An Alternative Sketching Practice in Interior Design Education

Una práctica alternativa de croquis en la educación del diseño de interiores

Uma prática alternativa de esboço no ensino de design de interiores

DOI: https://doi.org/10.18861/ania.2026.16.1.4202

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Received: 10/07/2025
Accepted: 10/01/2026

How to cite:
Buldaç, Merve. (2026). Alternative Sketching Practice in Interior Design Education. *Anales de Investigación en Arquitectura, 16*(1). https://doi.org/10.18861/ania.2026.16.1.4202

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Abstract

This study emphasizes the importance of sketching practices in interior design education through an alternative sketch study. While doing this, it is aimed to establish a connection between the material chosen for sketch practice and vernacular architecture and to obtain concrete outputs through this connection. The experiences of the students during the process and the effects of direct interaction with the aerated concrete material selected as a sketch tool on the design processes were observed through the course outcomes conducted in the 2024-2025 fall semester in the interior design department of a state university. This experimental sketch practice carried out with aerated concrete material also contributed to the students' experience and understanding of the form and structural features of vernacular architecture, as a result of the material's light and soft structure and its features, such as being easily workable by hand. Therefore, it is thought that this study is important in terms of raising awareness or providing guidance for the more widespread use of physical sketch methods in interior design education.

Keywords: interior design education; sketch; aerated concrete; vernacular architecture

Resumen

Este estudio enfatiza la importancia de las prácticas de croquis en la formación en diseño de interiores a través de un estudio alternativo de croquis. Al hacerlo, se pretende establecer una conexión entre el material elegido para la práctica de croquis y la arquitectura vernácula, y obtener resultados concretos a partir de esta relación. Las experiencias de los estudiantes durante el proceso y los efectos de la interacción directa con el material de hormigón celular elegido como herramienta de croquis sobre los procesos de diseño fueron observados a través de los resultados del curso llevado a cabo en el semestre de otoño 2024-2025 en el departamento de diseño de interiores de una universidad pública. Esta práctica experimental de croquis, realizada con hormigón celular, también contribuyó a la experiencia y comprensión de los estudiantes sobre la forma y las características estructurales de la arquitectura vernácula, como resultado de la estructura ligera y blanda del material y de sus propiedades, que permiten su fácil trabajo a mano. Por lo tanto, se considera que este estudio es importante para generar conciencia o brindar orientación sobre el uso más extendido de métodos físicos de croquis en la formación en diseño de interiores.

Palabras Clave: formación en diseño de interiores; croquis; hormigón celular; arquitectura vernácula

Resumo

Este estudo enfatiza a importância das práticas de esboço no ensino de design de interiores por meio de uma prática alternativa de sketching. O objetivo é estabelecer uma conexão entre o material escolhido para o exercício — o concreto celular — e a arquitetura vernácula, produzindo resultados concretos a partir dessa relação. As experiências dos estudantes ao longo do processo e os efeitos da interação direta com o concreto celular enquanto ferramenta de esboço foram observados por meio das atividades desenvolvidas no semestre de outono de 2024-2025, no departamento de design de interiores de uma universidade pública. A prática experimental realizada com concreto celular contribuiu tanto para a experiência quanto para a compreensão dos alunos sobre forma e características estruturais da arquitetura vernácula, em razão da leveza do material, da suavidade de sua superfície e de sua facilidade de manipulação manual. Portanto, considera-se que este estudo é significativo por promover consciência e oferecer orientação para um uso mais amplo de métodos físicos de esboço no ensino de design de interiores.

Palavras-chave: Ensino de design de interiores, Esboço, Concreto celular, Arquitetura vernácula

Introduction

Sketching, an integral part of design education, can be considered a fundamental tool that makes abstract thoughts concrete. In the discipline of interior design, as discussed within the scope of this study, especially in the educational process, sketch studies are not only a method of expression but also an integral part of the process of understanding space, creating form, and establishing a relationship with the material. Experimental sketching practices with various materials, beyond traditional drawing techniques, help students gain a more holistic perspective on design processes.

