



Jurnal Arsitektur Zonasi

Journal homepage:

<https://ejournal.upi.edu/index.php/jaz>



The Interior of Architecture Studio Classroom: Perspective from Student's Impressions

Francisca Adyuta Sri Melati Soeprapto ^{*1}, Lucky Hermawan ², Alifia Nur Sya'adah ³, Yana Annisa Natania ⁴,
Mustika Kusumaning Wardhani ⁵

^{1, 2, 3, 4, 5} Program Studi Arsitektur, Fakultas Arsitektur dan Desain, Institut Teknologi Nasional, Bandung, Indonesia

*Correspondence: E-mail: francisca.asms@gmail.com

ABSTRACT

Architecture students spend most of their time in studio-based classrooms. Interior design elements for studio-based classrooms, especially regarding colour, are applied to walls, floors, ceilings, and furniture selection. Colour psychology plays an important role in the emotions and creativity of users who use this space. This research aims to evaluate the suitability of the room as an architectural studio and classroom by analyzing the suitability of function and student experience. This research uses a mixed approach, starting with data collection through questionnaires distributed to 62 students with experience using the room. The findings reveal that the studio-based classrooms in this study are comfortable to use as studios but less comfortable when used as regular classrooms. The main problem is choosing less harmonious colours in room paint and furniture choices. Another thing that is highlighted is the choice of furniture that is less ergonomically comfortable. Also, air conditioners are not functioning optimally, and damaged power outlets further reduce the user's comfort level. A monotonous room atmosphere also causes boredom, reducing productivity, inspiration and creativity. This study offers insights that can guide interior designers of studio-based classrooms to better align with student needs and preferences.

ARTICLE INFO

Article History:

Submitted/Received 17 Dec 2024

First Revised 2 January 2025

Accepted 29 January 2025

First Available online 1 Feb 2025

Publication Date 1 Feb 2025

Keyword:

architecture,
impressions,
interior,
studio based classroom

1. INTRODUCTION

The Architecture program is an education system that spends much time doing assignments in studio-based classrooms (Hartono and Kustiani 2023). In the process of discovering a concept, architecture students are expected to be able to hone their creativity while in the studio. Creativity is the ability to process emotions and produce unique and valuable work. Moreover, the creative process also produces innovative design ideas (Park and Lee 2022). The environment around campus and even more limited classrooms support this creative process and support the students. Interior colour, atmosphere including air circulation and lighting, and room furniture arrangement indicate whether the room is good enough to be used as a studio-based classroom (Adryan *et al.* 2023).

According to previous research, disturbed concentration and visual discomfort will occur if the lighting in a room is not good (Masruchin and Mufidah 2019). In the discussion regarding light openings, it must be placed so that natural lighting in the room reaches 20% of the floor area (Hartono and Kustiani 2023). In addition, natural lighting provides visual comfort and benefits such as increasing enthusiasm, telling time, and improving body health. In addition, natural lighting can create a pleasant and functional atmosphere for room users (Ragilyani and Dewi 2021).

The ideal of a room depends on the function and perception of the user. Moreover, the ideal space for art learning is a space that can increase creativity and make users feel comfortable also relaxed in order to improve the quality of learning. This also optimizes the learning process and development of sensory processes and fine motor skills (Farisza *et al.*, 2019). Interior design is vital in creating a learning atmosphere to optimize a classroom. The interior colour of a studio-based classroom affects the psychological condition of the people working there. For example, brown is considered to provide comfort and increase morale. The colour blue is considered to provide coolness and can improve concentration (Farisza *et al.*, 2019).

Apart from that, paying attention to the proper furniture arrangement according to standards is necessary, or users need to create comfort for users in carrying out activities (Zhafirah and Syoufa 2023). In addition, choosing the right furniture and its arrangement is essential in providing comfort in space, including the architecture studio learning room. Placing furniture and equipment in the interior of architecture studio-based classrooms must provide comfortable movement and circulation space for lecturers and students (Pratama and Sudarwanto 2020).

