

Bridging Artistic Boundaries: Interdisciplinary Connections in Architectural Education – A Review of Selected Cases from Western and Iranian Architects

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Abstract

The interplay between various sciences, particularly artistic disciplines, is a profound and intricate relationship. Throughout the history of architectural education, many renowned architects have demonstrated remarkable abilities in artistic fields beyond their primary expertise. The correlation between art and architecture has been researched and acknowledged in certain architectural schools, with scholars identifying it as a key factor in enhancing students' creative output. However, the significance of this topic has been largely overlooked in many educational settings, especially in newer institutions, despite the potential of space and architecture to foster social interaction among students. This paper underscores the importance of this relationship and its impact on promoting educational creativity among designers. To achieve this objective, we examine the lives and works of the selected prominent architects and theorists, emphasizing their connections with various art forms and artists from other disciplines. We then analyze how these interactions have influenced their architectural achievements. Additionally, as case studies, we explore more the impact of this relationship on the lives and works of renowned architects, including Le Corbusier, Houshang Seyhoun, and Kamran Diba. This study is primarily based on a review of relevant library resources.

Keywords: Architecture, Art, Educational spaces, Creativity, Houshang Seyhoun, Interdisciplinary Interaction, Kamran Diba

¹ This paper is based on research conducted for my master's thesis at Azad University of Isfahan, originally drafted in 2014 and revised in 2024.

1. Introduction

The division of art disciplines appears to be an impossible task, yet in numerous academic settings, particularly in universities, there is insufficient emphasis placed on this issue. Specifically concerning architecture students, it seems to receive less attention from decision makers. By studying successful architecture schools and architects, we can recognize the significance of acknowledging various artistic fields and their impact on their work.

The emergence of various factors, including technological advancements and increasing human complexities, has made interdisciplinary collaboration an inevitable endeavor (Roozbehani, 2009). Interdisciplinary research has become essential to address the limitations and gaps within specialized fields of study, leading to the formation of smaller, more focused areas of expertise (Barzegar, 2008). The establishment of architectural studios that bring together architecture students and poets, architects and painters, or architects and musicians has been shown to yield creative outcomes (Antoniades, 2010), as the experiences of architects or painters directly influence the work of the other group.

2. Research Methodology

The research methodology of this article is qualitative and primarily relies on literature review and case study analysis. Key aspects of the methodology include:

-Literature Review: The study is based on existing resources, examining the correlation between art and architecture through prior research, books, and academic papers.

-Historical and Biographical Analysis: The research reviews the lives and works of famous architects, such as Le Corbusier, Houshang Seyhoun, and Kamran Diba, to explore their artistic influences.

3. Theoretical Framework

3.1 Art and Society

Based on insights from social sciences, it can be posited that poetry, music, dance, iconography, sculpture, and various other artistic activities are among the earliest manifestations of human life. From the very beginning, as humans crafted tools, sought sustenance, and sheltered themselves, they also engaged in artistic pursuits such as dancing, singing, and sculpting. Undoubtedly, ancient humans, in their tireless efforts to preserve their existence, simultaneously created and derived enjoyment from artistic endeavors (Arianpour, 1975). Art is considered one of the most significant legacies

passed down by past generations, transferred from artists to subsequent ones (Shahnazzadegan and Manafi, 2016).

3.2 The Importance of Interdisciplinary awareness

The traditional perspective on academic disciplines and specialization has hindered higher education from developing the essential capacities needed to address emerging trends and confront new challenges. Consequently, fostering interdisciplinary skills in both educational and research domains has become a crucial requirement in higher education (Roozbehani, 2009). Interdisciplinary studies alleviate the limitations and shortcomings of fragmented approaches and specialization, while also opening up new research opportunities and resources across various scientific fields (Barzegar, 2008).

Interdisciplinary information encompasses the knowledge and concepts shared between art and architecture disciplines, where close relationships exist among these fields of study. In certain cases, information from one discipline can stimulate creativity and development in another, a phenomenon referred to as "cross-fertilization" by Antoniades(2010).

