Salud, Ciencia y Tecnología. 2025; 5:2460 doi: 10.56294/saludcyt20252460

SYSTEMATIC REVIEW



Educational Media for Promoting Disability Sensitivity in Inclusive Education: A Systematic Literature Review

Medios educativos para promover la sensibilización sobre la discapacidad en la educación inclusiva: una revisión sistemática de la literatura

Husnul Istiqomah^{1,2} ¹⁰ ⊠, Sunardi Sunardi^{1,2} ¹⁰ ⊠, Joko Yuwono^{1,2} ¹⁰

¹Sebelas Maret University, Postgraduate Program in Special Education. Surakarta, Indonesia.

Cite as: Istiqomah H, Sunardi S, Yuwono J. Educational Media for Promoting Disability Sensitivity in Inclusive Education: A Systematic Literature Review. Salud, Ciencia y Tecnología. 2025; 5:2460. https://doi.org/10.56294/saludcyt20252460

Submitted: 12-07-2025 Revised: 22-09-2025 Accepted: 03-11-2025 Published: 04-11-2025

Editor: Prof. Dr. William Castillo-González

Corresponding Author: Husnul Istiqomah ⊠, Sunardi Sunardi ⊠

ABSTRACT

Introduction: disability sensitivity plays a vital role in enabling students with disabilities to actively participate in the learning process.

Objective: this systematic literature review aimed to explore the implementation of educational media in promoting disability sensitivity and fostering inclusive education. We synthesized evidence on which educational media are used to promote disability sensitivity, how these media are implemented in practice, and their measured impact on disability sensitivity.

Method: a total of twenty-two studies published between 2015 and 2025, indexed in the Scopus and ScienceDirect databases, were selected using a PRISMA flow diagram. These studies were analyzed through thematic analysis and utilized VOSviewer application to analyze keyword co-occurrence.

Results: the findings revealed a consistent pathway linking media, attitudes, and inclusion. Frequently used educational media, both digital and non-digital included picture/storybooks, comics, animated videos/TV shows, interactive mobile applications, social media initiatives, and educator-focused LMS modules. Media for educators and staff were embedded in professional development programs with pre/post assessments, while media for students were integrated into classroom lessons and paired with teacher-led reflections. Social media platforms extended communication with families and communities. Most studies reported improvements in knowledge, positive attitudes (e.g., empathy, reduced stereotyping), and behavioral changes (e.g., peer acceptance, inclusive routines) occurred when media were combined with guided discussion with instructors and ongoing coaching.

Conclusions: the implementation of educational media should be accompanied by structured facilitation, continuous professional development, and school-home communication to translate sensitivity into everyday inclusion.

Keywords: Disability Sensitivity; Inclusive Education; Educational Media.

RESUMEN

Introducción: la sensibilidad hacia la discapacidad es crucial para permitir que los estudiantes con discapacidades participen activamente en el proceso de aprendizaje.

Objetivo: esta revisión sistemática de la literatura tuvo como objetivo explorar la implementación de medios educativos para promover la sensibilidad hacia la discapacidad y fomentar la educación inclusiva. Sintetizamos evidencia sobre qué medios educativos se utilizan para promover la sensibilidad hacia la discapacidad, cómo se implementan en la práctica y cuál es su impacto medido en dicha sensibilidad.

© 2025; Los autores. Este es un artículo en acceso abierto, distribuido bajo los términos de una licencia Creative Commons (https://creativecommons.org/licenses/by/4.0) que permite el uso, distribución y reproducción en cualquier medio siempre que la obra original sea correctamente citada

²Sebelas Maret University, Center for Disability Studies. Surakarta, Indonesia.

Método: se seleccionaron veintidós estudios publicados entre 2015 y 2025, indexados en las bases de datos Scopus y ScienceDirect, utilizando un diagrama de flujo PRISMA. Estos estudios se analizaron mediante análisis temático y se utilizó la aplicación VOSviewer para examinar la coocurrencia de palabras clave. Resultados: los hallazgos revelaron una vía coherente que conecta los medios, las actitudes y la inclusión. Los medios educativos utilizados con mayor frecuencia, tanto digitales como no digitales, incluyeron libros de imágenes/cuentos, cómics, videos animados/programas de televisión, aplicaciones móviles interactivas, iniciativas en redes sociales y módulos de LMS enfocados en los educadores. Los medios para educadores y personal se integraron en programas de desarrollo profesional con evaluaciones pre/post, mientras que los medios para estudiantes se integraron en las lecciones en clase y se combinaron con reflexiones dirigidas por los maestros. Las plataformas de redes sociales extendieron la comunicación con las familias y las comunidades. La mayoría de los estudios informaron mejoras en el conocimiento, actitudes más positivas (por ejemplo, empatía, reducción de estereotipos), y los mayores cambios conductuales (por ejemplo, aceptación de los compañeros, rutinas inclusivas) ocurrieron cuando los medios se combinaron con discusiones guiadas y capacitación continua para el personal.

