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Strengthening self-confidence of students with visual impairment through STAD and Jigsaw: A case study in inclusive lectures

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ABSTRACT
The application of cooperative learning for students with visual impairments in lectures focusing on behavior modification of children with special needs has been rarely studied in depth. Therefore, this study investigates the impact of cooperative learning on the self-confidence of students with visual impairments in the Behavior Modification of Children with Disabilities course. The study employed a qualitative case study design involving two students with low vision and six regular students as supporting informants. The Student Teams Achievement Divisions (STAD) and Jigsaw cooperative learning types were applied for six meetings. Data were collected through observation, in-depth interviews, and documentation, and analyzed thematically. The results demonstrate that cooperative learning can foster an inclusive environment that enhances the self-confidence of students with visual impairments. This is evident in their increased active participation and courage in interacting with classmates and lecturers. The main supportive factors are empathy from classmates and positive reinforcement from lecturers. However, there are also inhibiting factors: internal anxiety, which impacts self-confidence, and a lack of understanding from the surrounding environment about the impact of visual impairment on students with visual impairments.

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ABSTRAK
Penerapan pembelajaran kooperatif khususnya bagi mahasiswa dengan gangguan penglihatan dalam konteks perkuliahan yang berfokus pada modifikasi perilaku Anak Berkebutuhan Khusus (ABK) masih jarang dikaji secara mendalam. Maka dari itu, penelitian ini bertujuan mengkaji pembangunan kepercayaan diri mahasiswa dengan gangguan penglihatan melalui pembelajaran kooperatif dalam perkuliahan Modifikasi Perilaku ABK. Metode penelitian yang digunakan adalah kualitatif dengan desain studi kasus yang melibatkan dua mahasiswa dengan gangguan penglihatan kategori low vision dan enam mahasiswa awas (reguler) sebagai informan pendukung. Pembelajaran kooperatif tipe Student Teams Achievement Divisions (STAD) dan Jigsaw diterapkan selama enam pertemuan. Data dikumpulkan melalui observasi, wawancara mendalam, dan dokumentasi, kemudian dianalisis secara terperinci dan tematik. Hasil menunjukkan bahwa pembelajaran kooperatif dapat menciptakan lingkungan inklusif yang mendukung peningkatan kepercayaan diri mahasiswa dengan gangguan penglihatan. Hal itu terlihat dari adanya peningkatan partisipasi aktif dan keberanian dalam berinteraksi dengan teman sekelas dan dosen. Faktor pendukung utama adalah rasa empati yang diberikan oleh teman sekelas dan penguatan positif yang dilakukan oleh dosen, namun disisi lain terdapat faktor penghambat yaitu kecemasan internal yang berdampak pada rasa percaya dirinya dan kurangnya pemahaman dari lingkungan sekitar mengenai dampak gangguan penglihatan pada kemampuan belajar mahasiswa low vision.
Kata Kunci: *gangguan penglihatan; kepercayaan diri; pembelajaran kooperatif; pendidikan inklusif*

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INTRODUCTION

In the context of higher education, students' self-confidence plays a crucial role in shaping their engagement during discussions, their ability to express opinions, and their willingness to take on active roles that support academic achievement. Therefore, fostering self-confidence is an integral part of efforts to enhance the quality of the teaching and learning process. This situation becomes more complex when it involves students with special needs, such as those with visual impairments. Students with visual impairments face limitations in sight that directly affect their access to commonly used visual information sources in learning (Bourne et al., 2021). These physical barriers not only present technical challenges in participating in lectures but also lead to significant psychosocial impacts (Manitsa & Doikou, 2022) (Manitsa & Doikou, 2022).

Students with visual impairments often face challenges in interacting with the academic social environment, which can lead to feelings of low self-confidence, anxiety, and fear of expressing opinions or actively participating in classroom activities. These limitations are further exacerbated by external factors such as the lack of understanding and acceptance from their surroundings, including peers and instructors, regarding the special needs they experience (Zabeli & Gjelaj, 2020). A learning environment that is not fully inclusive, combined with insufficient social support, serves as a major barrier to the development of self-confidence among students with visual impairments (Shutaleva et al., 2023). This condition may foster passive attitudes and social isolation, which not only hinder academic progress but also negatively affect students' overall psychological well-being. In addressing these issues, cooperative learning models have emerged as a promising approach.

