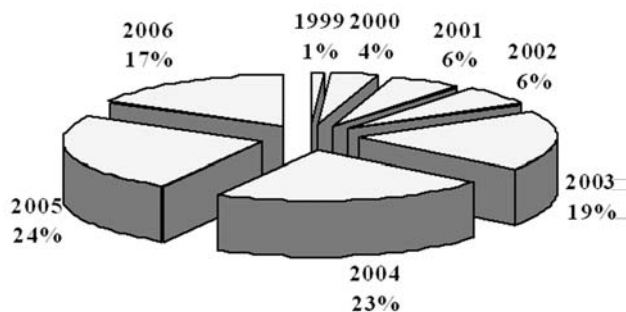


Fig-1: Registration years of the students who joined the survey.

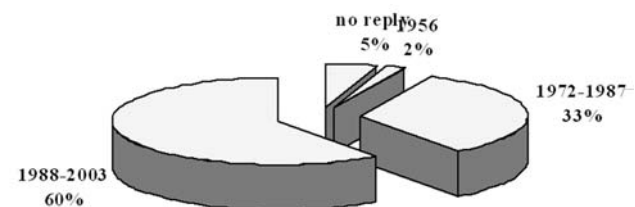


Fig-2:

¹⁰⁷ The person who graduated in 1956, studied architecture in Istanbul Technical University and the duration of architectural education there was five years then.

The graduation years of the Academic Staff are grouped according to the changes in the educational system in Turkey. The centralization of the academic system in Turkey changed the educational programmes in 1983, and the first graduates would be in 1987.

When the replies of the first two questions were considered, it is observed that both students (88%) and the academics (95%) think that the four year architectural education programme is

not enough for gaining professional qualification and the duration is not efficient (students' 88%, academics' 93%). 33% of academics and 32% of students think that the duration of architectural education should be five years, and 30% of academics and 25% of students believe that it should be six years (4+2). It means that both students and the academics think that the duration of architectural education should be at least five years.

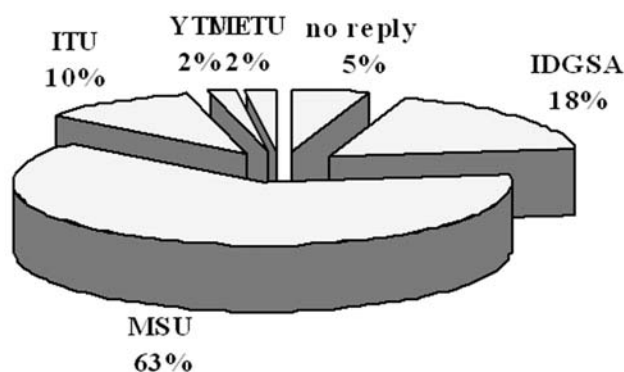


Fig-3: The universities which academics were graduated.

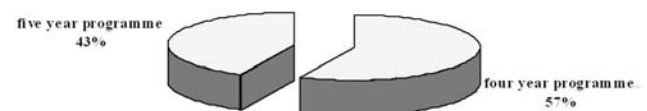


Fig-4: The duration of the programmes which academics were graduated.

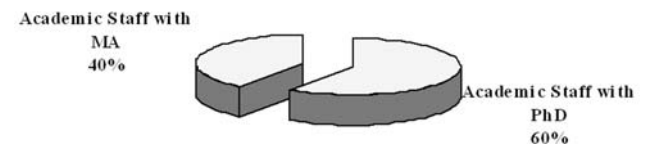


Fig-5: The programmes which academics completed.

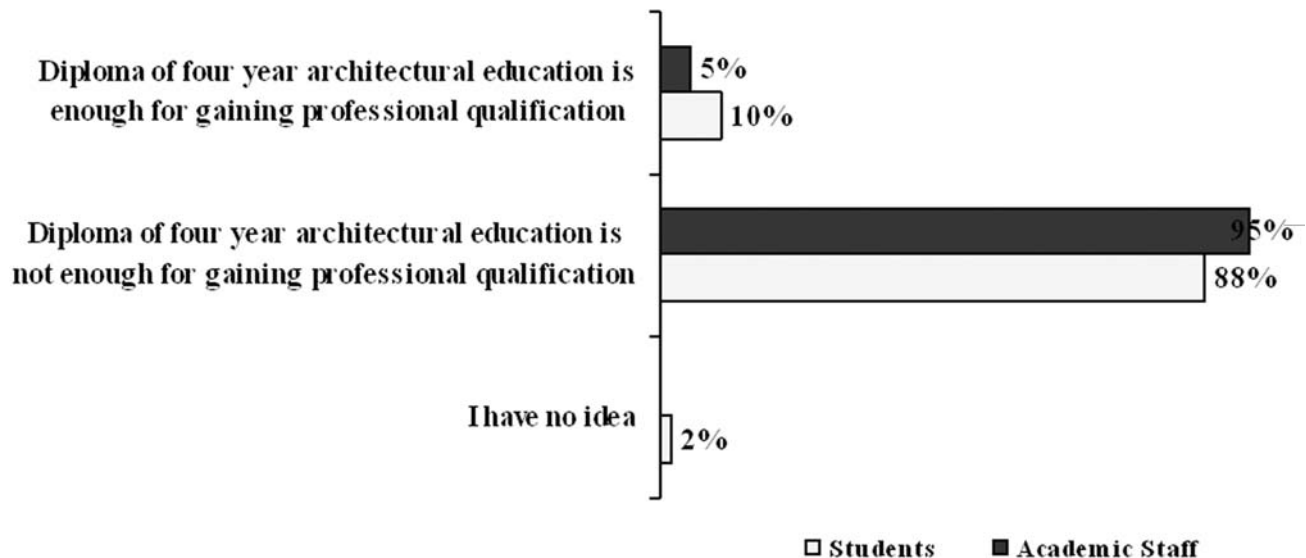


Fig-6:

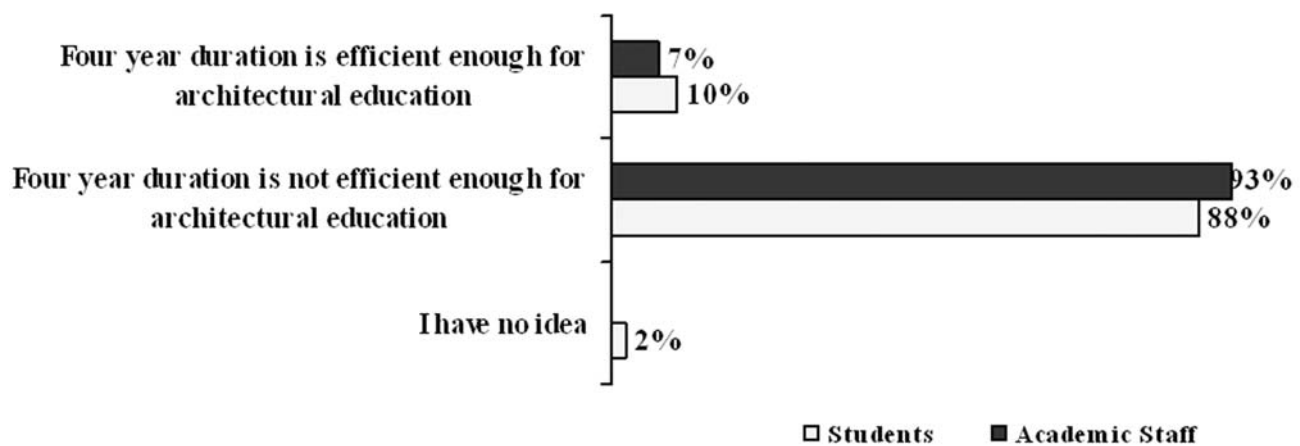


Fig-7:

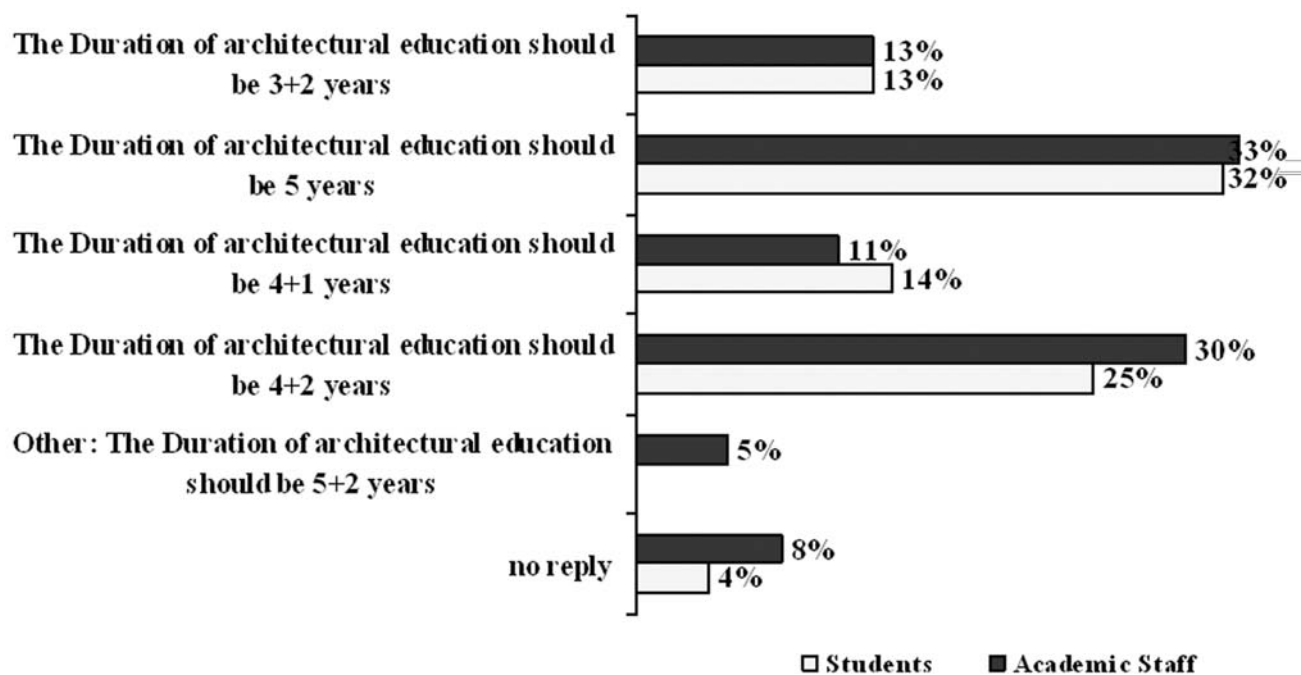


Fig-8:

Majority of both students (85%) and academics (81%) agree that the architectural education should be in accordance with international standards.

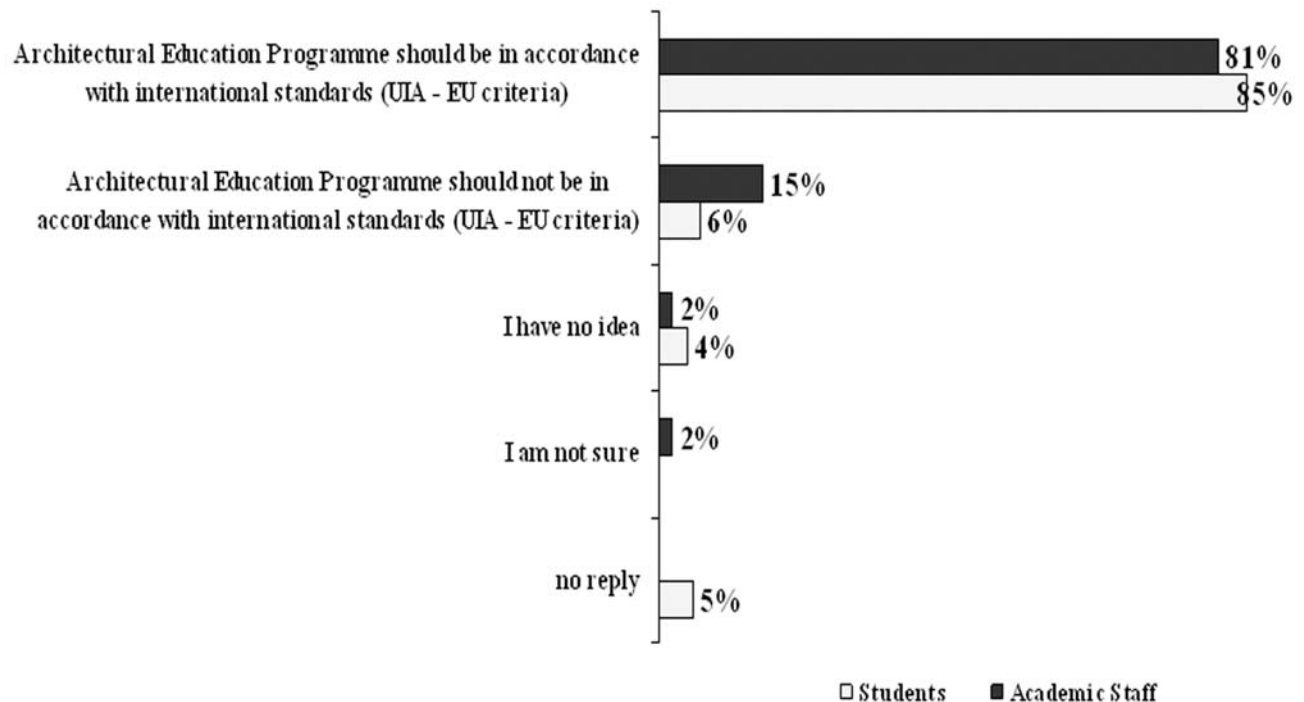


Fig-9:

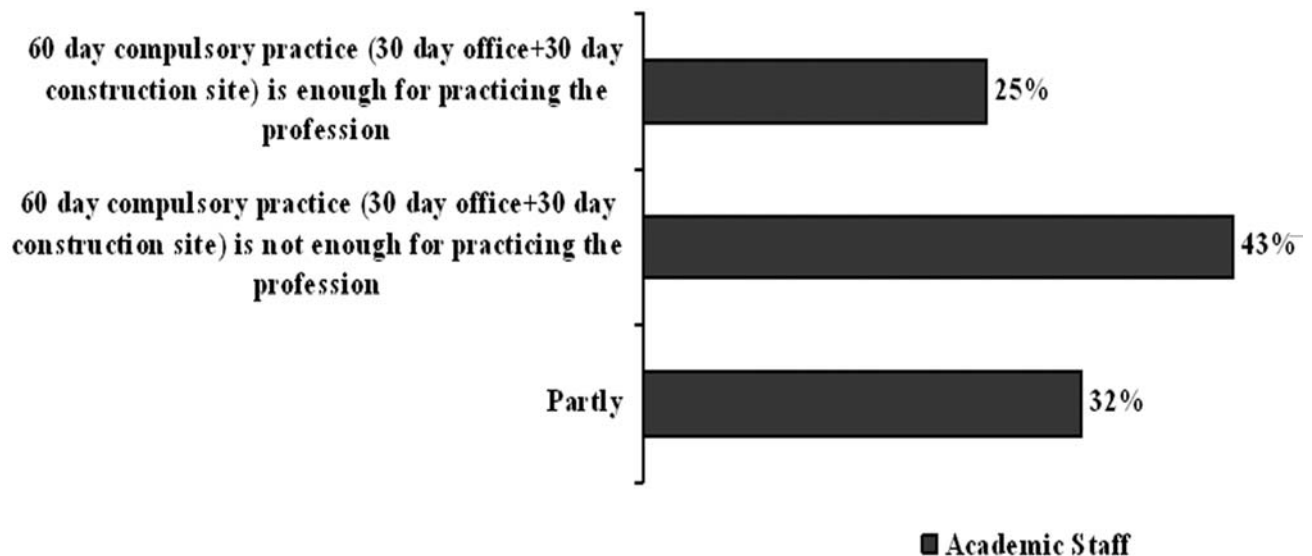


Fig-10:

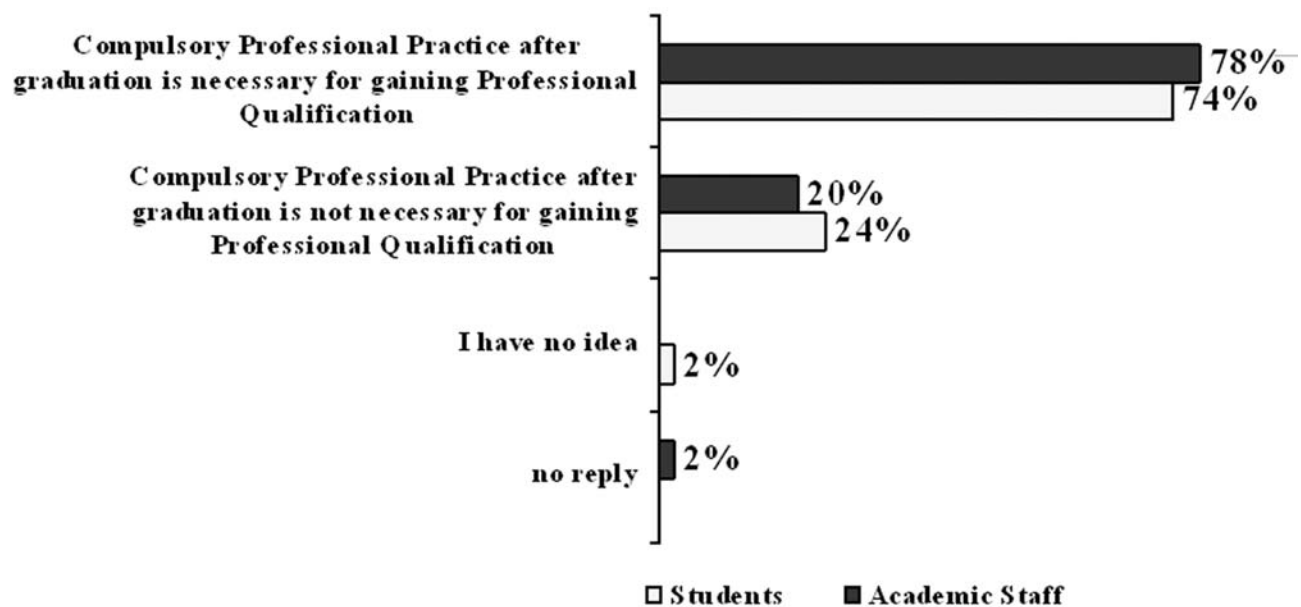


Fig-11:

About the inefficiency of the 60 day compulsory practice (30 day office+30 day construction site) during the education, 43% of academics agree, and 32% find it partly enough. The compulsory professional practice after graduation is believed to be necessary by 78% of academics and 74% of students. Most of them (61% academics and 54% students) think that the duration of it should be one year.

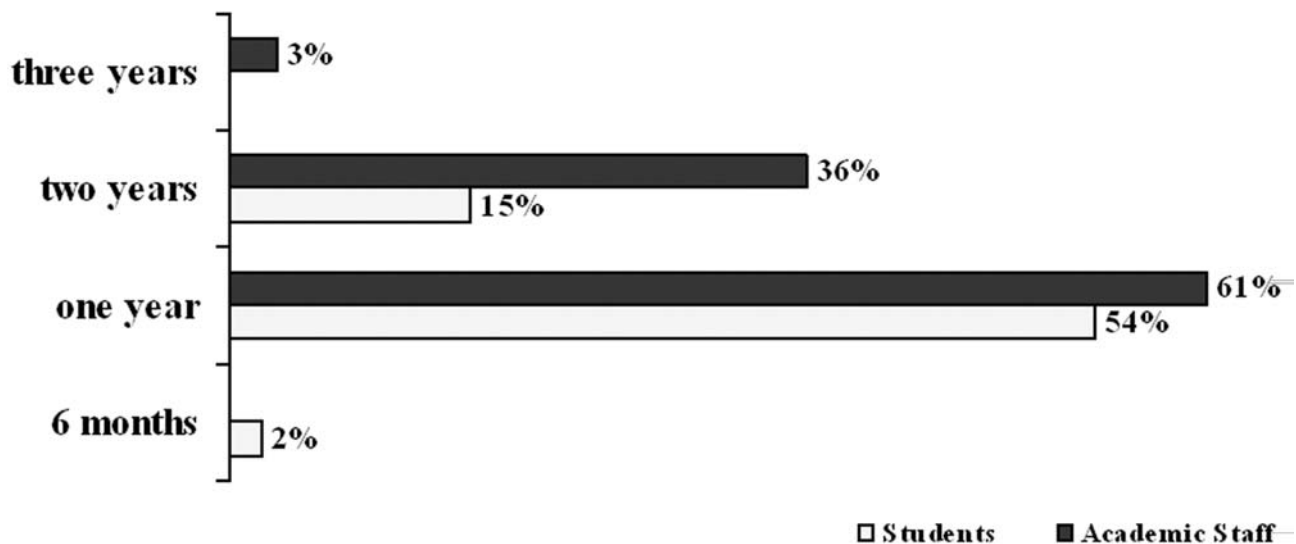


Fig-12:

Almost all the students (94%) are aware of the changes in educational programme (Some diploma students did not notice it, because they are not responsible for anything else but only the diploma project).

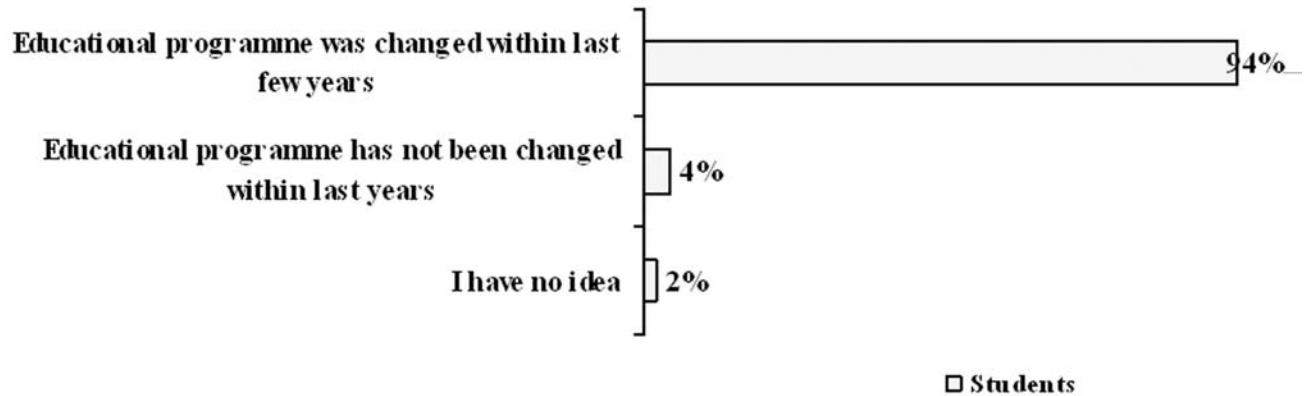


Fig-13:

While 73% of the academics state that they know the reason for the change in the schedule, 60% of the students do not know. That points out the low level of student participation in the changes, although Bologna Process is considered to be student-centred.

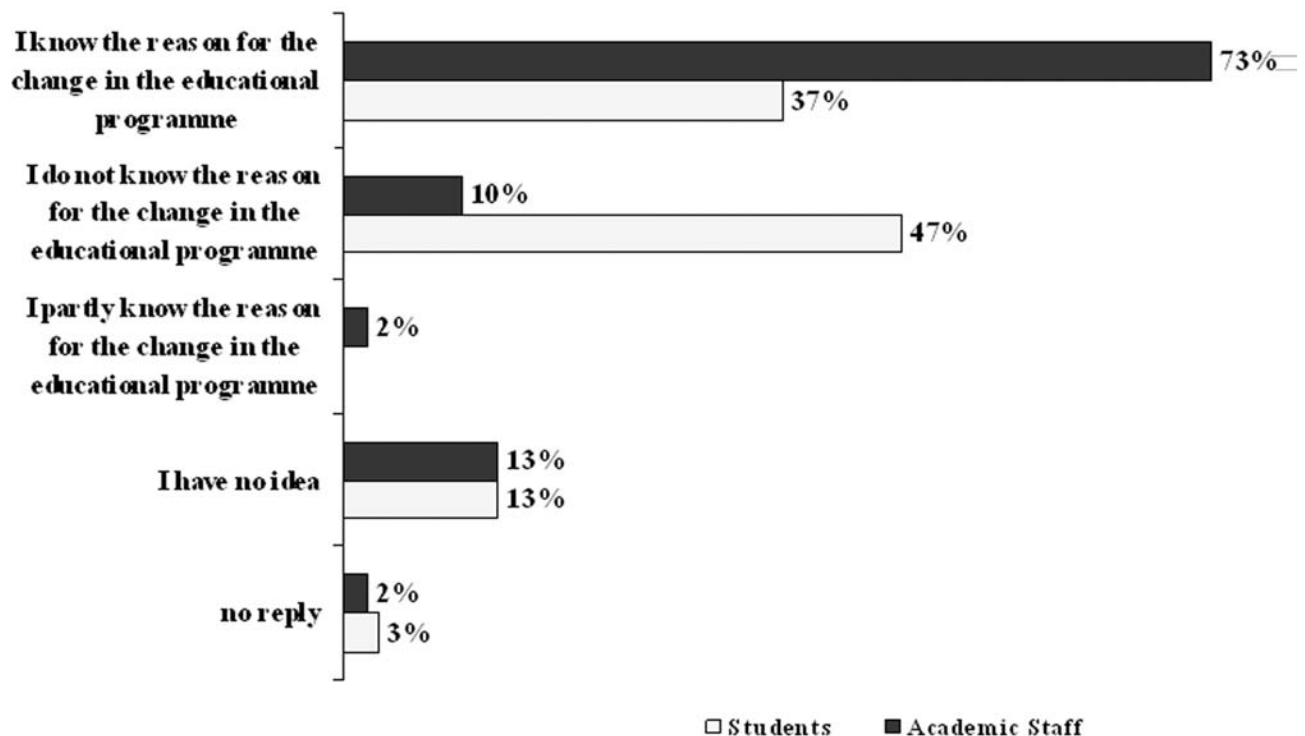


Fig-14:

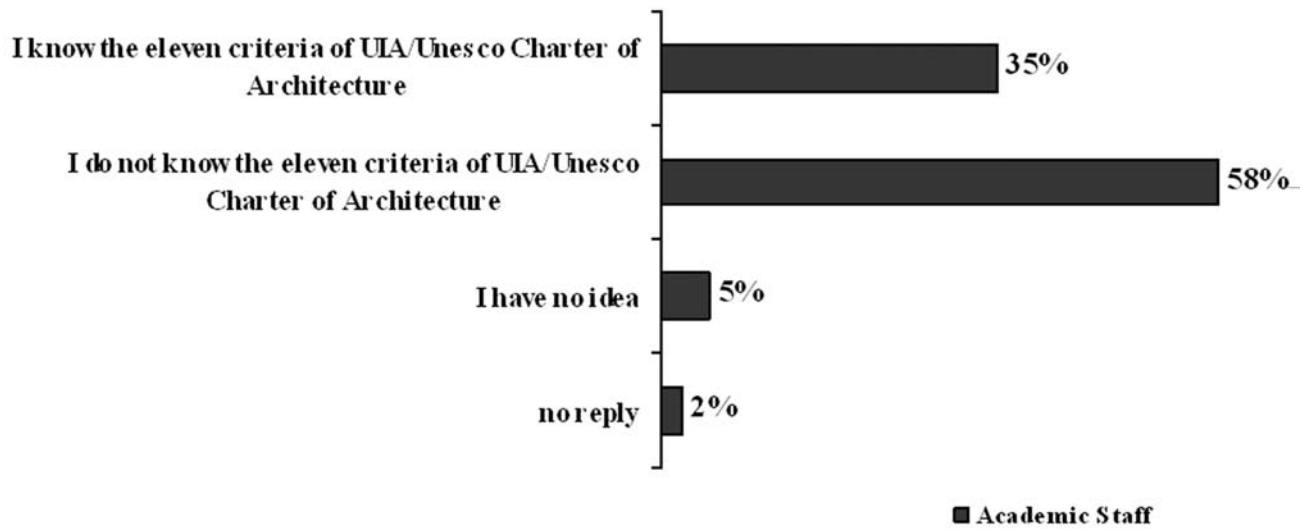


Fig-15:

The eleven criteria of architecture of UIA/UNESCO Charter and consequently EU directive, which accessed to MSGSU via YÖK Regulations on Recognition of Professional Qualifications, is not known by the majority of the academics (58%). Most of those who know about the eleven criteria (79%) think that the recent changes in the educational programme are not being realized accordingly. It means that the parallel changes happening in the world are followed only the minority (35%), and the majority considers them insignificant.