3.3 Cross-Fertilization

One strategy for fostering creative architecture involves collaboration between architects and artists such as painters, sculptors, and poets. This approach has yielded great success. For instance, Eliel Saarinen's solo construction of a school aimed to promote creativity through dynamic and simultaneous engagement with other art forms, driven by philosophical and aesthetic considerations. Notable examples of individuals who have grown creatively through this method include Daniel Libeskind, who blends mathematics, architecture, and painting, and Dan Hoffman, whose pursuits encompass architecture, poetry, and philosophy (Antoniades, 2010).

4. Historical Context and Influences

4.1. Artistic Disciplines Shaping Architecture

Creativity, akin to intelligence and memory, is an inherent human talent that varies in manifestation due to environmental and circumstantial factors (Bisadi et al., 2013). Educational spaces hold significant importance as public buildings due to the prolonged presence of a large number of people over time, making their design subject to multiple perspectives. Considering the extensive communication that takes place within these spaces and their impact on students, this subject carries great importance (Mosharraf & Tabaeian, 2014).

Environments that foster creativity facilitate its development, growth, and flourishing, while others may hinder the emergence of even the greatest creative potential. Given the aforementioned factors, it is crucial to discuss the design of educational spaces, which are among the most important public buildings. The constant presence of a large number of

people over an extended period makes these spaces worthy of examination from various angles. Moreover, the substantial communication that occurs within these environments, particularly with students, further emphasizes the significance of this subject.

Original creativity can be enhanced through engagement with various artistic fields, including painting, sculpture, photography, stage design, dance, theater, cinema, and notably, music. This principle applies to all artists, irrespective of their profession. The Bauhaus school in the 1920s serves as an exemplary instance of this approach, as students actively participated in diverse art forms alongside their architectural studies. Prominent painters such as Paul Klee, Wassily Kandinsky, Johannes Itten, along with architects like Mies van der Rohe and Walter Gropius, played a significant role in this creative process. Another example; Taliesin's music and theater events also contributed to the observation of Frank Lloyd Wright's work (see figure 1 and 2)(Antoniades, 2010). The reciprocal exchange of ideas between architects and painters during the creative and innovative works since 1890 further highlights their close relationship (Benevolo, 2007). Therefore, the concept of creativity extends beyond painting and sculpture. Throughout history, there have always been conceptual connections between music and architecture, with modernity altering the structure of this concept from the modern era onwards (Sohahgir & Norouz, 2012).



Frank Lloyd Wright, Taliesin West, 1955. The Frank Lloyd Wright Foundation #10107 0010

Fig. 1 Frank Lyiod Wright is designing graphic works (Wright Foundation Website, 2014)

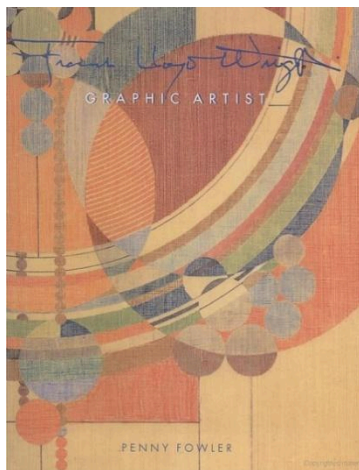


Fig. 2 Cover Photo of the book "Frank Lloyd Wright: Graphic Artist" (Penny Fowler, 2009)

4.2 Architects as Multidisciplinary Creators

During the Renaissance period, architects often held multiple roles as painters, sculptors, engineers, and innovators such as Michelangelo and Leonardo da Vinci. While specialization became more prevalent in the modern era, architecture, due to its inherently artistic nature, could not isolate itself entirely. The greatest architects of the 20th century recognized the need to connect and collaborate with other artists. Le Corbusier, for instance, found inspiration and significant influence through his connection with Brac and Picasso (Antoniades, 2010). Without them, he might not have been able to realize his ideas in a systematic manner. Similarly, Mies van der Rohe's engagement with painters like Piet Mondrian and the influence of the Bauhaus school played a crucial role in the creation of the Barcelona Pavilion and the overall expression of his style. Another example is Eero Saarinen, who drew inspiration from painters and musicians from Finland and later America, while Carl Sandburg had a similar impact on his cousin, Frank Lloyd Wright, and others (Antoniades, 2010).