Cooperative learning emphasizes collaboration among students within heterogeneous groups that support one another, share responsibility, and actively contribute to achieving learning objectives (Loh & Ang, 2020). Through intensive social interaction and mutual assistance, students are given opportunities to develop academic skills while simultaneously strengthening psychological aspects such as self-confidence and social competence. Studies have shown that cooperative learning strategies, including the Student Teams Achievement Divisions (STAD) and Jigsaw methods, have proven effective in enhancing learning motivation and academic outcomes across various educational contexts (Fatihannisa et al., 2019; Triansyah & Mutmainnah, 2022; Kurniawan, 2021). STAD focuses on group collaboration in completing tasks and individual evaluation, while Jigsaw involves dividing learning materials for specialized study and presentation within new groups, thereby maximizing engagement and individual responsibility.

Both methods can provide inclusive learning experiences and empower students with visual impairments to take active roles in the classroom. However, the implementation of cooperative learning, particularly for students with visual impairments in university courses focused on behavior modification for children with special needs, has rarely been examined in depth. There is a need to understand how these learning models are implemented, how students with visual impairments respond and develop self-confidence throughout the learning process, and what supporting and inhibiting factors influence these dynamics. This study aims to empirically investigate the application of STAD and Jigsaw cooperative learning methods in behavior modification courses for children with special needs at a private

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university in Bandung. The main focus of the research is to build self-confidence among students with visual impairments, which is expected to strengthen their active participation in the learning process and simultaneously promote the creation of an inclusive and supportive learning environment.

The research questions addressed in this study include how cooperative learning is implemented to foster self-confidence among students with visual impairments, how their self-confidence is manifested throughout the course, and what factors support or hinder the development of that confidence. The findings of this study are expected to make a significant contribution to the development of learning strategies that are responsive to the special needs of students, while also reinforcing a culture of inclusion in higher education. A deeper understanding of the impact of cooperative learning on the self-confidence of students with visual impairments is anticipated to help optimize the learning process, enabling students with special needs to overcome existing limitations and more fully develop their academic and psychosocial potential. Furthermore, the results of this study may serve as a foundation for educational policymakers in designing curricula, teaching methods, and learning environments that are genuinely inclusive and empowering.

LITERATURE REVIEW

Individuals with Visual Impairments

The term "visual impairment" refers to a condition in which an individual experiences limitations or loss of visual function, resulting in an inability to receive information in visual form. This condition may be total (blindness) or partial (low vision), and it affects various aspects of life, including access to information, education, communication, and daily activities. Visual impairment is generally classified into two categories: totally blind and low vision. Total blindness refers to a complete loss of visual function, while low vision describes a condition in which some visual ability remains, although it is severely limited (Ningrum, 2022). Individuals with visual impairments often face uncertainty regarding their condition, which they manage through seeking social support, employing instrumental strategies, and practicing self-acceptance. Systemic barriers and stigma continue to pose major challenges (Romo et al., 2024). In social contexts, individuals with visual impairments have demonstrated the ability to build meaningful relationships and, in certain dimensions, experience greater personal growth compared to the general population. Other studies suggest that individuals with visual impairments may develop compensatory cognitive mechanisms, allowing them to perform at levels comparable to sighted individuals in certain cognitive tasks (Rokach et al., 2021).

Self-Confidence in Individuals with Visual Impairments

Self confidence reflects how individuals value and assess themselves. It is a crucial psychological aspect that supports success across various domains of life, particularly in educational contexts (Ghafar, 2023). Self confidence not only involves a person's belief in their abilities but also encompasses a mental attitude that motivates individuals to face challenges and actively participate in learning activities (Ruijuan et al., 2023). Individuals with strong self-confidence generally believe in their capabilities and are able to develop their

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potential. Conversely, low levels of self-confidence can become a barrier to social interaction, causing individuals to hesitate in communicating effectively and hindering the optimal realization of their potential. Visual limitations are a key factor contributing to reduced self-confidence among individuals with visual impairments. Impairments in visual function significantly affect self-perception, personal views on daily life capabilities, and levels of self-esteem (Hani, 2021).