In the previous study conducted by Adryan *et al.* (2023), a mixed-method research method was used to obtain data from the study of colour, atmosphere, and furniture in an architectural studio classroom. The results show that the interior colour, atmosphere (air circulation and lighting), and the arrangement of the room's furniture indicate whether the room is good enough to be used as a studio-based classroom. These results serve as a reference in finding out more about students' impressions of the interior of studio-based classrooms. However, the findings of this study cannot reveal that the comfort of studio-based architecture classrooms can also influence the creativity and emotions of its users. Therefore, research is needed that can pay attention to and plan various interior elements well, especially the colour of the room and the use of facilities. Thus, this study aims to determine students' perceptions of their comfort in studio-based classrooms when used as architecture studios and regular classes. This study is intended to utilize this studio-based space according to its function and serve as evaluation material for the research object.

1.1 Studio-Based Classroom

According to the definition, studio-based classrooms are where architecture students work on design and assist with supervisors, which is also a simulation of an architectural firm (Pratama and Sudarwanto 2020). Moreover, the furniture's layout of a classroom are very influential for its users in shaping student creativity, behaviour, performance, concentration and happiness (Jihan et al., 2018). One standard of comfort in a room can be seen from the air temperature in that classroom. The air temperature in the interior of a comfortable tropical climate area is 23°C – 26°C. This can be overcome by using openings for natural ventilation or air conditioners to stabilize the air temperature in the room (Jihan et al., 2018).

The layout, equipment, and standard sizes of furniture for architectural design studios must also be considered in order to support the activities of the core architectural design course. Based on Neufert (1996), there are standard layouts and dimensions of furniture for drawing studios. The studio space is a production space rather than a regular classroom. This uniqueness can be seen from the size of the table module for a person as well as the flexibility of movement supported by the chair furniture because studio work takes quite a long time compared to the classroom learning system in general (See Figure 1) below:

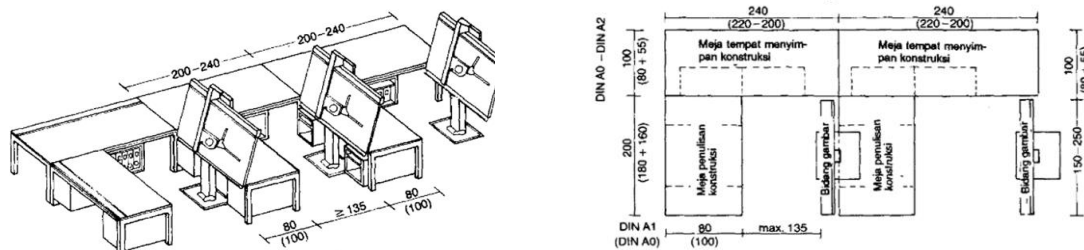


Figure 1. Standard architectural drawing in studio room
(Source: Neufert, 1996)

The choice of colour in the interior of a studio classroom can influence the user's feelings. In addition, choosing a workspace colour dominated by white has a positive impact, such as reducing the increase of working stress compared to harmonious and disharmonious colour compositions. A harmonious colour composition also means a combination of two or more colours that are in harmony to produce a perfect colour combination that has one unity. Meanwhile, the disharmonious colour composition is combination of two or more colours that do not have harmony, resulting in imperfect colours that do not blend (Jihan et al., 2018). The influence of harmonious colour choices is expected to be able to support studio performance because visually, coloured wall coverings are what users most often encounter when spending time in the studio room.

1.2 Environmental Psychology in Interior Discourses

The existence of empirical objects solely to the perceiving subject. According to Berkeley, humans do not perceive empirical objects themselves; it is human representations of these things that humans perceive in the form of sensations and ideas in the mind (Kaol 2017). In short, humans experience is perceptions or ideas formed by the human mind, including what humans perceive as physical objects and external reality. In addition, Berkeley also suggested that human action is a response to external stimuli and the individual's interpretation of those stimuli. This shows how important is considering the role of thought and perception in explaining human behaviour. Sensory experience can be obtained through the five human senses (senses of sight, hearing, smell, taste and touch). Each sensory organ receives and interprets information from the outside world through receptors in the sense organs and then sends this information to the brain for processing. In addition, sensory experiences can vary significantly from individual to individual (Safira Riska 2016).

