

Indonesian Journal of Special Educational Needs (I-Joursen)

ISSN: xxxx (Print) ISSN: xxxx (Electronic)

Journal homepage: <https://journal.uml.ac.id/index.php/IJ/index>

Email: ijoursenjournal@gmail.com / ijoursen@uml.ac.id

The Use of Positive Reinforcement to Improve Learning Attention: A Literature Review

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ARTICLE INFO

Article history:

Received: October 14, 2025

Revised: December 26, 2025

Accepted: February 7, 2026

Keywords:

Deaf Students
Educational Media
Inclusive Education
Literature Review
Teaching Strategies

ABSTRACT

Positive reinforcement is a strategy rooted in behaviorist theory that emphasizes strengthening behavior through pleasant stimuli such as praise, rewards, or enjoyable activities. In the context of deaf education, this approach has been proven to increase students' motivation and concentration. This study is based on the need for adaptive and effective teaching strategies to improve the academic abilities and character of deaf students in Special Needs Schools. The study aims to examine innovative teaching strategies and learning media through a literature review of 10 national journals. The approaches reviewed include Applied Behavior Analysis (ABA), positive reinforcement, visual media such as Big Books, educational games, and the use of sign language. The findings identified eight main themes: positive reinforcement, religious sign language, visual and multisensory media, educational games, the teacher's role as motivator, character building, learning barriers, and digital technology. Adaptive, visual, and contextual strategies were found to effectively enhance students' focus and understanding of learning materials. In conclusion, visual-based learning combined with positive reinforcement can significantly improve learning attention and positive behavior. Educators are encouraged to maximize the use of visual media and reinforcement techniques. Future researchers are advised to develop culturally based digital media and evaluate its long-term impact to support inclusive and sustainable learning for deaf students.



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INTRODUCTION

In analyzing effective learning strategies for deaf children, this study refers to three main theories in educational psychology: Behaviorist Theory (Skinner), Cognitive and Multisensory Theory (Bruner & Piaget), and Social Learning Theory (Bandura). Behaviorist theory emphasizes the importance of reinforcement in shaping learning behavior. In the context of deaf children, the provision of praise, reward symbols, or enjoyable activities has been proven to increase learning concentration and motivation (Adela & Diana, 2024; Imamah & Hasanah, 2023). Applied Behavior Analysis (ABA) is an example of the direct application of this theory.

Deaf children learn more optimally through visual media and sensory interaction. This aligns with Bruner's concept of stages of learning representation and Piaget's theory of active learning

through sensory experience. The use of media such as Big Books, educational games, and colorful posters has shown positive results in improving early literacy skills in children (Punasri, 2023; Septiawati et al., 2021).

Bandura emphasizes the importance of observation and modeling in learning. In religious education for deaf children, strategies such as habituation of worship practices, videos demonstrating prayer movements, and teacher role modeling have been shown to be effective in developing spiritual understanding and affective values (Karinska et al., 2024).

Every child has the same right to receive education, including children with special needs such as deaf children (children with hearing impairments). Deaf children face not only challenges in receiving auditory information but also difficulties in developing language skills, communication abilities, and comprehension of both general and religious learning materials (Adela & Diana, 2024). In the context of Islamic education, learning *Iqro'* and the Qur'an is a fundamental obligation for every Muslim. However, deaf children experience obstacles in learning to read *hijaiyah* letters phonetically due to limitations in hearing function (Qurratul Aini, 2024).

To address these challenges, various learning approaches and strategies can be developed. One of them is the use of reinforcement methods, sign language, and visual media such as Big Books and educational games to enhance children's interest and cognitive abilities (Punasri, 2023; Septiawati et al., 2021). In addition, approaches such as Applied Behavior Analysis (ABA) have also been proven effective in stimulating communication skills and learning behaviors in deaf children (Adela & Diana, 2024). Literature studies indicate that visual- and multisensory-based learning, such as pictures, videos, and illustrated books, is highly effective in supporting the learning process of deaf children (Punasri, 2023; Juherna et al., 2020).

Game-based learning media are also able to increase children's emotional engagement in the learning process (Septiawati et al., 2021). Positive reinforcement strategies, such as verbal praise, symbolic rewards, or enjoyable activities after task completion, can foster learning motivation and build consistency in students' positive behaviors (Imamah & Hasanah, 2023). An individualized approach in Islamic religious learning through the visualization of worship movements and the interpretation of their values can enhance the understanding of many abstract concepts in deaf children (Karinska et al., 2024). Several studies also emphasize the importance of curriculum adaptation and teaching techniques that are aligned with the characteristics of deaf children to improve learning outcomes, both cognitively and affectively (Nurmayani et al., 2025; Juherna et al., 2020).

