

Application of Deaf Space in the Interior of Creativity and Art Center for the Deaf

Alexia Aurelius^{1*}, Ika Rachmayanti², Ade Ariyani Sari Fajarwati³

^{1,2,3}Universitas Bina Nusantara, Indonesia

***Corresponding Author:** alexia.aurelius@binus.ac.id

Abstract: Deaf people have difficulty or cannot even hear, so they develop sign language to communicate. Difficulty of hearing and communication differences prevent deaf people from learning. However, the potential and talent of each deaf person are the same as those of other hearing people. From this point of view, deaf people can continue to work in the field of art that prioritizes form, visuals, and movement or motor skills that do not require the sense of hearing. By being creative, deaf people can voice their opinions and provide messages and stories for people who enjoy their work. This study aims to give awareness to the public and opportunities for deaf people to get space and facilities to be creative. The method used in this study is qualitative analysis and design thinking method. The design facilitates creative and artistic activities as outlined in the exhibition room for deaf works, painting, drawing, makerspace, deaf theater practice, multipurpose room, classroom, mini library, and co-working space ensuring that deaf people are comfortable doing activities in the room. This research was developed for the community to provide opportunities for deaf people to be more accessible and dare to be creative.

Keywords: deaf culture, deaf space, interior, sign language

History Article: Submitted 20 April 2024 | Revised 18 May 2024 | Accepted 2 June 2024

How to Cite: Aurelius, A., Rachmayanti, I., & Fajarwati, A. A. S. (2024). Application of Deaf Space in the Interior of Creativity and Art Center for the Deaf. *Journal of Aesthetics, Creativity and Art Management*, 3(2), 76–86. <https://doi.org/10.59997/jacam.v3i2.3736>

Introduction

Deaf people depend on the sense of sight because of their hearing difficulties. Therefore, deaf people communicate using sign language, combining hand and facial movements, gestures, images, symbols, or (visual) signs (Vineyard, 2012). The difference in the way of communication between hearing people (oral communication) and deaf people (visual communication) makes the need for facilities that are more based on visual and motor forms so that they can be more easily understood (Rahmah, 2018).

All information is absorbed through the eyes of the deaf. Therefore, not only through writing but also through pictures, paintings, and art displayed can provide messages for the deaf (Silver, 2000). In addition, deaf people are also involved in deaf theater. This theater presents the creation of a combination of sign language with antonymy movements that have been translated from the author's script so that the deaf audience can understand what the show wants to convey (Powers, 2019). For people who are deaf, visual arts such as painting, drawing, dance, and theater are tools to convey messages and express themselves.

There is a need for deaf people for space facilities that communicate with deaf people (signal communication on a visual basis) and the need for deaf people to express themselves to the outside world. This study aims to provide opportunities for deaf people to be able to carry out daily activities, especially when active indoors independently, like other hearing people. Besides that, it also facilitates and provides space for deaf people to be creative, voice their opinions and express themselves through creativity and art.

With the condition of deaf people who depend on sight, it is necessary to have a room with adequate visual facilities or signs for the deaf. To design a good space according to the deaf, aspects of color, light, and materials must be selected and designed carefully (Harahap, 2020). This will provide an excellent visual and spatial experience so deaf people can work independently. Deaf space is a space specially designed for deaf people who have special behavior, initiated by Bauman in 2006. It is created from the behavior of deaf people who use sign language to communicate. Sign language requires a greater range of motion because it is expressed using hand gestures and facial expressions (Goldstein, 2019). Therefore, a greater distance or circulation area is needed to provide free space for deaf people when using sign language.

To design a space for deaf people, several aspects need to be considered, namely, Sensory Reach and the need for a space that looks visually free. Deaf people need access to know the state of the surrounding environment to provide a sense of security and comfort. This can be realized by placing directions in and out of the room and placing light that does not create shadows or dark corners. Space and Proximity: in the interaction between deaf people and hearing people, sufficient visual access is needed for deaf people to see their interlocutors freely. Therefore, it is necessary to have a large enough room free of obstructions so that people with hearing impairments can freely access their opponents. Usually, this is applied to large spaces for one-way conversations, such as multipurpose rooms or classrooms.