Difficulties in performing even simple daily tasks can lead to feelings of inadequacy and diminished self confidence. In addition, physical appearance also influences self perception and the development of self-confidence. Individuals with visual impairments who lack adequate social skills and hold negative views of themselves are more likely to face challenges in building self confidence (Omnihara et al., 2019). This is due to the importance of social competence and self-appreciation as key components in the formation of self-confidence. In general, the factors that support the development of self confidence are divided into two categories: internal factors (self-concept, self-esteem, physical self-concept) and external factors (employment, education, life experiences, environment). When internal and external factors are in balance, individuals with visual impairments have a greater opportunity to build positive self confidence (Rostiana & Wahyudin, 2025). Healthy self-validation, combined with adequate support from the surrounding environment, can help individuals overcome challenges related to visual limitations.

Cooperative Learning

Cooperative learning emphasizes collaborative learning processes within groups, aiming not only at mastery of academic content but also at fostering teamwork in understanding the material. Through cooperative learning, students are encouraged to actively engage in both comprehending the subject matter and interacting with their peers. The integration of social skills within academic settings makes this approach particularly effective in the learning process. The formation of structured groups is intended to help students articulate arguments and engage in discussions while studying a topic. Cooperative learning is a pedagogical approach in which students work in small groups with clearly defined structures, assigned roles, and both individual and collective responsibilities. Each member relies on one another to achieve shared goals, and the success of the group depends on the active contributions of all members (Anca, 2025). Within this collaborative process, every student is individually responsible for contributing actively to the group. A lack of learning motivation among students can pose challenges in mastering the material being delivered by the instructor. This may result in reduced classroom participation and hinder the achievement of expected academic outcomes.

As a positive instructional method, cooperative learning is particularly effective in higher education settings, enabling students to more easily reach their academic goals. It offers several benefits to the learning process, including fostering a positive attitude toward the subject matter, helping students become more open to receiving and understanding information. Additionally, this method enhances intrinsic motivation, driven by the desire to actively participate and take responsibility for the group's success. Students' self-confidence is gradually built through interaction, the necessity of expressing opinions, and the obligation

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to contribute to group discussions. Furthermore, cooperative learning creates social support, strengthening empathy and mutual respect among group members. Ultimately, this method promotes active student engagement, which in turn improves the quality of learning and academic achievement.

Student Teams Achievement Divisions **(STAD) and Jigsaw**

Student Teams Achievement Divisions (STAD) is a cooperative learning strategy designed to enhance academic achievement, motivation, and social interaction among students. Research has explored its effectiveness across various subjects and educational levels, focusing on outcomes such as reading, writing, speaking, mathematics, and science (Ismuhartik, 2021). Several studies have found that STAD increases students' motivation and self-efficacy, both in traditional and online learning environments. Students reported higher motivation scores and greater enthusiasm for learning when STAD was implemented. Moreover, STAD promotes collaboration, participation, and improved engagement among students. It encourages active involvement and fosters positive group dynamics, resulting in a more conducive classroom atmosphere. The Jigsaw model is another type of cooperative learning in which students assume greater responsibility for the learning process than the instructor (Leetelay & Widiastuti, 2020). Each member is responsible for learning and teaching a specific portion of the material to other group members.

This method creates a supportive environment for understanding the subject matter while simultaneously fostering a sense of responsibility and enhancing communication skills.

The implementation of STAD requires students to work in small, heterogeneous groups, where each member is responsible for ensuring that all group members understand the material being taught (Bahartiar, 2024). The combined application of STAD and Jigsaw in a single learning process aims to optimize collaboration, content mastery, and student learning outcomes. The stages of implementing STAD and Jigsaw are as follows.