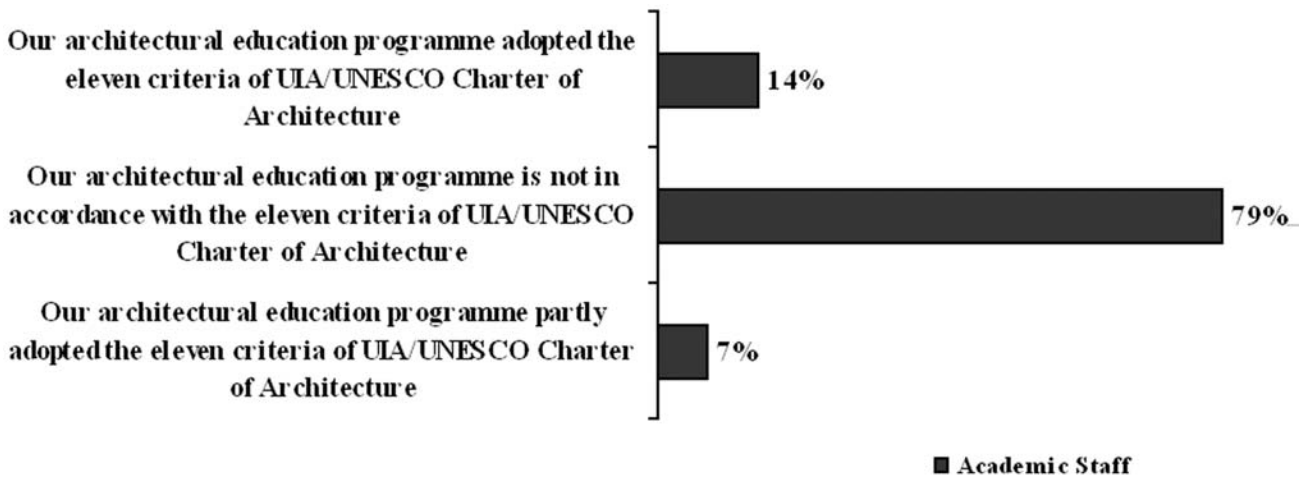


Fig-16:

The two third of academics (65%) know about Bologna Process on which the most of the reforms are based, whereas the majority of students (87%) do not.

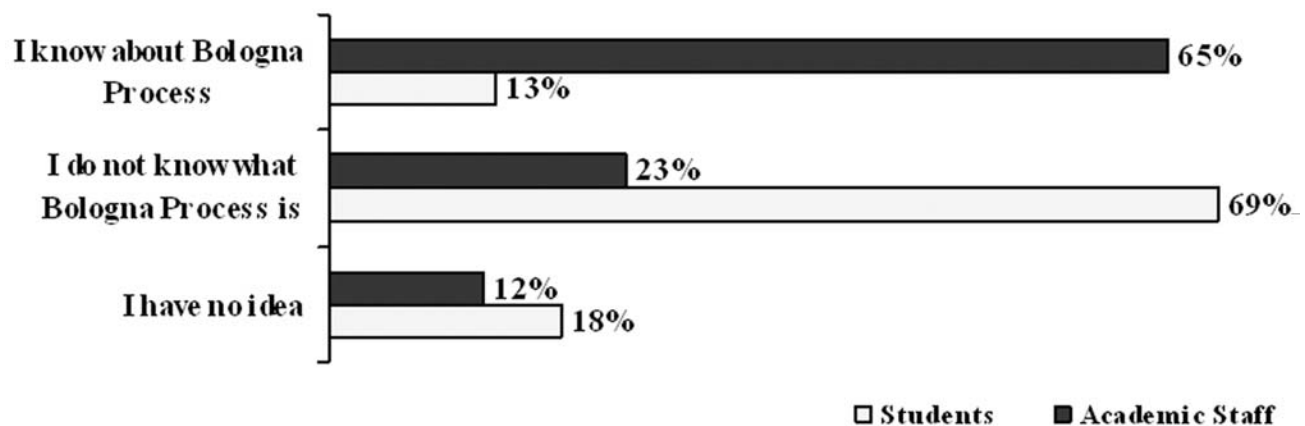


Fig-17:

While three fourth of the academic staff (78%) is aware of the quality assesment works in MSGSU, the two third of students (68%) do not know about it. It implies that quality assessment and internal evaluation works are carried out as a formality without considering its essential qualities, and the importance and the necessity of it are not explained to the students.

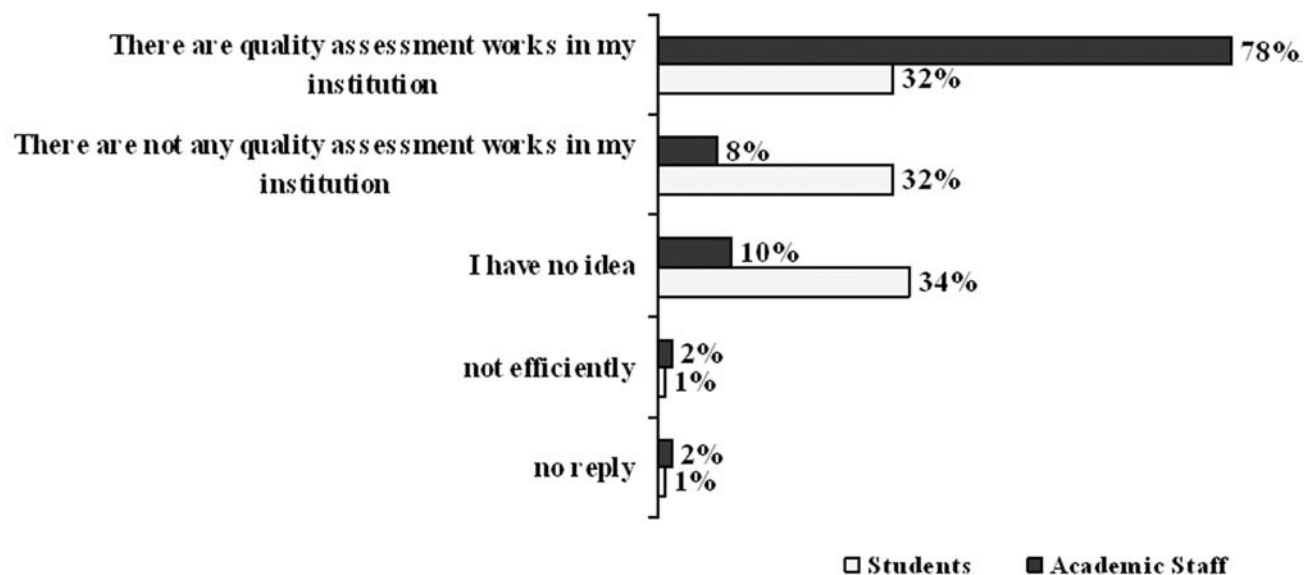


Fig-18:

Most of the academics (70%) and almost half of the students (48%) believe that the accreditation in architectural education is necessary, yet, both of them do not know about accrediting institutions in majority (65% of academics, 94% of students).

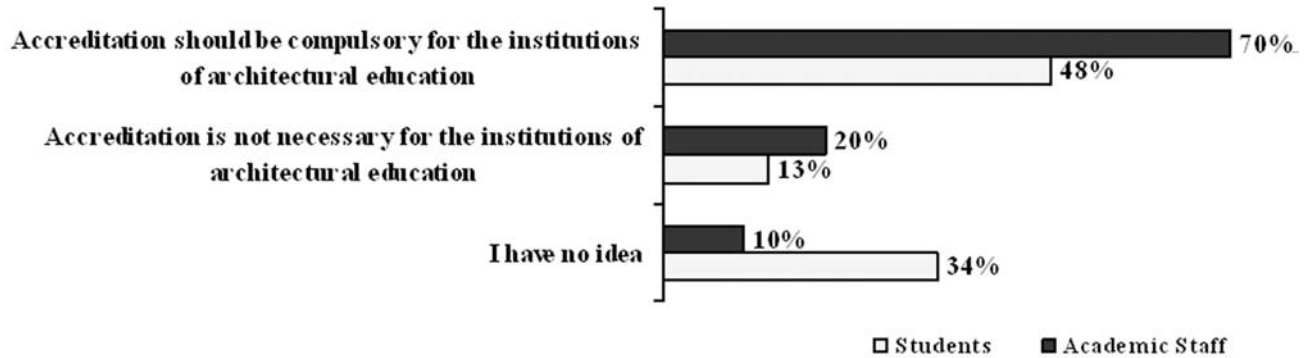


Fig-19:

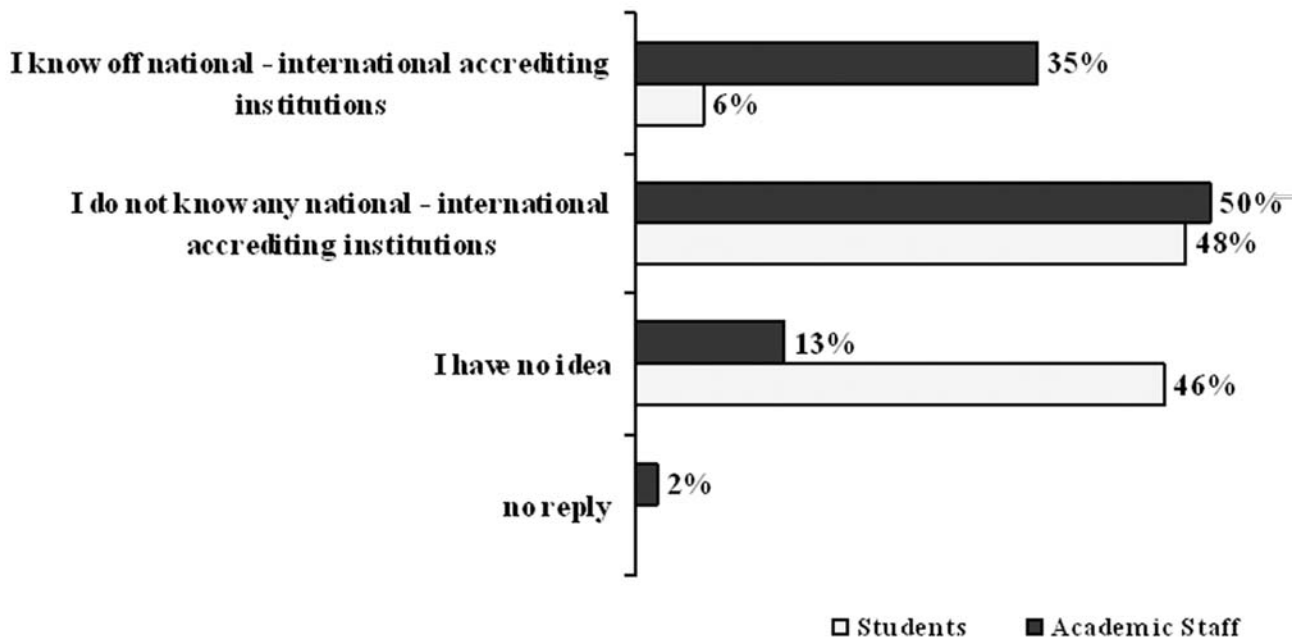


Fig-20:

The survey in MSGSU implies that a very small percentage of the academic staff, because of their administrative duties, follows the changes in the architectural education curriculum as a result of the global processes. Most of the academics at least know of the Bologna Process, whereas two third of them do not know the 'eleven criteria' of architectural education, although they were sent to every division in the

Department of Architecture in MSGSU. The students' ignorance about the processes points out the low level of student participation in the changes, although Bologna Process is considered to be student-centred.

According to the survey, quality assessment and internal evaluation works, which are indispensable components of this process of

change, are carried out as a formality without considering its essential qualities. Those who follow the processes are limited number of academics. The importance and the necessity of it, has not been grasped by the majority and consequently not explained to the students well enough.

CONCLUSIONS

Global and continental economic agreements affected Turkey in many aspects. The most important of them is the European Union membership candidacy of Turkey, and that means harmonization of legislation. Agreements and recommendations by international architectural organizations due to the influences of economy based regulations on architectural profession and education accessed to Turkey through EU membership process. Some of them were within EU directives to be transposed into the national law, and some others through recommendations of Bologna Process, aiming at creating the European Higher Education Area. The most important EU directive influencing architecture is the one describing the eleven criteria of architecture which is in harmony with the UIA/UNESCO Charter of Architecture. This became the regulations of Council of Higher Education –YÖK in 2008. The recommendations on education were mainly from the Bologna Process, through European Universities Association – EUA. These also accessed to the schools of architecture in Turkey through YÖK regulations.

Bologna Criteria has been tried to be applied in MSGSU mostly within last few years. Still new recommendations reach universities through YÖK. The establishment of a clear three cycle system was already founded in 1982, and information packages were established for all faculties. Yet diploma supplement is given only on demand. A credit system was established where ECTS will become an internal credit system. In terms of mobility, EU programmes such as Erasmus are benefited for students, teaching and administrative staff, as well as exchange for professional practice. Quality assurance systems have been established and developing although in the process of refinement.

Self-evaluation results do not turn back as feedback and any outer evaluation has not been applied for yet. Lifelong learning programmes for public are not continuous in the university, and in architecture, it is limited with two summer schools for students and professionals. Student participation seems to be weak, as student representatives are not yet involved in the decision making process, or at least have attended such meetings within the university by now. Budget for research projects is very small and does not seem to be on the rise. Within MSGSU there are very few people using outer resources (national or international) for research.

The eleven criteria of architectural education from an EU directive accessed MSGSU via YÖK regulations was not applied in MSGSU properly. The change in the curriculum of the Department of Architecture was not as a consequence of a detailed research and self-evaluation of the programme, and therefore caused important losses. In fact, very few members of faculty were aware of the introduction of the relevant regulations during the process.

These findings were supported by the results of the survey in MSGSU. It was found that only a very small percentage of academic staff follows the process, while students were not aware of it and were almost left out of the process despite Bologna Process being student-centred. Quality assessment and internal evaluation works, which in fact are an inseparable part of the process, are perceived as a formality; their importance is not grasped by the majority and students were not informed properly.

However, due to the common sense and the willingness of both academic staff and the students, that may be a consequence of the high speed of the transition, as well as being very recent. It may also be connected to the activation of the Process, which has been accelerating, particularly since 2003, in accordance with the harmonisation process with the EU. It is expected that the problems of the transition period will be solved in time by using the facilities and potentials of the new system.

ARCHITECTURAL EDUCATION IN MIMAR SINAN FINE ARTS UNIVERSITY IN GLOBALIZING TURKEY

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ABSTRACT

Due to the changing parameters of global economy and information technologies within the last two decades, both life and architecture are increasingly becoming multi-actored, more complex and instable¹. Accordingly, the need for redefinition of the profession has emerged. Global and continental economy based organisations, essentially enabling free movement of services internationally, gave rise to discussions on change and transformation in architectural discourse and education. The topics were professional practice, provision of services and the way they were applied, as well as improvement of profession in terms of the quality of life. International architectural organizations carried on discussions and published the consequent agreements and recommendations².

This article aims at examining the reflections of these changes in the concepts of architectural education, within the framework of the international agreements and programmes, due to the EU membership process in particular, in the Department of Architecture, Faculty of

Architecture, Mimar Sinan Fine Arts University - MSGSU, the oldest architecture school in Turkey. Although the processes of change have not been completed yet, in order to survey the perception of changes and the level of awareness, questionnaires were conducted with 100 architecture students and 40 academics of the Department of Architecture in MSGSU.

CHANGING ARCHITECTURAL EDUCATION IN EU AND INFLUENCES IN GLOBALIZING TURKEY

Global Changes, EU Membership Process of Turkey and Architectural Education

The first global process affecting Turkey, is 'The General Agreement on Trade in Services-GATS'³, carried out by World Trade Organization-WTO and the second is the 'European Union-EU' Process⁴. Following the EU process in a more effective and technical way is easier than GATS⁵. The restrictiveness of the EU regulations started a very dynamic process in member countries, recent members, candidates and those in

- 1 CAE-Conseil des Architectes Europeens-Documents de reference lors de L'Assemblee Generale de Novembre 2003, Brussels, via Dengiz, N., Tercan A., Kuruc A., 'Virtual and Physical Realms Creating a Joint Studio Environment', Architectural Education Forum 3, Global Architectural Education Area, 15-17.11.2006, ITU, published in Arkitekt, 2006/6, p.47.
- 2 Tagmat, T., AB'de Mimarlik Alanini Ilgilendiren Güncel Konular, Belgeler 8, TMMOB Mimarlar Odasi Belgeler Bülteni, Kasim 2006, Recommended Guidelines for the UIA Accord on Recommended International Standards of Professionalism in Architectural Practice, http://www.uia-architectes.org/image/PDF/UIA-Accord%20full_def.pdf, 12.12.2008, http://www.mimarlarodasi.org.tr/UIKDocs/architecture_practice.pdf, 12.12.2008, Architecture & Quality of Life ACE Policy Book, <http://www.mimarlarodasi.org.tr/UIKDocs/policybook.pdf>, 12.12.2008, ACE Strategy-Political Agenda, <http://www.mimarlarodasi.org.tr/UIKDocs/politicalagenda.pdf>, 12.12.2008.
- 3 15.04.1994/ The Turkish National Assembly, Official Gazette dated 25.02.1995 no: 22213 via Tagmat, T., AB'de Mimarlik Alanini Ilgilendiren Güncel Konular, Belgeler 8, TMMOB Mimarlar Odasi Belgeler Bülteni, Kasim 2006.
- 4 Accession Negotiations of Turkey have been launched on October 3, 2005 with the adoption of the ' by the Council of the European Union. The ' lasted about a year from October 20, 2005 until October 13, 2006. <http://www.abgs.gov.tr/index.php?p=37&l=2>, 12.12.2008.
- 5 WTO brings frameworks, while EU sets up a law system. http://www.wto.org/english/tratop_e/serv_e/serv_e.htm, 20.12.2008, http://europa.eu/scadplus/scad_en.htm, 20.12.2008.

harmonization process. Globalization in trade of services and the customs union protocol⁶ with the EU makes Turkey's partnership process irreversible and the continuity of the harmonization of the legislation seems to be unavoidable⁷.

These changes have officially influenced the architectural education in Turkey mainly in two directions. The first was the governmental procedures mainly due to the EU membership process of Turkey; the EU directives on professions and education forced the change. The second was the recommendations of the Bologna Process, the collectivization process of higher education in Europe⁸. Both of them accessed to the higher education institutions in Turkey through the regulations of the Presidential Council of Higher Education of the Republic of Turkey-YOK⁹. As an important part of the change, civil initiatives were very active in Turkey, aiming at being closely involved in the process, in order to moderate the influences of the rapid change

and direct it for the benefits of the architectural discourse and education.

Effects of the Bologna Process and Impacts on Turkey

In 2000, EU chose an articulate target known as Lisbon Strategy¹⁰ aiming at making the European Union the most competitive knowledge-based economy in the world within ten years. This development brought new directive recommendations, which directly influence the movement of architectural services and therefore education within Europe¹¹.

The developments influencing architectural education continued with the goal of 'European Higher Education Area-EHEA'¹² that became concrete with 'Sorbonne Declaration' in 1998¹³. In 1999, the process started with and named after 'Bologna Declaration' with the intention of completing the collectivisation in education by 2010¹⁴. Aims of Bologna Process were: (1999).

- 6 According to the protocol dated 23.11.1970, customs union was predetermined.
http://www.belgenet.com/arsiv/ab/ab_kprotokol.html, 20.12.2008. Customs union was completed on 01.01.1996 in EU, and it means passing to the third stage of Ankara Agreement of 1963. <http://www.ikv.org.tr/gumrukbirligi.php>, 20.12.2008.
- 7 Tagmat, T., AB'de Mimarlik Alanini Ilgilendiren Güncel Konular, Belgeler 8, TMMOB Mimarlar Odasy Belgeler Bülteni, Kasym 2006.
- 8 This meant the transformation of European universities, in order to prepare them for competition, considering globalisation in higher education that accelerated in the Age of the Internet that brings interactive relations with the rest of the world. In fact, the Bologna Process is the European part of the globalisation in higher education. Luc E. Weber, James J. Duderstadt, The Globalization of Higher Education, Economica, France, 2008, Black Sea Universities Network- There are similar efforts all over the world in order not be left out of the competition. As an example, the BSUN was founded in order to develop 'educational, scientific, and cultural cooperation and exchanges among the universities of Black Sea Economic Cooperation-BSEC (1992) Member States and other institutions with similar concern.' At the aims and purposes of BSUN 'harmonization, comparable conditions and compatibility of systems of university management' are mentioned. That means compatibility with European Higher Education Area-EHEA, because some of BSEC members are EU members or candidates.
http://www.bsun.org/index.php?option=com_content&task=section&id=4&Itemid=27, 17.02.2009.
- 9 YOK was founded in 1981, when Turkey was adopting the global economical system.
<http://www.yok.gov.tr/hakkinda/hakkinda.htm>, 06.12.2008.
- 10 http://europa.eu/scadplus/glossary/lisbon_strategy_en.htm, 15.12.2008.
- 11 Directive 2006/123/EC on Services in the Internal Market (SIM) Guide, published on EU Official Gazette on 12.12.2006, via Tagmat, T., AB'de Mimarlik Alanini Ilgilendiren Güncel Konular, Belgeler 8, TMMOB Mimarlar Odasy Belgeler Bülteni, Kasym 2006, http://www.ace-cae.org/MemberN/Downloadcae/tool/SIMGuide_Ver6_1.pdf, 15.12.2008.
- 12 <http://www.ond.vlaanderen.be/hogeronderwijs/bologna/>, 18.12.2008.
- 13 Sorbonne Joint Declaration Joint declaration on harmonisation of the architecture of the European higher education system by the four Ministers in charge for France, Germany, Italy and the United Kingdom Paris, the Sorbonne, May 25 1998 http://www.ond.vlaanderen.be/hogeronderwijs/bologna/documents/MDC/SORBONNE_DECLARATION1.pdf, 14.12.2008
- 14 It was signed by the ministers of education of sixteen member countries of EU, in 1999. The Bologna Declaration of 19 June 1999 Joint declaration of the European Ministers of Education
http://www.ond.vlaanderen.be/hogeronderwijs/bologna/documents/MDC/BOLOGNA_DECLARATION1.pdf, 12.12.2008.

- 'Developing easily readable and comparable degrees,
- Adoption of a system essentially based on two main cycles, undergraduate and graduate,
- Establishing of a system of credits,
- Promotion of mobility,
- Promotion of European co-operation in quality assurance and
- Promotion of the necessary European dimensions in higher education'¹⁵.

The Process has continued with additional criteria in following meetings. As is the case in international processes, the Bologna effort continued and transformed into subsequent declarations and diplomatic protocols.

Aiming at the involvement of the universities at each step in the Process, European Universities

Association - EUA, provides the fundamental information and analysis of Trends in Higher Education in Europe to be discussed upon in biennial ministerial meetings¹⁶. The effects on architectural education can be followed in publications of European Association for Architectural Education - EAAE¹⁷ and European Network of Heads of Schools of Architecture - ENHSA¹⁸.

In 2001, two years after signing the Bologna Declaration, Turkey became full member of the Bologna Process¹⁹. The Process has operated in international, national and institutional levels. The international level includes biennial ministerial meetings, and Bologna Follow-up Group -BFUG²⁰ works, and Bologna seminars. In Turkey, the national level consists of YOK, National Agency²¹, and the National Team of Bologna Promoters²². The institutional level refers to the institutions of higher education²³.