Mobility and Proximity: Sign language is a unique form of communication that uses hand gestures and facial expressions to convey information. These gestures require a significant range of motion to be effective. Therefore, deaf individuals need a larger area of movement than people without hearing impairments so they can move their hands freely and communicate clearly. Creating spacious environments with ample room for movement is essential to facilitate this form of communication.

For people with hearing impairments, sight becomes their primary source of information. Therefore, a room's arrangement of light and color is not just a design choice but a practical necessity. Soft, natural light and contrasting colors like blue, green, and red against skin tones can enhance the visibility and clarity of hand movements and facial expressions. These design elements are crucial in creating a visually supportive environment for effective communication.

While some deaf individuals can hear certain sounds with hearing devices, loud interior elements can be distracting and uncomfortable. This is where the role of acoustics in spatial design becomes evident. We can create a quieter and more comfortable environment by using interior elements that absorb sound and

reduce echo reflections, such as carpets, heavy curtains, and acoustic panels. This design choice significantly reduces auditory distractions, enhancing the overall experience for the deaf.

By considering mobility, light, color, and acoustics in the design of spaces for deaf individuals, we can create environments that are not only accessible but also supportive of their unique communication needs. This holistic approach ensures deaf individuals can interact and engage comfortably and effectively within their surroundings.

The existence of signage is also essential to note because it provides information in space or can also direct space users (Wave, 2017). Display signage in images and symbols that symbolize the data to be given. Signage aims to ensure that everyone, including the deaf, can understand information. Having clear instructions or signs also helps deaf people work independently.

Signage can also be formed into a three-dimensional form, which is the application of graphic design to the interior. This application is usually in the form of typography or pictures and shapes. Signage is part of interior design elements that can be applied to wall or floor or ceiling elements (Ruki & Nediari, 2014). Signage that everyone can understand needs to be designed with graphic concepts that are easy to read and recognize. The way to make a good image or symbol is to determine several things such as the shape of the pictogram, the shape of the panel to be used, the color, the meaning of each pictogram, and the tools used to create the signage. By knowing things related to pictograms, colors and materials, the signage you want to design already has a clear basis and direction. The pictogram system created to create signage must also be available in the right place and be seen and read clearly (Adir et al., 2015). Having these criteria makes the design of pictograms more apparent and worthy of being used as signage that works for users.

Signage adds quality to the area where it is placed. It shouldn't be too big, too loud, or visually striking. In addition, the signage needs to blend with the feeling (ambiance) of the room. Signage should also not be too small and need to be placed in an ideal place and can be seen easily (Calori & Vandenberg, 2015). With the criteria that become these limits, good signage that can be understood by everyone can be realized.

Deaf culture is the culture of deaf people. Deaf culture includes visual language (sign language), a unique communication method through facial and hand motion expressions and gestures. In addition, it includes works of deaf people in the form of literature, paintings, theater, films, and so on. Likewise, the views of deaf people who accept life with different conditions from other hearing people. With the gathering of deaf people, it can provide opportunities to develop social skills, leadership, and self-esteem (Cripps, 2022). With the existence of a deaf culture, deaf people can communicate freely and can live life according to their identity.

Deaf culture includes several essential things that make a significant difference to other cultures. Values: deaf people appreciate sign language, which is very substantial in deaf culture, and reject the medical view that hearing-impaired conditions require treatment. Based on this value, deaf people believe

that a deaf child needs to be educated about the heritage and culture of the deaf (literature, art, theater, and other works). The attitude of sharing and experiencing to understand and appreciate the culture of the deaf requires acceptance of the condition of the deaf and the use of sign language to communicate.