The Concept of Sketching and Its Role in Interior Design Education

As in all design disciplines, the sketching phase in interior design is a crucial process that plays a vital and effective role in the development of the design idea. “Design is a highly complex problem-solving activity that differs from the conventional problem-solving approach in cognitive psychology and necessitates creativity” (Elias, 2005, as cited in Ayıran, 2007). For this creativity to emerge, sketching is the first step of the process. Transferring the ideas that form in the mind to paper quickly is very important in shaping the design. Abstract thoughts are put on paper and become concrete output. Many people have proposed various definitions of the concept, often accompanied by similar expressions. For Bilir (2013), a sketch is the first and simplest interpretation of a concept/thought in the brain that turns into form. According to the Turkish Language Association, a sketch is defined as a “preliminary work, draft, made with drawings for architectural works and paintings” (URL 1). Therefore, in the simplest terms, it can be defined as “a design draft; an act of creation directed at the artist herself/himself” (İnceoğlu, 1995). The designer both creates a problem for herself/himself and turns the sketch into a tool to solve that problem (Ayıran, 2007).

Gehry describes his sketching process as being able to hold an image in one’s mind for three or four minutes (Ivy, 1999). Jonson (2002) argues that the power of freehand drawing lies in its economy (low cost), its immediacy (single-tool interface), and its ease of minimal correction and revision. Belardi (2019) also defines sketching as a note-taking system that is fast, readily available, densely self-reproducing, and, more importantly, has extraordinary communicative power. According to Chastain et al. (2002), sketches are semantically clear. They argue that “the abstraction found in a design sketch serves to aid similar reasoning used early in the design task” and that “the initial design process is abstract; typically conceptual; concerned with discovery rather than defining a solution; and implying more than what is described”. It has an open-ended and rich quality that stimulates creativity because it is fast and open to interpretation. The relationship between drawing and conceptual design has been attributed to the characteristics and activities of creating and interpreting drawings (Guidera, 2004). Purcell and Gero (1998) state that in the first stage of the process, the designer uses drawings/scribbles that are not fully understood and contain vague expressions, such as sketches. Guidera (2004) also provides a similar definition, stating that one of the basic features of sketches that support abstraction and reinterpretation is the vagueness in conceptual drawings created by hand. Sketches/freehand drawings created in conceptual design intentionally show uncertainty, a fundamental feature that feeds the cognitive processes required for discovery. Sketching activities can be associated with different actions, such as (i) whether the designer actively makes a sketch, (ii) whether he/she produces information by thinking about and reading a sketch, or (iii) whether he/she mentally reasons without making a sketch (Goldschmidt, 1991). Won (2001) suggests that designers exhibit a “seeing behavior” that focuses on the formal characteristics of the sketch during the sketching process. Accordingly, he states that the designer may perceive the image he sees as something different and adds that this change in perception encourages the emergence of new interpretations. Laseau (2001 as cited in Guidera, 2004:) defines the concept with a similar approach in practice as thinking that supports the continuous cycle of information-laden images from paper to the eye, brain, hand and back to paper. For Tversky (2002), sketching helps designers share internal thoughts by making them visible and helps make temporary ideas more permanent. A sketch is “a concrete model of an idea and proof of its existence”, he continues.

The sketching process is also a fundamental tool in interior design education in terms of visualizing design ideas, developing spatial perception, and guiding/supporting creativity. Arnheim (1993) defines the role of sketches in the design process as the “primary core.” This perspective shows that sketches have a very important function in design studios. The architectural design studio logic first emerged at the Ecole des Beaux-Arts in France. Students who start school learn to design by working on design

problems, and they start this with sketches (Anthony, 2012). Environments where design alternatives are explored, discussed, and evaluated constitute design studios, which serve as the focal point of design education (Gökmen & Süer, 2003). Ledewitz (1985) describes sketching as a rather sophisticated way of teaching creative problem-solving. Fish and Scrivener (1990) emphasize that design processes involving paper and pencil significantly enhance creativity. However, it has been observed that students are reluctant to engage in sketching and tend to articulate their design ideas verbally. As a response to this tendency, students are expected to adopt an artistic and creative design process (Doll, 2002).