- 15 www.bologna.gov.tr/Bologna/documents/files/990719BOLOGNA_DECLARATION.pdf, 14.12.2008.
- 16 <http://www.eua.be>, 01.12.2008. At the moment, it is a matter of curiosity how the change of members of both European Parliament and EUA in 2009 will affect the developments.
- 17 <http://www.eaae.be/eaae2/info.php?mainType=about&help=about>, 20.12.2008.
- 18 Two architecture schools are partners of ENHSA. <http://www.enhsa.net/schools.htm>, 20.12.2008. <http://www.enhsa.net/profil.htm>, 20.12.2008.
- 19 <http://www.ond.vlaanderen.be/hogeronderwijs/bologna/links/Turkey.htm>, 14.12.2008.
- 20 BFUG was established in 2001 in Prague. http://www.ond.vlaanderen.be/hogeronderwijs/bologna/BolognaSeminars/documents/Athens_FinalReport.pdf, 21.01.2009.
- 21 T.R. Prime ministerial State Planning Organization, Centre for European Union Education and Youth Programmes, National Agency of Turkey, which was founded in 2002, runs and controls EU programmes such as Lifetime Learning Programme. Lifetime Learning Programme include Comenius(Preschool, primary school, and high school), Erasmus(higher education), Junior Technical College, Leonardo da Vinci(Professional education), Grundtvig(adult education) projects. In every country in the EU, national agencies were constituted in order to introduce EO education and youth programmes, www.ua.gov.tr/index.cfm?action=detay&yayinID=47573EF7ADCDE893DFFFECCD93D3076D25116.
- 22 In 2003, in Berlin, National Teams of Bologna Promoters were set up as subgroups of European Team of Bologna Promoters, intoffice.uludag.edu.tr/docs/bologna/20071207_bursa_giris_sunumu.ppt, 14.12.2008, Implementation of the Bologna Process should be overseen by National Teams of Bologna Promoters which is a semi-governmental body, The National Team of Bologna Promoters consists of Senior Academics, (Vice-) Rectors, Ministry Representative and Student Representatives, who are successful in introducing the Bologna principles in their institutions. <http://www.bologna.msmt.cz/files/B2B050204RestrictedCall.pdf>, 14.12.2008, The members of NTBP of Turkey are promoted by YOK, with approval of the European Council, intoffice.uludag.edu.tr/docs/bologna/20071207_bursa_giris_sunumu.ppt, 14.12.2008, The team is supported by T.R. Prime ministerial Secretariat General for European Union Affairs. Since 2004, The National Team of Bologna Promoters has organized area, city meetings, university visits, national conferences, prepared introductory documents and a report following an evaluation conference and established the Bologna Process website, <http://www.bologna.gov.tr/>, 14.12.2008.
- 23 Mehmet Durman presentation at 28 April 2008 Bologna Process National Evaluation Meeting, <http://www.bologna.gov.tr/index.cfm?action=detay&id=94&publish=131&lang=TR>, 20.12.2008, Commission for Academic Evaluation and Quality Improvement in Higher Education - YODEK was founded due to the YOK 'Regulation on Academic Evaluation and Quality Improvement in the Institutions of Higher Education' which was based on the 'Higher Education Law' (dated 04.11.198, no: 2547), and published in the Official Gazette dated 20.09.2005, no: 25942, <http://www.yok.gov.tr/mevzuat/yenimevzuat.htm>, 30.12.2008.

In parallel with the developments, YOK started to establish new regulations for reforming higher education institutions in 2001. YOK also produced relevant regulations and founded the Student Councils and the National Student Council of Higher Education Institutions²⁴ and Higher Education Academic Evaluation and Quality Improvement Commission -YODEK²⁵. Higher Education National Qualifications Framework Commission²⁶ was again set by YOK.

EU Directives and Eleven Criteria of Architecture in Turkey

As in the Bologna Process, the regulations of YOK are the route of the EU directives to the universities in Turkey, after being transposed into the national law. Recognition of professional qualifications is the most significant step towards the collectivisation of EHEA. Directive on Recognition of Professional Qualifications (2005/36/EC)²⁷ which was replaced with the Architects' Directive (85/384/CEE)²⁸ is a general directive for 402 professional areas and includes

special regulations for seven professions including architecture. This directive aimed at a common measurable valuation system between EU members, and architecture is included in the automatic recognition²⁹. In both directives, it is agreed that architectural education should meet the eleven criteria, which was also stated in the UIA/UNESCO Charter for Architectural Education dated 1996 and revised in 2004³⁰. That means the primary objective of architectural education is developing professionals who can cope with the conflicts between different necessities³¹. It also determines the common minimum duration of architectural education.

In Turkey, YOK completed the 'Regulations for Determination of the Minimum Conditions of Education for the Programmes of Doctors of Medicine, Nurses, Midwives, Dental Practitioners, Veterinary Surgeons, Pharmacists and Architects' in 2008³². In terms of architectural education, having included the eleven criteria, these regulations mostly overlap the Directive on Recognition of Professional Qualifications (2005/36/EC):

- 24 'Regulations on Student Councils of Higher Education Institutions and the National Student Council of Higher Education Institutions' published in the Official Gazette dated 20.09.2005, no: 25942, <http://www.yok.gov.tr/mevzuat/yenimevzuat.htm>, 31.12.2008, <http://www.mevzuat.adalet.gov.tr/html/23369.html>, 31.12.2008.
- 25 'Regulations on Academic Evaluation and Quality Improvement Commission in Higher Education Institutions' published in the Official Gazette dated 20.09.2005no:25942, <http://www.yodek.org.tr/>, 01.02.2009, <http://www.yok.gov.tr/mevzuat/yenimevzuat.htm>, 02.01.2009.
- 26 Turkey joined Lisbon Recognition Act in 2004 and established and carried out it in 2007. In parallel with this development, the process of establishing a national qualifications framework was started by a commission set by YOK in 2006. http://www.yok.gov.tr/duyuru/tyuyc_ara_raporu.pdf, 04.02.2009.
- 27 Architects' Directive of 1985 became invalid when Qualifications Directive was published in EU Official Gazette on 07.09. 2005. DIRECTIVE 2005/36/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 7 September 2005 on the recognition of professional qualifications, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:255:0022:0142:EN:PDF>, 12.12.2008.
- 28 Architects' Directive was COUNCIL DIRECTIVE of 10 June 1985 on the mutual recognition of diplomas, certificates and other evidence of formal qualifications in architecture, including measures to facilitate the effective exercise of the right of establishment and freedom to provide services (85/384/CEE), http://www.ace-cae.org/MemberN/Content/EN/download/links/85_384_EEC.pdf, 12.12.2008.
- 29 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:255:0022:0142:EN:PDF>, 12.12.2008.
- 30 <http://www.mimarlarodasi.org.tr/UIKDocs/charterforarchitecturaleducation.pdf>, 01.12.2008.
- 31 The Directive 2005/36/EC of the European Parliament and of the Council, of 7 September 2005 on the recognition of professional qualifications (Text with EEA relevance), Article 46. <http://www.mimarlarodasi.org.tr/index.cfm?sayfa=Ubelge&sub=17>, 12.12.2008.
- 32 Prime Ministerial Secretariat General for European Union Affairs-EUSG (Prime ministerial Secretariat General for European Union Affairs-EUSG is a governmental body, which has been functioning within T.R. Ministry of Foreign Affairs, follows the harmonization process. Approved by the Turkish Grand National Assembly on 27 June 2000 and published in the Official Gazette No.24099 on 4 July 2000, <http://www.abgs.gov.tr/index.php?p=289&l=1>, 14.12.2008.) has transferred the 'Draft of Law on Formation and Recognition of Professional Qualifications' to the related ministry and it was discussed on the university level, yet, it was not legitimized. Instead, the relevant YÖK regulations were published in the Official Gazette dated 02.02.2008 No. 26775.

THE DIRECTIVE 2005/36/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 7 September 2005 ON THE RECOGNITION OF PROFESSIONAL QUALIFICATIONS (Text with EEA relevance), Article 46:

1. Training as an architect shall comprise a total of at least four years of full-time study or six years of study, at least three years of which on a full-time basis, at a university or comparable teaching institution. The training must lead to successful completion of a university-level examination. That training, which must be of university level, and of which architecture is the principal component, must maintain a balance between theoretical and practical aspects of architectural training and guarantee the acquisition of the following knowledge and skills:
- (a) ability to create architectural designs that satisfy both aesthetic and technical requirements; 30.9.2005 EN Official Journal of the European Union L 255/47
 - (b) adequate knowledge of the history and theories of architecture and the related arts, technologies and human sciences;
 - (c) knowledge of the fine arts as an influence on the quality of architectural design;
 - (d) adequate knowledge of urban design, planning and the skills involved in the planning process;
 - (e) understanding of the relationship between people and buildings, and between buildings and their environment, and of the need to relate buildings and the spaces between them to human needs and scale;
 - (f) understanding of the profession of architecture and the role of the architect in society, in particular in preparing briefs that take account of social factors;
 - (g) understanding of the methods of investigation and preparation of the brief for a design project;
 - (h) understanding of the structural design, constructional and engineering problems associated with building design;
 - (i) adequate knowledge of physical problems and technologies and of the function of buildings so as to provide them with internal conditions of comfort and protection against the climate;
 - (j) the necessary design skills to meet building users' requirements within the constraints imposed by cost factors and building regulations;
 - (k) adequate knowledge of the industries, organisations, regulations and procedures involved in translating design concepts into buildings and integrating plans into overall planning.
2. The knowledge and skills listed in paragraph 1 may be amended in accordance with the procedure referred to in Article 58(2) with a view to adapting them to scientific and technical progress. Such updates must not entail, for any Member State, any amendment of existing legislative principles relating to the structure of professions as regards training and the conditions of access by natural persons.'

-
- (1) It is prerequisite to be graduated from high school at minimum, to be able to be accepted to the architectural education.
- (2) Architectural education covers a full time university education for four years at minimum.
- (3) The architects graduated from an architecture programme should have:
- An ability to create architectural designs that satisfy both aesthetic and technical requirements.
 - An adequate knowledge of the history and theories of architecture and the related arts, technologies and human sciences.
 - A knowledge of the fine arts as an influence on the quality of architectural design.
 - an adequate knowledge of urban design, planning and the skills involved in the planning process.
 - An understanding of the relationship between people and buildings, and between buildings and their environment, and of the need to relate buildings and the spaces between them to human needs and scale.
 - An understanding of the profession of architecture and the role of the architect in society, in particular in preparing briefs that take account of social factors.
 - An understanding of the methods of investigation and preparation of the brief for a design project.
 - An understanding of the structural design, constructional and engineering problems associated with building design.
 - An adequate knowledge of physical problems

and technologies and of the function of buildings so as to provide them with internal conditions of comfort and protection against the climate.

- The necessary design skills to meet building users' requirements within the constraints imposed by cost factors and building regulations.
- An adequate knowledge of the industries, organisations, regulations and procedures involved in translating design concepts into buildings and integrating plans into overall planning.³³

Civil Initiatives in Architectural Education in Turkey via Regulations of YÖK

Architectural education institutions and the Chamber of Architects, developed strategies for the duration and the quality of architectural education, by improving their relations with organizations such as Architects' Council of Europe-ACE, International Union of Architects-UIA, European Association for Architectural Education-EAAE, European Network of Heads of Schools of Architecture-ENHSA, and partly with students' contribution³⁴. This process brought up biennial assemblies of 'Architecture and Education', which was held four times since 2001³⁵. These assemblies helped accumulating knowledge and therefore creating a basis for the formation of some institutions.

Preparations started in 2000, setting up five work groups: Graduate and Postgraduate Education in Architecture, Accreditation in Architecture, Educational Practice and

33 The institutional bodies which was in charge of examining the 'Draft for Determination and Recognition of Professional Qualifications', four deans, MOBBIG, MIDEKON, The Chamber of Architects of Turkey, agreed to add four more criteria specific to Turkey. Yet, even before the draft was legitimized, YÖK authorized the regulation on 02.02.2008, without the four additional criteria.

Neslihan Dostoglu, 'Mimarlık Lisans ve Lisansüstü Eğitimi', Mimarlık ve Eğitim Kurultayı IV, Aralık 2007, Ankara, p.84.

34 Neslihan Dostoglu, 'Mimarlık Lisans ve Lisansüstü Eğitimi', Mimarlık ve Eğitim Kurultayı IV, Aralık 2007, Ankara, p.84.

35 The fifth Assembly will be held towards the end of 2009.

Professional Practice, Continuous Professional Development, Professional Practice within the EU and GATS Processes. As a result, the Architectural Accrediting Board – MIAK³⁶ was founded and the 'Draft for Architectural Policy of Turkey' was produced³⁷. The Communication Group of Heads of Schools of Architecture – MOBBIG³⁸ and Chamber of Architects of Turkey together supported the formations of the Architectural Accrediting Board - MİYAK and the Council of Deans of Faculties of Architecture - MİDEKONM³⁹.

ARCHITECTURAL EDUCATION IN MIMAR SINAN FINE ARTS UNIVERSITY AND EU STANDARDS

Brief History of Architectural Education in MSGSU

In 1882, 'Mekteb-i Sanayi-i Nefise-i Şahane' was founded by Osman Hamdi Bey, who was an art historian, an archaeologist, a museologist

and a painter. The education started in 1883. The institution was the first art (painting and sculpture) and architecture school in western means. In 1886 it was handed over to the Ministry of Education from the Ministry of Commerce. The architectural education was adopted from the French Beaux Arts system. As both teachers and students were few in number, the master and students system functioned efficiently⁴⁰. The architectural education had a four year programme⁴¹. The first year programme consisted of simple plan and project drawings and modelling. The programme continued with projects in Roman and Greek styles; third year Renaissance and the last year Turkish architecture⁴². In 1914, The Girls' School (İnas Sanayi-i Nefise Mektebi) was opened without the architecture department⁴³.

In 1926, three years after the foundation of the republic, girls and boys started to study together. In 1928, it became Academy of Fine Arts⁴⁴.

36 <http://www.miak.org/>, 20.12.2008.

37 <http://www.mimarlarodasi.org.tr/UIKDocs/turkey.pdf>, 02. 01.2009.

38 MOBBIG was first held on 15.03.1996 <http://mobbig.emu.edu.tr/toplantilar/mobbig4/main.htm>, 02.12.2008.

39 MİDEKON was founded by YÖK and first held on 07.07.2006 and its actual objective was exchanging of ideas among faculties of architecture on management, education, research issues of the disciplines within the discourse of architecture (architecture, design, planning), considering the developments in EU and in global scale www.arkitera.com/g59-midekon---mimarlik-fakultesi-dekanlari-konseyi, html, [midekon.org/](http://www.midekon.org/), 08.12.2008, <http://www.arkitera.com/g59-midekon---mimarlik-fakultesi-dekanlari-konseyi.html?year=&aID=589>, 08.12.2008, Neslihan Dostoglu, 'Mimarlık Lisans ve Lisansüstü Eğitimi', Mimarlık ve Eğitim Kurultayı IV, Aralık 2007, Ankara, pp. 83-84. Yet, MİDEKON is not as active and effective as MOBBIG in the process of change.

The five deans charged by YÖK received opinions of MOBBIG, MİDEKON and MIAK, while preparing the report on aforementioned 'Draft of Law on Formation and Recognition of Professional Qualifications'. The fourth assembly had the theme 'Continuity and Change' and simultaneous efforts for the database of Architectural Education in Turkey were started by surveying the architectural schools, Bülend Tuna, The Head of the Chamber of Architects of Turkey, Mimarlık ve Eğitim Kurultayı IV, Aralık 2007, Ankara, pp.18-21.

40 When the education started, there were eight teachers and twenty one students in all the departments. <http://www.msgsu.edu.tr/msu/pages/16.aspx>, 18.12.2008. Kemal Söylemezoglu stated that in 1930-31, they were 13 classmates accepted to study architecture in the 'Academy'. 'Güzel Sanatlar Akademisinden "Anılar ve Görüşler"', Prof. Orhan Pahinler, MSÜ Mimarlık Fakültesi Yayını No: 14, 1990, pp.12-13. Asım Mutlu mentions that they were only 9 students accepted in 1931. Ibid, p.18.

41 According to the 1911 Regulations, the duration of architectural education was four years. Cezar, M., 'Güzel Sanatlar Akademisi'nden 100. Yılda Mimar Sinan Üniversitesi'ne', "Güzel Sanatlar Eğitiminde 100 Yıl", Mimar Sinan Üniversitesi Yayını no: 3, 1983, p.20.

42 Ebru Özeke Tökmeci, presentation in meeting 2 'Mimarlık Eğitiminde Ulusal Gelişmeler ve Gelecek'(National Developments and Future in Architectural Education), Mimarlık ve Eğitim Kurultayı II December 2003, Kurultay Kitabı, pp.48-49.

43 <http://www.msgsu.edu.tr/msu/pages/16.aspx>, 29.12.2008.

44 <http://www.msgsu.edu.tr/msu/pages/16.aspx>, 29.12.2008.

Professor Ernest Egli invited by the Ministry of Public Works, started to teach in the 'Academy' once a week, then four days a week⁴⁵. He realised a revolutionary change in the curriculum by adopting a central European system⁴⁶. Architectural education became five years; first two years for the technical base for design. Sedat Hakkı Eldem's 'Construction Project' at the second year determined the character of the education as 'construction based'. Second two year period was for specialisation and architectural projects; and the last year for diploma project. This curriculum introduced the modernist ideology instead of the academic classicism; following the seminars of national architecture with Sedat Hakkı Eldem since 1934, in 1940's a new architectural style occurred⁴⁷. From 1938, the graduates of architecture were given the degree of 'Master of Architect'⁴⁸.

In 1936-1937, academic staff was renewed with teachers leaving Nazi Germany and famous

architects such as Bruno Taut and Robert Vorhölzer were appointed to be the head of the architecture department⁴⁹. All the invited teachers worked for the 'Architectural Application Office' (Mimarî Tatbikat Bürosu) which was founded by the Ministry of Education in 1937⁵⁰. The fire on 01.04.1948 destroyed many important documents and collections. The Academy could turn back to its own building again, in 1953⁵¹.

In 1957, all departments were semi-autonomous and heads of departments were elected⁵². In 1959, on initiative of the Minister of Education, the head of the Academy also started to be determined by the faculty⁵³. According to the regulations dated 1959⁵⁴, in 1960 'Architectural Application Project Studio' (Tatbikat Projesi Atölyesi) was established with participation of the tutors from all chairs. Unique to the 'Academy', the Architectural Application Project has been a synthesis of the units of construction and building design in the first year study⁵⁵. It

45 M. Cezar mentions the 'Architectural Application Office' which was founded in 1937. Cezar, M., 'Güzel Sanatlar Akademisi'nden 100. Yılda Mimar Sinan Üniversitesi'ne', "Güzel Sanatlar Egitiminde 100 Yıl", Mimar Sinan Üniversitesi Yayını no: 3, 1983, p.24.

46 <http://www.msgsu.edu.tr/msu/pages/16.aspx>, 29.12.2008, Kemalî Söylemezoglu describes this new system as a Turkish model oriented from Vienna Technical University. 'Güzel Sanatlar Akademisinden "Anılar ve Görüşler"', Prof. Orhan Bahinler, MSÜ Mimarlık Fakültesi Yayını No: 14, 1990, p.15.

47 This style was to be called 'Second National Architecture' <http://www.msgsu.edu.tr/msu/pages/16.aspx>, 29.12.2008, pp 49-50.

48 Cezar, M., 'Güzel Sanatlar Akademisi'nden 100. Yılda Mimar Sinan Üniversitesi'ne', "Güzel Sanatlar Eđitiminde 100 Yıl", Mimar Sinan Üniversitesi Yayını no: 3, 1983, p.25.

49 Ibid., http://www.msgsu.edu.tr/data/infopack/info_yeni/rektorluk.pdf, 29.12.2008, p.23.

50 There was the project office of the Ministry of Education in the 'Academy', and its chiefs worked there also taught. This office was responsible for preparing projects for educational buildings for the newly founded republic and contributed to the education as well as supplying jobs for new graduates. 'Güzel Sanatlar Akademisinden "Anılar ve Görüşler"', Prof. Orhan Bahinler, MSÜ Mimarlık Fakültesi Yayını No: 14, 1990, pp.11, 22, 13. While Prof. Egli was mentioned to be the head of the 'School Architecture Office' (Mektep Mimarisi Bürosu) of the Ministry of Education within the 'Academy' in the website of Ministry of Culture:

<http://www.eskisehir.kultur.turizm.gov.tr/BelgeGoster.aspx?F6E10F8892433CFF1279C58074C31537B39AF7D896DAF648>, 26.01.2009, M. Cezar mentions the 'Architectural Application Office' which was founded in 1937. Cezar, M., 'Güzel Sanatlar Akademisi'nden 100. Yılda Mimar Sinan Üniversitesi'ne', "Güzel Sanatlar Egitiminde 100 Yıl", Mimar Sinan Üniversitesi Yayını no: 3, 1983, pp.29-30.

51 http://www.msgsu.edu.tr/data/infopack/info_yeni/rektorluk.pdf, 29.12.2008, p.23.

52 Interview with Prof. Orhan Bahinler, the last Head of Istanbul State Academy of Fine Arts and the first rector of Mimar Sinan University, 27.01.2009.

53 Interview with Prof. Orhan Bahinler, the last Head of Istanbul State Academy of Fine Arts and the first rector of Mimar Sinan University, 27.01.2009, Cezar, M., 'Güzel Sanatlar Akademisi'nden 100. Yılda Mimar Sinan Üniversitesi'ne', "Güzel Sanatlar Egitiminde 100 Yıl", Mimar Sinan Üniversitesi Yayını no: 3, 1983, p.37.

54 Interview with Prof. Orhan Bahinler, the last Head of Istanbul State Academy of Fine Arts and the first rector of Mimar Sinan University, 27.01.2009.

55 Yüksek Mimarlık Bölümü Öğretim Kılavuzu 1960-1961 Öğretim Yılı, Güzel Sanatlar Akademisi İstanbul Publication, September 1960, Tophane, İstanbul, p.57.

was in the second year, of Construction Project that was introduced. The Architectural Application Project was the prerequisite for passing to the second phase of education and starting architectural projects. This emphasized 'Design' beside 'Construction' in terms of the character of architectural education.

In 1969, with legitimization of 'Law of State Fine Arts Academies' no: 1172, it gained scientific autonomy and the name became Istanbul State Academy of Fine Arts. Consequently, the curriculum of architectural education was reformed, based on research and student participation, without changing its three stage character⁵⁶. This reform was paralleled with 1968 student movements. Accordingly, student representatives started to join the senate meetings and many units were introduced due to the students' requirements. Meanwhile, Basic Design Education Chair was founded for serving all departments. Architecture students started to share the Basic Design Studio with fine arts students in their first year. Another important unit for design training was Architectural Basic Design (Mesleki Temel Egitim) at the second year. In 1971, the 'Academy' was bounded up the newly founded Ministry of Culture⁵⁷. In 1976, Urban Planning Research Institute and Turkish Architecture Research and Restoration Institute were founded within the Department of Architecture⁵⁸.

Due to the tradition of the 'Academy', the

teachers were talented and experienced architects who did professional practice and won competitions. The academic staff did not feel completed to do research for academic promotion⁵⁹. The 'Academy' was perceived only as an educational institution, and research was not considered together with it. Moreover, in accordance with the Law no: 1172, PhD or Proficiency in Art became compulsory for the teachers⁶⁰. After the preparation and approval of the relevant regulations, the assistants started to do PhD in 1974. The same law also limited the professional practice of the teachers with the condition of part-time work and that resulted in less professional work by the teachers.

In 1981, according to the 'Higher Education Law' no: 2547⁶¹, the Presidential Council of Higher Education of the Republic of Turkey-YÖK was founded. YÖK established the three-cycle higher education model (Bachelor, Master and Doctorate degrees of /4+2+4 years respectively to be carried out and centralised higher education by combining various former higher education institutions as universities. Accordingly, IDGSA became a university with the name Mimar Sinan University. Within departments, instead of the chair system, divisions and subdivisions were founded. By YÖK all Turkish universities became connected to the President. Starting from 1983 the duration of education in MSU became four years and the number of the students accepted to the Department of Architecture was doubled where the students were divided into two classes⁶².

56 According to Prof. Asim Mutlu, in time, the adopted central European system of architectural education developed in accordance with the needs of Turkey. 'Güzel Sanatlar Akademisinden "Anılar ve Görüşler"', Prof. Orhan Bahinler, MSÜ Mimarlık Fakültesi Yayını No: 14, 1990, p.55.

57 Interview with Prof. Orhan Bahinler, the last Head of Istanbul State Academy of Fine Arts and the first rector of Mimar Sinan University, 27.01.2009.

58 http://www.msgsu.edu.tr/msu/ana_duyuru/strateji/durum_analizi1.pdf, 28.12.2008.

59 Academic staff in IDGSA used to get their rises owing to the duration of their work in the institution. Assistants were called then teacher candidates, and they could be sent abroad for personal development and a book following this experience with giving a lecture would make them teachers, of course in addition to their professional experiences and success. It was also possible to become a teacher with accumulation of projects proving their talents and experience. According to the law no:1412, state workers could be sent abroad for their personal developments. Interview with Prof. Orhan Bahinler, the last Head of Istanbul State Academy of Fine Arts and the first rector of Mimar Sinan University, 27.01.2009.

60 Ibid, Cezar, M., 'Güzel Sanatlar Akademisi'nden 100. Yılda Mimar Sinan Üniversitesi'ne', 'Güzel Sanatlar Eğitiminde 100 Yıl', Mimar Sinan Üniversitesi Yayını no: 3, 1983, p.40.

61 Accepted on 04.11.1981 and published in the Official Gazette dated to 06.11.1981 no: 17506, <http://www.yok.gov.tr/mevzuat/yenimevzuat.htm>, 12.01.2009.

62 <http://www.msgsu.edu.tr/msu/pages/16.aspx>, 20.12.2008.

Meanwhile Law no: 2547 also introduced minor and double major programme possibilities.

While decreasing the duration of education to four years, preparing a new curriculum for the new system was never considered. Rather, efforts were made to fit the material of the five year curriculum into four years, by increasing the class hours and reducing hours of the units. The resulting curriculum was very dense and heavy. The first two years were still for technical base for design (losing Basic Design at the first year), second part was for the projects (one year was cut off from the projects), but some units were attended synchronically with the diploma project. Due to decreasing number of architectural projects, the diploma projects were started to be guided by a jury twice a term. In order to maintain the barrage application of the former system, prerequisites were used. These caused too much delay for graduation.