Various elements in a room can be combined to create a structured or random visual appearance. These elements include the layout, ceiling, and room furniture arrangement (Dhini *et al.*, 2018). The sensory experience in this study involves the senses of sight and touch of studio-based classroom. In previous study, colour can influence behaviour and provide an aesthetic assessment; also, colour psychologically influences human behaviour and the soul (Engrasia *et al.*, 2023). Moreover, colour is one of the interior elements that must be considered in creating the atmosphere for each space segmentation or need because colour plays an active role in supporting people's mood (Gunawan and Darmayanti 2022) . Furthermore, colour has a strong influence on human feelings. These feelings have an indirect effect on the atmosphere created in the surrounding environment as well as on a person's mood and emotions. According to their characteristics, colours can be classified into two categories, such as hot colours and cold colours, and between them, there are intermediate colours (Marsya and Anggraita 2016).

According to Marsya and Anggraita (2016), cool colours culminate in greenish blue so that those close to greenish blue are included in the calm or relaxed colour group. The colours of this group have a calming, peaceful, calm, fresh and positive feeling. This study will produce data regarding whether the interior colours of studio-based classes are influenced by the colour theory that previous researchers have put forward or whether there are other possible pattern findings. This study also discusses human interest, which can be defined as a feeling that an activity or object is valuable or meaningful to someone. Interest can also be a motivation that guides a person's behavior (Rufaidah 2015). In this research, information or data was obtained on the influence of studio-based classroom interiors on students' interest in studying and doing assignments, which became the research objectives.

2. RESEARCH METHODOLOGY

The data obtained was divided into two, namely primary data and secondary data. Primary data was obtained from observations and questionnaire results. The questionnaire consists of qualitative questions and is given via Google Forms. The questionnaire was addressed to users of rooms 17-302 and obtained 62 respondents. Secondary data is obtained from the results of literature studies by studying books, journals, and related research to be used as a reference in the research process. The research phase can be seen in the following diagram (see Figure 2) below:

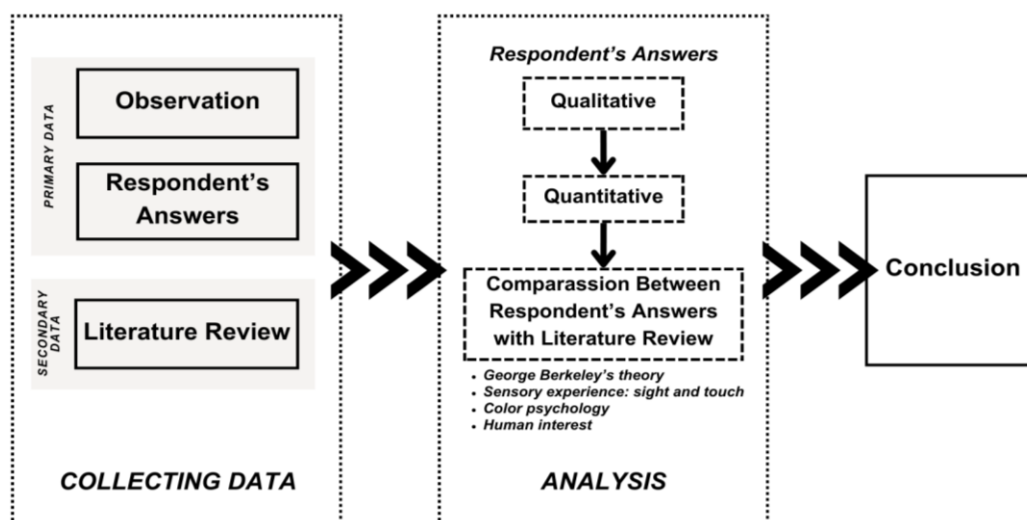


Figure 2. Research phase
(Source: Authors, 2024)

The qualitative approach distributes essay questionnaires where respondents can respond according to their perceptions. Collecting data is to obtain respondents' perceptions of the research object. Data collection uses a qualitative method, where filling out the questionnaire is based on respondents' feelings about the studio-based classroom 17-302, which is then processed into quantitative form. The results of each question asked are obtained from the questionnaire (Creswell 2018). These results were compared with the literature found by researchers. The interior of a studio-based classroom is the object of research, and specifically, this study was located in one of the architectural studio-based classrooms in Building 17, Insitut Teknologi Nasional, Bandung.



