

An Analysis of Dixit: Board Game Design Elements for the Deaf Community

Aurelia Soehalim

s180123019@student.ubaya.ac.id
Universitas Surabaya, Surabaya, Indonesia

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ABSTRACT

This study examines inclusive board game design as a vital medium to support social interaction and cross-modal communication within and outside of the deaf community, with a specific focus on children and adolescents. Communication barriers frequently marginalize deaf individuals, limiting their participation in socially interactive environments. To address this, the research utilizes a qualitative observational approach supported by extensive library research to identify key design elements that foster inclusivity. By applying the Mechanic-Dynamic-Aesthetic (MDA) framework, the study analyzes how specific gameplay structures can bridge the gap between deaf and non-disabled players. The findings indicate that board games prioritizing 2-way communication using clear visual medium, simple feedback, and interaction mechanics can effectively reduce linguistic barriers and encourage active, equitable participation. Ultimately, this research contributes to the field of inclusive design by providing practical considerations and a theoretical foundation for creating socially accessible board games that promote empathy and shared play experiences across diverse sensory abilities.

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INTRODUCTION

Parents have the responsibility to care, protect and educate their children; they bear this responsibility regardless of their children's physical and mental state. Children who are born with impairments are commonly referred to as children with special needs or disabilities. In their development, relationships with communities outside their immediate environment are essential to support the growth and adaptation of children with special needs within a broader social context. Interaction with the social environment helps these children develop social skills, build self-confidence, and minimize any stigma or discrimination they may face later in life.

Communication is essential in building relationships. The act of communication in order to build relationships is called socializing. While having its own flaws, Maslow's Hierarchy of Needs has become the basis of research regarding human needs. The need to socialize and achieve a sense of belonging are imparted into the upper half of the pyramid (Pichère, 2015). Not only that, some would say that the need to socialize in humans are essentially equal to their need for food and shelter (Braren, 2023).



Maslow's hierarchy of needs

Figure 1. Maslow's hierarchy of needs
Source: simplypsychology.org

Understanding the Deaf

People with disabilities or special needs—such as the deaf—often struggle developing social skills as their conditions can limit opportunities to improve related skills through direct social interactions. Due to their biological, physical and mental limitations, the needs of people with disabilities are harder to cater to especially when our world is designed without the necessary social, cultural and social support for them (Kim et al., 2024). In addition, people with disabilities frequently face discrimination in their daily lives. This aligns with Erving Goffman’s classical stigma theory (1963) which states that society labels certain traits—such as disabilities—as undesirable thereby “spoiling” an individual’s own identity. As a result, people without disabilities may hold different attitudes, expectations, and interaction norms towards people with disabilities leading to feelings of exclusion and negatively affecting their social experiences (Aldè et al., 2025; Luthfia & Selian, 2025; Riana et al., 2024; Thomas, 2026)

While there are multiple levels of deafness (Umah, et al., Fitriyani, 2024). children who are deaf or hard of hearing often struggle with the development of basic skills, including language comprehension, communication, emotional regulation and recognition which can make social interaction challenging (Aldè et al., 2025; Lestari & Zulmiyetri, 2019; Luthfia & Selian, 2025). These difficulties stem from multiple factors beyond stigma; the use of different languages or communication modalities and limited access to auditory input, as well as, in some cases, challenges in producing spoken language makes it difficult for them to communicate smoothly.

Most importantly, due to their difficulty in hearing and speaking, the deaf community have a specific language namely sign language. In Indonesia, the deaf mainly uses Sistem Isyarat Bahasa Indonesia (SIBI) and Bahasa Isyarat Bahasa Indonesia (BISINDO) where visual cues of the body - such as hand gestures, movement and facial expressions—are interpreted to mediate communication with other people (Iman, 2024; Saraswati et al., 2022).