1. Group Formation: Students are divided into small groups. These groups are used flexibly, allowing learners to interact with different group members at each stage of the process
2. Material Delivery and Task Assignment: The instructor presents the learning material to the entire class. The content is then divided into several subtopics, with each group member assigned responsibility for studying one specific subtopic
3. Expert Group Discussion: Students from different original groups who are assigned the same subtopic gather in expert groups to explore the material in depth and develop a strong understanding of their assigned content
4. Return to Original Group and Collaboration (STAD): After the expert group discussion, students return to their original groups and teach their subtopics to one another. The group then discusses the complete material collaboratively and works together on group tasks
5. Individual and Group Evaluation:The instructor administers assessments both individually and in groups to evaluate understanding and collaboration outcomes

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6. Reflection and Reinforcement: Feedback is provided to strengthen comprehension and emphasize the importance of cooperation, individual accountability, and group responsibility

Cooperative learning models such as STAD and Jigsaw are two approaches frequently used across various educational levels, including universities, to improve learning outcomes, motivation, and student activity. Based on research findings, both STAD and Jigsaw are effective in enhancing learning outcomes, motivation, and student engagement across different subjects. Jigsaw tends to be superior in terms of learning outcomes and activity, while STAD is more effective in increasing motivation. The choice of model can be adjusted according to the needs and learning objectives in higher education (Rahmawati & Ika, 2020). However, the combination of these two methods has proven effective in improving learning outcomes, both in terms of content understanding and social skills (Leetelay & Widiastuti, 2020). In addition, integrating STAD and Jigsaw can foster collaboration, mutual respect, and peer support for students experiencing difficulties.

METHODS

This study employed a qualitative approach with a descriptive case study design. The qualitative approach was chosen to obtain a deep and comprehensive understanding of the self confidence aspects of students with visual impairments during cooperative learning. The research was conducted at a private university in Bandung that provides higher education services for students with visual impairments. The selection of research subjects was carried out using purposive sampling, based on predetermined criteria to ensure the relevance of data related to cooperative learning. The main subjects of this study were two low-vision students enrolled in the course "Behavior Modification for Children with Special Needs." In addition, six regular students who were members of the learning group served as supporting informants through snowball sampling. Data collection was conducted through several methods, including participatory observation, in which the researcher directly observed the behavior, interactions, and participation levels of students with visual impairments over six cooperative learning sessions. The focus of the observation was on indicators of self-confidence such as speaking courage, initiative in asking questions, and involvement in group discussions. Furthermore, in-depth semi-structured interviews were conducted with the main subjects and selected group members to explore their experiences, perceptions, and the factors that supported or hindered their self confidence during the learning process.

The cooperative learning model implemented consisted of two types: STAD during the first three sessions and Jigsaw during the following three sessions. Students were divided into six heterogeneous groups, each consisting of five members. Students with visual impairments were placed in different groups in each session to promote inclusivity and diverse social interactions. Each group was alternately responsible for supporting the learning success of the student with visual impairment assigned to their group. Data were analyzed through the stages of data reduction, data presentation, and conclusion drawing with verification. Data reduction involved selecting and simplifying the results of observations, interviews, and documentation. The data were systematically presented to identify patterns and themes related to the development of self-confidence and the supporting or inhibiting factors. Data validity was maintained through method and source triangulation, as well as verification

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using member checking and peer debriefing techniques to ensure the credibility of the findings

RESULTS AND DISCUSSION

The implementation of cooperative learning in the course *Behavior Modification for Children with Special Needs* was carried out using a systematic and structured approach, applying two main types of cooperative learning: STAD and Jigsaw. This strategy was designed to provide an inclusive learning experience, enhance active participation, and gradually build the self-confidence of students with visual impairments through constructive social interaction. In the initial stage, the STAD model was applied during the first three sessions. The implementation began with the lecturer delivering the learning objectives and material, followed by organizing students into six heterogeneous groups, each consisting of five members, including a student with visual impairment who was rotated among different groups in each session. These groups shared responsibility for learning the material and supporting one another to ensure that all members understood the content. Within the group work, students with visual impairments received guidance from their peers, enabling them to contribute and feel engaged in the learning process.