Based on the background and literature review, this study aims to identify and analyze the implementation of various learning strategies to improve *Iqro'* reading skills and religious concept comprehension in deaf children, particularly through sign language approaches and reinforcement techniques. The research questions addressed in this study are as follows "how are adaptive learning methods implemented for deaf children in the context of religious education?"

METHOD

This study employs a literature review method by examining and analyzing the findings of previous studies relevant to the theme of learning for deaf children. A literature review is an approach used to obtain an in-depth understanding of a topic based on previously published scholarly sources (Syafri, 2020; Machi & McEvoy, 2016). This research was conducted through the collection and analysis of national scientific journal articles that have undergone a peer-review process and are relevant to the topic. In this process, 10 journal articles were obtained, and the stages are as follows:

1. Conducting a search on Google Scholar with themes related to positive reinforcement for deaf children using the following keywords: *deaf children, learning strategies, educational media, inclusive education, and literature review*.
2. Data collection was carried out by searching Google Scholar for articles published from the earliest year, 2019, to the most recent year, 2025. Through this process, 10 peer-reviewed journal articles were selected using a data charting technique (Septiawati, Suryani, & Widayastono, 2021).
3. Data analysis in this study was conducted using content analysis. This technique was used to identify themes, patterns, and key findings from each journal article and then compare them to obtain comprehensive conclusions regarding the phenomenon under investigation. The stages of this analysis include:
 - a. Data reduction
 - b. Topic categorization
 - c. Data presentation in narrative and tabular forms
 - d. Thematic conclusion drawing

Content analysis is an appropriate method for systematically and in-depth processing data derived from literature review studies and has been widely used in qualitative educational research (Imamah & Hasanah, 2023).
4. The primary instrument used in this study was a categorization table, which served to record and classify information from various journal articles based on main topics (e.g., learning media, learning strategies, learning outcomes, and barriers). This table was used to support the process of data reduction and qualitative data interpretation in the literature review (Juherna et al., 2020).

Table 1. Data Charting

No	Author	Method	Result
1	Qurratul Aini (2024)	Qualitative	Praise increased students' motivation
2	Adela (2024)	Quantitative	ABA was effective
3	Punasri (2023)	Quantitative	Improved early literacy skills
4	Karinska (2024)	Quantitative	Visual media and reinforcement were effective
5	Nurmayani (2025)	Qualitative	Games and visual media were effective
6	Septiawati (2021)	Qualitative	Improved vocabulary mastery
7	Linda (2021)	Quantitative	Visual media were needed
8	Prasista (2023)	Survey	Low interest; adaptive approaches were needed
9	Juherna (2020)	Qualitative	Habituation was effective
10	Imamah (2023)	Quantitative	Numeracy scores increased

RESULT AND DISCUSSION

The results of this review were obtained from an analysis of ten journal articles discussing learning for deaf children, particularly those related to *Iqro'* reading instruction, communication skills, and the reinforcement of religious values. This review aims to address the research questions concerning effective learning strategies for deaf children, the challenges encountered, and the impact of using sign language and reinforcement techniques in learning (Qurratul Aini, 2024; Adela & Diana, 2022; Nurmayani et al., 2025).

1. Sign Language in Religious Learning

Teaching *Iqro'* reading to deaf children requires visual and multisensory approaches due to limitations in auditory perception. Qurratul Aini (2024) demonstrated that the use of *hijaiyah* sign language and multisensory methods helps deaf students recognize and memorize letters more effectively. This method has been shown to increase students' active participation and strengthen visual memory of letter forms. These findings are supported by Karinska et al. (2024),

who reported that the use of worship movements and visual symbols in religious learning at special schools (SLB) significantly improves children's religious understanding.

2. Positive Reinforcement

Positive reinforcement in the form of praise, star symbols, or enjoyable activities after task completion has proven effective in motivating deaf children to remain focused and consistent in learning. Imamah and Hasanah (2023) employed the traditional *dakon* game combined with positive reinforcement techniques, resulting in improved numeracy skills and increased learning motivation. These findings are consistent with Skinner's behaviorist theory, which states that behavior can be strengthened through repeated pleasant stimuli. Adela and Diana (2022) also noted that within the context of Applied Behavior Analysis (ABA), positive reinforcement is a primary technique for shaping adaptive and communicative learning behaviors in deaf children.

3. Visual and Multisensory Media

Learning media such as Big Books, visual images, and educational games have been shown to enhance engagement and comprehension among deaf children in reading and vocabulary acquisition. Punasri (2023) and Septiawati Dewi (2021) reported that visual methods and game-based learning reduce learning anxiety and increase children's enthusiasm.