Figure 3. Condition of the room when used for regular classes
(Source: Authors, 2024)

This space serves as an architectural studio-based classroom for third- and fourth-grade students. Apart from that, this room also used for a regular lecture room. The students' sitting positions can differentiate the atmosphere of regular and studio classes. Students and supervisors sit at their respective desks when the room is used as a studio. Meanwhile, if the room is used for regular classes, it can be seen in Figure 3, where students have to move their chairs to the middle of the room so they can see the learning presentation on the screen located at the front and centre of the room perfectly. This adjustment process takes quite a long time and is also less effective as a studio classroom (See Figure 3 above).

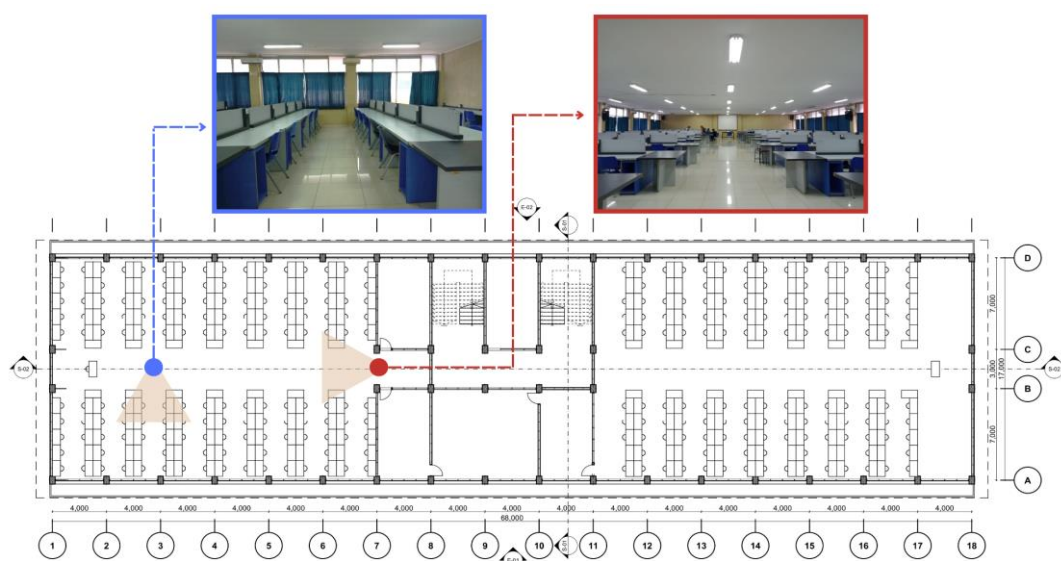


Figure 4. Figure plan and location
(Source: Authors, 2024)

Architecture studio-based classroom 17-302 has an interior with blue chair furniture, grey partition tables, light yellow wall paint, turquoise curtains, white GRC¹ ceiling and shiny cream-colored floor tiles (see Figure 4) above. The positions of the tables and chairs in the room are divided into two, namely on the right and left sides. Each table has a partition to separate one table from the table in front of it. Meanwhile, the lecturer's desk is in the middle of the room. The main light source in the room comes from sunlight coming in through the window. Apart from that, other additional lighting used comes from fluorescent lamps. The curtains have the colour of green and are often closed throughout the day, and the lights are turned on, including during the day. The room gets natural ventilation through window openings and is supported by air conditioner. However, the air conditioning inside the room is no longer functioning properly, so the room often feels hot and uncomfortable for the learning process.

3. RESULT AND FINDING

The research results show that the hypothesis is in line with George Berkeley's theory, which states that from experience, humans form their perceptions. Each student has a different opinion regarding the comfort and feeling of studio-based classrooms in terms of interior and facilities. The pie chart data below states that students' impression of studio-based classrooms is that 37% of students feel comfortable because of the facilities that support the running of the studio teaching system, such as the presence of power sockets, comfortable furniture, and the presence of air conditioning or an air conditioning system that makes the air cooler. As many as 34% students felt normal, and another 29% felt uncomfortable because the air conditioning system and sockets did not always work properly (See figure 5).