Conclusiones: la implementación de medios educativos debe ir acompañada de una facilitación estructurada, un desarrollo profesional continuo y una comunicación entre la escuela y el hogar para traducir la sensibilidad en inclusión diaria.

Palabras clave: Sensibilidad Hacia la Discapacidad; Educación Inclusiva; Medios Educativos.

INTRODUCTION

Millions of children live with disabilities around the globe, affecting many people across nations. (1) Ironically many report that this number continues to extend every year. (2) Disabilities in children can be comprehensive which impact many aspects of their lives. These include motoric skills, intellectual, and emotional challenges that could influence the way they live every day. Due to their disabilities, many of them face difficulties in being actively engaged in the learning process. (3,4) This phenomenon emphasizes the urgent need for educational systems that are specifically designed for them, (5,6) enabling children with special needs to get opportunity into general schools, receive supports and accommodations they need to access the same learning opportunities as their peers.

Data from global organizations, such as the World Health Organization, report that disability is a common condition in the society. It is a widespread issue that impacts people at every stage of life and at every social level. (7) Disability can be a permanent condition and ongoing aspect of the human experience, affecting people from all backgrounds, cultures, and abilities. Therefore, this highlights the importance of planning educational systems that acknowledge disability as a part and has to be included in society. These educational systems need to ensure that educational settings are inclusive and accommodate the characteristics of all students with disabilities.(8)

Inclusive education is an educational approach where students with disabilities learn alongside their peers in the same classrooms, receiving personalized support to meet their individual needs. (4,5) Some studies has shown that this educational approach leads to positive outcomes for both groups of students. (9,10) For students with disabilities, inclusive settings often foster academic, social, (11) and emotionally from being included in inclusive education settings, (12) while their peers without disabilities tend to experience neutral or even positive effects. The success of inclusion implementation is influenced by several factors from schools and outside schools' authorities. These factors included the quality of teachers, the availability of learning media, the willingness of schools to modify the curriculum, (5) and the legal policies that can vary widely from country to country.

Countries has legalized policy commitments on inclusive education. However, despite ongoing policy commitments in many countries, numerous studies reported several practical challenges in schools. Many teachers reported there was lack of sufficient training programs for them. (13,14) Some studies also reported that schools' environmental settings were not accessible. (15,16) Furthermore, disabled students received negative or stigmatizing attitudes toward disability. (17,18) Due to these barriers, students with disabilities often prevent from fully engaging in classroom activities, limiting their access to the same educational opportunities as their peers. In some cases, these issues lead to direct discrimination where some students even felt marginalized and rejected from their schools. (19) The gap between the ideal of inclusive education and its actual implementation remains a pressing concern, as many students are still marginalized despite physically being in classrooms, due to a lack of disability sensitivity. (20)

Disability sensitivity is an essential aspect to overcoming these obstacles and ensuring that inclusive education becomes a reality. Disability sensitivity refers to recognizing disabilities' presence, the characteristic, and understanding the challenges faced by individuals with disabilities. (21,22) Disability sensitivity aims to

educate others about the different types of disabilities, which eventually will promote positive attitudes, reduce stigma and misconceptions toward disabilities. (21) Some disability sensitivity efforts in schools typically include development or training programs and educational materials delivered in classrooms to foster a more inclusive and respectful environment. These educational materials especially targeted school all stakeholders which include teachers, staff members, parents, and students. By strengthening disability sensitivity through a comprehensive approach such as staff training, (23) peer social support and acceptance, (24) an inclusive environment can be created in which students with disabilities feel accepted and respected. This supportive school environments can reduce stigma and encourage full participation of students with disabilities in general education settings. Additionally, improving disability sensitivity can guide schools in developing more inclusive educational designs and curricula. Ultimately, disability sensitivity ensures that all students, including those with disabilities receiving suitable educational supports with the characteristics and conditions.