Science and Technology Institute and Social Sciences Institute were also founded in 1982, to carry out the postgraduate (Masters and Doctorate/Proficiency in Art degrees) programmes and MSc programmes were opened.

In order to let the academic staff do professional work and support the university budget the Revolving Fund was founded⁶³. Yet, it does not work efficiently as there is no regular work and its contribution to the budget is very low in MSGSU.

After Turkey became the member of the Bologna Process, in 2002, according to the instructions of the newly founded National Agency, a work group was set to understand the process and learn the procedure. This group later on became International Relations Office – ULIK⁶⁴ to manage the Socrates-Erasmus Programme funds. The new MSU Regulations on Graduate and

Postgraduate Education, completed in 2002⁶⁵, introduced the local credit system and electives. The credit system meant another change in the curriculum.

Only a few units were appropriate for the semester system and the rest were annual. Many of them were divided into two terms as sequential units; the first was prerequisite for the second. Some units were compressed to half time. Electives as compulsory requirement for the credit system took the place of the shrinking units. Again, the possibilities of the new system were not studied in advance and changing the curriculum in the last moment caused many problems. The possibility of minor programmes within the new regulations has not been utilized yet.

In 2004, MSGSU became a member of EUA by Erasmus University Charter and accordingly started to use EU exchange programmes within the Bologna Process. The name of Mimar Sinan University was changed as Mimar Sinan Fine Arts University on 22 Jan 2004. The renewed 2005 MSGSU Regulations on Graduate and Postgraduate Education⁶⁶ introduced double major programme, however it has not started yet. In 2006, The Strategy Development Committee was founded. The MSGSU Academic Evaluation and Quality Development Committee-ADEK and the Publication Committee were founded in 2007. MSGSU joined Erasmus University Charter Extended in 2007.

In 2008, the curriculum of the architectural education was changed again, when 'Regulations for Determination of the Minimum Conditions of Education for the Programmes of Doctors of Medicine, Nurses, Midwives, Dental Practitioners, Veterinary Surgeons, Pharmacists and Architects' of YÖK accessed to MSGSU.

63 MSGSU Regulations on Revolving Fund published in the Official Gazette dated 17.12.1984 no: 18608, <http://rega.basbakanlik.gov.tr/#>, 01.01.2009.

64 http://www.msgsu.edu.tr/msu/ana_duyuru/strateji/durum_analizi1.pdf, 28.12.2008. There is not a specific YÖK regulation describing international relations offices of universities.

65 Published in the Official Gazette dated 26.11.2002 no: 24948, 01.02.2009.

66 Published in the Official Gazette dated 02.06.2005 no: 25833, 01.02.2009.

Academic promotion conditions according to the 'Higher Education Law' no: 2547, gradually became more difficult. Consequently, in Turkey, most of the academics with PhD's are assistant professors and the number of higher degrees in general is less than expected. The new system does not allow academic promotion without research and publication. Despite the 'Academy' becoming a university, the tradition of research has not settled properly, and the number of associate professors is very low in the Department of Architecture.

How Far is Bologna Criteria Applied in MSGSU

In the Mimar Sinan Fine Arts University in the Infopack in the website, it is stated how the principles of the Bologna Process were adopted and then roughly explains how far the Bologna Criteria was achieved. While a detailed search was carried out through changing regulations, and detailed information was gained from the relevant offices, the picture has started to become clearer. Some of the criteria have been achieved, and some are on the way:

- **Easily readable and comparable degrees:** Parallel to the harmonisation process, in 2006, it was determined that the name of the department of graduator, and the degrees gained from the main branch of art or science should be written on diplomas, instead of professional titles⁶⁷. However, this created contradiction with the existing

legislation⁶⁸.

Diploma supplement, as an element of the Bologna Process, included to improve the transparency of the educational system, provides information of the quality, level, contents and the extent of the programme graduated from. In Turkish universities it is compulsory by YÖK regulations; it was planned to give diploma supplement with the graduates of 2005-2006 academic year⁶⁹. But in MSGSU such a document is only given on demand. For the sake of clarity, as for all universities in Turkey, Information Package -Infopack was published and is accessible at the university's website since 2008.

- **Adoption of a system essentially based on two main cycles, undergraduate and graduate:** The 4+2 system in practice in Turkey since 1982 was compatible with the Bologna Process⁷⁰. Accordingly, MSGSU, with the adoption of the 2/3 cycle system in 1982, had already met one of the Bologna criteria in advance. That means following the successful completion of BArch and MSc programmes, students can apply for the PhD programmes⁷¹. Recently, the Draft Report for Higher Education National Qualifications Framework, by the Higher Education National Qualifications Framework Commission and the Work Group, dated to January 2009, was sent to the universities for getting their comments by YÖK⁷².

67 In the YÖK document dated 09.02.2006 which was sent to the universities, there was the decision of the general assembly of 03.02.2006. It was stated that in some programmes the titles could not be determined by the date the diplomas were given (such as graduates of Law). Therefore, the professional practice should not be restricted by titles on the diploma in advance and it would be appropriate to write the name of the programme graduated on diplomas.

68 Presentation by Kerim Edinsel, National Team of Bologna Promoters, The Project of Application of Bologna Process in Turkey, 28.04.2008, <http://www.bologna.gov.tr/index.cfm?action=detay&id=94&publish=131&lang=TR>, 14.12.2008.

69 <http://www.yok.gov.tr/egitim/ab/ab.htm>, 10.01.2009.

70 Gülsüm Sağlamer, Member of EUA Directorate, Mimarlık ve Eğitim Kurultayı IV December 2007, Kurultay Kitabı, Ankara, p.31.

71 Erasmus University Charter 2003, European Policy Statement, <http://www.msgsu.edu.tr/msu/pages/426.aspx>, 30.12.2008.

72 The Commission of Higher Education National Qualifications Framework and the Work Group presented the first draft of NQF to the higher education institutions. The members of the commission were substituted and the Higher Education Qualifications Work Group was set to accelerate the work in 2008 and the draft report of January 2009 was sent to the universities. The Draft was prepared in accordance with Qualifications Framework for European Higher Education Area - QF-EHEA which accepted at the ministerial meeting in Bergen in 2005 and due to the decisions of London 2007 meetings. Report on Turkey Higher Education National Qualifications Framework January 2009, http://www.yok.gov.tr/duyuru/tyuyc_ara_raporu.pdf, 04.02.2009.

Yet, in Turkey, the system of 4+2 means that the four year architectural education programme is enough to gain the professional qualification due to the National Law. According to the aforementioned 'Regulations for Determination of the Minimum Conditions of Education for the Programmes of Doctors of Medicine, Nurses, Midwives, Dental Practitioners, Veterinary Surgeons, Pharmacists and Architects', the duration of architectural education is four years. Yet, the duration of architectural education is a crucial issue of discussion and most programmes focus on five year programmes both in Turkey and in Europe.

Joint Degree Programmes have not been constituted in MSGSU yet, although they are supported and expected based to the Bologna Process⁷³.

- **Establishing of a system of credits:** Application of the local credit system was started being applied in the Faculty of Architecture in 2003⁷⁴. This meant a crucial change in the curriculum as already mentioned. Universities in Turkey met on European Credit Transfer System-ECTS⁷⁵ that is, based on the studying hours of students they became members of

European University Association-EUA⁷⁶. The credit system, which has been in use since 2003, and during 2003-2004 academic year works for convertibility with ECTS were carried out. In MSGSU, the Vice Rector responsible for education is the ECTS Coordinator of the institution makes ECTS activated in the educational system⁷⁷. It is planned to replace the local credit system with ECTS. According to the extended Erasmus University Charter 2007, MSGSU promised to use ECTS as internal credit accumulation system⁷⁸, but the application has not been started yet.

- **Promotion of mobility:** Earlier on, going abroad for study or research was possible only by scholarships (State, YÖK or foreign scholarships) or on the researchers own budget. There was also a limited fund for that in MSGSU, and every year only a few academics could go abroad for a short while. Bologna Process brought additional opportunities for developing relations between European academics and students as well, that helps reinforced the shared 'European Culture'. For activating the mobility, EU has established and run Socrates (Erasmus) programme since 1997⁷⁹. In MSGSU the International Relations Office-ULIK started to carry out it

73 For the Joint Degree, YÖK has two regulations based on the Higher Education Law no: 2547: 'Regulations on establishment of Joint Degree Programmes of Higher Education Institutions with the Higher Education Institutions Abroad' published in the Official Gazette dated 28.12.2006 no: 26390 and 'Regulations on Establishment of Joint Graduate Programmes of Higher Education Institutions with Domestic Higher Education Institutions' published in the official Gazette dated: 22.02.2007 no: 26442.

74 <http://www.msgsu.edu.tr/msu/pages/16.aspx>, 30.12.2008.

75 http://www.msgsu.edu.tr/data/infopack/info_yeni/rektorluk.pdf, 25.12.2008, p. 35, As Bologna Process was a student-centred system, on demands of ESIB(European Students' Union - ESU today), The European Credit Transfer System (ECTS) was introduced as a tool within the framework of the ERASMUS/SOCRATES programme between 1988 and 1995, to enable students mobility. ECTS is based on how long time the student need to spend for the unit. <http://www.eua.be/eua/jsp/en/upload/ESIB%20Policy%20Paper%20on%20ECTS.1068808486478.pdf>, 12.12.2008.

76 EUA is the result of a merger between the Association of European Universities (CRE) and the Confederation of European Union Rectors' Conferences, which took place in Salamanca, Spain on 31 March 2001. <http://www.eua.be/about-eua>, 28.12.2008.

77 The trouble with adopting the semester and credit system was particularly the studio hours and the education of arts to define the ECTS. Apart from the dense know-how traffic to solve these problems, there had been also some other difficulties as the studying hours of the students are focused by the necessity of the ECTS system instead of focusing the hours of the lessons in the former traditional education system. Dengiz,N., Konuk,G., Ergönül,S., Öztürk,A.,: 'Academical Cooperations and Restructuring Process Of Mimar Sinan Fine Arts University ' " Letters From The Black Sea "International Journal Of The Black Sea Universities Network Vol. 8 No. 2, August 2005, s:39-41.

78 Erasmus University Charter 2007, <http://www.msgsu.edu.tr/msu/pages/426.aspx>, 30.12.2008.

79 <http://www.eua.be/not-in-menu/search/?L=0>, 23.02.2009.

in 2004. The Guideline of ULIK was constituted in 2007 and is updated within the frame of Educational Programmes of EU⁸⁰.

The Mimar Sinan Fine Arts University joined 'Erasmus University Charter – EUC' in 2004, and was qualified with 'Lifelong Learning - Erasmus University Charter Extended – EUC' covering the years 2007-2014. Development of Student Mobility, Staff Mobility and Placement, and Intensive Programmes-IP, Curriculum Development-CD, development educational programmes are aimed⁸¹. By now, about 100 bilateral agreements have

been signed with the EU higher education institutions in bachelor and master levels in the fields of science, art, and design⁸². Since 2004, student, academic staff (teaching assignment), and staff training (for administrative staff) exchange has been realized with the EU universities⁸³:

The data for surveying the number of incoming academicians is not reliable, as they do not have to get their documents registered at ULIK during their visit. Finding of a solution for this problem is expected.

Academics' Mobility by Erasmus Programme in the Department of Architecture

Year	Outgoing Academics Total	Outgoing Academics of Architecture Department	Incoming Academics Total	Incoming Academics To Architecture Department
2004-2005	12	-	?	-
2005-2006	4	1	?	2
2006-2007	18	2	?	6
2007-2008	20	7	?	4
Total	54	10	?	12

Reference: International Relations Office, MSGSU, 08.01.2009.

Architecture Students' Mobility by Erasmus Programme in MSGSU

Year	Incoming Students Total	Incoming Architecture Students	Outgoing Students Total	Outgoing Architecture Students
2004-2005	7	-	11	3
2005-2006	14	1	25	4
2006-2007	19	4	31	11
2007-2008	43	10	41	7
Total	83	15	111	25

Reference: International Relations Office, MSGSU, 08.01.2009.

80 <http://www.msgsu.edu.tr/msu/pages/51.aspx>, 30.12.2008.

81 ULIK guideline, <http://www.msgsu.edu.tr/msu/pages/51.aspx#>, 30.12.2008.

82 In this context, there are bilateral agreements with the USA, Japan, Russia, Ukraine, China, South Korea, Kosovo and Azerbaijan as well. http://www.msgsu.edu.tr/data/infopack/info_yeni/rektorluk.pdf, 25.12.2008, p. 35.

83 <http://www.msgsu.edu.tr/msu/pages/51.aspx>, 31.12.2008.

Increasing the number of the students (20% outgoing, and 50% incoming) and the academic staff (50% in both ways) exchanged, the number of the institutions in contact, and that the projects run with them by 2010 are planned⁸⁴. In order to improve the level of use of the foreign languages, apart from the compulsory foreign language courses, elective foreign language courses in advanced level were established in the MSGSU and started in 2007 fall semester⁸⁵.

The placement contract gives students the opportunity of professional practice abroad during their studies or within two years following graduation⁸⁶. However, there were no architecture students among the seven who benefited the placement in 2007-2008⁸⁷.

In 2006, 'Regulations on Student and Faculty Member Exchange Programme Among Turkish Higher Education Institutions' was established by YÖK⁸⁸. Accordingly, MSGSU made an agreement with Eskişehir Anadolu University in 2007.

- **Promotion of European co-operation in quality assurance:** The quality assessment is a crucial component of the Bologna Process⁸⁹. For a higher education institution getting accredited means providing a certain level of quality in education and attracting better students. EUA has been building up the infrastructure of the quality assurance system in higher education and even the quality assessment institutions are evaluated⁹⁰.

European Universities Association has been doing external evaluation (institutional evaluation) to the member universities on their demands. Almost all Turkish universities are EUA members and 21 universities from Turkey⁹¹ have been evaluated by now. In Turkey, the Architectural Accrediting Board-MIAK completed its first programme accreditation in 2008⁹². Before these possibilities, some architecture schools had applied for other accrediting institutions⁹³.

In MSGSU, in accordance with Higher Education Academic Evaluation and Quality

84 ULİK, Strategic Plan, <http://www.msgsu.edu.tr/msu/pages/51.aspx>, 30.12.2008.

85 http://www.msgsu.edu.tr/data/infopack/info_yeni/katalog.htm, 30.12.2008.

86 ULİK guideline, <http://www.msgsu.edu.tr/msu/pages/51.aspx>, 30.12.2008.

87 International Relations Coordination Office, MSGSU, 08.01.2009.

88 Published in the Official Gazette dated 31.03.2006 no: 26125

<http://rega.basbakanlik.gov.tr/main.aspx?home=http://rega.basbakanlik.gov.tr/eskiler/2006/03/20060331.htm&main=http://rega.basbakanlik.gov.tr/eskiler/2006/03/20060331.htm>, 20.02.2009.

89 European Association for Quality Assurance in Higher Education – ENQA is significant in the system, accrediting all these organizations with European Quality Assurance Register for Higher Education – EQAR. ENQA regulations: Article 36: 'In accordance with its broad objective to function as a policy forum developing and proposing standards, procedures and guidelines on quality assurance in the EHEA, and to maintain and develop co-operation with other appropriate European stakeholder organisations, ENQA is committed to a continuing cooperation with key European partner organisations. These include the European University Association (EUA), the European Association of Institutions in Higher Education (EURASHE), the European Students' Union (ESU), Education International (EI), Business Europe and the European Commission (EC).' <http://www.enqa.eu/files/ENQA%20regulations%20version%20260908.pdf>, 13.12.2008. <http://www.eqar.eu/about/background.html>, 20.12.2008. Members of EQAR, which was founded recently, are the four founders, ENQA, ESU, EUA and EURASHE, as well as the social partner organisations represented in the Bologna Follow-Up Group (BFUG) and European governments that have decided to support the operation of EQAR and get involved in its governance. The diverse membership of the EQAR Association is reflected in different rights and responsibilities of the different categories of members. <http://www.eqar.eu/association.html>, 20.12.2008.

90 <http://www.eua.be/quality-assurance/>, 16.02.2009.

91 <http://www.eua.be/events/iep/who-has-participated/>, 29.12.2008.

92 <http://www.miak.org/index.cfm?sayfa=okullar>, 2.1.2009.

93 For example, Istanbul Technical University, Faculty of Architecture, Department of Architecture started the accreditation process with NAAB in 2002, and the process was completed in April 2008. <http://www.arkitera.com/news.php?action=displayNewsItem&ID=28576>, 12.12.2008.

Improvement Commission-YÖDEK regulations, in 09.01.2007, the Academic Evaluation and Quality Improvement Committee – ADEK was founded. The first internal evaluation report of the institution for 2005-2006 was completed in February 2006 and it was very simple. YÖDEK produced a more detailed and clearer format for 2006-2007 reports. The third is in the process at the moment. Based on the data of 2006-2007 Self Evaluation Report the SWOT (Strong & Weak Sides, Opportunities & Threats) analysis was made, and sequential institutional improvement strategies were prepared, but MSGSU has not been ready for external evaluation yet.

There are some difficulties in MSGSU for internal evaluation. Actually, due to the obscurity of some questions, the small number of participants (the questionnaires for the self-evaluation report was done with administrative duties) and the limited knowledge of the participants about the process lowers the viability of the results⁹⁴. Counting questionnaires by hand causes over-bureaucratisation⁹⁵. Using proper software is necessary for either questionnaires, or evaluation and consequent planning works. Although the internal evaluation actually targeted the improvement of the quality of education, this process has not started yet. Yet, these processes are quite new in MSGSU, and these problems can be expected to be solved in time.

- **Promotion of the necessary European dimensions in higher education:** As already mentioned, the architectural education in the Academy was based on European models in the foundation period. At the moment, the architectural education in MSGSU has been in transition process paralleled to the European universities. According to the European Policy Statement 2003 (Erasmus University Charter), 'MSU has transformed its leading position in the national art and architectural system depending on its historical background of 120 years to a candidacy in the general, international academic platforms. It has developed new strategies and policies in order to perform and maintain its competitive role and position within the new visionary approach. The historical background of the university is fully engaged with the social, economic, and cultural developments within the national, international and European context that has been reflected in the policies of education.'⁹⁶
- **Lifelong learning**⁹⁷: Although in the university some evening courses (computing courses) or certificate programmes (certificate in education) for professionals, or public courses (courses of arts for adults or children) are provided at times, in the Department of Architecture there has been none of them. Yet, two summer schools for professionals and students were opened in Birgi and Divrigi, where working there is accepted as a part of the compulsory professional practice for architecture students⁹⁸.

94 For example, according to MSGSU Self Evaluation Report for 2006-2007, the evaluation results of Research and Application Centre results are extremely higher than expected levels, much above the faculties institutes, and the average of MSGSU, although they started to function very recently. As very few works were produced by now, some questions must have been misunderstood.

95 According to the EUA 2007 Annual Report published recently, over-bureaucratisation should be avoided in quality assessment works. http://www.eua.be/fileadmin/user_upload/files/Publications/EUA_2007_annual_report_final.pdf, p.35.

96 Erasmus University Charter 2003, European Policy Statement, <http://www.msgsu.edu.tr/msu/pages/426.aspx>, 30.12.2008.

97 European Qualifications Framework for Life Long Learning - EQF-LLL was improved by European Council and Commission decisions between 2004-2006 and officially endorsed by European Parliament and European Union Council on 23.04.2008. Report on Turkey Higher Education National Qualifications Framework January 2009, http://www.yok.gov.tr/duyuru/tyuyc_ara_raporu.pdf, 04.02.2009.

98 http://www.msgsu.edu.tr/data/infopack/info_yeni/mim_ing.pdf, 30.12.2008.

- **Participation of higher education institutions and students:** In terms of participation in the governance, Turkish universities are organised by the centralising structure of YÖK. Each subdivision is represented in a division, each division is represented in a department, each department is represented in a faculty, each faculty is represented in the senate of the university, and each university is represented at YÖK by its rector. Each has a council (Division Council, Subdivision Council, Council of Department, Council of Faculty and the Senate of University) and the participation in the governance is realised by decisions of the councils.

As Bologna Process is student-centred, the students have a crucial effect on decisions⁹⁹. Paralleled to the Process, YÖK established the 'Regulations on Student Councils of Higher Education Institutions and the National Student Council of Higher Education Institutions' in 2005¹⁰⁰. In MSGSU a student council was founded accordingly. The students elect representatives at departments, faculties and the university every year. According to the regulations, faculty representatives can be invited to the faculty council meetings when topics related to the students are being discussed. Similarly, the university representative can be invited to the senate meetings. But, these have not been realised yet.

EUA measures student participation by their level of participation in the quality assessment process. Students are supposed to participate

in four processes: Management of national bodies related to Quality Assurance; as a member of the specialist team, as an expert in decision making, in the process of external evaluation of higher education; in consultation process for external evaluation process; internal evaluation¹⁰¹. In the average of Turkey, students are considered to join three of these processes. Yet, in MSGSU, it seems that student participation is mostly limited with internal evaluation.

- **Promotion of the Attractiveness of the European Higher Education Area:** Having a website, being the first architectural school and consequent accumulation of knowledge and experience, sharing the same building with Faculty of Fine Arts and being in a central area of Istanbul situated by the sea and other institutional facilities creates an attractive setting for the Department of Architecture¹⁰². The institution has become well known by national and international activities. The objectives in the 2009-2013 strategic plans of MSGSU are determined according to the competitive university understanding of EUA and the process will go on due to the annual Action plans.
- **Establishing European Higher Education Area and European Research Area as two pillars of the knowledge base society:** The postgraduate programmes of the Department of Architecture have been carried out by Science and Technology Institute since 1982. The Architecture Division of the institute has seven MSc and

99 The West European Student Information Bureau was created in 1982, and in 1990 the name was converted to European Student Information Bureau – ESIB. In 1999, 'Bologna Declaration' gave ESIB a European arena to act, and in Prague summit in 2001, ESIB, representing the students of Europe, became an official observer in the Bologna Process. <http://www.esib.org/index.php/About%20ESU/History>, 14.12.2008 In May 2007, ESIB was renamed as ESU. <http://www.esib.org/index.php/News/news-archive/187-esib-becomes-esu>, 14.12.2008. European Architecture Students Assembly – EASA is more concerned about the profession. <http://www.easa.tk/>, 20.12.2008.

100 Published in the Official Gazette dated 20.09.2005, no: 25942 <http://www.yok.gov.tr/mevzuat/yenimevzuat.htm>, 31.12.2008, <http://www.mevzuat.adalet.gov.tr/html/23369.html>, 31.12.2008.

101 Presentation by Mehmet Durman, National Team of Bologna Promoters, The Project of Application of Bologna Process in Turkey, 28.04.2008, <http://www.bologna.gov.tr/index.cfm?action=detay&id=94&publish=131&lang=TR>, 14.12.2008.

102 ADEK, MSGSU Self Evaluation Report for 2006-2007, <http://www.msgsu.edu.tr/data/doc/ozdeger0607.pdf>, 30.12.2008., p.15.

Year	Number of the thesis completed in MSc Programmes in Architecture	Number of the thesis completed in PhD Programmes in Architecture
1997 - 2007	119	35

Reference: Science and Technology Institute, MSGSU.

six PhD programmes. The graduates of architecture are also accepted to the programmes of the Construction Engineering and the Interior Design Division.

Mimar Sinan University Research Fund was founded in 1984 due to the YÖK regulations based on the Higher Education Law no: 2547. The reformation process in the university research funds started in 1997¹⁰³. In 2001, the name was changed as Scientific Research Projects¹⁰⁴ and the Commission of Scientific Research Projects was organized. Each unit

is represented in the commission which is administered by a vice rector and the Institutes of Science and Technology, and Social Sciences are members as of right¹⁰⁵. At the moment, Research Funds of Scientific Research Institution of Turkey-TÜBİTAK, Science Academy of Turkey-TÜBA, T.R. Prime Ministerial State Planning Organization-DPT have been used by a few people in MSGSU. Moreover, the budget for research projects in MSGSU is limited, and does not grow. The number of research projects approved in last five years is below:

Year	Number of Scientific Research Projects Approved in MSGSU	Number of Scientific Research Projects in Faculty of Architecture	Number of Scientific Research Projects in Department of Architecture
2004		9	9
2005	16	5	2
2006	15	7	7
2007	16	6	6
2008	11	2	2

Reference: Commission of Scientific Research Projects, MSGSU.

In MSGSU, there are twelve Research and Practice Centres connected to the rector, apart from the Commission of Scientific Research Projects. Architect Sinan Research and Practice Centre (founded in 1984) and the Construction Research and Practice Centre of Technology (founded in 2008) are related to architecture.

Supporting the academic staff to attend scientific conventions and increasing the number of research projects by getting the budget developed are planned¹⁰⁶. Yet, the budget for research in the institution has

been small and not growing because of low income of revolving fund.

In terms of the Bologna Criteria, in the Bologna Evaluation Report of EUA, in 2005, in Bergen, the level Turkey achieved was graded, in average, as good; and in 2007, in London, as very good. MSGSU Self Evaluation Report 2007 implies that, in terms of appropriation for the Bologna Criteria, MSGSU needs to improve research and quality assessment works. As the processes are new, and the speed is accelerating, the problems of the transition period can be solved in MSGSU.

103 <http://www.msgsu.edu.tr/msu/pages/35.aspx>, 12.12.2008.

104 By the announcement published in the Official Gazette dated 03.07.2001, no: 24451.

105 <http://www.msgsu.edu.tr/msu/pages/35.aspx>, 12.12.2008.

106 Strategic Plan, http://www.msgsu.edu.tr/msu/ana_duyuru/strateji/plan1.pdf, 9.01.2009.

Eleven Criteria of Architecture in MSGSU

In 2008 spring, YÖK regulations on minimum educational standards of seven professions including architecture accessed MSGSU, Faculty of Architecture, Department of Architecture. In May, the Head of Department organized some meetings for discussing the planned changes in the curriculum. In fact, the eleven criteria were mostly compatible with the actual curriculum. However, in the department, the adequacy and the appropriation of the curriculum and the units with the eleven criteria were not evaluated systematically in order to determine the weak, strong and unique characteristics of the programme.