Respondent's Impressions of Room 17-302

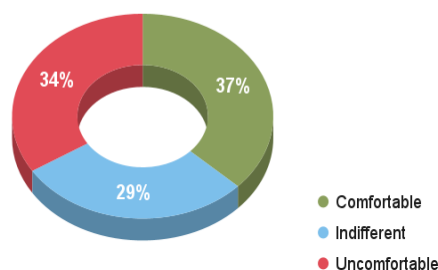


Figure 5. Respondents' impression of studio based classroom
(Source: Survey, 2024)

However, most respondents supported its main function with the available facilities. Regarding furniture colour, grey table partitions give the impression of privacy for most respondents. A small number of respondents felt uncomfortable with the presence of this partition because it gave the respondent a cramped impression. Visually, this partition actually disrupts the effectiveness of learning and interaction between lecturers and students in carrying out the lecture system. Additionally, from the atmosphere, most students feel that this studio class makes them bored because it seems too formal and monotonous. However, the studio layout can still support its function as both a studio classroom and a regular classroom. Of the three aspects mentioned in the circle diagram above, most students feel that the atmosphere in the studio classroom is the main factor that makes this room seem boring and does not give any positive impression in terms of work productivity.

¹ *Glassfibre reinforced concrete*

3.1 The Psychology of Colour in Interior Classroom

The Impression of Respondents Towards the Interior Color of Room 17-302

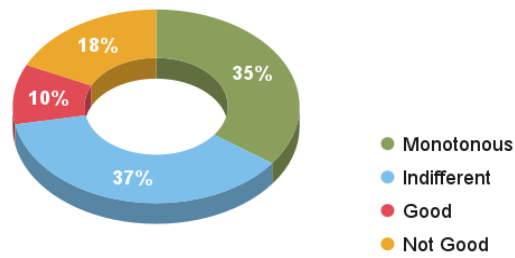


Figure 7. Respondents' impressions of interior colours
(Source: Survey, 2024)

The respondents' impression when they saw the colour of the interior space was light yellow on the interior walls, turquoise blue on the curtains, blue on the chairs, grey on the tables and partitions, matte white on the ceiling, and glossy white on the granite floor. The respondents' answers stated that the impression they got was normal as much as 37%. Meanwhile, responses that captured the impression of monotony were 35%. Meanwhile, 18% of respondents had an unfavourable impression, and 10% expressed a good impression. The respondents' reasons for the questions asked showed that the majority of respondents felt undisturbed and felt normal when they were in the classroom. This is considered a condition where the environment does not affect a person's focus on productivity. However, quite a few respondents stated that the impression of monotony and feelings of boredom with the colour of the room were things that affected performance in studio classes.

According to interior colour theory, light yellow should give a pleasant and warm impression, like morning sunlight, which gives enthusiasm and creates passion. According to the results of this research modelling survey, this colour is actually less attractive because it is too monotonous and 'pale'. In addition, the turquoise colour on the curtains or the blue colour on the chairs did not influence the respondents' positive feelings. Respondents thought that this colour was disturbing because it created colour disharmony in the room's interior. However, there were still respondents who felt normal about the existing interior colour choices and even said they were good.

3.2 Student's Interest in Studio Classroom

The Most Influential Factors to Achieve the Ideal Architecture Studio Classroom

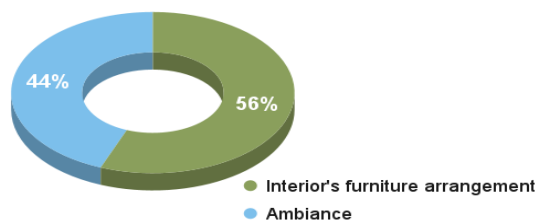


Figure 8. Determinants of the ideal architectural studio-based classroom
(Source: Survey, 2024)

According to 56% of respondents, the ideal architectural studio-based classroom is expected to have good interior arrangement, comfortable furniture, suitable location, good ventilation and lighting, as well as supporting facilities to support activities in the studio. Meanwhile, 44% of respondents stated that studio-based classrooms should have a good

atmosphere because students should feel comfortable looking for ideas and working on drawing assignments.