Therefore, overcoming this behavioral pattern should be among the primary objectives of educators. A well-structured school should promote a mode of thinking that utilizes known knowledge to uncover the unknown (Wigley, 2004, as cited in Şahin, 2013). Renzo Piano, as cited in Robbins (1994), describes design and implementation as a form of silent play, emphasizing that drawing is the key to this process. Similarly, Brawne (2003) asserts that architectural thinking constitutes a nonverbal mode of cognition. Examining the interaction between a design student and a studio instructor reveals how the process of seeing and drawing operates. In this process, a dialogue primarily based on visual communication, alongside verbal interaction, facilitates the reinterpretation of sketches and the expression of new interpretations through further sketching (Schön, 1992). The course instructor must continuously be aware of the diverse perspectives of students and guide them through various approaches in the design process. By encouraging each student to generate distinct forms, instructors foster creativity and development while also cultivating an awareness of overcoming the challenges inherent in both learning and teaching (Durusoy, 2015).

Students should learn to use sketches effectively as a thinking tool in the early stages of design for competence and practicality, and this skill should be developed. To do this, it is necessary to go through the “analytical” and “synthetic” sketching processes (Durusoy, 2015). While the analytical sketching process defines the process of systematically analyzing and evaluating existing data by breaking it down into pieces to solve a design problem, the synthetic sketching process expresses a more creative and abstract approach. Generally, in these processes, students use the “traditional sketching” method, which describes the process of transferring ideas to paper, and the “digital sketching” method, which refers to the transfer of ideas onto a screen in a digital environment. Although the methods vary, the importance of the sketching process does not change.

Alternative Materials in Sketching and Spatial Thinking Processes

In addition to the familiar and widely used sketching processes using paper and pencil, using different methods will encourage students to focus and engage in sketching, adding value to the design process. Sketches and experimental methods, particularly those made with physical materials, allow for the exploration of different aspects of design. In addition to these methods, sketch models are also created to provide a three-dimensional perception of the design and understand its structure (Bilir, 2013). It is possible to use different materials in the creation of these models.

Current approaches to design education emphasize the use of various materials that enable tactile, experimental, and three-dimensional processes, which will enable students studying design disciplines to develop a three-dimensional understanding of space or product. For example, clay, because it allows for seamless interventions such as addition, subtraction, disruption, or shape modification, supports students’ intuitive form-seeking processes and allows them to explore the relationships between mass and void in their spatial constructions. For another example, modeling cardboard, or cardboard, is among the frequently preferred materials due to its easy accessibility and simple cutting processes. It helps students quickly transform their conceptual sketches into volumetric models/prototypes. Plaster or soapstone blocks, similar to the aerated concrete material discussed in this study, allow students to experiment with easy manual manipulation, thus fostering an understanding of depth, thickness, and cross-sectional transformation. In addition to these examples, wire, thanks to its capacity to produce a three-dimensional representation of line, contour, and form, allows students to construct air volume, structural continuity, and spatial shell/skeleton on an abstract level. In particular, it allows for the expression of boundary-void relationships in interior spaces through a lightweight and permeable narrative, generating a spatial experience distinct from that offered by other solid materials. Incorporating these materials into sketch-based studio work provides a broader procedural framework that allows students to compare the effects of different structural behaviors, textures, resistance properties, and shaping techniques on form formation. Such comparative material

experiences not only enrich cognitive and perceptual skills but also help students develop a deeper understanding of how materials shape spatial language. In this context, working with aerated concrete/three-dimensional material, which serves as a study sample and is used by the instructor as course material within the relevant course, allows students to experience the relationship between material, form, and space. Furthermore, the primary purpose of students' sketching processes with this material is to ensure that certain structural properties of the material serve as a strong reference to traditional/vernacular architecture. An assessment of the material's impact on the process will be made based on the results obtained.