The bilateral impact of the arts throughout history is an undeniable fact. It may seem peculiar to some that the acclaimed sculptor Phidias was the driving force behind all the Acropolis monuments in Athens, encompassing their artistic, architectural, construction, and implementation processes. Throughout his life, Phidias engaged in daily discussions about art and architecture with like-minded friends, particularly Anaxagoras, a Pre-Socratic Greek philosopher, in the house of Pericles. Looking forward, it is equally likely that people will find it surprising that the progress made in 20th-century architecture owes much to the influence of artists such as Mondrian, Picasso, Oldenburg, and Giorgio De Chirico on architects (Antoniades, 2010).

Vitruvius, in his book "The Ten Books on Architecture," emphasizes the importance of architects possessing knowledge in various fields of study and diverse forms of learning. Architects serve as the judges of all works produced by other arts. According to Vitruvius, architects should possess skills in drawing, proficiency in geometry, a comprehensive understanding of history (specifically the history of art), familiarity with philosophy, a grasp of music, some knowledge of medicine, an awareness of legal opinions, and acquaintance with astronomy and celestial theory (Vitruvius, 2012).

Beaux-Arts in Paris was established through the combination of different art colleges, creating a deep and institutional relationship within its educational system between architecture training and disciplines such as painting and sculpture. The Bauhaus school exemplified this diversity by offering majors ranging from visual arts to construction sciences and industrialization methods of construction, along with the incorporation of behavioral sciences. Hannes Meyer played a pivotal role in teaching behavioral sciences at this school. These transitions within the Bauhaus school facilitated the development of various majors and fields of study related to architecture, while still maintaining a strong connection to its artistic foundations (Wang, 2010).

In order to promote creativity, communication, practical involvement, and working relationships with other artists and creative individuals must be an integral part of an architect's approach. Great architects have already recognized the importance of such measures, and the results have been astonishing (Antoniades, 2010).

5. Case studies

5.1 Le Corbusier

Le Corbusier's body of work includes over 400 paintings, 800 designs, and 44 sculptures (Cohen and Benton, 2008) (see figure 3). Le Corbusier persisted in being recognized as an artist even after his first painting exhibition in 1918, considering painting to be a secret laboratory that informed his architectural projects (Jean-Louis Cohen and Jim Benton, 2008). Therefore, painters and architects not only influence each other but also engage in similar creative work (Benevolo, 2007).



Fig. 3 Le Corbusier's paintings (Le Corbusier foundation website)

One notable musician who probably had an effect on Le Corbusier was Olivier Messiaen, a musician highly regarded by Le Corbusier. Messiaen became the mentor of Iannis Xenakis, who played a pivotal role in shaping many of Le Corbusier's projects. Xenakis utilized his musical knowledge and his unique system of notation (form-oriented music) to contribute to the advancement of 20th-century architecture. He demonstrated his expertise in geometry and proportion through his collaboration with Le Corbusier, significantly contributing to the creation of rhythmic systems in some of Le Corbusier's projects (Fig 4). Xenakis, alongside Greek architect Stamos Papandakis, played a crucial role in making mathematical adjustments to Le Corbusier's Modular system, a series of proportional modules. As Le Corbusier had limited knowledge of mathematics, despite his claims, Xenakis and Papandakis, drawing upon their academic education at the Athens School of Architecture, were responsible for "discovering some points from lines," ultimately achieving successful results (Antoniades, 2010).



Fig 4. Le Corbusier and Xenakis, Philips Pavilion (Archdaily Website,2023)

As noted by Giedion (2009), the foundation of the houses designed by Le Corbusier shares similarities with modern painting. Like other modern painters, Le Corbusier employed techniques where objects appear to penetrate one another or possess a transparent quality, akin to glass.

It has been widely acknowledged by experts that if the intricate sculptures of Ronshan Church had been entrusted to conventional architects, the result may have been an unsightly and precarious arrangement. This highlights the fact that Le Corbusier had a background in painting and sculpture (see sculptures in Fig 5). In contrast, a typical architect lacks an understanding of the relationship between objects and possesses limited knowledge of sculpture. Often, a sculptor is only called upon to embellish a completed building. Unfortunately, nowadays, the prospect of architects and sculptors collaborating modestly from the inception of a project is quite low. Nevertheless, this collaborative effort appears to be the only pathway to progress (Giedion, 2009).