Educational media play a vital role in making inclusive education more tangible and implementable for all stakeholders. These media—such as traditional materials (e.g., printed books) to advanced online resources, simulations, and interactive games—help translate the abstract principles of inclusive education into daily practice. As a result, educational media can significantly impact promoting disability sensitivity in inclusive classrooms. However, based on the earlier investigation, there is still a lack of comprehensive research that reviews the various types of educational media, assesses their effectiveness and impacts in promoting disability sensitivity in inclusive educational settings. Therefore, this review aimed to fill that gap by systematically analyzing recent studies and exploring how different these educational media have been used to enhance disability sensitivity in inclusive schools.

To address these issues, this systematic review aimed to synthesize evidence on the use, implementation, and impact of educational media to promote disability sensitivity within inclusive education. Drawing on empirical studies, this systematic review aimed to map the range of educational media used in studies, synthesize implementation strategies of the media, and impact on disability sensitivity. The result of the research will provide valuable insights for schools and policymaker in order to create a more inclusive environment in schools. Ultimately, the result of this research will benefit students with disabilities in getting the educational setting which accommodate their special needs.

METHOD

Design and databases

This research employed a systematic literature review (SLR) following the PRISMA-2020 reporting guidelines. (26) Studies were searched in the Scopus and ScienceDirect databases using combined queries, including "educational media" or "learning media" and "inclusive education" or "inclusive learning" and "disability sensitivity" or "disability awareness". These databases were selected for their coverage and indexing quality. The publication years were limited to between 2015 and 2025 in order to capture recent developments on the topic. Searches targeted the titles, abstracts, and keywords fields. This research used Boolean operators (AND/OR) and parentheses to structure the queries to balance sensitivity and specificity.

Eligibility criteria

The eligibility criteria were defined according to the PIO framework to ensure methodological clarity and relevance. The population (P) included students, teachers, and educational personnel involved in inclusive schools or special education school from primary level to higher education institutions. Studies focusing on non-educational contexts such as healthcare, workplaces, or rehabilitation settings were excluded from this review. The intervention (I) encompassed the use of educational media in education institution which explicitly designed to promote disability sensitivity among stakeholders. Therefore, studies addressing only assistive or accessibility technologies without an instructional component were excluded. The outcomes (O) comprised measurable or observable impacts related to disability sensitivity, encompassing the domains of knowledge, attitude, and behavior. Studies reporting only usability or technical performance metrics without reporting any impact were excluded. This research included peer-reviewed, open-access, and English-language studies. This research excluded paid-access studies, non-English publications, and studies published outside the date range (2015-2025). These criteria ensured that the included studies provided empirical evidence on how educational media function as pedagogical tools to foster disability sensitivity toward individuals with disabilities across various educational levels.

Screening and selection

This research yielded 361 records in total from both databases and hand searching. After removing duplicates, 358 studies remained for further screening. Screening was conducted in two distinct phases to minimize bias: the first phase involved title and abstract screening, followed by full-text screening in the second phase. After the title and abstract screening process, 46 studies remained for full-text screening. Based on the full-text

screening, 22 studies met the inclusion criteria. Some studies were excluded for several reasons, including outcomes unrelated to disability sensitivity or awareness, failure to explicitly mention media use in the study, or implementation outside educational/school settings. Screening was conducted independently by three reviewers, using the Rayyan platform to manage and organize records efficiently. Any disagreements between reviewers were resolved through discussion and fourth reviewer. A PRISMA flow diagram summarizing each step of the selection process is presented below.