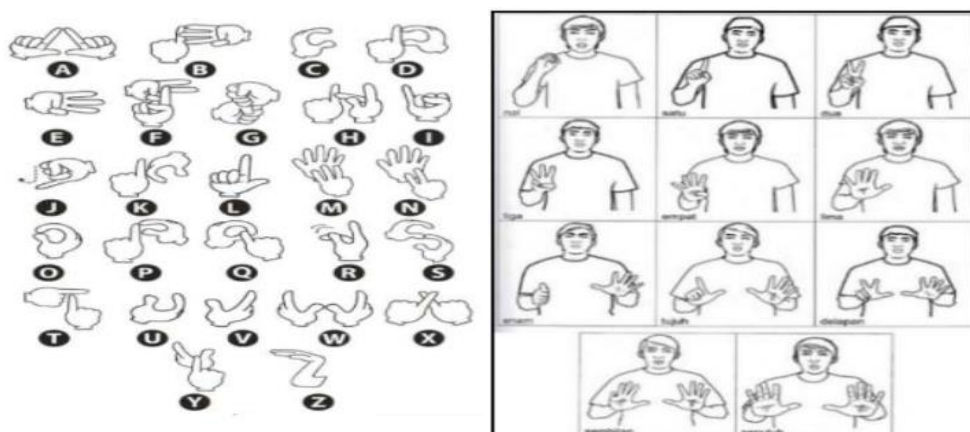


Figure 2. BISDINDO in alphabetical and nominal form
Source: (Saraswati et al., 2022)

However, the vast majority of the hearing society may not be familiar with such a language. Such causes a limited understanding and inaccurate perceptions of the language which further alienates the deaf with the hearing which often results in the marginalization and social exclusion of Deaf individuals in social settings (Iman, 2024).

Board Game

Play environments are often used to support children's general development. Through play, children are able to develop stronger socialization, interpersonal processing skills, and communication abilities (Handojo & Sukada, 2024). Furthermore, the visual aspects of Board games are proven to help learning feel more exciting and easier to grasp. It engages people to improve by assisting the imagination and analytical skills needed to truly master a subject (Gunawan, 2021; Hidayah, 2023) Inclusively designed board games not only provide entertainment but also strengthen social interaction and engagement across diverse backgrounds. Games that incorporate accessibility elements create opportunities for everyone, including the hard of hearing, to feel included and participate in social events without communication barriers or limitations (Meeple Like Us., 2016). In conclusion, the design for inclusive interactive games represents an innovative and strategic approach for a more inclusive society.

Board games' key strengths also lie in their capacity of fostering social interactions. Board game is particularly effective in encouraging youths' engagement, including those with special needs, due to its participatory nature and ability to present learning in an enjoyable and accessible manner (Rizkizha et al., 2025). Through gameplay, children can develop essential social skills—such as turn-taking, cooperation, and empathy—within a supportive and non-pressuring environment (Gunawan, 2021; Tesalonika et al., 2023). In addition, board game communities are widely recognized for their inclusive nature (Sousa et al., 2023). Players generally understand that enjoyable and meaningful gameplay depends on mutual understanding, participation, and respect among all participants.

Theoretical Framework

This research applies the Mechanics–Dynamics–Aesthetics (MDA) framework (Hunicke et al., 2004). The MDA framework was developed by Robin Hunicke, Marc LeBlanc, dan Robert Zubek and is widely used in game studies to analyze and design games by examining the relationship between mechanics (rules and systems), dynamics (player behaviour and interaction), and aesthetics (emotional and experiential outcomes) (Hunicke et al., 2004). The framework allows for a structured analysis of how design elements shape player experiences and supports the evaluation of accessibility and inclusivity in game design (Wenger et al., 2023).

In addition, there are aesthetic categories for game design:

1. **Sensation:** Player's enjoyment on audiovisual elements which caters players' satisfaction
2. **Fantasy:** The concept of games set in an imaginary world where player can escape real-life situations
3. **Narrative:** The use of storytelling in games to capture a player's attention through dramatic elements
4. **Challenge:** Gameplay difficulties that makes engaging to play repeatedly and encourage players to improve their skills
5. **Fellowship:** Creation of communities and groups where players can play together or discuss the game, allowing social groups to form
6. **Discovery:** A player's motivation to explore and gain a deeper understanding of the game world.
7. **Expression:** Involves player's ability to creatively or personally incorporate their identity and self-expression into the game.
8. **Submission:** Refers to the willingness of players to engage in gameplay without external motivation or despite obstacles.