In July 2008, in Department of Architecture, the new curriculum was already in force. Number of the electives was not enough, and room was made in the curriculum again by shrinking the compulsory units. In order to create space for the elective units, the percentage of compulsory lectures was reduced in the curriculum. While the ratio of the compulsory and the elective units within the curriculum were re-arranged, the eleven criteria were not considered due to the lack of a detailed analysis and evaluation of the existing situation. Although it could be an opportunity to rise the discussion on how to substitute the design based character of education that was crippled by the changes since 1982, it was almost seen as a mere operation for opening space for the electives. As mentioned before, this revision undermined Architectural Application Project and Urban

Design Unit which are very important components of architectural education. According to the eleven criteria, the units of social contents seem to be needed improvement at first sight. However, this revision did not provide a solution. In consideration, with the mission and vision of the department, a new formation with the goal of accreditation, through evaluating the actual curriculum, will help the improvement of the institution. Within the limits of this article, to survey the level of awareness of the eleven criteria and the other changes in MSGSU, some questionnaires were realised.

THE PERCEPTION OF THE CHANGE

In order to make a survey of the perception of the changes realized in the architectural education programme in MSGSU, a questionnaire was run with 40 academics and 100 students, in December 2008. The first students who replied the questionnaire were registered to MSGSU in 2006, and therefore experienced some of the changes during their study, with ages varied between 19-28.

Almost the half of the academic staff who replied the questionnaire was with PhD (60%), and the rest (40%) were the assistants writing their PhD dissertations who involve in the education sector. 28% of 40 academics have been involved were actively doing, or recently done administrative duties. The graduation years vary between 1956 and 2003, and most of them were graduates of MSU (IDGSA)¹⁰⁷.

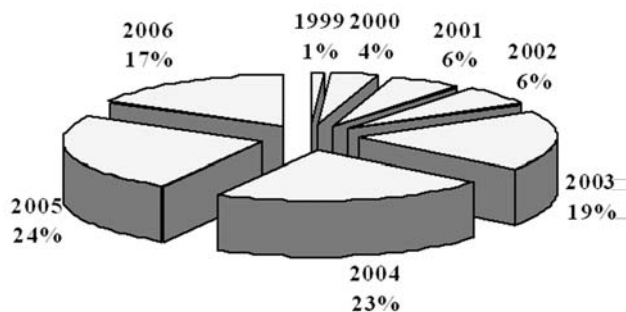


Fig-1: Registration years of the students who joined the survey.

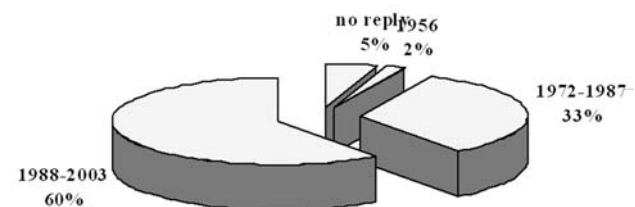


Fig-2:

¹⁰⁷ The person who graduated in 1956, studied architecture in Istanbul Technical University and the duration of architectural education there was five years then.

The graduation years of the Academic Staff are grouped according to the changes in the educational system in Turkey. The centralization of the academic system in Turkey changed the educational programmes in 1983, and the first graduates would be in 1987.

When the replies of the first two questions were considered, it is observed that both students (88%) and the academics (95%) think that the four year architectural education programme is

not enough for gaining professional qualification and the duration is not efficient (students' 88%, academics' 93%). 33% of academics and 32% of students think that the duration of architectural education should be five years, and 30% of academics and 25% of students believe that it should be six years (4+2). It means that both students and the academics think that the duration of architectural education should be at least five years.

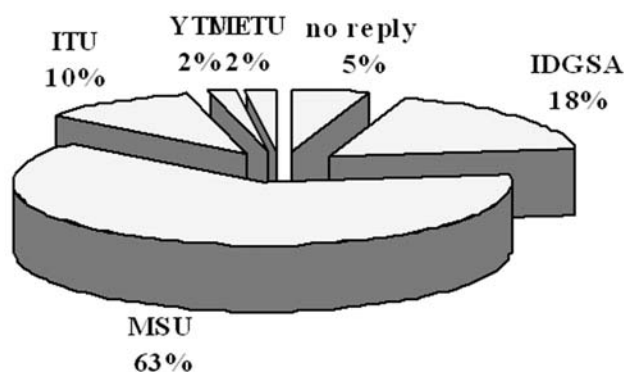


Fig-3: The universities which academics were graduated.

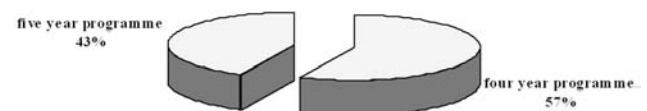


Fig-4: The duration of the programmes which academics were graduated.

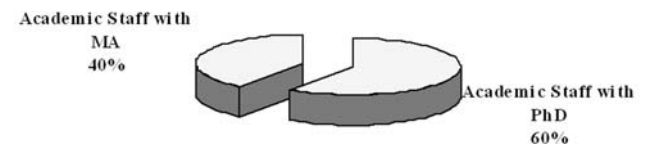


Fig-5: The programmes which academics completed.

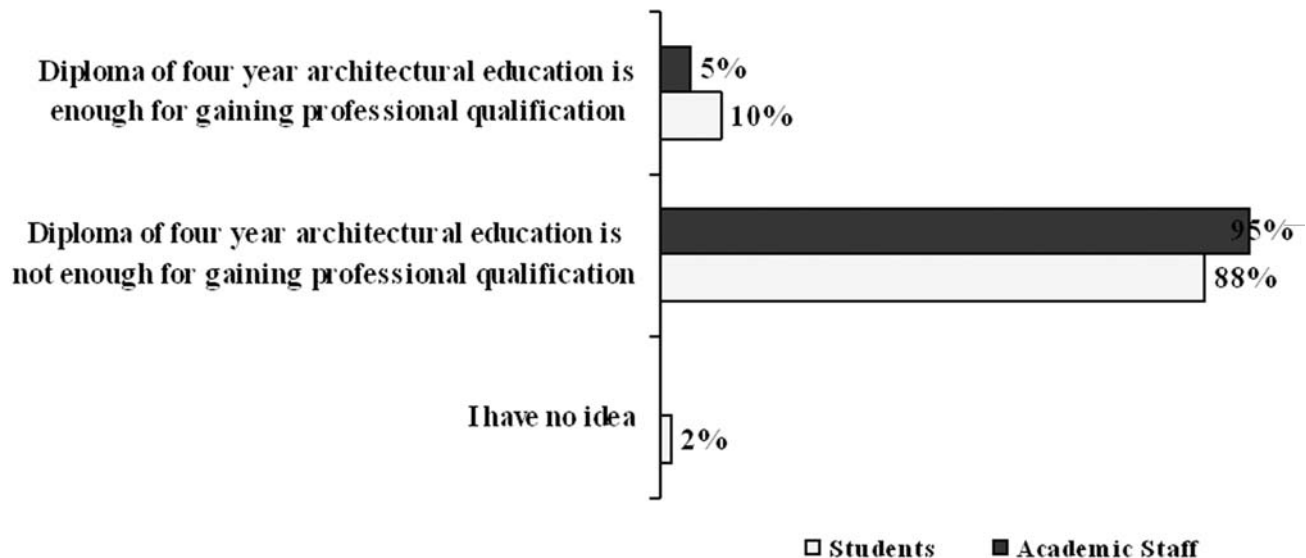


Fig-6:

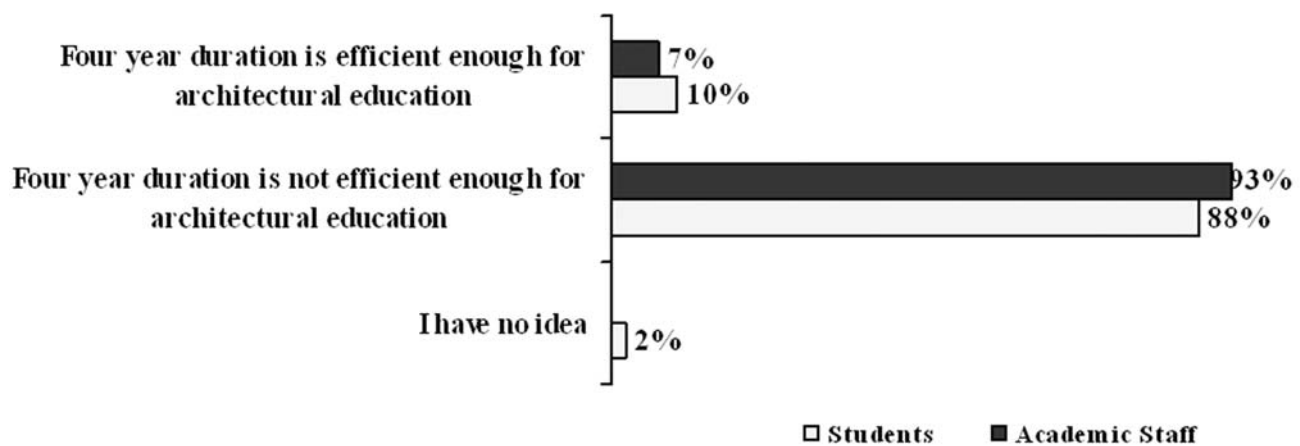


Fig-7:

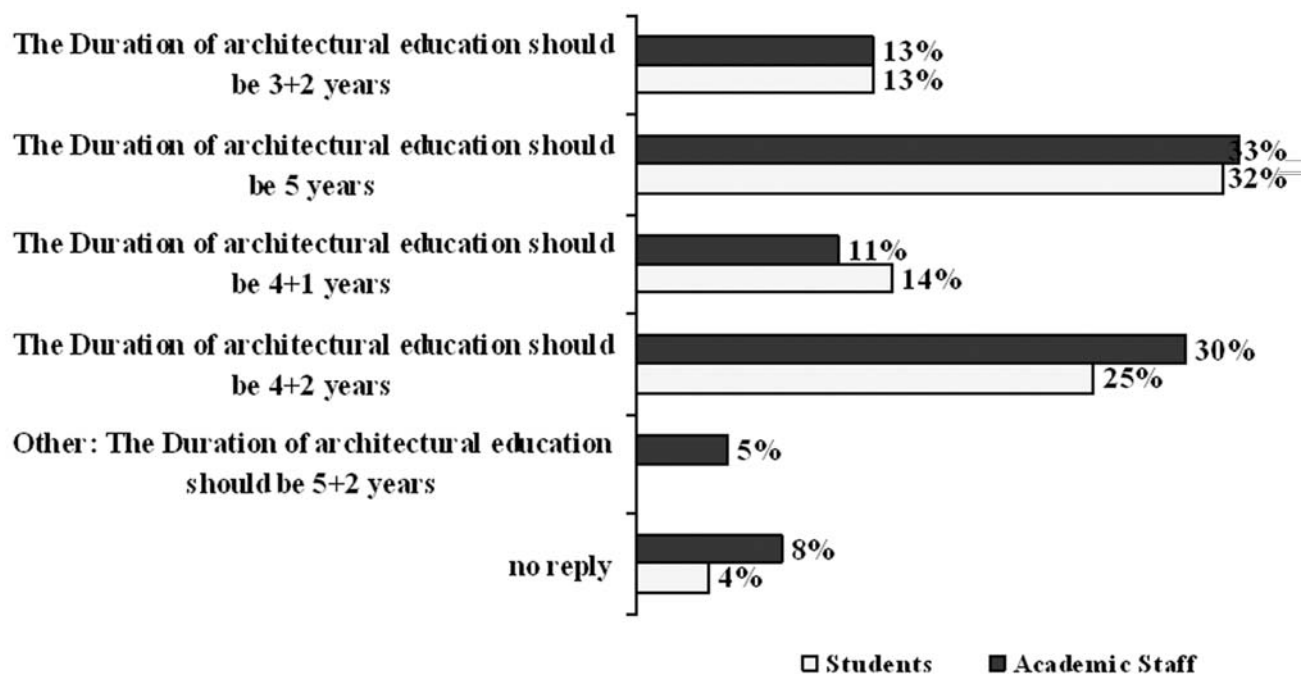


Fig-8:

Majority of both students (85%) and academics (81%) agree that the architectural education should be in accordance with international standards.

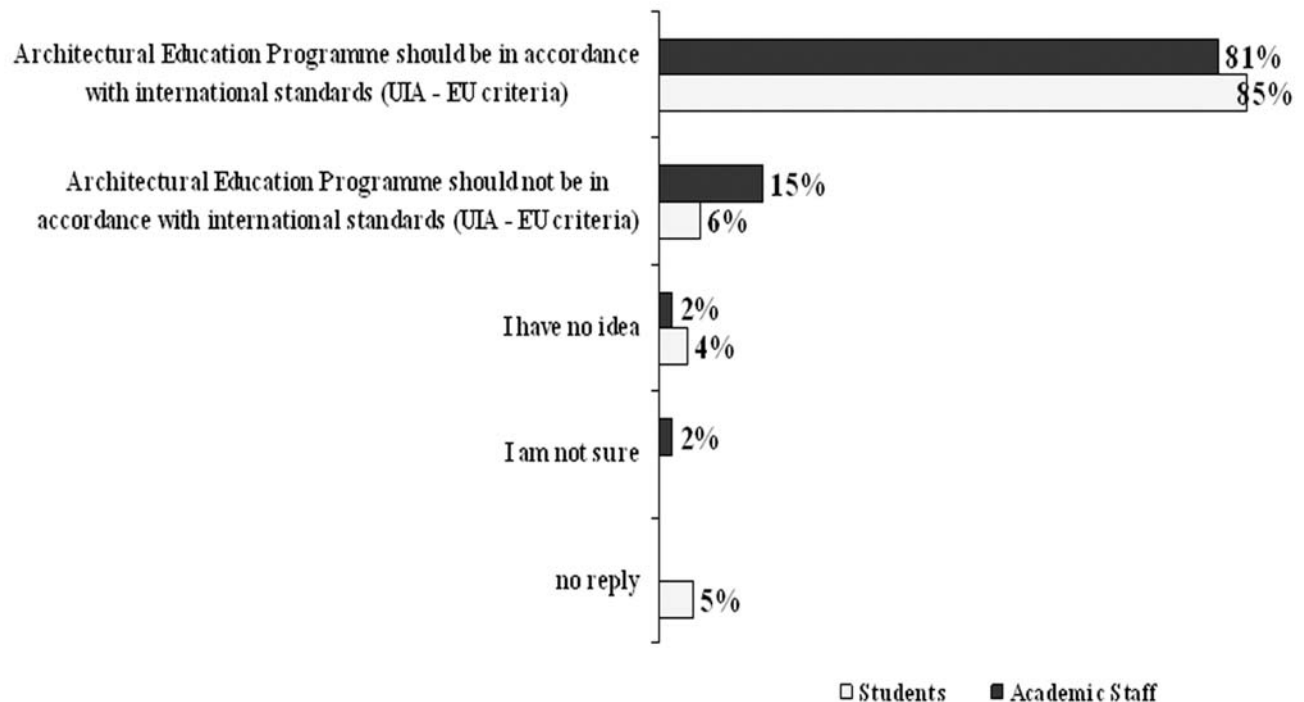


Fig-9:

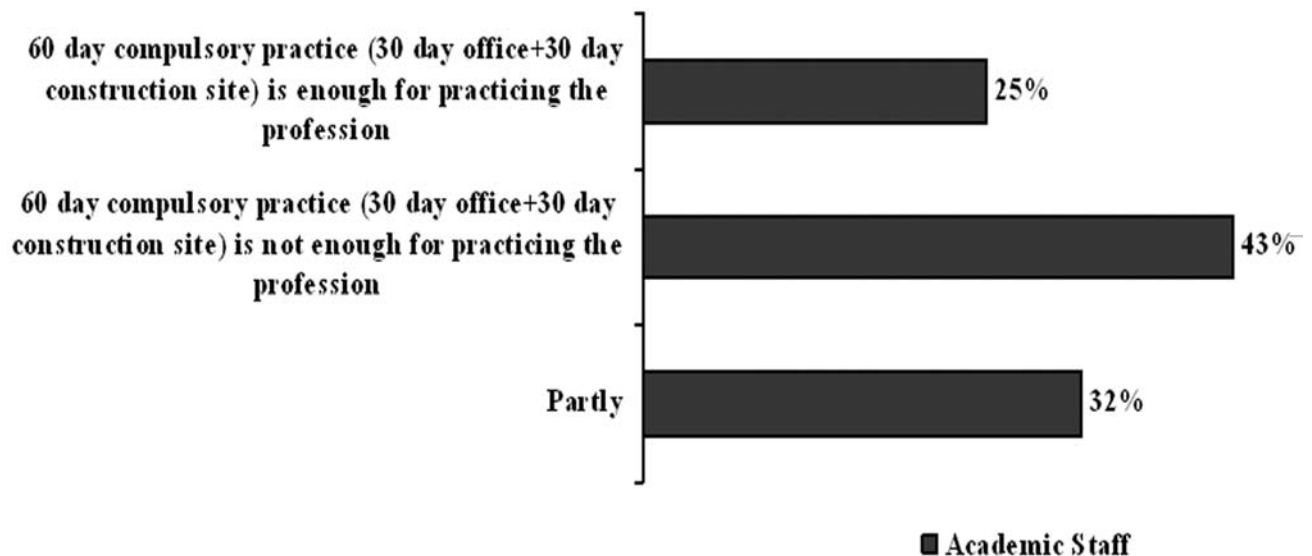


Fig-10:

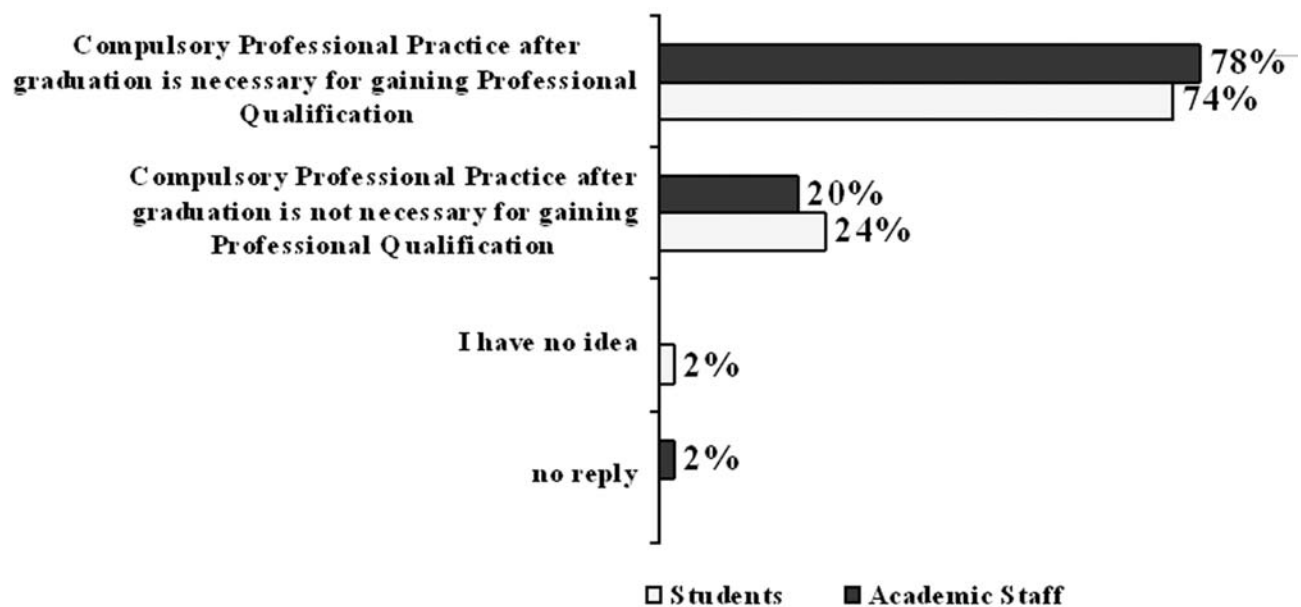


Fig-11:

About the inefficiency of the 60 day compulsory practice (30 day office+30 day construction site) during the education, 43% of academics agree, and 32% find it partly enough. The compulsory professional practice after graduation is believed to be necessary by 78% of academics and 74% of students. Most of them (61% academics and 54% students) think that the duration of it should be one year.

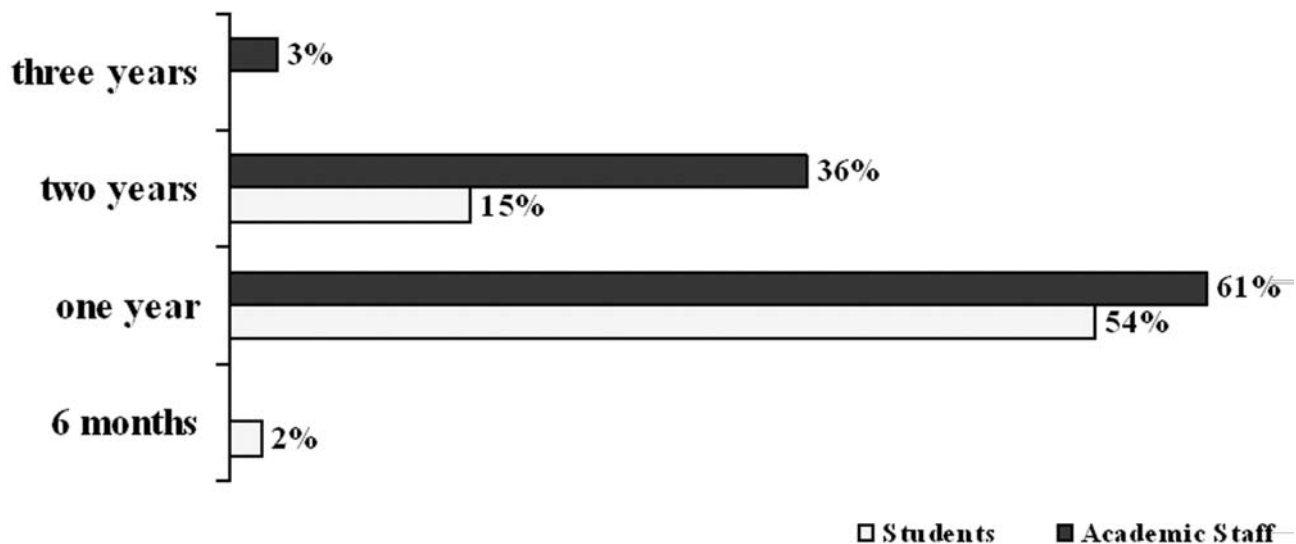


Fig-12:

Almost all the students (94%) are aware of the changes in educational programme (Some diploma students did not notice it, because they are not responsible for anything else but only the diploma project).

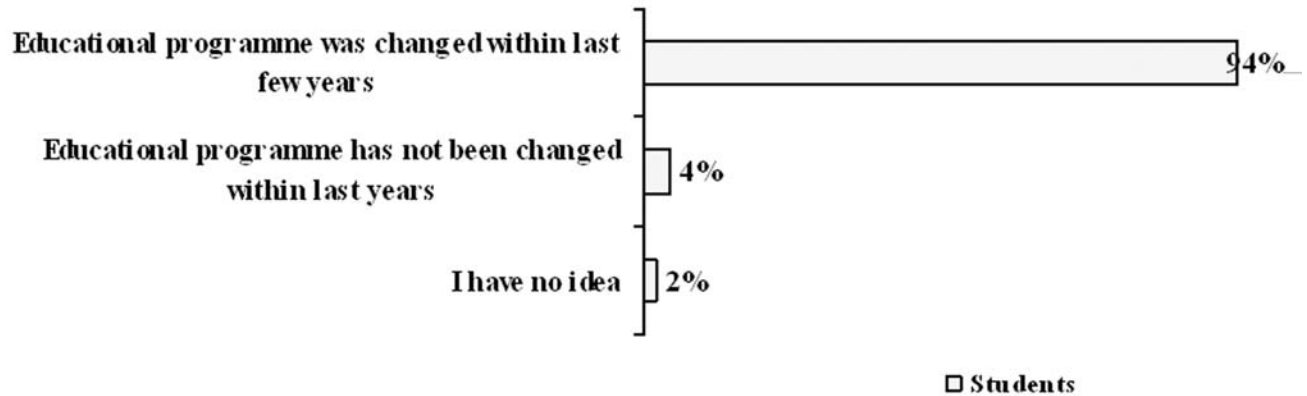


Fig-13:

While 73% of the academics state that they know the reason for the change in the schedule, 60% of the students do not know. That points out the low level of student participation in the changes, although Bologna Process is considered to be student-centred.