There are two points of view that are connected between students' interest in carrying out studio activities influenced by external factors such as uncomfortable room temperature, a boring or 'sleepy' atmosphere, furniture that is distracting for some students, and inadequate facilities. The findings in this research indicate that the studio classroom can accommodate studio activities but has not been able to maximize its role in supporting student productivity. From both physical and non-physical aspects, this needs to be considered to be a sustainable interior design and support architecture students' studio activities.

3.3 Overall Discussion

This research produced four new findings related to the relationship with student psychology in an interior studio-based classroom. The findings of this research are things that need to be considered in interior design, responding to the condition that students need stimuli to increase their level of productivity. The outcome of student impressions stated that 37% comfort was obtained in this research modelling, accompanied by an uncomfortable condition of 34%. This raises the question of how a condition can be felt similar but in an opposite condition. There are two assumptions from the findings on the impression variable; each student's first impression illustrates that the interior environment's environmental aspect does not always influence student impressions. Second, a student's impression of the interior space is independent of the comfort and discomfort of students learning in the studio classroom.

Regarding the findings related to sensory sense experience, it is found that the ambience in an interior studio classroom hit as much as 40%, accompanied by interior colour as much as 31%. This shows that students consider the ambience that appears more important than the colour intervention that dominates the interior of a studio classroom. Ambience can emerge from an environment designed to suit the needs of productivity and concentration in project work. Likewise, the colour psychology obtained tends to be ordinary or indifferent as much as 37%, accompanied by the finding that monotonous colours dominate in this model. This condition tends to give the impression of a lack of ideas, boring, and non-insightful. Consider that students who use this class tend to use their right brain impulsively to create designs.

Furthermore, student interest is a new variable tested in this research model, differentiating it from similar previous research. The findings, which stated that 56% were indifferent, indicated a tendency for the interior furniture arrangement to influence students' flexibility and increase their creativity while studying in the studio classroom. Student interest is essential in designing a studio classroom interior, considering that a person's interest will encourage stimuli in their brain to work more 'happy' and can solve stressful conditions in working on a project in the studio room.

4. CONCLUSION

The interior of a classroom studio plays a vital role in supporting the productivity of architecture students. A suitable environment and impression can improve a student's mood and comfort when carrying out the studio-based learning activity for a long period. Design that considers user impressions will provide better effectiveness because it is closely related to students' cognitive perception of receiving a positive 'image' of their studio-based classroom. The study found that the psychology of colour and standards in the interior of studio-based classrooms gives a different impression depending on the perception of each

user. In terms of visual aspects, the colour setting should avoid monotony and disharmoniousness both in the colour selection for interior elements and the dominance of colours on the walls.

The choice of furniture and layout arrangement could be more comfortable and flexible, and several supporting facilities need to be added so that the ambience in studio activities can reach quality. Meanwhile, the indoor atmosphere is influenced by external factors and in terms of studio-based classroom function, it is considered suitable enough. Meanwhile, in this research model, the facilities are considered inappropriate and less comfortable for students when used as a regular classroom.

The limitation of this study can be seen from the quantity of respondent data obtained, so data interpretation still needs to be improved in building a rational and reliable conclusion. Furthermore, the research findings only focus on interiority and user preferences. Suggestions for further research include exploring the relationship between user preferences and the possibility of alternative interior design to answer the urgency of future studio-based classroom indicators suitable for all academic communities.