Dixit and How to Play

Dixit is a card-based board game designed for 3 to 6 players, featuring 84 oversized cards illustrated with surreal, dreamlike artwork. It is a storytelling-based board game that uses abstract and imaginative illustrations as its primary mode of interaction. Instead of relying on text-heavy instructions or verbal dominance, Dixit encourages players to communicate meaning through visual interpretation, association, and turn-based clue giving (Vitancol & Baria, 2018). By combining an interpretive art style with a visual matching system, Dixit allows for minimal to zero verbal communication. This is a unique departure from many traditional board games, which typically rely on verbal interaction to drive gameplay. This is because board games—as a creative medium—often relies on emergence through spoken languages to thrive (Masuda & DeHaan, 2015). Studies, including one on EFL speaking skills, highlight Dixit's promotion of creative expression and interaction

through visuals, suggesting adaptability for accessibility-focused design without verbal dominance (Qalbina et al., 2025).

The way the game works is that in a group of 3-6 players, each player takes turns and progressively garners points. When one of the players has reached 30 points or when the last card of the draw pile is drawn the game ends. The player with the most points at the end of the game wins.

Each turn can be outlined into stages derived from the official guidebook (Libellud, 2025) and further broken down by a previous Dixit gameplay analysis by Vitancol & Baria.

1. Storytelling Phase

The active player chooses a card from their hand and gives a short clue by saying it out loud while keeping their card hidden. The clue can be in the form of any sound, a word, a group of words or phrases which can come from an existing word or made up on the spot.

2. Card Submission

Each of the remaining players would select 1 card from their hand that they think best suited to the clue provided and submit it to the storyteller. The storyteller shuffles the collected cards and presents the card illustration to the remaining players.

3. Voting

The non-active players would then try to guess which card among the revealed cards belongs to the active player. They then cast their individual votes on which card they think belongs to the active player based on what they learn from the clue given. However, the player can not cast a vote for their own card.

4. Scoring

Once all votes are cast and finalized, the active player reveals which card is theirs. The votes then is counted as such :

If all players find the active player's card:

- Active player: 0 points
- Other players: 2 points

If no players find the active player's card:

- Active player: 0 point
- Other players: 2 points (+1 point per vote for their own card)

If at least one player, but not all players have found the active player's card:

- Active player: 3 points
- Players who have found the card: 3 points (+1 point per vote for their own card)

5. End of Turn

Each player takes a card from the deck to add to their hand. Then the role of the active player falls to the next player.

RESEARCH METHODOLOGY

This study employs a qualitative research approach using library research as its primary method. Qualitative research is appropriate for this study because it emphasizes the interpretation of concepts, meanings, and design elements rather than numerical measurement. The purpose of this research is to analyze inclusive board game design elements that support social interaction and accessibility for the deaf community, using Dixit as a case study.

• Data Sources

Data were obtained from secondary sources through library research. These sources include peer-reviewed academic journals, books, conference proceedings and scholarly publications related to inclusive design, game studies, disabilities studies and social interaction. In addition, official documentation of the Dixit board game such as rulebooks and game cards was used as textual and visual data for analysis.

• Data Collection Techniques

Data collection was conducted through a systematic literature review process. Relevant sources were identified using academic databases and digital libraries by applying keywords such as inclusive design, board games and disability, communication & the deaf community, and the MDA

Framework. Documentation of the game Dixit was examined to identify design elements relevant to inclusive interaction.

- **Data Analysis Technique**

Data analysis was performed using qualitative descriptive analysis. The collected data were categorized and interpreted based on the components of the MDA framework. Game mechanics, player interaction patterns and aesthetic experiences were analyzed in relation to inclusivity and accessibility principles. Qualitative descriptive analysis allows us to present findings in a structured and theory-driven manner while maintaining close alignment with the data

- **Research Validity**

Additionally, to ensure research validity and credibility, we compared information from multiple sources which includes academic literature, design theories and game documentation. The use of an established theoretical framework further enhances the reliability and consistency of the analysis.