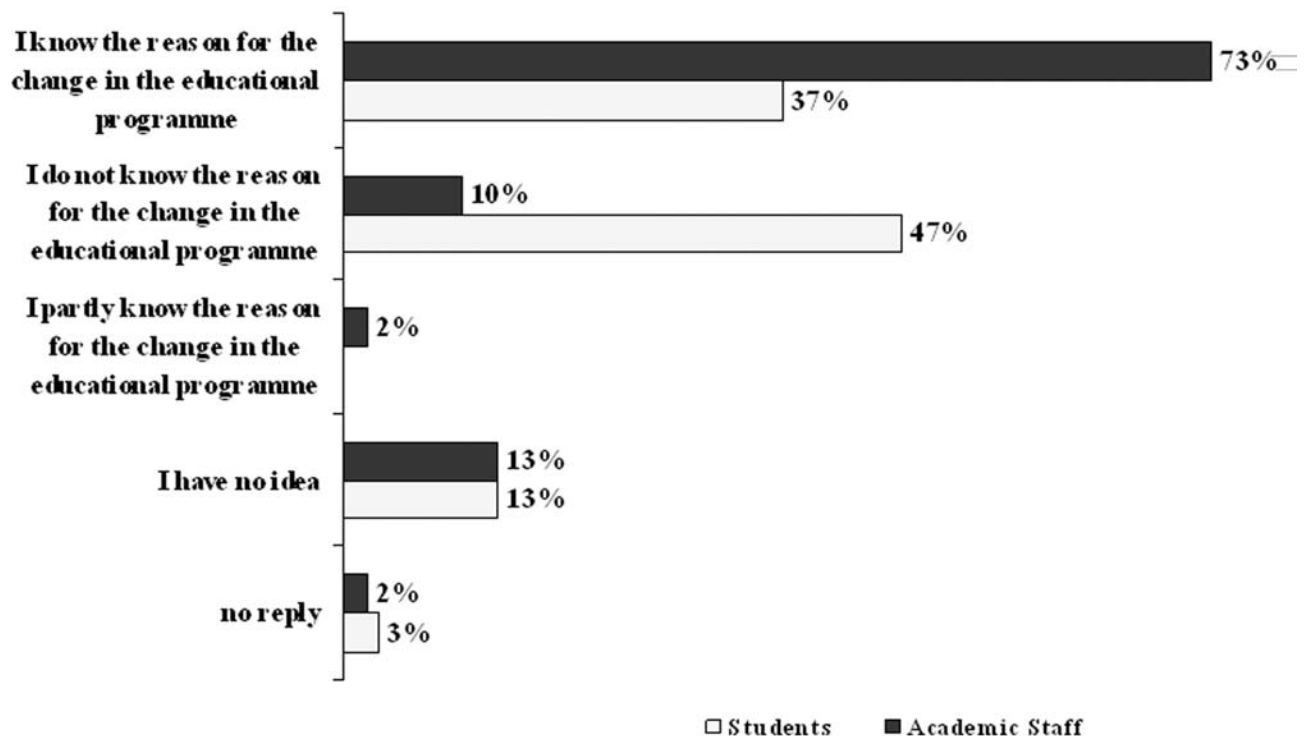


Fig-14:

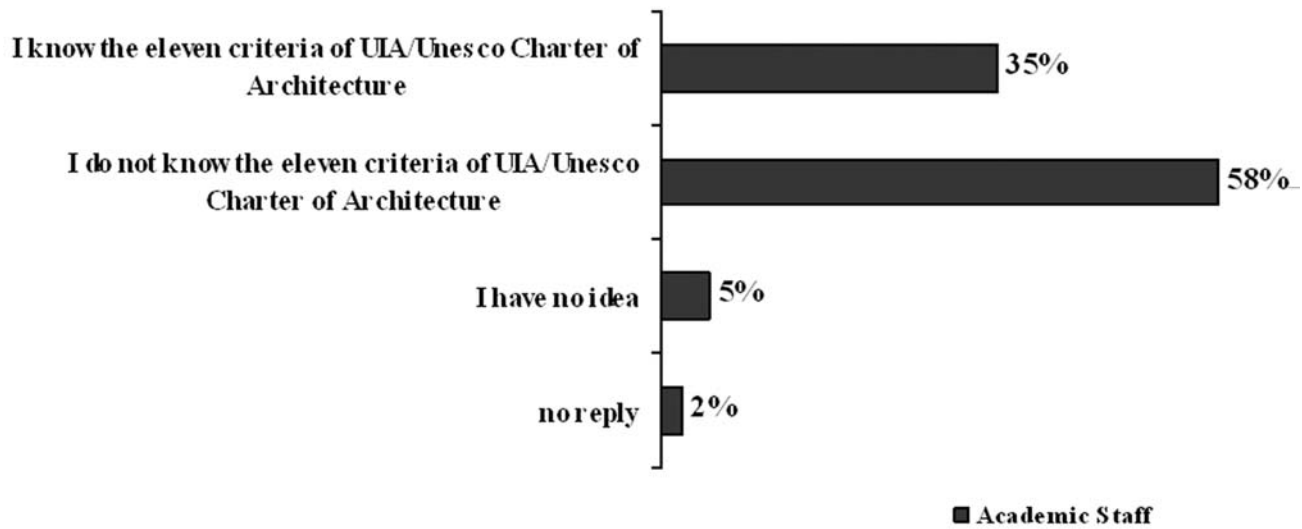


Fig-15:

The eleven criteria of architecture of UIA/UNESCO Charter and consequently EU directive, which accessed to MSGSU via YÖK Regulations on Recognition of Professional Qualifications, is not known by the majority of the academics (58%). Most of those who know about the eleven criteria (79%) think that the recent changes in the educational programme are not being realized accordingly. It means that the parallel changes happening in the world are followed only the minority (35%), and the majority considers them insignificant.

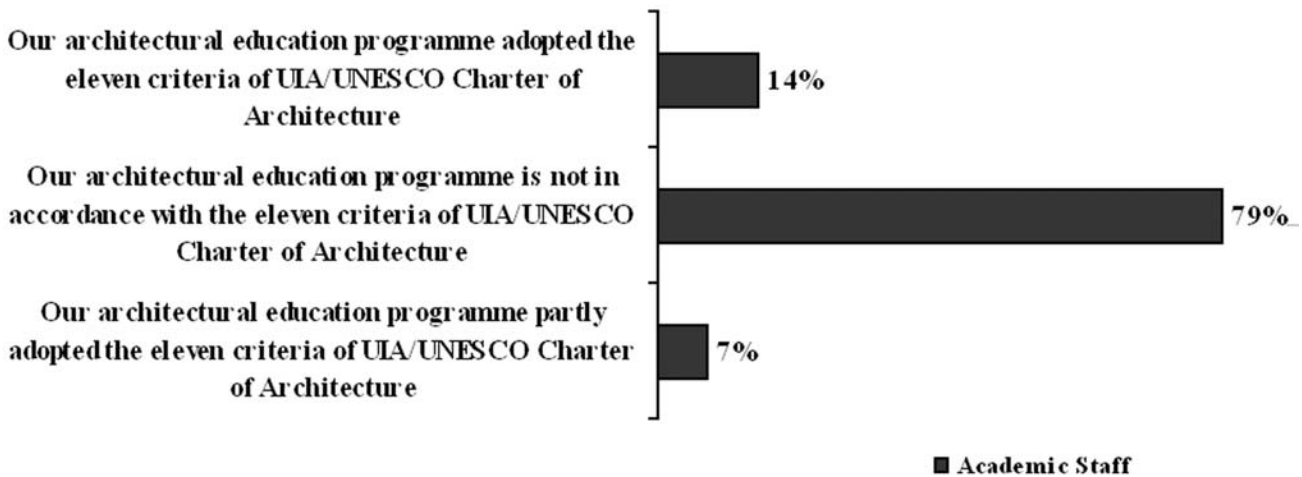


Fig-16:

The two third of academics (65%) know about Bologna Process on which the most of the reforms are based, whereas the majority of students (87%) do not.

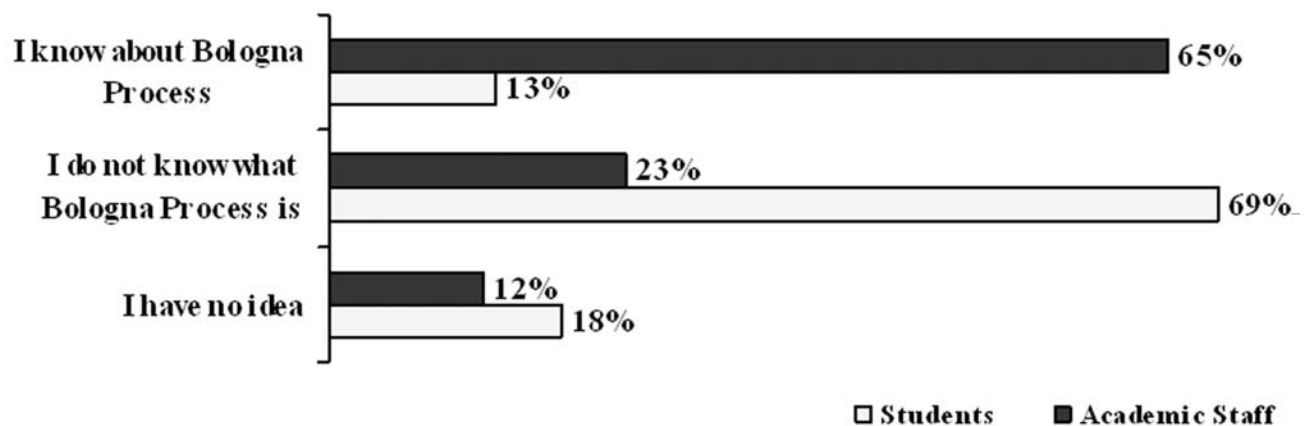


Fig-17:

While three fourth of the academic staff (78%) is aware of the quality assesment works in MSGSU, the two third of students (68%) do not know about it. It implies that quality assessment and internal evaluation works are carried out as a formality without considering its essential qualities, and the importance and the necessity of it are not explained to the students.

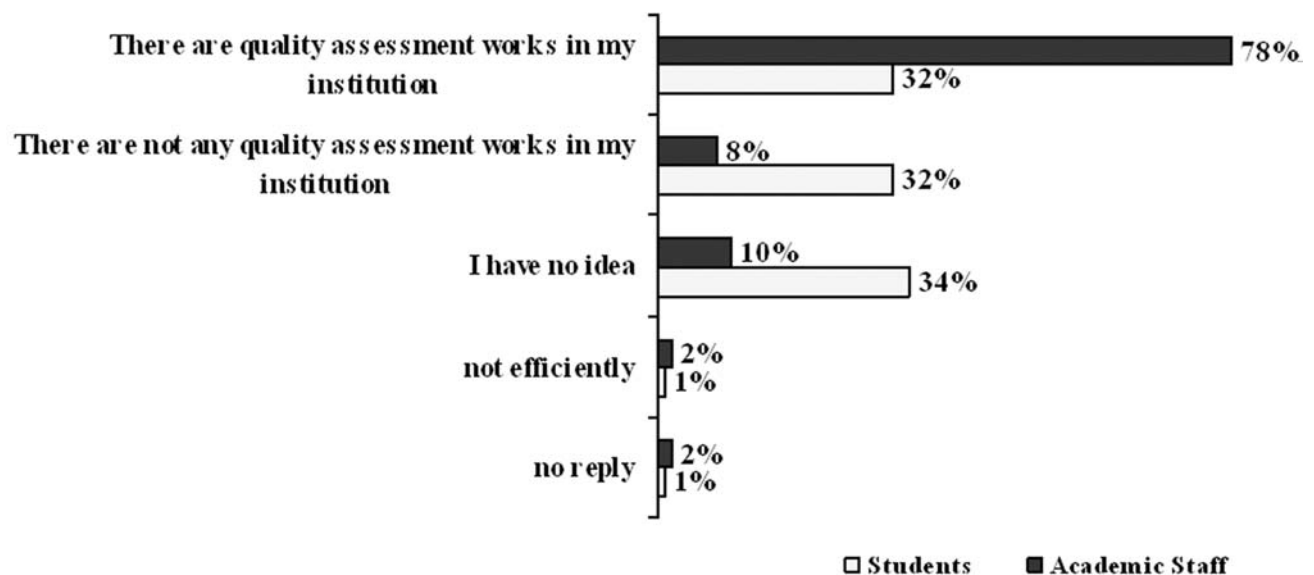


Fig-18:

Most of the academics (70%) and almost half of the students (48%) believe that the accreditation in architectural education is necessary, yet, both of them do not know about accrediting institutions in majority (65% of academics, 94% of students).

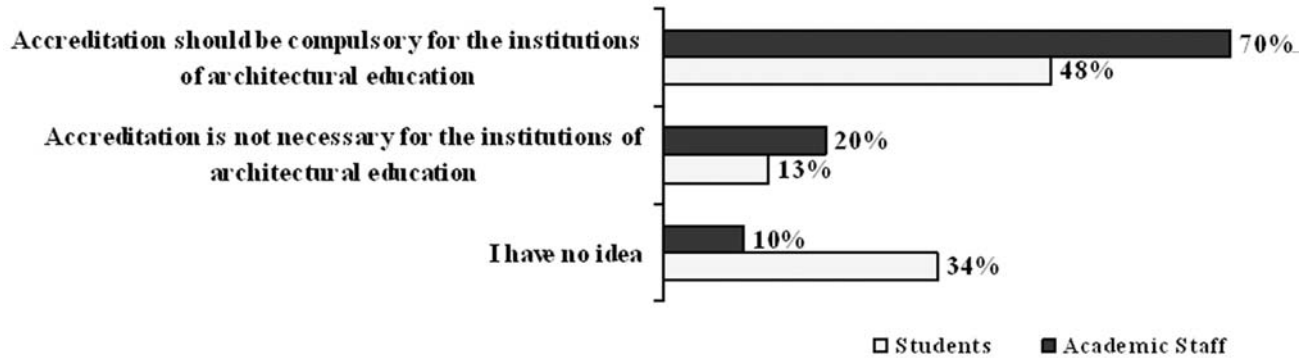


Fig-19:

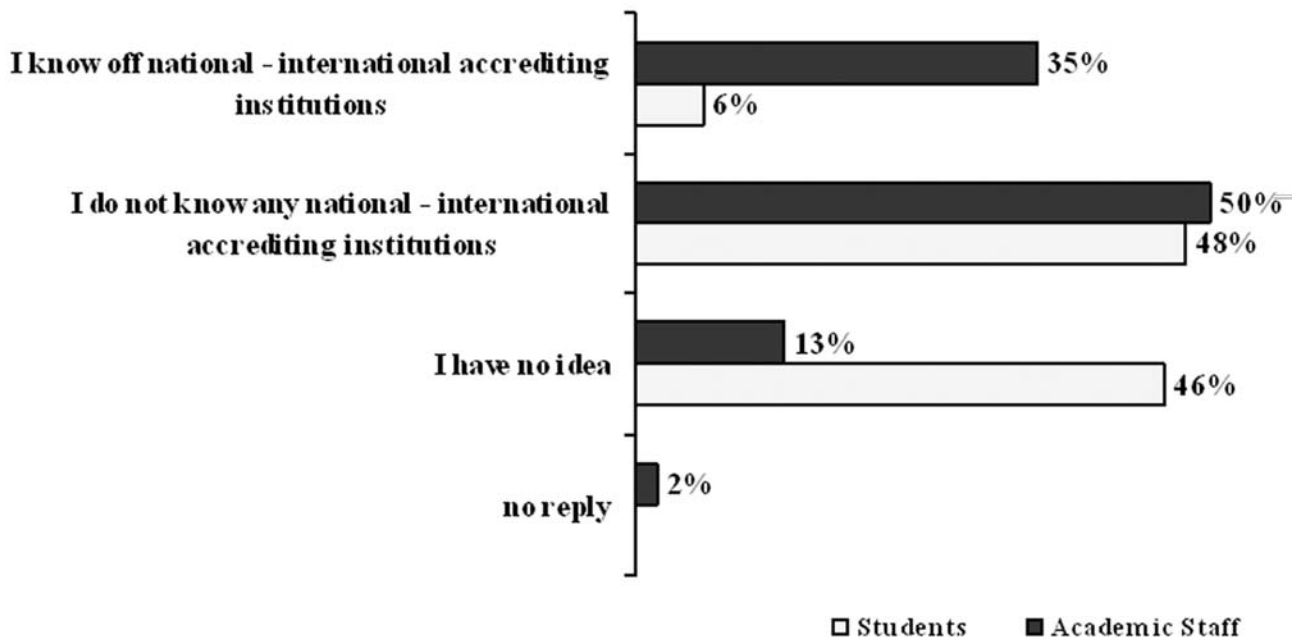


Fig-20:

The survey in MSGSU implies that a very small percentage of the academic staff, because of their administrative duties, follows the changes in the architectural education curriculum as a result of the global processes. Most of the academics at least know of the Bologna Process, whereas two third of them do not know the 'eleven criteria' of architectural education, although they were sent to every division in the

Department of Architecture in MSGSU. The students' ignorance about the processes points out the low level of student participation in the changes, although Bologna Process is considered to be student-centred.

According to the survey, quality assessment and internal evaluation works, which are indispensable components of this process of

change, are carried out as a formality without considering its essential qualities. Those who follow the processes are limited number of academics. The importance and the necessity of it, has not been grasped by the majority and consequently not explained to the students well enough.

CONCLUSIONS

Global and continental economic agreements affected Turkey in many aspects. The most important of them is the European Union membership candidacy of Turkey, and that means harmonization of legislation. Agreements and recommendations by international architectural organizations due to the influences of economy based regulations on architectural profession and education accessed to Turkey through EU membership process. Some of them were within EU directives to be transposed into the national law, and some others through recommendations of Bologna Process, aiming at creating the European Higher Education Area. The most important EU directive influencing architecture is the one describing the eleven criteria of architecture which is in harmony with the UIA/UNESCO Charter of Architecture. This became the regulations of Council of Higher Education –YÖK in 2008. The recommendations on education were mainly from the Bologna Process, through European Universities Association – EUA. These also accessed to the schools of architecture in Turkey through YÖK regulations.

Bologna Criteria has been tried to be applied in MSGSU mostly within last few years. Still new recommendations reach universities through YÖK. The establishment of a clear three cycle system was already founded in 1982, and information packages were established for all faculties. Yet diploma supplement is given only on demand. A credit system was established where ECTS will become an internal credit system. In terms of mobility, EU programmes such as Erasmus are benefited for students, teaching and administrative staff, as well as exchange for professional practice. Quality assurance systems have been established and developing although in the process of refinement.

Self-evaluation results do not turn back as feedback and any outer evaluation has not been applied for yet. Lifelong learning programmes for public are not continuous in the university, and in architecture, it is limited with two summer schools for students and professionals. Student participation seems to be weak, as student representatives are not yet involved in the decision making process, or at least have attended such meetings within the university by now. Budget for research projects is very small and does not seem to be on the rise. Within MSGSU there are very few people using outer resources (national or international) for research.

The eleven criteria of architectural education from an EU directive accessed MSGSU via YÖK regulations was not applied in MSGSU properly. The change in the curriculum of the Department of Architecture was not as a consequence of a detailed research and self-evaluation of the programme, and therefore caused important losses. In fact, very few members of faculty were aware of the introduction of the relevant regulations during the process.

These findings were supported by the results of the survey in MSGSU. It was found that only a very small percentage of academic staff follows the process, while students were not aware of it and were almost left out of the process despite Bologna Process being student-centred. Quality assessment and internal evaluation works, which in fact are an inseparable part of the process, are perceived as a formality; their importance is not grasped by the majority and students were not informed properly.

However, due to the common sense and the willingness of both academic staff and the students, that may be a consequence of the high speed of the transition, as well as being very recent. It may also be connected to the activation of the Process, which has been accelerating, particularly since 2003, in accordance with the harmonisation process with the EU. It is expected that the problems of the transition period will be solved in time by using the facilities and potentials of the new system.

RE-PUBLISHED
PAPER OF
OUTSTANDING
SIGNIFICANCE

A THEORY FOR INTEGRATING KNOWLEDGE IN ARCHITECTURAL DESIGN EDUCATION¹

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1. INTRODUCTION: FROM KNOWLEDGE CONSUMPTION TO KNOWLEDGE PRODUCTION

The theory introduced in this paper is culled from a wide spectrum of issues I have explored over a period of two decades. Since architecture is created in a field of tension between reason, emotion and intuition, I suggest that architectural design pedagogy should be viewed as training towards the manifestation of the ability to conceptualize, coordinate, and execute the idea of building. This act must furthermore be rooted in humane tradition. However, this mandates a comprehensive understanding of the role of knowledge in architecture while comprehending how to integrate different modes of knowledge production. Recent years have witnessed a number of phenomenal and continuous changes in the structure of contemporary societies, the emergence of housing problems and squatter settlements, the deterioration of the built heritage, the rising complexity of large structures and new building types, and the recent interest in environmental conservation and protection. While these phenomena continue to exist, demands for multiple types of knowledge are clearly on the rise: knowledge of how to create better environments for poor societies; knowledge of how to involve people affected by design and planning decisions in the process of making those decisions; knowledge of how to protect the built heritage; knowledge of how to design environments that do not compete with but complement nature; knowledge of how to deal with problems associated with special

populations that form major parcels of contemporary societies such as children, seniors, the disabled, and the poor; knowledge that responds to socioeconomic and sociopolitical issues; and knowledge that responds to advances in building and telecommunication technologies.

This paper conceives two distinct — yet related — types of knowledge in architecture. The first type is knowledge resulted from research that seeks to understand the future through a better understanding of the past — research that tests accepted ideas. The second is knowledge resulting from research that probes new ideas and principles which will shape the future — research that develops new visions and verifies new hypotheses. Still, the typical debate about the role of knowledge and research in architecture as an academic discipline and a profession continues to exist. Within the framework of these knowledge types, the paper calls for a fresh look at architectural design education, and proposes that it should be centered on critical inquiry and knowledge acquisition and production.

A theory is conceptualized that argues for more responsive architectural design pedagogy, enabling future architects to create livable environments. This theory emerges from and responds to societal, cultural, and environmental needs. In order to contextualize the overall environment in which the theory is developed, the reasons why it is introduced are discussed, followed by a number of aspects that characterize its context.

1 An earlier version of this paper has been published in Archnet-IJAR, International Journal of Architectural Research, Volume 2, Issue 1, 2008, PP.101-128. Thanks are due to the journal editorial team for granting permission to republish this paper.

The theory is based on some alarming figures, the syndrome of viewing architecture as art and only art, and the syndrome of emphasizing the development of skills at the expense of knowledge. Evidently, the reasons for and the context of a theory for knowledge integration suggest a different form of thinking that goes beyond typical discussions of modifying architecture curricula or massaging studio pedagogy and the teaching/learning processes involved. The theory encompasses a number of underlying theories and concepts derived from other fields that differ dramatically from architecture, including philosophy of science and cognitive psychology. Metaphorically, the theory is conceived in terms of a triad consisting of three major components: the disciplinary component; the cognitive-philosophical component; and the inquiry-epistemic component. Each of these components encompasses other smaller components integral to the building of the theory itself. Notably, the three components address ways in which knowledge can be integrated, how the desired integration would meet the capacity of the human mind, how such an integration relates to the nature of knowledge and how knowledge about it is acquired, conveyed, and assimilated. Possible mechanisms for knowledge acquisition are an indispensable component of the theory, whose aim is to foster the development of responsive knowledge critical to the successful creation of built environments. It is believed that by adopting this theory, future architects will have the capacity to be active knowledge producers, and not just consumers of knowledge developed by other specialists in other disciplines.

2. WHY INTRODUCE A THEORY FOR KNOWLEDGE INTEGRATION?

Critical to the introduction of a theory for knowledge integration in architectural design education is a discussion of the underlying reasons for developing it. Here, I build on some of my earlier surveys and arguments developed over the past fifteen years in response to the current situation of architectural education and studio pedagogy (Salama, 1995; Salama, 1999; Salama, 2005 a). While the reasons for introducing a theory are many and multifaceted,

in order to place the discussion in focus, I categorize and limit those reasons in terms of the following points: admission policies and the skills emphasis syndrome, idiosyncrasies in knowledge delivery and acquisition in architectural education, and some alarming figures on studio teaching practices.

2.1. Admission Policies and the Skills Emphasis Syndrome

Discussing admission policies as a theme within the context of knowledge integration in architectural design education raises questions more than providing answers. Architects receive their education and training in hundreds of schools of architecture around the world. Practice is typically locally regulated, but sometimes licensed (Salama, 2005 a). The practice of architectural design education appears to be remarkably similar in many parts of the world due to the overriding primacy given to the studio as the main forum for exploration, interaction, and assimilation (Salama, 1995). Such similarity enables significant mobility of architects among firms, areas of expertise and locales, even where cultural differences are dominant.

A number of important issues are revealed by surveys conducted on admission policies in over 120 schools of architecture worldwide (Goldschmidt et al, 2000; Salama, 2005 a). Results indicate that some admission criteria are more dominant than others. Emphasis is placed on high school records (93.2%). About 40 % of schools adopt a skill-based aptitude test and portfolio submission. While these numbers cannot be generalized, the different admission policies that emerged from the analysis reflect a sustained emphasis on the skills needed for enrolment, while knowledge and critical thinking abilities of applicants as they relate to architecture and the overall built environment appear to take a back seat. This is manifested in the results indicating that only 6.8% of the schools surveyed adopt a written statement approach as part of their admission criteria, and only 9.3% require critical essays as an important admission criterion. By and large, admission policies reflect the tendencies of most schools of architecture to emphasize skills in drawing

and form manipulation, an aspect of architectural education that continues to be emphasized throughout the duration of study in schools at the expense of other pedagogical aspects and learning outcomes.

While the preceding figures shed light on some tendencies toward admission policies, understanding the impact of those policies on the performance of students in schools and after graduation, and on their skills and knowledge needed for creating liveable environments, represent a challenging empirical question. Very little is known about the success or failure of admission criteria and the way in which they may shape the attitudes of future architects. Clearly, more in depth studies are urgently needed.

2.2. Idiosyncrasies on Knowledge Delivery and Acquisition

There has been — and still is — a continuous debate among architectural educators about the role of knowledge and research in architecture as a discipline and profession (Salama, 1996; Sutton, 1984). Whether in developed or developing countries, many in architecture still think of researchers as people in white smocks and thick glasses searching for the mystery and the unknown. In response, scholars and educators have emphasized that research should be viewed as part of everyday actions and experiences. They argue, and rightly so, that traditional teaching practices have long encouraged students to develop form manipulation skills by emphasizing intuition, reflective observation, and concept formation (Juhász, 1981; Salama, 1995; Sanoff, 2003; Seidel, 1994). However, these practices are hypothetical, largely unconcerned with real life situations, and neglect equally important skills that can be enhanced through experiential learning, research, or real interaction with the realities being studied.

In traditional teaching practices, architecture students are typically encouraged to conduct site visits and walkthrough the built environment in order to observe different phenomena. Unfortunately, research indicates that these

visits and exercises are simply casual and are not structured in the form of investigation or inquiry (Salama, 1995, 1996, 2005 b, 2006). As a result, students do not know what to see and what to look for in the built environment. The case would be worse when educators attempt to offer students ready-made interpretations about the physical world in lectures and seminar classes, leading to students' inability to think critically or develop their intellectual skills. This handicaps their abilities to gather, analyze, synthesize, and process different types of information. Traditional teaching practices have contributed to the view of architecture as an art-based profession, oversimplifying other critical views of it as a knowledge-based or research-based educational discipline and profession (Salama, 2007 a). In response, current discourses have heavily emphasized the value of knowledge acquisition and of the introduction of research based pedagogy (Fisher, 2004; Groat, 2000).