There are several rules of behavior in the deaf community, such as raising and moving hands to appreciate something instead of clapping. This also applies to class-room or meeting room positions where the chairs are positioned in a circle so that the view is not obstructed. The high number of marriages with fellow deaf people happens a lot because deaf couples can understand each other's situation compared to being with hearing people. Symbols: deaf people in America choose the hand shape of the sign language "I Love You" as a symbol of their deaf culture. Literature and art: The deaf culture has many works of literature and art that express the deaf person's view of life. Visual arts works for the deaf are better known as De'VIA, which express the experiences, views, and opinions of the deaf towards the outside world (White, 1998).

One form of deaf art is De'VIA (Deaf View Image Art), a work of art that represents the life views, opinions, and expressions of deaf people. The artist who creates the work determines whether his work is included in De'VIA. According to Miller, one of the earliest deaf artists, visual art is a way of life for them just as people listen to music (Durr, 2000). Music for hearing people is a way to express themselves, and visual art is created by deaf artists.

Deaf art usually displays the shape of the hands, mouth, lips, eyes, and ears. These forms express the message that the artist wants to convey regarding their experience of living life as a deaf person. In addition to shape, the choice of contrasting colors and textures is also a hallmark, giving the impression of a different, new, and personal perspective.

Often, what is expressed is terrible memories or negative emotions left over because of the artist's traumatic experiences from childhood. Miller's Bell School work shows a deaf child sitting with folded arms and practicing oral speech. For Miller, oral language training was a bad experience because it was coercive. Various parties often give negative opinions on the work of the deaf because it is considered too harsh or difficult to accept for the whole community (Durr, 2000).



Figure 1. Bell School by Betty J. Miller

Deaf art can also be used as an alternative way of communicating. Not all deaf people can be fluent in sign language, as well as ordinary hearing people who do not understand how to sign language. Drawing simple things to facilitate communication can be an alternative for deaf people to communicate smoothly with other people (Ho-rovitz, 2007). This practice can also be called art therapy, which can help relieve pressure on deaf people who have difficulty interacting with hearing people. It can also make it easier for hearing parents who have children with hearing impairments. This therapy can be done to facilitate communication between parents and children.

Methodology

This research uses Stanford's design thinking method, which is divided into five steps: empathize, define, ideate, prototype, and test. This design thinking stage focuses on how researchers can more thoroughly find out and recognize users' problems so that they can provide design ideas that solve user problems (Tu et al., 2018).



Figure 2. Design Thinking steps

In this study, the researchers used three of the five existing stages: empathize, define, and ideate. The first stage, empathize, is knowing that deaf people need special facilities in the room to support their daily activities. In addition, the second stage, define, is realizing that there is a need for facilities to

be creative in the field of art to provide space for deaf people to express themselves and express opinions. Third, the ideate stage, which is the stage of developing ideas for designing creative and artistic spaces for the deaf by developing the interior in the form of three-dimensional images. This design applies the element of deaf space as a reference in designing space and providing facilities that support creative and artistic activities for the deaf.

The method used in this study is qualitative analysis for data collection and design thinking method for designing suitable interiors for the activities of the deaf. Such a qualitative method can also be found in some design works such as Anwar & Ardhi-ati (2023), Gunawan & Ardhiati (2022), Herlambang & Ardhiati (2023), Kholis (2023), and Subagyo & Adi (2023) but all their works are different from this research in terms of physical location and object of study.

Results and discussion

Hearing difficulties or inability to hear is a clear difference between deaf people and other hearing people in society. This can have a negative impact where people with hearing impairment receive harmful and discriminatory treatment. This happens because of a misunderstanding of the disabilities that exist in society. The tendency to think with the concept of normality, which is to discriminate between people with an appearance or physical disorder, is still present in society. This thinking concept produces negative actions through separation and negative labeling (Widinarsih, 2019). In addition, deaf people think the term "hearing loss" has a negative connotation. Although "hearing loss" is a neutral term, it gives the expectation that this condition should be treated so that the deaf can hear. From a cultural perspective, this makes people think that using sign language to communicate is a "decrease" in language and literature (White, 1998). Therefore, a positive understanding of persons with disabilities is needed, providing inspiration and positive things from existing differences.