ACKNOWLEDGMENT

The authors would like to thank the respondents who filled out the questionnaire and the lecturers who participated in assisting the writing process in this study

REFERENCES

- Adryan, Alman Zaky et al. 2023. "Study of Color, Atmosphere, and Furniture in Architectural Studio Classroom: Perspective from Mix-Methods Research." *Vitruvian : Jurnal Arsitektur, Bangunan dan Lingkungan* 13(1): 1
- Cresewell, Cresewell John W and. 2018. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*
- Dhini, Dwi Risky Febrian, Angela C. Tampubolon, and Rea Risky Alprianti. 2018. "Persepsi Pengguna Terhadap Kualitas Visual Pada Ruang Perkuliahan." *Jurnal Lingkungan Binaan Indonesia* 7(1): 29–36
- Engrasia, Johana et al. 2023. "Studi Deskriptif Dan Dampak Penerapan Warna Pada Desain Interior Starland Preschool & Kindergarten." 7(2): 1–17
- Farisza, Gita Bintari, Suparno Suparno, and Agung Kumoro Wahyuwibowo. 2019. "Penerapan Psikologi Arsitektur Pada Perancangan Sekolah Tinggi Desain Komunikasi Visual Di Dki Jakarta." *Senthong* 2(1): 279–88.
<https://jurnal.ft.uns.ac.id/index.php/senthong/article/view/884>
- Gunawan, Yosia Franklin, and Tessa Eka Darmayanti. 2022. "Pengaruh Warna Terhadap Psikologi User Di Zen Family Spa & Reflexology Bandung." *REKAJIVA Jurnal Desain Interior* 1(1): 14–28.
<https://ejurnal.itenas.ac.id/index.php/REKAJIVA/article/view/6221>
- Hartono, Tri, and Kustiani Kustiani. 2023. "Tingkat Kenyamanan Pengguna Pada Studio Arsitektur: Studi Kasus Studio Arsitektur Institut Teknologi Sumatera." *MARKA (Media Arsitektur Dan Kota) : Jurnal Ilmiah Penelitian* 6(2): 85–100
- Jihan, Oleh :, Hafiz Bagaskara, Dwi Saputra, And Erni Setyowati Abstrak. 2018. "Pengaruh Kualitas Ruang Terhadap Efektivitas Penggunaan Ruang Studio Perancangan Arsitektur Studi Kasus : Studio Perancangan Arsitektur C301 & C302 Daft Undip." *Imaji* 1(7): 1–11
- Kaol, Winfred Atieno. 2017. "Dualitas Idealisme Dan Materialisme." *Ekp* 13(3): 1576–80

- Marsya, Intan Hannah, And Aria Weny Anggraita. 2016. "Studi Pengaruh Warna Pada Interior Terhadap Psikologis Penggunanya, Studi Kasus Pada Unit Transfusi Darah Kota X." *Jurnal Desain Interior* 1(1): 41
- Masruchin, Febby Rahmatullah, And Mufidah. 2019. "Optimasi Pencahayaan Alami Pada Studio Arsitektur Di Universitas 17 Agustus 1945 Surabaya." *Jurnal Hasil Penelitian* 04(02): 159–65
- Park, Eun Joo, and Sanghee Lee. 2022. "Creative Thinking in the Architecture Design Studio: Bibliometric Analysis and Literature Review." *Buildings* 12(6)
- Pratama, M. Iqbal Putra, and Budi Sudarwanto. 2020. "Evaluasi Pasca Huni Studio Program Studi Arsitektur Fakultas Teknik Universitas Diponegoro." *Imaji* 9(4): 411–20
- Ragilyani, Novia, and Atri Prautama Dewi. 2021. "Pengaruh Pencahayaan Alami Terhadap Kenyamanan Visual Di." *Sinektika Jurnal Arsitektur* 18(1): 85–92
- Rufaidah, Anna. 2015. "Pengaruh Intelegensi Dan Minat Siswa Terhadap Putusan Pemilihan Jurusan." *Faktor Jurnal Ilmiah Kependidikan* 2(2): 139–46
- Safira Riska, Annisa. 2016. "Peran Panca Indra Dalam Pengalaman Ruang Multi-Sensory Architecture View Project." (December). <https://www.researchgate.net/publication/347305426>
- Zhafirah, Inas, and Ade Syoufa. 2023. "Pengaruh Penataan Perabot Pada Ruang Baca Dan Ruang Koleksi Perpustakaan Terhadap Kenyamanan Fisik Pengguna." *Journal of Design and Creative Industry* 7(2): 18–32. <https://journal.uc.ac.id/index.php/AKSEN/article/view/3869>