Fig 5. Image of sculptures made by Le Corbusier Source: Le Corbusier Foundation website

4.2 Houshang Seyhoun

Hooshang Seyhoun, born into an artistic family in Tehran in 1920, is widely recognized as the father of Iran's modern architecture, leaving a visible impact on the country's architectural landscape. He has designed numerous masterpieces in Architecture of Iran, including Tombs of Khayyam, Ibn-Sina and Nader Shah(Fig 7). Apart from his architectural achievements, Seyhoun also excelled in painting, with his artwork being exhibited in numerous prestigious fine arts museums worldwide.

Seyhoun's artistic upbringing was deeply rooted in his family heritage. His grandfather, Mirza Abdollah Farahani, was a prominent figure in classical music and is revered as the father of traditional Iranian music. Growing up, Seyhoun was immersed in a musical environment, with his mother, late uncle Ahmad Ebadi (a renowned sitar master), and father, skilled in playing the tar, all contributing to his musical influences. When asked by a reporter which role he identifies with the most—painter, architect, or teacher—Seyhoun responded, "I cannot choose."(Khat -dar-Khial Documentary, 2011).

During his tenure as the dean of the College of Fine Arts at Tehran University, Seyhoun expanded the curriculum to include music and performing arts. He attributes his series of paintings, known as "Linear coils of yarn" or "yarn of thought," to his connection with music, particularly the practice of improvised music prevalent in Iranian culture. He views the collection as a form of improvisational painting. Notably, the "linear coils of yarn" collection was exhibited alongside works by Pablo Picasso and Salvador Dali at the University of Massachusetts in 1972. Houshang Seyhoun's multidisciplinary approach, encompassing architecture, painting, and his deep musical roots, exemplifies his diverse artistic talents and contributions to the arts (Bani Mas'ud, 2011).Figure 6 shows some of his paintings.



Fig. 6. Paintings by Seyhoun. (Rogallery Website, 2014)



Fig. 7 Use Sculpture on the tomb of Nader Shah ,(the tomb is designed by Seyhoun)(author, 2010).

4.3 Kamran Diba

Kamran Diba is a prominent Iranian architect who, in addition to his architectural pursuits, is also known for his artistic endeavors such as painting. Karim Emami, in Encyclopedia Iranica, describes him as an "architect, painter(Fig 8), and an art catalyst, accelerating the progress of the art" (Khanizad & Ehsani Moayed, 2014).



Fig 8. Oil painting, Kamran Diba (Kamran Diba official website, 2014)

Born into a prominent family, Diba traveled to America to study architecture. During his time there, exposure to various exhibitions at the Museum of Modern Art (MOMA) in New York sparked his interest in other art forms, including painting and the visual arts, cultivating his artistic taste and sense of wonder. His friendship with artists such as Parviz Tanavoli greatly influenced his architectural work. Throughout his architectural career, Diba maintained lasting friendships and collaborations with artists. For instance, Parviz Tanavoli contributed several sculptures to Diba's projects, exemplified by the figures in Yusef Abad Park and the Niavaran Academy (Fig 9). These sculptures were created at Diba's recommendation (Abolghasem, 2002).



Fig 9. Public sculptures, 1988, Collaborative work with Tanavoli, Life size bronze, Niavaran cultural Center (kamrandiba.com)

Among Diba's projects in Iran, he designed a house for personal use for Parviz Tanavoli which aimed for fluidity and an exhibition of Tanavoli's works.

The Tehran Museum of Contemporary Art, designed by Diba, bears great significance as he played a critical role in its establishment. In fact, it can be considered a museum that encompasses the roles of architect, collector, art expert, and manager.

Highlighting the museum's importance, we can refer to the speech delivered by Nelson Rockefeller, the Vice President of the United States at the time, during the museum's inauguration. He stated, "This museum is an example of artistic society worldwide, and

we believe its significance will surpass our current expectations." Rockefeller further remarked that the museum would serve as a resource for future generations and a complement to the Guggenheim Museum designed by Frank Lloyd Wright in New York. It is worth noting that the Rockefeller family is the founder of the Museum of Modern Art in New York. (Khanizad & Ehsani Moayed, 2014)

Without a doubt, the success of the museum and its subsequent fame can be attributed to Diba's profound knowledge and skills in various art forms. It is undeniable that his expertise in fields beyond architecture played a pivotal role in shaping the museum's achievements.