The Relationship Between Sketching, Aerated Concrete Material, and Vernacular Architecture

In the discipline of interior design, many elements play an important role in making the design tangible. One of these is the material. While materials contribute to the design and increase its impact value, their development processes in nature, forms, internal structures, fluidity, and self-organization skills also affect the design styles (Gezer, 2012). Bettaieb et al. (2019) interpreted the material through the building envelope and defined it as; materials are considered as some of the most important design elements that contribute significantly in reflecting a comprehensive image of buildings through their active role in providing consistent and interconnected images that facilitate the integration of users into their surroundings and environment. In the theoretical and practical courses given during the interior design education process, the main objectives of the education process are for students to know materials, material details, application techniques, and costs. Understanding the importance of the knowledge acquired in material-focused courses and being able to use it is important for the success of the project in perceiving the design idea (Gürçınar and Ermiyagil, 2019). In addition to understanding the materials theoretically, using them in practice as course materials allows students to develop a deeper and more comprehensive understanding of the design process. Putting the acquired knowledge into practice provides a better understanding of the design-production and material relationship. Applied processes support; (i) experimental learning (provide information about the texture, resistance, weight, workability, etc. of the material); (ii) strengthen design decisions (material choices directly affect the durability, aesthetic quality and functionality of the interior); (iii) develop three-dimensional thinking and spatial perception (making physical models or working on sketches with the material increases spatial thinking skills, students learn by experiencing scale, proportion and structural balance); (iv) encourage creative and innovative solutions (allow students to develop different production methods).

The use of aerated concrete, which is the sample of the study and selected as a course material, as a sketch tool has also been handled and used with an approach that supports the above-mentioned situations. It has made interior design education more effective, practical, and creative by ensuring that theoretical knowledge is supported by experience.

Aerated concrete is a lightweight material that is easily workable, can be cut effortlessly, and can be shaped into desired forms with ease (URL 2). First developed in Sweden in the early 1920s, the material was created as a solution to provide a building material that provided better insulating properties and less weight compared to traditional concrete. The innovation quickly spread throughout Europe and the world, leading to its widespread use in both residential and commercial construction. It's a preferred choice within the industry due to its numerous advantages. As a lightweight, highly insulating, and easily workable building material, it's being used as a sustainable and contemporary alternative in today's local architectural practices, bringing a modern interpretation to the building culture of the relevant regions. To understand the relationship between vernacular architecture and aerated concrete material used as a sketch tool, it is necessary to understand what vernacular architecture means. The word "vernacular", derived from the Latin word vernacutus, is used to convey an undifferentiated structural form that is a member of a large and homogeneous group (Kuban, 1995). Vernacular architecture exhibits features that can be adapted or improved as requirements change (Vellinga et al., 2007). It is widely accepted that vernacular architecture adapts to the local climate, topographic features, and available resources in terms of layout, building volume configuration, semi-open/open space arrangement, and materials and construction techniques. Therefore, vernacular architecture can be defined as a truly climate-sensitive and environmentally friendly design approach (Philokyprou et al., 2017). Vegas et al. (2022) state that vernacular architecture is the result of knowledge developed over centuries that aims to adapt to the natural environment, geographical conditions, and climate of a particular place while also optimizing

available resources to meet specific requirements. The importance of vernacular architecture lies in its ability to balance environmental sensitivity, cost-effectiveness, and cultural identity.

If it is to be evaluated within the framework of all its features, vernacular architecture is a building practice that is shaped by being sensitive to the climatic conditions, material possibilities and cultural dynamics of the geography in which it is located. In this context, the relationship between aerated concrete material and vernacular architecture can be examined as follows: (i) Material Adaptation and Sustainability (the integration of aerated concrete with traditional building materials can provide a sustainable solution by contributing to the fusion of modern and traditional construction techniques); (ii) Climate Adaptation and Energy Efficiency (for example, the thermal insulation provided by traditional stone walls can be provided in a lighter and more workable form by aerated concrete); (iii) Culture and Form Production Construction (One of the strongest ties between aerated concrete material and vernacular architecture is that its carvable structure enables the reproduction of vernacular architectural plans, facades or three-dimensional representations); (iv) Spatial Sketching and Experimentation (By re-examining the structural features of a local housing typology with aerated concrete, students can experience the building form and interior space organization practically and experimentally); (v) Vernacular Architecture with Contemporary Interpretation (for example, regional architectural styles such as courtyard houses or stone-walled village houses can be reinterpreted with the lightweight, modular structure of aerated concrete). This contemporary approach to vernacular forms can provide a platform for students to combine tradition with innovation. Thus, the strong relationship(s) established between materials and vernacular architecture can convey important messages to students within the framework of interior design education, emphasizing both environmental sensitivity and the creation of cultural identity.