RESULT AND DISCUSSION

This section presents the research results along with an integrated discussion of data and analysis based on the applied research method. The researcher will analyze the main elements of Dixit and relate it to how it is suitable for hard of hearing or deaf players. Using the Mechanics-Dynamics-Aesthetics (MDA) framework, this study analyzes how Dixit can function as an inclusive board game design that supports social interaction, particularly for the deaf community. The discussion also compares the findings with previous studies to highlight the originality and scientific contribution of this research.

Table 1. MDA Analysis of Dixit Board Game

MDA Analysis of Dixit Board Game		
MDA Component	Dixit Design Elements	Interpretation for Inclusive Interaction
Mechanics	Large fully illustrated cards with abstract, symbolic, and surreal imagery , flexible clue-giving system and simple-turn based rules.	Reduces reliance on spoken or written language and emphasizes visual interpretation, supporting accessibility for deaf players (Harahap, 2022).
Dynamics	Subjective interpretation of images; collective guessing and voting; clues can be communicated verbally, visually, or gesturally	Enables diverse communication modalities and reduces communicative hierarchy between and for both deaf and non-deaf players. ((C. C. S. Sousa et al., 2019; Tesalonika et al., 2023)
Aesthetics – Sensation	Rich visual stimulation through imaginative illustrations and color diversity	Enhances engagement and comprehension for visually oriented players, including the deaf community (Luthfia & Selian, 2025).
Aesthetics – Fellowship	Shared interpretation and collaborative guessing	Fosters social bonding and a sense of belonging in inclusive play environments (Rahmi et al., 2025).

Aesthetics – Expression	Personal storytelling through image selection and associative clues	Supports self- expression without dependence on linguistic precision (Faoziyah, 2023).
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Source: author's documentation

As summarized in Table 1, the inclusive potential of Dixit emerges from the interaction between visual-centered mechanics, flexible gameplay dynamics, and socially oriented aesthetic experiences.

Visual Mechanics as the Basis of Inclusivity

The primary mechanic of Dixit relies on illustrated cards featuring abstract and symbolic imagery which the players would associate with a specific word. These visuals, as shown in Figure 4, do not convey fixed meanings but instead invite players to construct interpretations based on personal associations. The absence of textual information on the cards reduces linguistic dependency and shifts gameplay toward visual cognition.



Figure 4. Preview of dixit cards illustrating open ended illustrations
Source: scribd.com

This design approach is particularly relevant for deaf players, for whom visual information plays a central role in communication and meaning-making (Harahap, 2022; Tat et al., 2021). In line with inclusive and universal design principles, Dixit emphasizes shared visual engagement rather than

auditory dominance, allowing deaf and non-deaf players to interact within the same communicative framework (Imrie & Luck, 2014).

Interaction Dynamics and Interpretive Flexibility

Beyond mechanics, Dixit’s gameplay dynamics encourage subjective interpretation and collaborative meaning-making. Following the rulebook, players respond to clues by selecting images they believe best correspond to the storyteller’s prompt. The rules do not require precise verbal explanation, enabling communication through gestures, visual references, or minimal verbal expression.



Figure 5. Dixit Official English Rulebook
Source: (Libellud, 2025)

Such flexibility supports inclusive interaction by accommodating diverse communication styles. Previous studies on inclusive play environments emphasize that adaptable interaction rules allow individuals with communication differences to participate meaningfully without marginalization (Tesalonika et al., 2023). Compared to verbally intensive board games, Dixit minimizes communicative hierarchy and supports equitable participation among mixed groups of deaf and hearing players.

Limitation within the Dynamics

Despite its inclusive potential, Dixit's interaction dynamics are not entirely free from limitations when applied to Deaf-inclusive play. While the game reduces reliance on spoken language, the storytelling phase may still implicitly favor players with stronger verbal articulation or narrative confidence, particularly in mixed groups where hearing players dominate the communicative space. Without intentional facilitation, Deaf players may still experience pressure to conform to spoken explanations rather than fully expressing meaning through visual or gestural modes or even outright exclusion.