5. Summary and conclusion

In conclusion, the examples of exceptional architects and successful architectural schools demonstrate that establishing connections between architects and artists from other disciplines, as well as acquiring knowledge and skills in diverse art fields, significantly enhances creativity and broadens the intellectual and visual horizons of architects. The presence of numerous artists and architects with extensive knowledge of various artistic disciplines further underscores the importance of interdisciplinary communication.

In contemporary architectural education, it is crucial to recognize and prioritize this interconnectedness. By creating collaboration among students from different artistic fields, design schools can encourage the creation of works that better address aesthetic needs and help designers develop a more refined and creative perspective. Additionally, transforming the physical characteristics of educational environments to promote social interaction and reduce barriers between disciplines can cultivate new friendships, facilitate communication, encourage discussions, and ultimately enhance the overall quality of education.

Unfortunately, these aspects are often neglected in the design and management of many art and design schools. Therefore, further research is needed to emphasize the significance of interdisciplinary collaboration by studying designers from various fields.

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Bibliography

Abolghasem, F. (2002). Art and thought in the architecture of Kamran Diba. Paris: Kamran Diba's website: www.kamrandiba.com.

Antoniades, A. (2010). Poetics of Architecture: Theory of Design (Translation by Ahmadreza Ay). Tehran: Soroush.

Arianpour, A. H. (1975). An overview of Dr. Arianpour's research on the sociology of art. Tehran: University of Tehran, Faculty of Fine Arts, Student Book Association.

Barzegar, A. (2008). History, essence, and philosophy of interdisciplinary sciences. *Interdisciplinary Studies in Humanities*, 1(1), 37-56.

BBC. (2011). Yarn of thought documentary [Khat-dar-Khial] (Interview with H. Seyhoun).

Benévolo, L. (2007). History of modern architecture (Translation by S. Bavar). Tehran: Tehran University.

Bani, M. (2011). Contemporary architecture of Iran. Tehran: Honar-e Memari-e Qarn.

Bisadi, M., Mozaffar, F., & Hosseini, S. B. (2013). Spatial characteristics influencing the creativity of researchers in architectural and urban research centers. *Journal of Fine Arts*, 7(3), 11 pages.

Cohen, J., & Benton, T. (2008). Le Corbusier Le Grand. London: Phaidon Press

Dandis, D. (2009). Principles of visual literacy (Translation by M. Sepehr). Tehran: Saroush.

Fowler, P. (2002). Frank Lloyd Wright: Graphic Artist. California: Pomegranate Communications Inc.

Giedion, S. (2009). Space, time, and architecture (Translation by M. Mozayeni). Tehran: Scientific and Cultural Publications.

Groat, L., & Wang, D. (2010). Architectural research methods (Translation by A. A'inei Far). Tehran: Tehran University.

Houshang Seyhoun paintings. (n.d.). Retrieved from www.artslant.com

Houshang Seyhoun paintings. (n.d.). Retrieved from www.rogallery.com

Khanizad, S., & Ehsani Moid, F. (2014). Kamran Diba and Humanitarian Architecture. *Century Architecture Art*.

Mosharraf, H. M., & Tabaeian, S. M. (Year). The Importance of Environmental Psychology in Design of Educational Spaces. *Advances in Environmental Biology*, Volume(Issue), Pages.

Philips Pavilion and Bauhaus images. (n.d.). Retrieved from www.Archdaily.com

Rouzbahani, Kianoush Mohammadi. (2009). Interdisciplinary thinking development: A prerequisite for interdisciplinary education in higher education with an emphasis on problem-based learning. *Interdisciplinary Studies in Humanities*, 1(2), 103-125.

Shahnezadegan, T. and Manafi, M. (2016) 'Applying knowledge management principles to preserve Iranian arts' In: *International Journal of Science and Engineering Applications* 5 (10) pp.450–453. At: <https://doi.org/10.7753/ijsea0510.1001>

Sohangir, S., & Norooz Barazjani, V. (2012). Comparative study of the conceptual connection between music and architecture in pre-modern and post-modern eras in the Western world. *Bagh-e Nazar*, 9(23), 33-46.

Vitruvius. (2012). *Ten books on architecture* (Translation by R. Fiaz). Tehran: Art University.