During the implementation of STAD, the lecturer actively supervised the groups by monitoring interactions among members, ensuring positive interdependence, individual accountability, and effective communication. Evaluation was conducted in two forms: individual evaluation through written quizzes, and group evaluation by combining individual results to determine overall group achievement. Verbal praise was given as positive reinforcement to groups and visually impaired students who actively participated. This process was designed not only to enhance content understanding but also to foster an inclusive and supportive learning environment, allowing students with visual impairments to feel valued and supported. In the next phase, the Jigsaw method was implemented during sessions four to six to increase the intensity of social interaction and individual responsibility among students. In this method, students remained in their original groups, but each member was assigned a different subtopic to study in depth, both independently and collaboratively. After the individual learning process, students with the same subtopic from different groups gathered to form "expert" groups to discuss and explore the material further. Students with visual impairments received intensive support from their peers during these expert group discussions to ensure they could contribute optimally.

After the expert group discussions, members returned to their original groups and shared the results of their learning with the other members. This stage fostered a greater sense of responsibility and increased the confidence of students with visual impairments to speak up and participate actively. Evaluation was conducted through group quizzes and verbal praise for both the groups and visually impaired students who demonstrated active participation. The Jigsaw method requires each student to take full responsibility for the material they have studied, while also collaborating to collectively share knowledge. Overall, the implementation of both methods demonstrated a learning process that integrates academic and social aspects in a balanced manner. Students with visual impairments not only received support in understanding the material but also in developing social and psychological skills that

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contribute to strengthening their self-confidence. A supportive environment and peer assistance served as key factors in helping students with visual impairments overcome fear and anxiety in social interactions, and in building sustainable self-confidence throughout the learning process.

Positive changes began to emerge after the implementation of cooperative learning, specifically starting from the third session. The two low-vision students began to confidently ask questions to other groups and express their ideas during discussions. This courage is a clear indicator of their increased self-confidence. Positive reinforcement from classmates, such as applause and verbal praise, as well as empathetic attitudes shown by group members, provided motivation and a sense of appreciation that was greatly needed by students with visual impairments. This development was not only limited to verbal aspects but also evident in non-verbal behaviors such as eye contact (although limited by visual conditions), open gestures, and active involvement in group work. Intense and continuous interaction with classmates, along with guidance from the course instructor, helped strengthen the sense of safety and comfort in the learning environment, which in turn supported the improvement of self-confidence. In addition, observations also showed that the self-confidence of students with visual impairments during cooperative learning was not entirely ideal when measured against standard indicators, including belief in one's abilities, optimism, objectivity in facing challenges, and the ability to accept responsibility and criticism.

Significant progress was demonstrated through their active roles in group and intergroup discussions from the third to the sixth session. The learning environment became a key determinant in this process. An inclusive classroom setting, designed with a foundation of friendly and respectful attitudes, successfully created a space where students with visual impairments felt accepted and supported. Peer social support is aligned with the need for esteem in the hierarchy of human needs, which, when fulfilled, strengthens motivation and self confidence. Overall, the self-confidence of students with visual impairments during the course showed a gradual transformation from passive and anxious behavior to increased activeness and courage in participation. This affirms that the implementation of cooperative learning, supported by a positive social environment, can be an effective effort in fostering and developing self-confidence in students with visual impairments. In addition, this study also identified inhibiting factors that influenced the development of self confidence in low vision students during cooperative learning in the Behavior Modification for Children with Special Needs course. These factors can be categorized into internal and external elements that interact in shaping the students' learning experiences. One key aspect is the anxiety that still lingers in their thoughts and feelings regarding self concept.

Students with visual impairments often feel undeserving of being among classmates who mostly do not have special needs. The fear of being rejected, saying something wrong, or being perceived as academically incompetent creates emotional tension that limits their courage to participate actively. In addition, feelings of being left behind academically or in technical skills such as difficulties in operating a laptop or accessing learning resources add psychological burdens and reduce self Confidence. This condition causes students with visual

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impairments to tend to be more passive and hesitant in taking roles during the learning process. Meanwhile, external factors are related to social and physical environments that are not fully supportive. Although most classmates show positive attitudes, a small number feel uneasy or uncomfortable when required to interact closely with students with visual impairments. A lack of understanding of the specific learning needs of students with visual impairments and limited knowledge about how to accommodate those needs become real obstacles.