Deaf people think that sign language is a strength and part of their identity. Sign language is a way for deaf people to communicate. Not only that, but sign language is also the identity of deaf people because it distinguishes them in society (Gumelar, 2018). Sign language is formed from natural interactions between deaf people, so this language is the hallmark of deaf people. Deaf people's desire to get better treatment from hearing people is also an effect of the expectations and treatment of the surrounding environment. For example, such as the ban on sign language occurred in America and Europe in 1880 (Schertz & Lane, 1999). As well as the demands given to deaf people to communicate orally, such as reading lip movements and pronouncing words according to the shape of the lips. This demand is applied to learning in special schools, which provide speech development material and train deaf people to speak as people hear.

The view that sign language is the identity and strength of deaf people starkly contrasts the view that hearing difficulties or disorders require treatment. Likewise, speech development materials given at schools are seen as forcing deaf people to be able to communicate orally like other hearing people. This view arises from the interaction of deaf people with the hearing environment.

However, if deaf people interact in a deaf environment, negative views will not occur because of similar ways of thinking, communicating, and living habits. Ann Silver felt when she entered a particular university for the deaf, she felt like she was at home even with strangers she didn't know (Silver, 2000). Deaf people who gather and carry out activities together make themselves feel comfortable and accepted as normal humans (Padden & Humphries, 2022). This similarity forms a community, and over time, it becomes a new form of "culture," which is called Deaf Culture.

Joint activities with fellow deaf people can raise enthusiasm and positively impact. Activities carried out together emphasize visual and motor activities more, not verbal and oral. Visual and motor activities can be included in painting, drawing, and theater arts activities, which can also hone the creativity of the deaf. Carrying out various activities that focus on creativity and art also provides space for deaf people to express themselves and express their opinions in works that can be enjoyed by multiple groups of people.



[Source: Aurelius, 2023]
Figure 3. Shape study steps

The study of shape was inspired by the shape of the hand in sign language for the word "together". When viewed from above, the shape of the two hands clenched into fists will look like in figure 2 in the schematic 2 stages of the shape study. This form will be developed and implemented in the layout, as well as the furniture in the interior. The use of color is inspired by the artwork of deaf artist Nancy Rourke who wears red, yellow, blue, black and white.



[Source: Aurelius, 2023]
Figure 4. Colour inspiration



[Source: Aurelius, 2023]
Figure 5. Colour application in design

The study of form is implemented in the form of signage, banquette sitting, and the form of displaying works of art., material with pine wood hpl finish. The color se-lection uses neutral colors such as wood (light brown) and gray, combined with red, blue and yellow. The use of blue in the lobby area aims to give a professional but still lively impression. Red is used in the painting room to provide enthusiasm and in-crease productivity to its users. Maker space, using yellow gives a cheerful and en-thusiastic impression so that the room's atmosphere remains cheerful and fun when doing crafting activities.



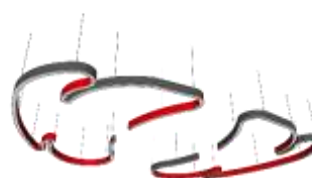
[Source: Aurelius, 2023]
Figure 6. The study of form design



Painting area



Canvas storage



Custom pendant light

[Source: Aurelius, 2023]
Figure 7. Red color application in design



Maker space



Pattern table



Moveable magnet board

[Source: Aurelius, 2023]
Figure 8. Yellow color application in design

Conclusion

Deaf people have a need to express themselves through creativity and art that focuses on visual and motor skills. This design focuses on facilitating creative and artistic activities as outlined in the exhibition room for deaf works, painting, drawing, makerspace, deaf theater practice, multipurpose room, classroom, mini library, and co-working space. In addition, this design was made with an emphasis on visual flexibility and space circulation to ensure that deaf people

are comfortable doing activities in the room. A technological approach is also applied to provide convenience for deaf people in their activities. It is hoped that this research can inspire other researchers to be more empathetic to the culture of the deaf and develop better and adequate facilities for the deaf.

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