While architectural educators strive to impart the requisite knowledge necessary for successful practice, the way knowledge is transmitted has significant professional and social implications (Mazumdar 1993; Salama 1998). Concomitantly, there is an urgent need to confront issues that pertain to the nature of reality ("what") and the way in which knowledge about that reality is conveyed to our budding professionals ("how").

Traditional teaching practices suggest that gaps exist between "what" and "how". Along this line of thinking, Amos Rapoport (1994) argues for the need for the discipline of architecture to develop a quantifiable body of knowledge by calling for a dramatic departure from the art paradigm that the profession and its education are based upon, towards one based on science and research. Rapoport introduced a number of questions underlying the heading of "*knowledge about better environments*"; these are: "*what is better, better for whom and why is it better?*" (Rapoport, 1994:35). A set of misconceptions can be envisaged in this context based on reviewing the recent literature on architectural education (Salama, 1995; Salama and Wilkinson, 2007; Seidel, Eley, and Symes, 1995).

Science as a body of knowledge versus science as a method of exploration

When teaching any body of knowledge, educators tend to present it as a body of facts and theories and as a process of scientific criticism. The processes that led up to this product are often hidden and internalized. There should be a distinction between the types of knowledge resulting from research in architecture, and students should be made aware of them and experience them as well. First, we have knowledge that results from research that seeks to understand the future through a better understanding of the past, research that tests accepted ideas. Second, we have knowledge that results from research that develops new hypotheses and visions, research that probes new ideas and principles which will shape the future.

Learning theories about the phenomena versus getting the feel of the behavior of the phenomena

Knowledge is usually presented to students in a retrospective way. Nevertheless, abstract and symbolic generalizations used to describe research results do not convey the feel of the behavior of the phenomena they describe (Schon, 1988). The term retrospective here means extensive exhibition of the performance of the work of an architect over time. In essence, the analysis of precedents as part of the curriculum should be introduced. Integral parts of learning include how projects were created and in what context, what was the client nature and intentions, how the project was delivered, and how construction was undertaken. The story-telling teaching mode carried out by educators in lecture and theory courses tends to ignore these issues.

The real versus the hypothetical

Educators tend to offer students hypothetical experiments in the form of hypothetical design projects, where many contextual variables are neglected. In this respect, learning from the actual environment should be introduced. Real-life experiences can provide students with

opportunities to understand the practical realities and different variables that affect real-life situations. Typically, educators focus on offering students ready-made interpretations about the built environment rather than developing their abilities to explore issues that are associated with the relationship between culture and the built environment. If they do, they place emphasis on one single culture, which is their own.

In the context of discussing the preceding idiosyncrasies, it should be noted that recent years have witnessed intensive discussions on the value of introducing real-life issues in architectural teaching (Morrow, 2000; Morrow *et al.*, 2004; Morrow, 2007; Romice and Uzzell, 2005; Salama, 2006; Sanoff, 2003, and Sara, 2000). However, while published experiences have debated innovative practices exemplified by exposing students to primary source materials in studio processes, little emphasis has been placed upon how real life issues could be introduced in theory and lecture courses.

2.3. Some Alarming Figures on Studio Teaching Practices

In 1994, I conducted a survey study of approximately 100 studio instructors from different parts of the world, representing 28 schools of architecture in 13 developed and developing countries. The results were less than appealing, and indicate a number of alarming shortcomings. While discussing all of them might go beyond the scope of this paper, certain negative tendencies indicating the lack of a responsive knowledge base should be highlighted.

A considerable number of design instructors view architecture as an *art* of making, not as an *act* of making. Therefore, developing communication and form manipulation skills represents 29.5% of the total objectives they have stated. This supports the argument that creativity is defined in terms of creating, inventing, and manipulating formal configurations. Creativity in this sense is limited to only intuition and talent.

On the one hand, drawing skills appear to be the most important ability that determines a student's performance as ranked by majority of instructors surveyed. This supports my earlier hypothesis that many architectural educators focus on issues important to an audience of fellow architects (Salama, 1995) and to this audience only (Cuff, 1991), rather than focusing on issues important to their clients and responsive to users' needs. On the other hand, although 48.6% of design instructors state that they introduce social issues, and the majority mention they introduce aspects related to user needs, special populations, and accessibility, only half of them believe that allowing students to develop the architectural program should be the most important approach. In this context, architectural programming process is referred to as a procedure for developing a set of design imperative that relate to user population. Moreover, 44.7% of instructors tend to focus on the "how" of design, which represents that act of designing after all the major decisions have been made. In essence, this reflects the fact that design instructors tend to be inconsistent regarding their ideologies and what they do to achieve their beliefs.

While 75.7% of design instructors believe that focusing on the design process is more important than focusing on the product, only 32.4% believe that identifying design problems is more important than developing concepts toward solutions. Such inconsistency supports the argument that design studio teaching continues to place emphasis on the design product rather than on exploring responsive methods and techniques for designing. Thus, students have insufficient opportunities to attain the ability of exploring the nature of knowledge and its role in design, where design experience is limited to concept formation and schematic design.

Strikingly, the non-response rate to some of the issues was high, and this reflects a typical negative attitude among design instructors that

can be traced to several factors. One factor is that some might believe that their way of teaching is unquestionable; their attitude tends to go like this *"We have been doing this for many years and we produced high quality professionals."* Another factor pertains to the tendency to consider teaching practice to be an intuitive process (based on some form of improvisation), and based on subjective viewpoints and personal feelings. Another pessimistic factor relates to the fact that some instructors did not have any idea about some of the issues discussed in the survey, or they do not feel comfortable stating or citing their preferences and teaching styles.

While the preceding figures are drawn from results of a 10 year old survey, my current research (Salama and Wilkinson, 2007) and surveys (and also recent literature) corroborate that the results are still valid and represents a continuous concern for improving the status of design studio teaching and integrating the missing knowledge components in architectural education².

3. THE MILIEU OF THE THEORY

Any theory is conceived, developed and may be implemented in a specific context. Such a context may encompass contradicting elements while at the same time may act as a driving force for validating and testing the theory. The context of a theory for knowledge integration in architectural design education can be exemplified by three general aspects: a) Derived from the reasons for introducing a theory there are negative impacts, produced by traditional teaching practices, which characterize the context, b) certain paradigm shifts do exist reflecting new ways of understanding and approaching the design of built environment in education and in practice, c) the negative impacts and paradigm shifts lead to a number of contextual questions that the theory attempts to address.

2 In Chapter 2 Design Studio Pedagogy: Horizons for the Future (Salama and Wilkinson eds., 2007), the work of Malika Bose, Nisha Fernando, Stephen Kendall, Ashraf Salama, and Ryan Smith expresses a concern toward looking for new approaches to improve studio teaching practices.

Negative Impacts of the Current Culture of Architectural Education

Clearly, the reasons for introducing a theory produce negative impacts on the professional environment within which education and practice takes place. Looking at any documented discussion in the literature on architectural education one can comprehend a reference to one or more of these impacts. In my earlier work (Salama, 1995; Salama, 1999), I have identified those impacts in terms of a) architectural education culture; b) its impact on students and practitioners; and c) its impact on the profession's context.

The current culture of architectural education is characterized by high advocacy and low inquiry while most criteria for students' performance and success are ambiguous. It adopts a research strategy shaped by low emphasis on developing or even critically examining current theories or precedents. It socializes its members through high emphasis on form and abstract aesthetics while superficially adopting fragmented pieces of knowledge on technology, ecology, social sciences, sociopolitical and socioeconomic aspects (Salama, 1995).

The impact of this culture on students and practitioners is envisioned in terms of the difficulty they encounter in explaining their work to others, and the inadequate language they use when communicating with non-architects. Moreover, such a culture leads students to learn to develop hypothetical solutions but not to test them; and learning to defend their final product (project) but not to explain the process that led to it (Salama, 1998, Salama, 2005 a). Experience indicates that if this culture continues to exist without true honest intervention, practitioners would continue to have limited understanding of construction technology (traditional and modern), limited knowledge of the impact of buildings on the environment; and limited ability to predict the impact of buildings on users.

What one would expect of the impact of the current culture on the overall profession's environment is that architects will continue to be seen as people with some special talents and

regarded as expensive luxury — and in essence, society will continue to place low value on architects. By default, this is leading to buildings that are functionally and economically inefficient, users' dissatisfaction with what architects do, while the general discouragement for seeking architectural services takes place.

The Shift from Mechanistic Pedagogy to Systemic Pedagogy

There is strong evidence that a shift in education and practice does exist (Schon, 1973, 1988; Ackoff, 1974; Salama, 1995, Salama, 2002). Such a shift is best expressed from "mechanistic" to "systemic" pedagogy. Following the mechanistic paradigm, the educational process of architecture is reduced to a large number of disconnected components. Education is decomposed into schools, curricula, grades, subjects, courses, lectures, lessons, and exercises. In this respect, I argue that formal education has never been treated as a whole, nor is it appropriately conceptualized as part of a process much of which takes place within society; a characteristic of the systemic paradigm.

The mechanistic orientation of pedagogy results in the treatment of students as if they were machines with the combined properties and characteristics of tape recorders, cameras, and computers. The student is evaluated with respect to his/her ability to reproduce what he/she has been told or shown. In turn, examinations are tests of the ability to reproduce material previously presented to the examined. They are designed to serve the system's purposes rather than the students' needs. In the mechanistic paradigm, educators make little or almost no effort to relate the pieces of information they dispense. A course in one subject does not refer to the content of another. This reinforces the concept that knowledge is made up of many unrelated parts, and thereby emphasis is placed on hypothetical design assignments (or paper architecture) rather than real-life issues. Inversely, the systemic paradigm focuses on grasping the relationships between different parts of bodies of knowledge.

In the context of relating the systemic paradigm to the need for knowledge in architectural education, one should relate to two important statements made by Alexander (1966) and Habraken (2003). According to Alexander (1966) three basic abilities for investigating and understanding the physical environment are critical. These are: a) the holistic behavior of the phenomenon which we are focusing on, b) the parts within the thing and the interaction among those parts which causes the holistic behavior we have defined, and c) the way in which this interaction among these parts causes the holistic behavior defined. While Alexander introduced these abilities in abstract terms, Habraken's recent statement — arguably while appearing to assert what Alexander called for 40 years ago — addresses architectural educators specifically *"We need to teach knowledge about everyday environment. How it is structured, what we can learn from historic and contemporary evidence, how different examples compare, how it behaves over time and responds to change of inhabitation or other circumstances... Teaching architecture without teaching how everyday environment works is like teaching medical students the art of healing without telling them how the human body functions. You would not trust a medical doctor who does not know the human body. Knowledge of everyday environment must legitimize our profession..."* (Habraken 2003: 32).

The systemic paradigm introduced some alternative concepts. These are exemplified by: 1) some subjects are best learned by teaching them to oneself, 2) some subjects are best learned by teaching them to others, 3) some skills are best learned through demonstration and instruction, and 4) some fundamentals are attained in seminar discussions guided by one specialized in the relevant area. While the mechanistic paradigm in design pedagogy is based for the most part upon showing-telling modes of communication, the systemic paradigm places emphasis on learning by experience, learning by exploring and doing, while adopting the hidden curriculum concept — a concept that expresses the interactional process and the everyday experiences manifested by the daily

routines of students and teaching staff. All in all, I argue that while the mechanistic paradigm still prevails in most schools of architecture, current discussions on architectural education and its underlying culture reveal that there are some hopes toward adopting the systemic paradigm (Boyer and Mitgang, 1996; Koch et al., 2002; Salama and Wilkinson, 2007).

Knowledge Content Transformations

Several transformations are being witnessed as a reaction to a number of transformations or paradigm shifts. Three knowledge content areas are emerging to reflect continuous shifts in knowledge content. These are: environment-behavior studies (EBS), sustainability and environmental consciousness, and digital technologies or virtual practices (Salama, 2007 a).

For example, environment-behavior studies (EBS) is a knowledge component integral to creating better environments, which can be seen as a response to the shift in thinking from emphasis on things to emphasis on relations between things. It adopts the vision that the properties of the parts can be understood only from the dynamics of the whole. Taking housing as an example, such a shift becomes clearer. The value of housing is assumed to be in the quantifiable attributes of dwellings, sometimes including their immediate environments. This view is already transformed where housing values lie in the relationships between the process, the product, the users, and the social and environmental contexts. After housing has been conceived for decades in terms of what it is, now it is regarded in terms of what it does for local populations and the way in which people interact with their home environment.

As one form of knowledge content transformation, the field of environment-behavior studies (EBS) has emerged in the late 1960s and flourished in the 1970s onward (Altman, 1975; Bechtel, 1997; Moore, 1979; Rapoport, 1969; Sanoff, 1992; Sommer, 1969). Recent literature indicates that it was a reaction to the failure of modernists in addressing contemporary crises such as housing problems, squatter

settlements, and the deterioration of historic cities. Many critics called for the reconsideration of the social and behavioral aspects of architecture (Proshansky, 1974). The disastrous consequences of the Pruitt Igoe project in St. Louis, Missouri in the United States (dynamited by city authorities in 1972 after becoming a social ghetto) are often cited in the environment-behavior literature as a prime example leading to the growth of the field.

Environment-behavior paradigm can be defined as the systematic examination of relationships between human behavior, cultural values, and the physical environment (Moore, 1979). The primary reason of why an explicit emphasis on this field has become an essential part of architecture is simply because the common sense of the architect is not the common sense of the user (Prak, 1977). Considerable research corroborates this view and indicates that the attitudes and values of professionals differ dramatically from those users they are to serve (Groat, 1982; Nasar, 1988; Sanoff 1991; Seidel, 1981 & 1994). This difference was addressed by the international academic community of architecture by implementing several underlying concepts that include pre-design research, architectural and project programming, post occupancy evaluation, user participation, and community design. Recent literature on education shows that these areas occupy a considerable position in architectural curricula world wide (Boyer & Mitgang, 1996; Salama, 1995 & 1998; Sanoff, 2003).

Another form of knowledge content transformation is sustainability and environmental consciousness. In the last two decades, the concept of sustainability has emerged in response to several environmental problems. Ecological consciousness was raised as a reaction to the overall overwhelming global environmental degradation. Many conferences, symposia, and colloquia have addressed environmental issues on the policy-making levels. Law-, policy-, and decision makers have tailored lengthy regulations and guidelines in order to maintain a sense of responsibility toward the environment (Duggan and Mitchell, 1997; Mokhtar, 1999; Salama et al. 2002; Salama and

Adams, 2004). The old paradigm has been characterized by three basic assumptions: man is more valuable than nature, man has the right to subdue and conquer nature, and man has no responsibility for nature. The new paradigm, however, is conceived to value the environment alongside economic development, and to value social equity alongside material growth.

Eco-development, ecosystem planning, bioregional planning, and green and sustainable design are all new ideologies and concepts that place emphasis on resolving environmental problems caused by human activities. They address the kind of development that meets the needs of the present generation, without compromising the ability of future generations to meet their own needs (ECE, 1996). Within the realm of sustainability, I argue that it relies on a change in culture, supported by an adapted economic system and fed by appropriately used technology. The same technology that has been employed to subdue and conquer nature needs to be employed for the benefits of nature. It is believed that this characteristic of the new paradigm creates the need for mature and competent professionals. Accordingly, the new sustainable society will need to identify non-material means for non-material needs. In response, professional development will need to include the practice of interdisciplinarity and transdisciplinarity, and to develop lifelong learning skills. However, it remains to be seen if architectural design education would be able to accommodate such knowledge content in an effective manner.

Digital technology or virtual practice is the third form of knowledge content transformations. Recent years have witnessed advances in the development of telecommunication technologies. Digital technologies and design in virtual environments are re-shaping architectural education and practice (Beamish, 2002; Maher et al 2000; Schon et al., 1998; Yee et al., 1998). Advances in electronic design and communication are reconfiguring the primary educational setting — the design studio, which is the backbone of architectural education. Early experiments that represent this paradigmatic trend have been conducted in the early 1990s by prominent

academics: William Mitchell at MIT, and John Gero and Mary Lou Maher at the University of Sidney. Their attempts went beyond the introduction of computer aided design (CAD) courses in architectural curricula to incorporate virtual design practices in studio teaching.

Developments in CAD, visualization, and digital modelling coupled with the advanced technology to communicate data, images, and life action design experiences, have enabled virtual dimensions in studio instruction. Students no longer need to gather at the same physical space and at the same time to solve the same design problem. In virtual environments, critics can comment over the World Wide Web or by electronic mail, and jury members can make virtual visits to architectural students without being in the same room. Thus, the traditional studio setting is changing by utilizing computers and telecommunication technologies with participants reaching across geography, cultures, and regions. Although this trend has started in the mid 1990s, it is believed that its impact on architectural education will be dramatic in the near future.

The preceding discussion of these transformations corroborates my conviction that a new way of thinking about architecture and its education is taking place. They pose themselves on the map of interests of both academics and practitioners, and thus are contributing to the restructuring of architectural education.

Pressing Questions – Urgent Answers

We are living in a complex world, a world in which no one discipline will have the upper hand in solving environmental and societal problems as they relate to architecture and the creation of livable environments. Evidently, the reasons for developing a theory and the context within which such a theory is envisioned—including knowledge content transformations—reveal some critical questions that require urgent

answers. They act as a contextualizing mechanism for calling for the need of a new theory. These questions can be stated as follows:

- Does the current system of architectural education introduce and integrate different types of knowledge needed for the successful creation of built environments?
- Does the current system of architectural education place high value on research and knowledge acquisition?
- Has it responded to the dramatic changes the profession is witnessing?
- Has it reacted effectively to the demands placed in the profession by society?
- Has it responded to the knowledge content transformations?

Based on the current context of the profession and its underlying ills, one can answer that the current system of architectural education still socializes its members into predominantly artistic terms. It still focuses on social, technological, or economic terms, still focuses on skill development, still adopts pedagogical methods and design approaches not equipped to efficiently and effectively address contemporary problems. The value of introducing a theory becomes evident when sustaining our thinking of these questions and their answers³.

4. THE THEORY APPARATUS

A theory for knowledge integration suggests a different form of thinking that goes beyond typical discussions of modifying architecture curricula, or massaging studio pedagogy and the teaching/learning processes involved. Here, I argue for a comprehensive theory that encompasses a number of underlying theories and concepts derived from other fields, and these differ dramatically from architecture by including the philosophy of science and cognitive psychology. The theory is metaphorically conceived in terms of a triad consisting of three major components: the disciplinary component;

3 These questions were based on a debate during an invited lecture at the Faculty of Design and Architecture, UPM-University Putra Malaysia, October 2007. Participants expressed concern on the future of architectural education and how ways for ameliorating the current situation are conceived.

the cognitive-philosophical component, and the inquiry-epistemic component. Each of these components encompasses other smaller components integral to the building of the theory itself. Notably, the three components address ways in which knowledge can be integrated, how the desired integration would meet the capacity of the human mind, how such an integration relates to the nature of knowledge, and how knowledge about it is acquired, conveyed, and assimilated. Possible mechanisms for knowledge acquisition are an indispensable component of the theory, fostering the development of responsive knowledge critical to the successful creation of built environments.

4.1. The Disciplinary Component: Beyond Mono-Disciplinarity

"... Architects who have aimed at acquiring manual skills without scholarship have never been able to reach a position to correspond with their pains..."

Marcus Vitruvius Pollio, Ten Books on Architecture, 100 B.C.

Theorists and practitioners have been discussing the issue of architectural knowledge for several decades. Recent years, however, have witnessed intensive debates in built environment literature. Donald Watson attempted to define a demand for knowledge in architecture and the built environment. He argues that: *"The discipline of architecture needs a rigorous knowledge base by which to support its premises and principles that define the relationship between human and community health, and between building and urban design,"* (Quote from Boyer and Mitgang, 1996). Henry Sanoff confirms this view when he argues that architecture should be based on knowledge of people needs; it should not be based just on the creative impulses of architects (Sanoff, 2003).

Planning and architecture, like other fields of vocational expertise, can be classified as professional disciplines, especially when we regard them as fields of inquiry (Becher, 1989). Ulf Sandström has followed the development in profession-related studies since he identified

two trends in research and knowledge production in the field of professional expertise: one which is oriented towards the production of mono-disciplinary academic knowledge, and the other which is directed towards subjects derived from concrete life situations, these being solution-oriented (Dunin-Woyseth, 2002). King and Burnell offer a broad and convincing representation of what constitutes an academic discipline. They propose several aspects that include a community, a network of communications, a tradition, a particular set of values and beliefs, a domain, a mode of inquiry, and a conceptual structure (Becher, 1989). Another definition, by Toulmin, focuses more on epistemological considerations, presenting disciplines like this *"...each is characterized by its own body of concepts, methods and fundamental aims"* (Becher, 1989).

The work of Klein, 1998; Ramadier, 2004; and Lawrence and Depres, 2004 suggest that transdisciplinarity is envisioned to tackle complexity while challenging fragmentation. As a mode of knowledge production, it is characterized by its hybrid nature and non-linearity — transcending any academic disciplinary structure. Transdisciplinary knowledge is a result of inter-subjectivity — a process that includes practical reasoning of individuals within the constraints of social, organizational, and material context, requiring continuous collaboration between different disciplines (by crossing their boundaries) (Dunin-Woyseth and Nielsen, 2004). Transdisciplinarity entails making linkages not only across disciplinary boundaries but also between theoretical development and professional practice, addressing real world problems and contributing to their solution. As a practice-oriented approach, transdisciplinarity is not confined to a closed circle of scientific experts, professional journals and academic departments where knowledge is produced. Through mutual learning, the knowledge of all participants (from different disciplines) is enhanced, including local knowledge, scientific knowledge and the knowledge of concerned industries, businesses, and non-governmental organizations (Nowotny, 2004). The sum of this knowledge is greater than the knowledge of any single partner. In

the process, the bias of each perspective is also minimized.

To date, the development of rigorous theory/knowledge building has been at the edge of the profession and frequently marginalized as something separate from the profession of architecture, that is: environment-behavior studies, building sciences, environment-technology studies, etc. As a result, most practitioners are not well equipped or even interested in understanding the value of their professional services. Concomitantly, the standing of the profession is marginalized in the eyes of the public. I argue here that without research, scholarship and a rigorous knowledge base, the profession cannot take stands on significant health, economic, social, political or ethical issues. In essence, this component calls for a more stable basis for knowledge in architecture and in the creation of built environments. Such a basis would be in the form of more balanced and integrated types of knowledge. The accommodation of transdisciplinarity toward knowledge integration in architectural education is discussed later.

4.2. The Cognitive Philosophical Component

Integral to the cognitive philosophical component is the way in which we approach designing built environment based on our capacity as humans, and based on the nature of knowledge about the realities we encounter. Therefore, this component is structured in three sub-theories or body of concepts: the split brain theory, Jungian psychological types (epistemological balance), and the two widely held concepts about the nature of reality and they way in which knowledge about that reality is conveyed.

The Split Brain Theory

Mind research provides insights into the understanding that we possess two different but complementary ways of processing information. A linear step-by-step process

analyzes the parts that make up a pattern, working on the left side of the brain; and a spatial relational style seeks and constructs patterns, working on the right side of the brain (Williams, 1983, Salama, 1995; Salama, 2005, b; Salama, 2007 b).

Both sides of the human brain perform cognitive operations, but each is developed or trained for a different mode of thinking. On the one hand, the left side is usually described as analytical, linear, and sequential, moving from one step to the next in a step-by-step manner. This way, it produces knowledge through inferential logic. For example, it deals with number, words, and parts. On the other hand, the right side of the brain is usually described as synthetic and wholistic, constructing parts while recognizing their underlying relationships. It does not function linearly, but simultaneously, dealing with images, patterns and wholes. It produces knowledge through intuitive and imaginative understanding (Figure 3).

Linking the split brain theory to knowledge integration in architectural pedagogy, I argue that architectural education is unique since it requires the full activation of the two sides. It encompasses courses that address bodies of knowledge that are rational, analytical and abstract in nature while implementing them into intuitive and imaginative design activities⁴.

Psychological Types and Epistemological Balance

I refer in the context of this subcomponent to Carl Gustav Jung whose work had a strong impact on analytical psychology (Jungian Psychology) and also (but with lesser impact) on understanding human thinking and behavior. Jung emphasized the importance of balance and harmony. He cautioned that modern humans rely too heavily on science and logic and would benefit from integrating spirituality and an appreciation of the unconscious realm (Jung,

4 The application of the split brain theory in a studio process is illustrated in two of my published works: *A Process Oriented Design Pedagogy: KFUPM Sophomore Studio* (Salama, 2005), *Where a Structured Content and a Rigorous Process Meet in Studio Pedagogy* (Salama, 2007).

1987).

The psychological types or the epistemological balance that Jung called for matches the concept underlying the split brain theory (Jung, 1976). Within such a balance, it is postulated that people can feel, think, perceive, and imagine both as individuals and in groupings. However, it is conceived that some human functions tend to inhibit other functions. Thinking and feeling, perception and intuition, and introversion and extroversion block each other. Each function in this balance has its own particular area in which it performs better than in others. According to Stamp (1994), feeling excels at well-being and belonging, thinking excels at distinguishing one's physical surroundings, intuition excels at generating options, introversion produces personal view points, and extroversion enables people to share thoughts and ideas with others.

Arguably, and for the purpose of classification, if architecture as an educational and professional discipline is composed of art and science, then one could assert that the art component is addressed by human functions such as feeling, intuition, and introversion, while the science component is addressed by thinking, perception, and extroversion. This understanding would have strong implication on the way in which architectural curricula and their contents are structured, and also on the processes and procedures adopted in studio pedagogy.

Philosophical Positions

There are two basic philosophies that can be conceived as the basis for understanding architecture and its education: positivism and anti-positivism. Derived from these philosophies, two positions are conceived based on ontology and epistemology. As defined by most dictionaries, ontology is the branch of metaphysics that deals with the nature of being or reality, while epistemology is the branch of philosophy that examines the nature of knowledge, its foundation, extent, and validity. It examines the way in which knowledge about a phenomenon can be acquired and conveyed.