The lecturer actively supervises and guides the group interaction process, ensuring that the principles of cooperative learning such as positive interdependence, individual accountability, effective communication, and group processing are properly fulfilled. The lecturer takes the initiative to address communication and social barriers by providing direct instructions, mediation, and positive reinforcement. In addition, the lecturer gives verbal praise and motivation to the entire group and specifically to students with visual impairments who demonstrate active participation and courage in contributing. This recognition serves as positive reinforcement that boosts self-confidence and motivates students to remain actively engaged in the learning process. Furthermore, the lecturer fosters an inclusive classroom culture by educating regular students about the importance of empathy, mutual respect, and supporting peers with special needs. This effort helps create a socially safe and comfortable environment, allowing students with visual impairments to feel accepted and able to interact without excessive fear or anxiety.

From the perspective of regular students, there was a growing awareness of the importance of their role in creating a supportive learning environment. They showed enthusiasm in becoming companions and assisting students with visual impairments in accessing materials and participating in discussions. This collaboration not only strengthened group learning but also fostered closer social relationships among students, ultimately encouraging a sense of inclusion and solidarity. Positive social interaction dynamics and the active role of the lecturer as a guide and supporter became key factors in building the self confidence of students with visual impairments. Healthy interaction and consistent support enabled these students to feel more confident, motivated, and capable of facing academic and social challenges throughout the course.

Discussion

Effectiveness of Cooperative Learning in Building Self Confidence

The implementation of cooperative learning models STAD and Jigsaw has proven effective in creating an inclusive and supportive learning environment for students with visual impairments. The STAD method, which emphasizes group collaboration and individual evaluation, allows students with visual impairments to get to know their classmates and feel more comfortable in social interactions (Lobe et al., 2020). Furthermore, the Jigsaw method deepens social engagement and individual responsibility through expert group discussions that require students to contribute actively. Social support from group members and positive reinforcement from the lecturer serve as important stimuli in building self-confidence. This aligns with the principles of operant conditioning, where positive reinforcement strengthens

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desired behaviors, in this case, the courage to participate actively. An inclusive learning environment minimizes psychological barriers and creates a safe atmosphere that enables students with visual impairments to develop optimally.

Development of Self-Confidence in Students with Visual Impairments

The behavioral transformation of students with visual impairments from being initially passive and awkward to becoming more active and confident demonstrates that cooperative learning is effective in promoting psychological change. This increase in self-confidence does not occur instantly but rather through a gradual process influenced by positive experiences in social interaction and receiving recognition. Anxiety and fear of rejection among students with visual impairments are significant internal factors that can be addressed through a friendly environment and empathetic classmates (Amerstorfer & Freiin von Münster-Kistner, 2021). With opportunities to express opinions without fear of being wrong, students begin to shift their negative self-perceptions into a belief in their own abilities.

Learning Development and Its Impact on Self Confidence

The development of learning during the implementation of cooperative methods illustrates how interactive and collaborative learning processes can influence the psychological aspects of students with visual impairments, particularly self confidence (Alotaibi et al., 2020). The cooperative learning applied was not only oriented toward academic achievement but also toward the development of social and emotional skills, which simultaneously support the growth of self-confidence. Through cooperative learning models STAD and Jigsaw, students with visual impairments gained more meaningful and structured learning experiences. The STAD method, with its group work system and individual evaluation, provided opportunities for students to experience personal responsibility alongside group support (Fatihannisa et al., 2019; Triansyah & Mutmainnah, 2022). Meanwhile, the Jigsaw method encouraged each student to become an expert in a specific topic and share knowledge with peers, enhancing self-confidence in their role as valuable contributors. This development was reflected in the improved ability of students with visual impairments to understand course material, ask questions, and actively contribute to group discussions and presentations. These improvements indicate that learning focused on collaboration is effective in strengthening academic understanding while also addressing psychological barriers that may hinder active participation (Wei et al., 2022).