Visual and multisensory media not only function as learning aids but also serve as essential bridges for deaf children to access information comprehensively. Deaf children tend to respond more positively to visual stimuli and movement due to their hearing limitations. The use of media such as Big Books and posters with vivid colors and strong illustrations facilitates better information absorption (Punasri, 2023). In addition, engaging other senses such as sight and touch through concrete teaching aids or interactive tools enhances holistic conceptual understanding. This aligns with multisensory principles that emphasize the involvement of more than one sensory channel in the learning process (Bruner & Piaget, as cited in Septiawati, Suryani, & Widyastono, 2021). Juherna et al. (2020) also confirmed that visual and multisensory approaches are more effective in teaching abstract concepts to deaf children than traditional verbal methods.

4. Barriers and Solutions in Deaf Education

Several barriers commonly encountered in teaching deaf children include limited teacher competence in sign language, inadequate facilities, and variations in individual abilities. These challenges were identified in studies conducted at SLB Negeri Sumatera Utara and SLB Negeri 1 Bantul, which recommended intensive teacher training and the development of instructional media tailored to the needs of deaf students.

Educational games have been shown to be both effective and enjoyable learning media for deaf children. Activities such as numeracy *dakon*, picture puzzles, and sign-language-based board games create a relaxed learning atmosphere, strengthen social interaction, and simultaneously support cognitive development. Games also help train memory, concentration, and problem-solving skills. According to Septiawati, Suryani, and Widyastono (2021), deaf students who participated in game-based learning demonstrated significant improvements in vocabulary mastery and logical skills. Furthermore, Juherna et al. (2020) explained that game-based educational approaches help build self-confidence and strengthen students' socio-emotional development. Games designed to accommodate the specific needs of deaf children can also serve as a means of reinforcing affective values such as cooperation, empathy, and sportsmanship.

5. Educational Games

The findings of this study indicate that visual- and emotion-based learning strategies have a substantial impact on shaping both the religious and academic character of deaf children. These strategies support constructivist theory (Bruner), which emphasizes the importance of direct

experience in knowledge construction. Moreover, the findings highlight the need to shift from traditional approaches toward more inclusive learning models, in line with Law No. 20 of 2003 on the National Education System. Teachers play a central role in the success of learning for deaf children, not only as instructors but also as mediators and motivators. Teachers act as intermediaries between learning materials and students' unique learning styles. Their ability to use sign language, employ strong nonverbal expressions, and create meaningful two-way interactions is a key determinant of instructional effectiveness (Karinska, Laila, & Husna, 2024).

Additionally, teachers who consistently provide verbal and symbolic reinforcement can foster a positive learning environment and enhance students' self-confidence. Nurmayani et al. (2025) emphasized the importance of teacher training and professional development to enable educators to accommodate the diverse needs of deaf children through flexible and adaptive approaches. This is reinforced by Juherna et al. (2020), who stated that teachers capable of building supportive emotional relationships contribute significantly to character formation and positive learning behaviors among students with special needs.

6. Character Integration

Beyond improvements in academic skills, this review also shows that visual-based learning strategies—such as *hijaiyah* sign language, worship symbols, and Big Book media—contribute to the character development of deaf children. Religious values such as patience, perseverance, and care are implicitly instilled through participatory and contextual learning approaches. As noted by Juherna et al. (2020), character education designed using visual and concrete approaches is more easily accepted by deaf children than purely abstract or verbal methods.

7. Teachers as Mediators and Motivators

The review also highlights the crucial role of teachers in the internalization of effective learning. Teachers serve not only as transmitters of knowledge but also as facilitators and motivators who create supportive learning environments. A study by Nurmayani et al. (2025) showed that the success of positive reinforcement implementation is largely determined by teachers' consistency in providing positive feedback, both verbally and symbolically. Therefore, enhancing teachers' competence in adaptive teaching techniques is essential.

8. Utilization of Digital Media Technology

In the context of digital education development, the use of interactive media such as sign-language videos, *hijaiyah* learning applications, and online learning platforms has made a significant contribution to facilitating understanding among deaf children. Technology-based learning helps deliver information visually and interactively while allowing repetition according to each child's learning pace. The literature suggests that the integration of such technology should become part of adaptive curricula in special schools and inclusive education settings.

Furthermore, the integration of cognitive and affective learning is also necessary. As demonstrated by Juherna et al. (2020), character education for deaf children can be internalized through habituation and role modeling that are appropriately adapted to the nature of their disabilities.

CONCLUSION

Positive reinforcement, such as praise, star symbols, and enjoyable activities after task completion, has been proven effective in increasing the motivation, concentration, and learning consistency of deaf children. This technique aligns with behaviorist theory and has been shown to shape adaptive learning behaviors as well as enhance academic and social achievement.

ACKNOWLEDGMENTS

Deep appreciation is extended to Universitas Muhammadiyah Lampung for the academic support, facilities, and guidance provided during the research process.

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