How these two positions are translated to a practical understanding in architectural education

is a conceptual challenge. Positivism relating to ontology adopts the premise that objects of sense perception exist independent of the observer's mind. This means that reality is believed to be objective and available for observation by every one. Relating to epistemology, positivism views knowledge as being independent of the observer and as objectively verifiable. Mazumdar (1993) made a perceptive understanding and argued that positivists believe that the best way to learn about a phenomenon is by the discovery of universal laws and principles. In positivism, a building is seen by educators and students as an objective reality with components and parts that every one can observe, perceive and agree upon. Therefore, adopting the positivistic understanding results in an emphasis on the common properties of buildings or built environment leading to the suppression of multiple view points, thoughts and voices (Salama, 1999).

Reversibly, anti-positivism relating to ontology involves the conception that universal laws and principles do not exist of the observer's mind. This means that reality is believed to be perceived by people as individuals and as groups. In epistemological terms, anti-positivism adopts the understanding that individuals and groups acquire different types of knowledge about the same phenomenon. This leads to the conception that individual and group differences are regarded as valid and important mechanisms. Concomitantly, adopting the anti-positivistic view would result in an emphasis upon values, preferences, lifestyles of people — who use, perceive, and comprehend the built environment — while leading to the presence of multiple understandings, perceptions, and viewpoints.

The implications of these two philosophical positions are critical for a pedagogy that aims at integrating different types of knowledge as they relate to people. While it is inevitable that certain aspects of knowledge about architecture and designing built environments are conveyed based on positivistic approaches, it is important to think of other aspects that accommodate anti-positivistic thinking. Those have the capacity to instill in future architects the values and

convents that their work is basically produced for people to use, see, and perceive, and that therefore understanding them is critical to successful designing.

4.3. The Inquiry-Epistemic Component

The inquiry-epistemic component addresses methods and tools by which knowledge is acquired. Integral to this component are three mechanisms or kinds of studies indispensable to knowledge acquisition and assimilation for understanding the relationships between people and their environments, and for developing responsive architecture and planning schemes. Similar and complementary in nature as immersing knowledge acquisition strategies, the mechanisms are ethnography, appreciative inquiry, and experiential and active learning.

Ethnography

Ethnography refers to the genre of writing that presents varying degrees of qualitative and quantitative description of social and behavioral phenomena as they relate to the built environment. The work of Hemmelsely and Atkinson (1995) and Johnson (2000) reveals that ethnographic methodologies vary from the use of structured observations, to coding and statistical analysis. In essence, Ethnographic studies are based on the premise that any phenomenon and its underlying properties cannot be well understood independently of its context exemplified by other phenomena.

In architectural design education, ethnographic studies can be utilized in various forms, from the macro level (macro-ethnography) to the micro level (micro-ethnography). These address broadly or narrowly defined cultural groupings according to the scale of design or planning projects. Relating to the philosophical positions discussed in the preceding section, ethnographic studies may involve -emic or -etic perspectives. The Emic perspective represents the way the member of a given culture perceives the environment around them, while the Etic perspective represents the way non-members (outsiders) perceive and interpret behaviors and phenomena associated with a given culture.

These perspectives are important components that students need to understand, and their resulting knowledge needs to be incorporated in their design assignments.

Appreciative Inquiry

Over the past decade Appreciative Inquiry (AI) emerged as a practice for approaching change from a holistic framework (Hammond, 1998; White, 1996; Cooperrider, 2000, 2001; Watkins and Mohr, 2000). Based on the belief that human systems are made and imagined by those who live and work within them, Appreciative Inquiry leads systems to move toward the generative and creative images that reside in their most positive core — their values, visions, achievements, and best practices (Watkins and Mohr, 2000). In theory, AI is a perspective, a set of principles and beliefs about how human systems function, a departure from the past metaphor of human systems as machines. In practice, AI can be used to co-create the transformative processes and practices appropriate to the culture of a particular organization. In essence, a culture of an organization represents the practices involved and the environment that accommodates them. Contrary to problem solving where the primary focus is on what is wrong or broken, AI focuses attention on what works in an organization and on its physical environment (Hammond, 1998). The tangible result of the inquiry process could be developed in the form of a series of statements that describe where the organization wants to be, based on the high moments of where it has been.

Adopting the Appreciative Inquiry paradigm in architectural design pedagogy is not “wishful thinking;” it can be applied in either classroom or studio settings. In classroom settings, students can be involved in a process of identifying positive aspects in specific environments or building types, and they can also perform various research assignments and Post Occupancy Evaluation (POE) studies. These represent a radical shift in the way in which POE evaluation studies typically aim at revealing problems. In studio settings, Appreciative Inquiry can be introduced in various pre-design assignments.

That will involve participatory design activities ranging from identifying design and project imperatives involving users' representatives, to precedent studies that aim at unveiling positive aspects found in environments similar to the one they are designing.

Active and Experiential Learning

Over the past decade several studies have emerged to challenge university faculty to develop teaching approaches that represent transformative pedagogies, simply moving away from thinking of students as passive listeners to active learners. However, this would seem "easier said than done." According to Bonwell (1999), in recent years the incorporation of active learning strategies into the daily routine of classroom instruction became a necessity. While there is a surge in the development knowledge on active learning (Judith S. Liebman,), one would limit this discourse to the characteristics of and the need for active learning.

The major characteristic of active learning is that students are engaged in individual or group activities during the class session including reading, discussing, commenting, and exploring. While these activities are carried out by the students, they are facilitated by the professor, and students can receive immediate feedback (Bonwell, 1996). Notably, in active learning students are involved in higher-order thinking that simultaneously involves analysis, synthesis, and evaluation of a wide spectrum of issues and phenomena. In the context of the university classroom, active learning involves students in doing things and thinking about what they are doing.

The value of active learning becomes evident when looking at the literature and research findings that were developed over the past several decades. The amount of information retained by students typically declines substantially after ten minutes (Bonwell, 1996). The results of research comparing lecturing versus active discussion techniques indicate that students favour discussion methods over lecture and the one-way mode of knowledge. Dean (1996), Bonwell (1999), and Liebman (1996)

all accentuate that students do not learn much by sitting in class, listening to faculty, memorizing pre-packaged and ready-made interpretations; they all agree that students must talk about what they are learning, write about it, and relate it to past experiences.

Several education theorists including Benjamin Bloom; David Kolb; Jean Piaget; John Dewey; and Paulo Freire voiced the opinion that experience should be an integral component of any teaching/learning process. Their work can be traced back to the famous dictum of Confucius around 450 BC "*Tell me and I will forget. Show me and I may remember. Involve me and I will understand.*" Experiential learning refers to learning in which the learner is directly in touch with the realities being studied (Keeton and Tate 1978).

Experiential learning is contrasted with learning in which the learner only reads about, hears about, talks about, writes about these realities but never comes in contact with them as part of the learning process. Mistakenly, some educators equate experiential learning only with "off campus" or "non-classroom" learning. However, in architectural pedagogy a class in history or theory of architecture might incorporate periods of student practice on theory exercises and critical thinking problems rather than consisting entirely of lectures about theories of architecture and the work of famous architects (O'Reilly, 1999; Salama *et al.*, 2002). Similarly, a class in 'principles of architectural design' or in 'human-environment interactions' might involve critical analysis exercises on how people perceive and comprehend the built environment. Both classes might involve field visits to buildings and spaces where students are in close contact with the environment, exploring culture, diversity, people behaviour, and be part of that environment. All of these mechanisms involve an experiential learning component.

Learning through experience involves not merely observing the phenomenon being studied but also doing something with it, such as testing its dynamics to learn more about it, or applying a theory learned about it to achieve some desired results. Evaluation as a valuable research

vehicle needs to be introduced both in lecture courses, establishing a knowledge base about the built environment that has the capability of endowing students with more control over their learning, knowledge acquisition, assimilation, and utilization in future experiences (Salama, 1999; Salama , 2007 c).

Active and experiential learning as concepts and instructional strategies appear to be two sides of the same coin. While they differ in terminology, they share similar aims and qualities. They both aim at increasing students' motivation, placing emphasis on the exploration of attitudes and values. In both of them, less emphasis is placed on knowledge transmission but greater emphasis is placed on developing students' critical thinking abilities.

It is evident that three components are the core of a theory for knowledge integration in architectural design education (Figure 3). They represent the theory apparatus and have the capacity to integrate fragmented pieces of knowledge required for the "whole-Architect." While the disciplinary component aims at knowledge integration by crossing the boundaries of different disciplines involved in the successful creation of built environments, the cognitive-philosophical component endeavors to integrate knowledge types amenable to human cognitive function and the overall human capacity in thinking about or creating built environments. However, through ontological and epistemological thinking it attempts to address the nature of knowledge and the way in which knowledge about it is conveyed, acquired, and assimilated. The inquiry epistemic component targets the issue of knowledge integration by introducing knowledge and acquisition and assimilation strategies that involve ethnography, appreciative inquiry, and active and experiential learning. It is believed that these components go beyond the conventional practices that look at the creation of the built environment only in terms of intuition, imagination, and innate gifts and talents.

5. CONCLUSION: STRATEGIC ACCOMMODATION OF THE THEORY

In this paper, I argued for the introduction of a new theory for knowledge integration in architectural design education. A contextual analysis of the reasons for developing a new theory was introduced and reasons were categorized in terms of admission policies and the skills emphasis syndrome, idiosyncrasies on knowledge delivery and acquisition, and alarming figures on studio teaching practices based on survey results. Based on the belief that any theory is conceived, developed and perhaps implemented in a specific context, I outlined the milieu of the theory. A number of contextual elements were exemplified by the negative impacts of the current culture of architectural education on students, practitioners and the way in which architects are seen by those they serve. Other contextual elements included the shift from mechanistic to systemic pedagogy, and knowledge content transformations. These contextual elements fostered the identification of a number of questions that need urgent answers. Discussing these elements was centered on how architectural education needs to respond.

While certain aspects of any theory remain conceptual, most components of the theory apparatus can be implemented in various forms and at different levels through sound practices. Here, I address some scenarios on the way in which such components can be implemented in architectural design education.

The disciplinary component can be accommodated at different levels that range from the knowledge delivery level, to studio level, to degree level (Figure 4). At the knowledge delivery level, the typical approach is to offer students different bodies of knowledge in lectures while it is assumed that they will be able to implement them in studios. In this context, there is a clear separation between knowledge acquisition and knowledge application. Adopting the Transdisciplinary approach may offer a panacea to this typical practice. This occurs by reconciling lectures and studios through the introduction of a "new setting" — an alternative

to classroom and studio settings where bodies of knowledge are delivered by different teaching staff, while at the same time students apply what is delivered to them in specific design assignments facilitated by the same staff. Here, the content of knowledge is derived from different areas (history-theory, urban issues, climatic controls, socio-economic aspects, structures and building technology, etc.), and is tailored to address the design tasks students are performing. Such a setting would enable the integration of different types of knowledge into specific design activities.

At the studio level, the Transdisciplinary approach can be partially accommodated by introducing graduation thesis projects through Transdisciplinary design studios, where students of different disciplines (planning/urban design, landscape architecture, architecture, industrial/product design, engineering, etc) work in team projects. In this context, the challenge would be to identify projects and processes that can be controlled to meet such a specific pedagogic orientation.

It should be noted that studio processes in the preceding two scenarios need to address the cognitive-philosophical component: the integration of the logical/rational and the intuitive/imaginative capacities of students. As well, they should strike the balance required between different psychological types or cognitive functions introduced by Jung. In this regard, a studio process can be looked at in terms of two major phases: analytical understanding and creative decision making. Each of these phases is constituted in a number of sub phases and procedures that range from exploration and definition of key issues, to precedent studies, information gathering and analysis, to the development of concepts and schematics (Salama, 2007 b).

At the degree level, crossing the boundaries between different disciplines can be accommodated in a transdisciplinary master degree in designing built environments. This would target graduate students and teaching staff from different disciplinary backgrounds. Sustainable planning, design, and development

could be the major driver of a degree of this type. Still, the challenge would be to create transdisciplinary knowledge content that can be taught and implemented.

The inquiry-epistemic component can be strategically accommodated in a studio setting when integrating three different types of knowledge that Rapoport called for: knowledge about setting objectives, knowledge about better environments, and knowledge about achieving socio-behavioral goals in design. For these knowledge types to be integrated it is essential to employ the three mechanisms of inquiry, i.e, ethnography, appreciative inquiry, and experiential and active learning. It is important to relate these types of knowledge and the mechanisms of inquiry to the studio level, the scale of the project, and the issues involved. This is envisaged when a studio process involves three major components "what" and "who, how, and why". *What* and *who* are characterized by involving students in proposing human activities and are appropriate for certain types of spaces and buildings, *how* is the act of design itself that is characterized by manipulating forms in response to well articulated and defined spatial needs, and *why* represents students' involvement in exploring why a certain type of space and form is appropriate for a certain type of user population. Again, the act of design in this process should address the cognitive-philosophical component; by integrating the logical/rational and the intuitive/imaginative capacities of students, while at the same time striking the required balance between different psychological types or cognitive functions.

By adopting the proposed theory for knowledge integration in architectural design education, I believe that several desired aspects can be part of the future of architecture education. Opportunities for reconciling lectures and studios are available, while literature on different bodies of knowledge is incorporated through both simulated and real life experiences into design teaching practices. Students will be in a better position to understand and appreciate the value of knowledge types derived from other disciplines that are dramatically different from architecture, but are critical to the creation of meaningful

environments. The abilities to think globally and act locally, and to search and think critically, will be major components of the formation of future architects. Future architects will have the capacity not just to consume knowledge but to produce it.

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REVIEW
AND
SHORT PAPERS

APRES LA GUEREE [AFTER THE WAR]: DESIGN WITHOUT FRONTIERS

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ABSTRACT

This paper examines the multiple roles of design professionals in the rebuilding of a range of cities decimated by armed conflict. By working 'without borders', I suggest that architects have a significant opportunity to assist peace-making and reconstruction efforts in the period immediately after conflict or disaster, when much of the housing, hospital, educational, transport, civic and business infrastructure has been destroyed. The aim of my exploration is to expand the traditional role of the architect from 'hero' to 'social reformer' and discuss how design practitioners and design educators can stretch their wings to embrace the proliferating agendas and sites of civil unrest.

Keywords: *Post-War Reconstruction, War, Architecture and Peace-Building.*

1. SITES OF DESPAIR AND SITES OF TRIUMPH

Events in Beirut during 2006 that re-escalated war one again in Lebanon prompted me to re-examine cities, as simultaneously sites of despair and sites of triumph; as urban pawns in a spin-doctored war of so-called global terrorism. Beirut: a city I thought I knew so well (a city I lived and worked in for three years; 2000-2003) and yet it had become an unintended terra nullius; with the Lebanese capital transformed into a fierce battlespace and its inhabitants the unwilling targets. How does the architect engage with such shifting political and geographic landscapes of fear, trauma and spatial annihilation?

This paper focuses on how design professionals can play more effective roles in cities destroyed by social conflict and natural disasters. My investigation is a response to the dilemma presented when we examine the roles played by other professionals in alleviating the chronic human and physical suffering caused by the alarming acceleration of urban conflict: the doctors, lawyers, and engineers are ever present, but where are the architects and urban planners? In the aftermath of conflict, where and what is the intersection between reconstructing the physical landscape and reconstituting civil society?

2. THREE SNAPSHOTS: BEIRUT, NICOSIA AND MOSTAR

The original research for this paper was based upon a series of interviews that were conducted with thirty-five architects, urban designers, politicians and social commentators in Beirut, Nicosia and Mostar between 2000 and 2004. Reflections upon these discussions revealed that design professionals might play any one of five roles in post-conflict reconstruction. These include the designer as: Pathologist, Hero, Historicist, Colonialist and Social Reformer. In this paper I will briefly examine how these roles were specifically played out in Beirut, Nicosia, Mostar, (with fleeting references to Jerusalem and Berlin).

3 FIVE RECONSTRUCTION ROLES

I: Design Professionals as Pathologists

As pathologists, design professionals seek to diagnose the post-war city and prescribe the

right “medicine” in the aftermath of sustained civil conflict. This role can suit reconstruction goals of domestic peace, economic restructuring, and recapture of lost investment and tourist dollars. In practicing architectural surgery, design professionals often see themselves as facilitators of control and order and as curers of pathological diseases who cut out the diseased cells.

II: Design Professionals as Heroes

The contemporary concept of the designer as “hero” largely results from the celebrity ranking system that operates within the international design community. In this elite hierarchy, we see much continual glorification by the profession and the press of individual design professionals such as Frank Gehry, Rem Koolhaas and Daniel Libeskind. Linked to this hero model is the supporting role of the architect as an independent artist and creative genius, who sullies his profession in any act of artistic compromise by dealing with clients or community.

III: Design Professionals as Historicists

The reconstruction of historic city areas and cultural monuments has been accorded high priority in many design approaches for rebuilding destroyed cities. For example, the rebuilding of Beirut’s downtown district has focused solely on the rebuilding of the former city center and its associated archaeological relics rather than plans for the much larger and socially disadvantaged Beirut metropolis.

IV: Design Professionals as Colonialists

Design professionals in cities such as Beirut, Nicosia, Mostar and Jerusalem are often working within the colonial mentality of “we know what is good for you”. The colonialist stance in architecture is clearly not limited to post-war cities. The reliance on international aid agencies in countries such as Bosnia also illustrates such colonialist-colonized relationships. In Mostar, for example, design professionals have played only a small role in determining the future of their city, as they are completely dependant on foreign aid for reconstruction projects.

V: Design Professionals as Social Reformers

If the division lines of war are political, do design professionals have a political role within the broader mission of achieving social reform? Architectural and landscape projects can be used to bring conflicting parties to the table in the political mediation process, as I observed in Nicosia. There is something tangible about an architectural plan as a basis for negotiation rather than just a series of discussions, policy or peace treaties.

4 CONCLUSION: SANS FRONTIERS?

My interest as both a design professional and educator is to envisage alternative and often liberating futures for designers, as roaming, collaborative mobile agents able to work outside of traditional sites and constructed environments. My analysis of cities after urban conflict, sees the task of the design professional in the much more expansive role of city mediator, moving between the design of actual buildings to the negotiation and problem solving inherent in the urban reconstruction process. The role of the designer is thus not limited to being satisfied with opportunities and constraints, so much as imaginatively finding ways to engage with diverse community expectations and associated planning processes.

It is thus only by looking over the self-defined walls of the architectural profession into more pressing issues affecting the social and physical health of cities that the practice of architecture can be re-invigorated. Focusing exclusively on aesthetics, on the understanding of architectural form and its representations, while paying lip service to “others” in the process, has confined architectural discourse within the extremely narrow community of its own professional elite. Without such a radical change in their professional direction, design professionals may therefore become increasingly marginalized and irrelevant in terms of their potential contribution to society at large and the complex and increasingly fragmented landscape we inhabit.

Finally, both architecture and planning are systems of spatial thinking that can be linked

to both site-specific design problems and to a wider contemplation about urban and regional territories and their associated patterns of social contexts. This broader definition of design extends the role of the design profession beyond acting as the conceivers and executors of designer objects, to, potential negotiators and mediators of urban politics and planning. While an urban pathologist maybe needed to dissect the diseased city at hand, it is the social reformer and educator that ensures the prescribed medicine: the capacity of architecture to contribute to the social and physical reconstruction of the proliferating club of destroyed cities and communities, is therefore vast, but still unfortunately, largely untapped.

ENHANCING CULTURAL AND ENVIRONMENTAL AWARENESS IN CHILDREN

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ABSTRACT

Education of architecture mainly starts with establishing an understanding of one's relation with its environment and the built world. Sensing the place and learning to think spatially are the first and fundamental steps into the conceptual world of architecture (Varnelis, 1998: 212). In Turkey, common places are rich of cultural and historical assets, a context feeding architectural setting. Understanding of space is a culture specific construct, if stimulated at younger ages proves to be fruitful in many ways. It is the argument of this paper that if children are stimulated through culture and environment, their spatial perceptions grows, become culturally more aware, and builds a belonging towards the place they live in.

In Fall 2008, a collaboration started to foster between Kadir Has University, Graduate Program for the Preservation of Cultural Heritage (GPCH) and The Culture Awareness Foundation (CAF) to create awareness for cultural heritage in children through exploitation of cultural heritage.

CAF has been applying "Culture Ants" education program for the students in primary schools with narrow circumstances. This program is delivered by licensed volunteers in five modules expanding to an entire academic year. Volunteers from Kadir Has University, in a graduate seminar, with varied backgrounds, discussed the ways of creating consciousness in children towards the city surrounding us. In a way, it is the first step towards architecture education.

Keywords: *Culture awareness, children, space, environment, Culture Ants, spatial perception, Kadir Has University.*

THE CASE STUDY

Knowing the importance of providing a wider perspective to our children awareness for history, environment and culture as early as possible, the following program is envisaged. Having its roots from the experience of METU in 1976, a seminar program is organized at the Kadir Has University, Graduate Program in Cultural Preservation in Fall 2008. This program bears a great opportunity which is a unique structure in Turkey that calls students from all of the disciplines and not only limited to the architecture field. The strength of having this seminar in a multi-disciplinary format serves the complex needs of teaching cultural awareness to young children. It is planned that students from backgrounds such as architecture, civil engineering, psychology, proto-archeology, international relations will produce ideas having one of their foot on their past majors and the next on the preservation and therefore covers a wider range of aspects of the problem. The outcomes of the project will be presented to the Cultural Awareness Foundation and it is hoped that they will be operative in the primary schools in the near future.

It is assumed that the primary school teachers, volunteers of the Culture Ants, and individual parents will appraise the outcomes of this seminar.

In this paper, the details of the structure of the seminar, the outcomes and its possible consequences upon our young generations will be discussed. It is hoped that this seminar will serve for better environments in the future, and in a way, it is the first step towards architecture

education. As we all know 'You cannot teach an old dog new tricks'.

WHAT IS CULTURALLY AWARE?

Environmental experience is related with cultural awareness. In his article Matthews questioned the relation of these issues in a non-western society (Kenya) and compared behaviors of subjects with their counterparts in Britain. Research proves to link cultural awareness with expressions of environmental perception (Matthews, 1995: 285-295). The children in Kenya who are more out-door displayed significant difference in expressing their environment, for example boys versus girls who were not allowed to play outside. Furthermore, when compared with their counterparts in Britain, it was observed that the mapping abilities of children in Britain were advanced in style, if not cognitively. How is it possible to interpret the results of this research?

In The Columbia Encyclopedia, *culture* is defined as "the integrated system of socially acquired values, beliefs, and rules of conduct which delimit the range of accepted behaviors in any given society. Cultural differences distinguish societies from one another". Another definition can be found at the Dictionary of the English Language

dictionary, The American Heritage, as "The totality of socially transmitted behavior patterns, arts, beliefs, institutions, and all other products of human work and thought". From these explanations it is understood that out-door activities and culture are closely related. Many people from different disciplines such as psychology and urbanism looked deeply and scrutinized this link. For example K. Lynch (1979) looked at the children's environmental experience in different cultures, such as Cracow, Melbourne, Mexico City, Salta and Toluca. A. Rapoport (1978) pinpoints this issue in an article titled "On the environment as an enculturating systems". Spatial thinking develops, similar to the musical task at age related intervals (Nelson, and Barresi, 1989, 93-103). In the 19th century an education method developed by Froebel which focused on the motor-expression aimed the mental development through learning the world and the self. It is possible to say that the method has been quite successful in the early 20th century by looking at earlier education of famous architects like Frank Lloyd Wright, Le Corbusier, Kandinsky. Froebel education system was common to all, which suggests that spatial thinking broadens the artistic sensitivity (Varnelis, 1998, 214).

In Turkey, especially in metropolitan cities like Istanbul, the urban experience of children is highly limited (Fig.1).



Fig-1: Children in the city and their playground (D.Karamýk)

The ability to establish a belonging towards the place they live in is narrow. A major reason is because they are not natives of the city. For the immigrating families, the rate of replacement is very high. The outcomes of this phenomenon cause environmental and cultural decay. People are indifferent to their surroundings. The local qualities are neglected, thus most of the Turkish cities are dehumanized. This is one way of looking at the problem from the social point of view. The transitory character of the dwellings, either built over night or in historically rich, yet abandoned areas, causes destruction of the physical environment. Therefore theoretically speaking if awareness for culture and environment could be stimulated or enhanced in children this would have positive impact on the city. Certainly the outcomes of this investment will not be visible in the city immediately.

However, the results of the Culture Ants, educational program carried out by the Culture Awareness Foundation (CAF) applied since 2002, are immediate. The program is designed around themes such as getting to know Istanbul, Istanbul and Water, Istanbul and Citizenship. Through this program, children are taken out of their usual environs to the historically rich areas of the city. This education is given by licensed volunteers, who are also trained at a different level. Therefore benefits of this program have a double effect. In Fall 2008, graduate students from Kadir Has University, Program for the Preservation of Cultural Heritage took part as volunteers. At the same time through a seminar, they searched ways in which issues of cultural heritage could be given to children in primary schools. As the most crucial aspect, the answer to what is valuable? came up. The importance of place emerged in their debates. In order to overcome this conceptual problem, graduate students designed a card game for children. In this way, their judgments could be refined (Fig. 2).

Another issue discussed was to convey the importance of historical past. Children until 10 or 11 years old are not able to perceive the historical process. In ancient surroundings like Istanbul, buildings from 5th century like Hagia

Sofia and modern structures can be seen next to each other. The age value of the structures can not be expressed easily. In order to overcome this phenomenon the historical evolution of objects that the children are familiar with are used (i.e. from ipod to gramophone). The same concerns were tackled by a similar graduate group in 1976 at METU, and they displayed a different set of ways of approach (Erder, 1976). After this early attempt, in 1990's children's involvement in architecture through education became an issue which developed until today. Turkish Chamber of Architects, which is in the process of preparing the National Children and Architecture Congress, initiated Children & Architecture Studies in 2002. The same year The International Union of Architects (UIA) gathered in Berlin acknowledged the role of children and UNESCO/UIA Charter for Architectural Education which comprises the basis of international studies on the education of children. Finland, Austria, France and Italy are some of the followers of this education charter. The main aim of these working groups is to enhance awareness in children for the cultural and environmental sensitivity.



Fig-2: Card Game (D.Karamýk)

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