Methodology

Within the scope of the third-year course discussed in the study, which was conducted in the 2024-2025 fall semester in the Interior Design Department of a state university, students were expected to carry out a sketching process on aerated concrete, which was the main material of the course. The inspiration for the course content comes from Louis Kahn's student, Prof. Dr. Cengiz Yetken's book "Classical Music Is Not Whistled" (2020), in which he mentioned that he wanted his students to create spaces on aerated concrete material and understand the vernacular architecture with the name "carve your room".

This study presents an experimental approach aimed at analyzing vernacular architecture from a broader perspective, drawing inspiration from the selected sample and utilizing the textural and three-dimensional properties of aerated concrete material. To reach concrete course outcomes regarding the sketching process, some steps were followed.

- The students were introduced to aerated concrete material and were asked to reflect on its workability and design potential.
- Student presentations on vernacular architecture were conducted, discussing the meaning of vernacular architecture and supporting the discussion with examples.
- Selection of one of the three spaces determined as a study room, bedroom, and living (resting-socializing) room by students
- Developing a simple/plain design idea for the selected space and transferring it to paper as a traditional sketching method
- Transferring the ideas to the instructor
- Obtaining flat block gas concrete material
- Trials of three-dimensional sketches for the resulting design ideas (they went through experimental processes such as coloring the sketches, leaving them neutral, supporting them with different materials, etc.)
- Presentation of the concrete outcomes obtained at the end of the process

The purpose of selecting such a sketching process is to provide students with a tool that will motivate them to develop a sketching habit, thereby enabling them to understand that sketches can be achieved through different methods, raise awareness, provoke thought, and introduce the material—enhancing their knowledge of materials and establishing a direct relationship with them. While establishing this relationship, the aim has been to teach and demonstrate what vernacular architecture is as another example of approaching course content and how such a method refers to it.

At the end of the process, selected sketch studies from each space chosen within the scope of the relevant course have been included as examples in the study. Each selected aerated concrete sketch is coded as SS1, SS2, etc. (student sketch1; student sketch2) and evaluated within itself.

- The common features of each sketch study selected to be analyzed within the scope of the study are given below;

- The porous and lightweight structure of the aerated concrete material allowed surface manipulation.

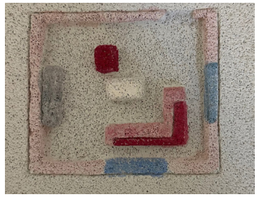
In the studies, spatial boundaries and layers were highlighted with carving and surface excavation techniques.

However, features such as color, form, depth, spatial character, etc., differed in each study. thin the given examples, the sketching process conducted using aerated concrete material has enabled interior design students to experience alternative sketching methods while contributing to their understanding and interpretation of vernacular architecture. The studies carried out within the scope of the course, focusing on three different spatial functions, have utilized the material's porous structure, allowing spatial boundaries and layers to be emphasized through carving and surface manipulation techniques. This approach has provided students with the opportunity to reflect on craftsmanship and spatial organization, which are frequently encountered in vernacular architectural traditions. While spatial composition was clarified through the use of color in SS1 and SS2, SS3 and SS4 highlighted the impact of traditional craftsmanship and local building materials on spatial perception by emphasizing natural material textures. Overall, the study has encouraged students to interact directly with aerated concrete and to interpret vernacular architectural elements in terms of form, texture, and scale. In this regard, the sketching practice conducted with aerated concrete can be considered both an alternative tool for design and thinking in interior design education and an experimental method that promotes students' exploration of vernacular architecture and its integration into contemporary design processes.