Inclusive learning dynamics also help students with visual impairments develop social skills such as interpersonal communication, empathy, and teamwork. These abilities are essential in the context of higher education and everyday life, as they support future social and professional success.

Learning development does not only refer to cognitive achievement but also involves the formation of strong character and mental resilience. A learning process that supports the growth of self-confidence requires continuity and consistency. Challenges that remain, such as initial anxiety and uncertainty in interaction, can be overcome through a learning approach that continuously fosters a sense of safety and appreciation. Cooperative learning with intensive guidance from lecturers and support from peers is an effective model for achieving

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these goals (Ismail & Al Allaq, 2019; Islam, et al., 2022). Overall, structured learning development through cooperative learning has a significant positive impact on the self-confidence of students with visual impairments (Triansyah & Mutmainnah, 2022; Wei et al., 2022). This learning model emphasizes active, participatory, and inclusive learning processes that help students not only achieve good academic results but also develop sustainable self-confidence and more mature social skills.

Supporting and Inhibiting Factors in the Learning Process

This study reveals that the success of building self-confidence in students with visual impairments during cooperative learning is strongly influenced by the presence of supporting and inhibiting factors that interact with one another. A comprehensive understanding of these factors is essential for designing effective and sustainable educational interventions. Internal supporting factors are psychological strengths that originate from within the students with visual impairments. A strong sense of curiosity and the need to actualize their potential serve as the main drivers for them to face learning challenges. The opportunities provided by the cooperative learning model to participate actively, express opinions, and take responsibility for group material offer space for students to channel their intrinsic motivation. This aligns with learning motivation theory, which places a sense of competence and engagement as key elements in enhancing motivation and self-confidence (Gottlieb et al., 2022).

From an external perspective, an inclusive and supportive social environment serves as a key foundation for fostering self-confidence. Support from classmates who demonstrate empathy and enthusiasm in accompanying students with visual impairments creates a comfortable and safe learning atmosphere. Positive reinforcement in the form of praise, verbal recognition, and a friendly atmosphere strengthens the psychological need for appreciation and acceptance, allowing students with visual impairments to feel valued and included. The role of lecturers as facilitators who provide intensive guidance and recognition is also a crucial supporting factor. Lecturers manage classroom dynamics by monitoring social interactions and offering positive reinforcement that encourages students with visual impairments to remain actively engaged. Furthermore, organizing heterogeneous groups and rotating students with visual impairments across different teams promotes their adaptation to various social environments, expands their social networks, and reinforces a sense of inclusion. Conversely, internal inhibiting factors such as anxiety, fear of making mistakes, and feelings of academic lag present significant psychological barriers (Tekkar & Tripathi, 2022).

Anxiety rooted in negative self-concept leads students with visual impairments to feel undeserving and reluctant to take risks in social interactions. Technical barriers, such as limited skills in operating learning devices, further increase pressure and diminish sel - confidence. External inhibiting factors stem from a social environment that lacks inclusivity and from classmates' limited understanding of the specific needs of students with visual impairments (Miyauchi, 2020; Manitsa & Doiku, 2022). Discomfort or unease expressed by a small number of classmates contributes to a classroom atmosphere that is less conducive to safety and openness. In addition, the lack of disability-friendly learning facilities and insufficient adaptation of instructional materials pose technical challenges that hinder optimal access and participation for these students.

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The success of cooperative learning in building self confidence among students with visual impairments is highly dependent on the balance between supporting and inhibiting factors (Wei et al., 2022). A supportive environment and positive reinforcement can help mitigate the negative impact of anxiety and technical limitations. On the other hand, without sufficient support, both internal and external barriers may slow down or even obstruct the development of self confidence. Educational interventions must therefore be designed in a holistic manner, addressing psychological, social, and technical dimensions simultaneously (Amalia et al., 2024). The cultivation of an inclusive culture through training for lecturers and regular students as well as the provision of accessible learning facilities is essential to ensuring successful learning experiences for students with visual impairments.