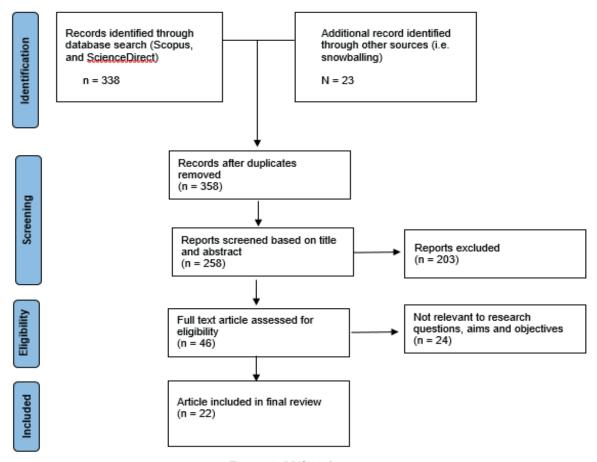


Figure 1. PRISMA diagram

Data extraction and analysis

Key information from each study was extracted, including the types of educational media used, the implementation of the educational media (such as setting, delivery method, and facilitator), and the impact of the media on promoting disability sensitivity. A descriptive synthesis was conducted to summarize the educational media types used across the studies. This research also utilized thematic synthesis to analyze common patterns in the implementation and impact of the educational media. To support the analysis, this research employed VOSviewer to analyze keyword co-occurrence and identify patterns and clusters within the data. The VOSviewer visualized relationships among variables, which helped confirm the answers to the research questions regarding educational media types used, the implementation in practice and the impact of the materials on promoting disability sensitivity.

The methodological quality of the included studies was evaluated using the Mixed Methods Appraisal Tool (MMAT, version 2018).(27) This instrument enabled evaluation of varied stud designs, including qualitative, quantitative, and mixed-methods. This tools evaluated in several criteria such as the appropriateness of study design, data collection, analysis procedures, and coherence between research questions and conclusions. Therefore, this approach ensured consistency and transparent evaluation of study quality across the varied research design included in this review. Quality appraisal was conducted by three reviewers. Any disagreements about the study quality were resolved through discussion and a consultation with a fourth reviewer. The findings were interpreted both narratively and thematically. First, the data from each study were tabulate and organized into tables to identify recurring themes, patterns, and variations in the implementation and outcomes of educational media interventions in promoting disability sensitivity. This process allowed the reviewers to capture both tendencies and insights, which further facilitating an integrated interpretation of the evidence base. Although the review protocol was not formally registered in a public repository, the review

procedures were planned, recorded, and tested in advance way. The entire process followed the PRISMA 2020 guideline to ensure methodological transparency and to minimize of potential reporting bias. All records and extracted data were managed using the Rayyan platform and stored in a shared, secure cloud folder accessible to the research team.

RESULTS

The twenty-two studies included in this review were imported into VOSviewer to examine the keyword co-occurrence. The co-occurrence is displayed as a map showing variables that are directly linked to other variables. The studies were formatted into RIS files and then input into the VOSviewer application to generate the map. Based on the VOSviewer analysis, disability awareness or disability sensitivity is closely related to several variables including picture books, positive attitude, students, training, access, awareness, diversity, and inclusion. However, the VOSviewer is not capable of explaining the reasons behind these links between variables. Therefore, for deeper investigation, a thematic synthesis was conducted in order to gain a more comprehensive understanding. Every study included in this review was analyzed to identify common patterns and correlations. The figure below illustrates the keyword co-occurrence across the studies utilizing the VOSviewer application.

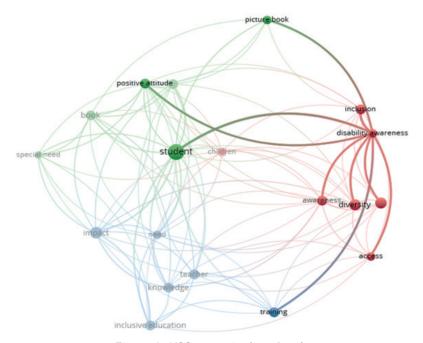


Figure 2. VOSviewer Analysis Result

To provide a comprehensive overview of the studies included in this review, table 1 summarizes the general information of each study. The table presents essential information such as the author(s), publication year, level of education or setting, and the educational media used. The table below presents the general data of the included studies.

Table 1. General Data of the Studies Included				
Author (s)	Publication Year	Level of Education/ Setting	Educational Media	
(28)	2024	School	Social Media	
(29)	2020	Elementary / Children	Android App	
(30)	2021	University / Faculty Training	Blackboard Online Platform	
(31)	2017	Primary School	Picture Books	
(32)	2017	University / Faculty	Training Modules	
(33)	2024	Preschool	Television Program	
(34)	2023	Primary / Literature	Picture Books	
(35)	2023	Primary School	Literary Works / Textbooks	
(36)	2016	High School	Educational Comic Book	
(37)	2020	Teacher Training	Video Materials	