Findings and conclusions

the sketching process plays a critical role across all design disciplines. In the context of interior design education, sketching is recognized as one of the initial and fundamental steps of the design process. Therefore, instructors bear a significant responsibility in ensuring that students develop sketching as a habitual practice to enhance their ability to generate design ideas. Students may utilize various sketching techniques to express their ideas more effectively. While traditional sketches created with paper and pencil have transitioned to digital platforms with technological advancements, another

Table 1. Aerated Concrete Sketch Examples

In this sketch study, a volumetric composition was created with wall thicknesses that show the definition of the limiting area and different color code definitions used in doorways and window openings. A simple seating area was created with an L-shaped seating element, a coffee table, a basic armchair, and a TV unit that complement it.	 Figure 1. SS1 Living space sketch (from the author's archive, 2024)
The ease of processing and easy shaping of the aerated concrete material in the spatial organization shaped by the bed, two nightstands, a sitting corner, a dressing table, and a wardrobe are read in this colored sketch study. Here, the student used color with paint and made the sketch easier to perceive with the color palette he/she used.	 Figure 2. SS2 Bedroom sketch (from the author's archive, 2024)
Within this simple border organized as a study room, there are seating elements (a-c) and a desk (b). In this sketch study, SS3 preferred to use materials instead of colors for the perception of the fittings and gave them texture. Therefore, a minimal and warm spatial order was obtained in which natural and tactile materials were brought together.	 Figure 3. SS3 Study room sketch (from the author's archive, 2024)
In this sketch practice, where the bedroom was studied, similar to SS3, the spatial order was read by creating textures on the materials. However, the student also made a front view (Figure 4) drawing outside the plan plane, which included the bed, nightstands, and the sitting element, which strengthened the three-dimensional readability of the sketch practice.	  Figure 4a-b. SS4 Bedroom sketch (from the author's archive, 2024)

crucial aspect to consider is the simultaneous teaching of material knowledge. In this regard, fostering students' awareness of the necessity to develop material knowledge through sketching with different materials constitutes an important educational objective for instructors.

Within the scope of this study, students were encouraged to go beyond conventional materials and methods and engage in sketching practice using an alternative material. Throughout this process, the course instructor aimed to overcome students' reluctance toward sketching by introducing a motivational tool while simultaneously conveying the value of vernacular architecture, which references contemporary concerns such as sustainability, through sketching practice. Although reference is made to vernacular architecture through smaller-scale individual interior spaces within the scope of the study, the integration of vernacular architectural features of aerated concrete material into contemporary building language in terms of form and structure can also be shown as an outcome of the study.

As can be understood from Table 2, gas concrete material can be used in sustainable contemporary structures in harmony with the aesthetic and functional features of vernacular architecture. Traditional forms and structural solutions can be combined with gas concrete to create environmentally friendly and energy-efficient structures. In addition to all these statements, several gains were obtained for both the students and the course instructor during the course process.

- The course allowed for an experimental process.
- It was observed that instead of seeking a single solution to the problem, students developed different sketches or solution approaches by utilizing materials, tools, and methods.
- Students demonstrated the ability to use knowledge with objectives such as curiosity, exploration, and problem-solving.
- They enhanced their ability to express themselves through three-dimensional model sketching and learned to think in both two and three dimensions.
- The use of an alternative sketching practice within the course facilitated students' focus, motivation, and disciplined work ethic.
- When sketching is considered not only as a linear representation but also as a spatial thinking method, aerated concrete, due to its physical malleability, proved to be a significant tool contributing to this process.
- Students developed a better understanding of professional concepts, structural components, and design tools through the applied methodology. They gained awareness by adopting a new perspective on the design process and design problems.
- The use of aerated concrete as a sketching medium provided interior design students with an opportunity to comprehend, experience, and reinterpret vernacular architecture through contemporary methods.
- The combination of vernacular architecture and aerated concrete revealed new possibilities in disciplines such as architecture and interior design concerning sustainable material use, climate responsiveness, and cultural heritage preservation.
- Throughout this process, students not only engaged with materials but also deeply analyzed the spatial, cultural, and structural implications of their design decisions. As a result, they developed creative and sustainable designs that bridge vernacular architectural heritage with contemporary construction technologies.
- The instructor fostered originality and differentiation in education by implementing the experimental approach.
- A unique communication dynamic emerged between the instructor and students, leading to a more interactive, student-centered teaching process. This new communication method enhanced student engagement and improved the overall efficiency of the course.
- A different studio model was developed, allowing students to experience each stage of the design process firsthand. This approach created a more dynamic learning environment compared to the traditional studio model.