The Role of Lecturers and Social Interaction Dynamics

The role of lecturers in cooperative learning has proven to be highly strategic in creating a conducive and inclusive learning climate for students with visual impairments (Moriña, 2019). Lecturers do not merely serve as content deliverers but also act as facilitators who manage group dynamics and bridge communication among group members. In this study, lecturers actively monitored social interactions to ensure that the principles of cooperative learning such as positive interdependence, individual accountability, promotive interaction, and effective communication were fulfilled. Furthermore, lecturers played a key role in consistently providing positive reinforcement through verbal recognition not only to successful groups but also specifically to students with visual impairments who demonstrated active participation. Such recognition served as reinforcement that enhanced motivation and self-confidence. By doing so, lecturers helped build a safe and supportive environment that enabled students with visual impairments to explore socially and academically without fear.

The dynamics of social interaction among students also showed positive development. Initially, students with visual impairments tended to withdraw and remain passive, but through the cooperative learning approach, they gradually became more confident in interacting and contributing actively (Moriña, 2019). Classmates who mostly demonstrated inclusive attitudes and empathy played a crucial role in facilitating this social adaptation process. They served not only as learning partners but also as companions who helped overcome technical and psychological barriers faced by students with visual impairments.

The growing awareness among regular students about the importance of supporting peers with special needs fostered an atmosphere of mutual respect and close collaboration. The social interactions that emerged not only improved the quality of learning but also strengthened the sense of togetherness and solidarity, which are essential foundations for inclusive education (Stentiford & Koutsouris, 2021). Overall, the active role of lecturers and the positive social interactions among students mutually reinforced the development of self confidence in students with visual impairments. Collaboration between facilitators and peers can create a learning ecosystem that supports balanced academic and psychosocial growth.

Implications for Inclusive Education

The findings indicate that the cooperative learning model can serve as an effective strategy to address the psychological and social challenges faced by students with visual impairments

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in academic settings. One of the key implications is the need for a paradigm shift from traditional learning models that tend to be individualistic toward models that emphasize collaboration and peer interaction. The cooperative learning approach not only enhances academic achievement but also helps develop social skills and self confidence that are essential for students with special needs. The development of capacity among lecturers and regular students in understanding special learning needs and implementing inclusive strategies plays a significant role in this study. Systematic training and socialization are needed to strengthen pedagogical competence and social awareness, thereby creating a truly supportive and disability friendly learning environment

The development of instructional materials and learning media tailored to the needs of students with visual impairments is also a crucial aspect. With improved access to disability friendly learning resources, these students can overcome technical barriers and focus on developing both academic and psychosocial competencies. Furthermore, the implementation of inclusive education policies at the institutional level must accommodate individual needs assessments, curriculum adjustments, and the provision of adequate support in the form of mentoring and facilities. Such efforts will not only support academic success but also strengthen the empowerment of students with special needs within academic environments. Inclusive education is not merely about physical access but also encompasses social and psychological dimensions that require holistic attention. The application of cooperative learning is a concrete example of inclusive education that can be adapted and expanded across various academic programs.

CONCLUSION

The findings of this study indicate that cooperative learning methods, specifically the STAD and Jigsaw types, are effective in creating a supportive learning environment and encouraging active engagement among students with visual impairments. Their effectiveness is evident in the increased active participation of students in group discussions and the strengthening of psychological aspects. Contributing factors include internal motivation, peer empathy, lecturer reinforcement, and a supportive classroom atmosphere. However, implementation has not yet reached its full potential due to persistent barriers such as internal factors like anxiety and fear of rejection, as well as external factors including limited facilities and the attitudes of some classmates. The role of lecturers is crucial as facilitators and social mediators in managing group dynamics and fostering a safe and supportive learning climate. In addition, healthy social interactions among students have been shown to reinforce a sense of inclusion and solidarity within the classroom. Therefore, collaboration among learning methods, lecturer roles, and environmental support is the key to building self-confidence in students with visual impairments in higher education. Future research is recommended to involve a broader sample and explore psychological aspects in greater depth.

AUTHOR'S NOTE

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