This linguistic limitation of communication between the deaf and hearing can be mitigated as detailed by the observation of Aprilia & Nisa, (2022) through secondary communication methods using a separate medium such as Whatsapp or Transcribe apps. This means that mediation between the 2 groups can be done using specific tools that can help note and interpret the messages each side is trying to convey.

Aesthetic Experience and Social Inclusion

Within the MDA framework, the aesthetic dimensions of fellowship, expression, and sensation play a central role in shaping inclusive experiences. Fellowship emerges through collective guessing and shared interpretation, fostering social bonding and a sense of belonging. This aspect is particularly important for deaf individuals, who often face social exclusion due to communication barriers (Rahmi et al., 2024). Since part of correctly guessing the card is understanding the active player's perception and thoughts.

The aesthetic of expression allows players to project personal emotions, memories, and identities onto the visual cards without reliance on spoken language. This supports self-esteem and agency, which are essential components of psychological well-being in inclusive environments (Faoziyah, 2023). Meanwhile, sensation is achieved through rich visual stimulation, which enhances engagement and supports comprehension for visually oriented players (Luthfia & Selian, 2025).

Dixit as an Inclusive Design Model

The findings indicate that Dixit exemplifies how board game design can support inclusive social interaction without explicitly being labeled as a disability-focused game. Unlike studies that focus on assistive adaptations or educational tools, this research demonstrates that inclusivity can be integrated organically into mainstream entertainment through visual storytelling, interpretive openness, and socially driven aesthetics.

This approach aligns with universal design principles, which advocate for products and environments that are usable by the widest possible range of users without requiring specialized adaptations (Imrie & Luck, 2014). By prioritizing visual communication and interpretive freedom, Dixit reduces communicative asymmetry between deaf and non-deaf players and creates a shared interaction space that values diverse modes of expression. This distinguishes the present study from previous research by positioning a commercially successful board game as a model for inclusive social interaction.

Triangulation and Analytical Validity

To ensure analytical validity, this study applies qualitative triangulation by integrating multiple data sources and theoretical perspectives. The analysis combines visual data from Dixit card illustrations, textual data from the official rulebook, and conceptual insights from inclusive design theory, deaf communication studies, and the MDA framework. By cross-referencing these sources, the findings are supported by converging evidence rather than a single interpretive lens .

Limitations and Future Research

Despite its contributions, this study has limitations. The analysis relies on qualitative library research and design interpretation without direct empirical observation involving deaf players. Consequently, the findings emphasize the potential of inclusive design elements rather than measuring actual player experiences.

Future research is encouraged to employ participatory or user-centered methodologies, such as playtesting with deaf participants or mixed-method approaches combining observation and interviews. Such studies would allow empirical validation of how inclusive board game design influences real-world social interaction.

CONCLUSION

This study aimed to analyze inclusive board game design elements that support social interaction for the deaf community through a qualitative library research approach using the Mechanics–Dynamics–Aesthetics (MDA) framework, with Dixit as a case study. The findings indicate that Dixit supports inclusive interaction through visual-centered mechanics, flexible interpretive dynamics, and socially oriented aesthetic experiences that reduce reliance on verbal communication and encourage shared meaning-making among deaf and non-deaf players.

These results demonstrate that inclusivity can be integrated organically into mainstream board games without explicitly adopting disability-focused adaptations. From a scientific perspective, this study contributes to inclusive game design discourse by applying the MDA framework to highlight how universal design principles can be embedded within commercial entertainment media.

This research is limited by its reliance on qualitative library research without direct empirical observation involving deaf players; therefore, the conclusions emphasize the potential rather than measured outcomes of inclusive design. Future research is recommended to employ participatory or user-centered methods, such as playtesting with deaf participants or mixed-method approaches, to empirically examine how inclusive board game design influences real-world social interaction.