It is believed that this study will contribute to future course processes by enabling design education to be approached more holistically and experientially. Students can become more conscious of different materials and how to use them

Vernacular architectural features	The response of aerated concrete material to these features
Use of organic and traditional forms	Since it is a material that is easy to cut and shape, organic or irregular plans can be designed.
Simple and functional plan layout	Simple but functional structures can be designed for both interior and exterior spaces.
Use of local materials	Aerated concrete material, like traditional materials, can be produced locally and used as an environmentally friendly material.
Structural strength	Although it is a lightweight material, it can have high durability. In addition, the flexibility and durability of aerated concrete in earthquake zones can increase the safety of the structure.

Table 2. Vernacular Architecture – Aerated Concrete Material Relationship (created by the author)

effectively in design processes. Moreover, this method can be integrated into future workshops and diversified by applying it at different scales with various materials. In addition to aerated concrete, similar experiments with alternative materials can help students gain a deeper understanding of the relationship between material and space. The broader implementation of this process in interior architecture education can enhance students' awareness of sustainable design, cultural heritage, and innovative material usage. At the same time, it fosters the development of creative problem-solving skills in both individual and group projects.

Final approval of the article
MSc. Arch. Andrea Castro Marcucci, Editor-in-Chief.

Author contributions
The author, Merve Buldaç is responsible for all stages of the preparation and development of this article.

Data availability
The data used in this research are not publicly available in a database. However, researchers interested in accessing the dataset may request it directly from the corresponding author, Merve Buldaç.

References

Anthony, K. H. (2012). *Studio culture and student life*. Architecture School, Three Centuries of Educating Architects in North America. Edited by Ockman, J. Williamson R. MIT Press, Cambridge, Massachusetts.

Arnheim, R. (1993). Sketching and the psychology of design. *Design Issues, 9*(2), Autumn, 15 – 19. https://doi.org/10.2307/1511669

Ayıran, N. (2007). The role of sketches in terms of creativity in design education and the effects of a scientific ideal. *ITU A-Z, 4*(2), 52-66.

Belardi, P. (2019). *Mimarlar neden hala çiziyor?* (çev. A. Erol),. İstanbul,: Janus Yayıncılık.

Bettaieb, D., Malek, R., Alawad, A. (2019). General and special materials selection criteria for interior design projects. *International Journal of Structural and Civil Engineering Research, 8*(1), 16-20. doi: 10.18178/ijscer.8.1.16-20.

Bilir, S. (2013). Mekân tasarımında kavram geliştirme sürecine analitik bir yaklaşım. [Unpublished Master's Thesis, Hacettepe Üniversitesi Güzel Sanatlar Enstitüsü, Ankara]. https://tez.yok.gov.tr/UlusalTezMerkezi/tezDetay.jsp?id=_hsqzKF7Axm4K7mcviTOwg&no=jfzeVW2HFNNeSwZWwZnDLA

Brawne, M. (2003). *Architectural thought: the design process and the expectant eye.* Architectural Press, Oxford and Burlington.

Chastain, T., Kalay, Y., and Peri, C. (2002). Square peg in a round hole or horseless carriage? reflections on the use of computing in architecture. *Automation in construction, 11*(2), 237 – 248. https://doi.org/10.1016/S0926-5805(00)00095-9

Doll, W.E. (2002). *Beyond methods? teaching as an aesthetic and apritful quest.* in Mirochnic, E., Sherman, D. C. (Eds.), Passion and Pedagogy Relation, Creation and Transformation in Teaching, Peter Lang, New York, 127 – 152.