REFERENCES

- Aldè, M., Ambrosetti, U., Barozzi, S., & Aldè, S. (2025) The Ongoing Challenges of Hearing Loss: Stigma, Socio-Cultural Differences, and Accessibility Barriers. In *Audiology Research* (Vol. 15, Number 3, p. 46). <https://doi.org/10.3390/audiolres15030046>.
- Aprilia, R., & Nisa, F.K. (2022) Communication Patterns of Deaf Students with Hearing Lecturer in The Classroom. *Journal Communication Spectrum*, 12(2), 135–145. <https://doi.org/10.36782/jcs.v12i2.2277>
- Braren, S. (2023) The Evolution of Social Connection as a Basic Human Need. *Social Creatures*. <https://www.thesocialcreatures.org/thecreaturetimes/evolution-of-social-connection>
- Faoziyah, S. (2023) Inklusi Sosial dalam Perspektif Keislaman: Meningkatkan Kesejahteraan Sosial untuk Semua. *AKSELERASI: Jurnal Ilmiah Nasional*, 5(1), 47–56. <https://doi.org/10.54783/jin.v5i1.677>
- Gunawan, L.A. (2021) Product Design of Card Game with the Theme of Mental Health for Teenagers. *Journal of Visual Communication Design*, 6(1), 53–69. <https://doi.org/10.37715/vcd.v6i1.2411>
- Handojo, H. L., & Sukada, B.A. (2024) Implementasi Desain Sarana Terapi Bermain Untuk Pengembangan Kemampuan Wicara dan Bahasa Anak Penyandang Tunarungu. *Jurnal Sains, Teknologi, Urban, Perancangan, Arsitektur (Stupa)*, 6(1), 603–612. <https://doi.org/10.24912/stupa.v6i1.27502>
- Harahap, R.M. (2022) Exploring The Deaf Culture Experience In Interior Architecture. *International Symposium on Cultural Heritage (ISyCH)*, 1(1), 143–156
- Hidayah, L.R. (2023) The Importance of Using Visual in Delivering Information. *VCD*, 8(1), 52-61
- Hunicke, R., LeBlanc, M., & Zubek, R. (2004) MDA: A formal approach to game design and game research. *Proceedings of the AAAI Workshop on Challenges in Game AI*, 4(1), 1722. <https://game-developers.org/wp-content/uploads/2022/09/MDA.pdf>

- Iman, M.N. (2024) Sign Language and Culture: Understanding Communication in The Deaf Community. *Proceeding of the International Conference on Social Sciences and Humanities Innovation*, 156–166
- Imrie, R., & Luck, R. (2014) Designing Inclusive Environments: Rehabilitating The Body and The Relevance of Universal Design. *Disability and Rehabilitation*, 36(16), 1315–1319. <https://doi.org/10.3109/09638288.2014.936191>
- Kim, J., Park, G.-R., & Namkung, E.H. (2024) The Link Between Disability and Social Participation Revisited: Heterogeneity By Type of Social Participation and By Socioeconomic Status. *Disability and Health Journal*, 17(2), 101543. <https://doi.org/10.1016/j.dhjo.2023.101543>
- Lestari, W., & Zulmiyetri, Z. (2019) Meningkatkan Kemampuan Membaca Kata Melalui Media Video Pembelajaran Bagi Anak Tunarungu. *Jurnal Penelitian Pendidikan Khusus*, 7(1), 71–76
- Libellud (2025) Dixit Libellud
- Luthfia, F., & Selian, S.N. (2025) Strategi Adaptasi dan Tantangan Berinteraksi Sosial Anak Tunarungu di SLB-B. *Jurnal Ilmu Sosial Dan Humaniora*, 1(2), 269–281. <https://doi.org/10.63822/7kk4bb57>
- Masuda, R., & DeHaan, J. (2015) Language and Game Play : A Study of Emergence in Pandemic. *International Journal of English Linguistics*, 5(6), 1–10. <https://doi.org/10.5539/ijel.v5n6p1>
- Meeple Like Us. (2016) Meeple like Us
- Pichère, P. (2015) Maslow's Hierarchy of Needs: Gain Vital Insights Into How to Motivate People. 50 Minutes
- Qalbina, F., Rofiqoh, R., Hasyim, Z., & Manurung, K. (2025) The Use of Dixit Board Game to Develop EFL Students' Speaking Skills. *ELS Journal on Interdisciplinary Studies in Humanities*, 8(3), 870–878. <https://doi.org/10.34050/els-jish.v8i3.45874>
- Rahmi, I., Praptiwi, R. N., & Rahmawati, A. (2024) Inclusive Education: Typically Developing Student's Sentiments, Attitudes, and Concerns. *KnE Social Sciences*, 411–424. <https://doi.org/10.18502/kss.v9i25.16991>