Durusoy, M. (2015). Düşüncenin eskizle anlatımı ve mimari tasarımdaki önemi. [Unpublished Master's Thesis, Maltepe Üniversitesi Fen Bilimleri Enstitüsü İç Mimarlık Anabilim Dalı]. https://openaccess.maltepe.edu.tr/entities/publication/01a4b9a1-00ab-40fe-902f-71cbec492a9c

Fish, J., Scrivener, S. (1990). Amplifying the mind's eye: sketching and visual cognition. *Leonardo, 23*(1), 117 – 126. https://doi.org/10.2307/1578475

Gezer, H. (2012). Malzemenin gizil güçlerinin mimariye katkısı. *İstanbul Ticaret Üniversitesi Fen Bilimleri Dergisi, 10*(20), 97-118. https://ticaret.edu.tr/uploads/yayin/fen20_dosyalar/97-118.pdf

Goldschmidt, G. (1991). The dialectics of sketching. *Creativity Research Journal, 4*(2), 123-143. doi: 10.1080/10400419109534381

Gökmen, H. Süer, D. (2003). *Mimarlık eğitiminde tasarım stüdyolarına farklı yaklaşımlar.* Mimarlar Odası İzmir Şubesi Yayınları, İzmir.

Guidera, G. S. (2004). *Assessing the use of digital sketching and conceptual design software in first-year architectural design studio.* Proceedings of the American Society for Engineering Education Annual Conference & Exposition.

Gürçınar Sunaalp, C., Ermiyagil Abbasoğlu, M.S. (2019). İç mimarlık tasarım eğitiminde malzeme kullanımının değerlendirilmesi. *İdil, 64,* 1705-1718. doi: 10.7816/idil-08-64-08.

Ivy, R. (1999). Frank Gehry: plain talk with a master. *Architectural Record, 187*(5).

İnceoğlu, N. (1995). *Düşünme ve anlatım aracı olarak eskizler.* İstanbul: Helikon Yayınları.

Jonson, B. (2002). Sketching now. *Journal of art design and education, 21*(3), 246 – 253. https://doi.org/10.1111/1468-5949.00321

Kuban, D. (1995). *The Turkish Hayat House.* İstanbul, Eren Yayıncılık.

Ledewitz, S. (2014). Models of designing studio teaching. *Journal of Architectural Education, 38*(2), 2 – 8. https://doi.org/10.1080/10464883.1985.10758354

Philokyprou, M., Michael, A., Malaktou, E., Savvides, A. (2017). Environmentally responsive design in Eastern Mediterranean. The case of vernacular architecture in the coastal, lowland and mountainous regions of Cyprus. *Building and Environment, 111,* 91-109. https://doi.org/10.1016/j.buildenv.2016.10.010

Purcell, A.T., Gero, J.S. (1998). Drawing and the design process: a review of protocol studies in design and other disciplines and related research in cognitive psychology. *Design Studies, 19*(4), 389-430. https://doi.org/10.1016/S0142-694X(98)00015-5

Robbins, E. (1994) *Why Architects Draw.* MIT Press, Cambridge, MA.

Schön, D. (1992). Designing as reflective conversation with the materials of a design situation. *Research in Engineering Design, 3*(3), 131-147. https://link.springer.com/article/10.1007/BF01580516

Tversky, B. (2002). *What do sketches say about thinking.* AAAI Technical report.

Vegas, F., Mileto, C., Escobar Hueto, A., Lidon de Miguel, M. (2022). Sustainability, risks and resilience of vernacular architecture. *International Journal of Architectural Heritage, 16*(6), 817-819. doi: 10.1080/15583058.2022.2067435

Vellinga, M., Oliver, P., Bridge, A. (2007). *Atlas of vernacular architecture of the world.* New York, Scotprint.

Won, P. (2001). The comparison between visual thinking using computer and conventional media in the concept generation stages of design. *Automation in construction, 10*(1), 25-35. https://doi.org/10.1016/S0926-5805(00)00048-0

Yetken, C. (2020). *Klasik müzik ıslıkla çalınmaz – Louis Kahn stüdyo ve atölyesinde birlikte üretmek.* Yem Yayın, İstanbul.

Online References

URL-1. Definition of sketch. Turkish Language Association Dictionary. Retrieved from https://sozluk.gov.tr/ /. 11.03.2025.

URL-2. (2022). What is aerated concrete?). Retrieved from https://bbcmuhendislik.com.tr/gaz-beton-nedir/. 14.03.2025.

Figure References

Figure 1. From the author's archive, 2024
Figure 2. From the author's archive, 2024
Figure 3. From the author's archive, 2024
Figure 4a. From the author's archive, 2024
Figure 4b. From the author's archive, 2024