- Rahmi R, N., Bastiana, B., Zulfitriah, Z., Nurul Mutahara B, & W.A.S. (2025) Konstruksi Sosial Stigma terhadap Mahasiswa Penyandang Disabilitas di Fakultas Ilmu Pendidikan: Analisis Perspektif Erving Goffman. *J-CEKI: Jurnal Cendekia Ilmiah*, 4(5), 2428–2445. <https://doi.org/10.56799/jceki.v4i5.10687>
- Riana, A. R. P., Fauziyah, I., Adawiyah, S. S., Zidny Arriva Mulkia, & Hamidah, S. (2024) Peluang dan Tantangan Penyandang Disabilitas dalam Dunia Kerja. *Deposisi: Jurnal Publikasi Ilmu Hukum*, 2(2), 389–399. <https://doi.org/10.59581/deposisi.v2i2.3233>
- Rizkizha, D. F., Rizqi, W. T., & Hamzah, T.R. (2025) Pengembangan Islamic Board Game Bagi Anak Tunagrahita Sebagai Upaya pembelajaran Aktif di SLBN 1 Yogyakarta. *Visual Heritage: Jurnal Kreasi Seni Dan Budaya*, 7(2), 355–361. <https://doi.org/10.30998/vh.v7i2.13274>
- Saraswati, D. A., Towidjojo, V. D., & H. (2022) Bahasa Isyarat Indonesia. *Jurnal Medical Profession (Medpro)*, 4(1), 8–14
- Sousa, C., Rye, S., Sousa, M., Torres, P. J., Perim, C., Mansuklal, S. A., & Ennami, F. (2023) Playing At The School Table: Systematic Literature Review of Board, Tabletop, and Other Analog Game-Based Learning Approaches. *Frontiers in Psychology*, 14, 1160591. <https://doi.org/10.3389/fpsyg.2023.1160591>
- Sousa, C. C. S., James, D., & Rodrigues, C.L. (2019) Technologies for Educating Deaf Children- A Systematic Literature Review. *Brazilian Computer Society (Sociedade Brasileira de Computação - SBC)*, 30(1), 1161–1170. <https://doi.org/10.5753/cbie.sbie.2019.1161>
- Tat, B. A., Hudin, R., & Nardi, M. (2021) Metode Pembelajaran dalam Mengembangkan Interaksi Sosial Anak Tunarungu. *Jurnal Literasi Pendidikan Dasar*, 2(1), 21–32. <https://doi.org/10.36928/jlpd.v2i1.2043>
- Tesalonika, C., Prasida, T. A. S., & Prestiliano, J. (2023) Perancangan Board Game sebagai Media Edukasi Bicara Siswa Berkebutuhan Khusus “Speech Delay.” *JiIP-Jurnal Ilmiah Ilmu Pendidikan*, 6(7), 5340–5348. <https://doi.org/10.54371/jiip.v6i7.1944>
- Thomas, G.M. (2026) ‘Re(Dis)Covering Goffman: Disability, “Deference” and

- “Demeanour” in A Community Café. *The Sociological Review*, 74(1), 176–193. <https://doi.org/10.1177/00380261251316054>
- Umah, R. N., Angraeni, M., Usman, U., & Fitriyani, F. (2024) Communication Skills of Deaf Children. *Education Achievement: Journal of Science and Research*, 5(1), 77–83. <https://doi.org/10.51178/jsr.v5i1.1758>
- Vitancol, N. S., & Baria, R.M. (2018) Dixit: a Case Study on Improving Group Communication. *International Journal of Education and Research*, 6(12), 127–148. www.ijern.com
- Wenger, I., Prellwitz, M., Lundström, U., Lynch, H., & Schulze, C. (2023) Designing inclusive playgrounds in Switzerland: why is it so complex? *Children’s Geographies*, 21(3), 487–501. <https://doi.org/10.1080/14733285.2022.2077093>