(38)	2023	Kindergarten (Inclusive)	Picture Storybooks
(39)	2023	Elementary (Grade 3)	Storybooks about Special Needs
(40)	2024	Primary School	Picture Books
(41)	2016	Elementary / Middle School	Comic Book about Disability
(42)	2019	Teacher Training / Inclusive Schools	Disability-Friendly Training Modules
(43)	2024	Early Childhood Education (ECE) Teachers	Interactive Digital Modules
(44)	2020	Kindergarten (Inclusive)	Animated Videos
(45)	2016	Elementary / Children	Animated TV Show and Comic Series
(46)	2018	Elementary / Children	Picture Books
(22)	2023	University / Postsecondary	Online Videos
(47)	2017	University / Faculty	Online Learning Modules
(48)	2025	Elementary / Children	Online Picture Books

Educational Media Used in Promoting Disability Sensitivity

Findings revealed a diverse range of educational media used to promote disability sensitivity in inclusive education settings. Digital-based media were reported in numerous studies to foster sensitivity among students and educators. These included mobile applications, such as Android trivia game "Kuis Disa" which provided an interactive platform to educate young students about disabilities. (29) Online platforms and series of modules were also implemented in some studies, (30,32) as well as video-based training programs for instructors, (22) and interactive digital modules for early childhood educators. (43) Animated videos (44) and animated TV shows "Realabilities" (45) were also implemented in some studies, offering engaging visual content for young students to learn about disabilities.

In addition, non-digital media such as picture books, (31) educational comic books, (36) picture storybooks, (38) and literary works⁽³⁵⁾ were widely used in classrooms by teachers to promote empathy and understanding toward students with disabilities. These books contained stories, contents, and images about disabilities and were especially common in students' activities. Other educational media included social media platforms⁽²⁸⁾ which served as communication tools connecting teachers to parents while also promoting and sharing information about disabilities. Overall, this review found the broad use of both digital and non-digital educational media in promoting disability sensitivity and inclusivity in educational settings. The table below presents the types of educational media identified across studies.

Table 2. Types of Educational Media		
Types of Educational Media	Media	
Digital Media	Mobile Apps, ⁽²⁹⁾ Online platform and modules, ^(22,30,32,47,48) Interactive Digital Modules, ⁽⁴³⁾ Animated Video, ⁽⁴⁴⁾ Animated TV Show, ^(33,45)	
Non Digital	Picture Books, (31,34,40,46) Educational Comic Books, (36,41) Literary Works, (35) StoryBooks, (38,39)	
Other Media	Social Media ⁽²⁸⁾	

Implementation of Educational Media in Promoting Disability Sensitivity

This research identified the dual focus of educational media on educators/staff and students' engagement, with various media types tailored to each group. For instructors and staff, the online platform, such as BlackBoard system, which was integrated with a series of modules containing information about disabilities was used. These modules helped personnel understand the variety of needs among people with disabilities. These platforms were incorporated into training that used pre- and post-program surveys to assess the effectiveness of the training utilizing the educational media. (30,32,42,43,47) Furthermore, social media platforms played a significant role in strengthening communication among schools, parents and communities, in order to foster a better understanding of inclusive education. (28) Video materials were also encountered in teacher training programs. (22,37) These videos were shown to teachers during the training sessions to increase their disability sensitivity and promote inclusive teaching practices. Through these video materials, teachers were provided with the necessary resources to implement inclusive educational approaches effectively.

The implementation of the educational media for students tended to be more engaging and age-appropriate. The delivery and design of the educational media were suited by the characteristic of the target audience of the

media. For example, a mobile app like "Kuis Disa" which was designed as a trivia game-like, ⁽²⁹⁾ provided a fun and interactive way for children to learn about disabilities. Printed media, such as picture books, textbooks, and comic books were used in the classroom settings by the teachers. These media which embodied content about disabilities were delivered as a topic in class. Therefore, teachers presented disability content and facilitated discussion to build knowledge and raise sensitivity and empathy among students. ^(31,35,41) Animated video and TV shows were also used in classrooms for students. ^(44,45) Teachers utilized these audiovisual materials, which were suitable for young audiences. These videos contained information or stories about disabilities. After the videos were played, teachers discussed the topic with the students.

Overall, implementation of educational media varied depending on the target group or audience of the media. For educators and staff members, the educational media were embedded in professional development and training programs. While the educational media for students were mostly implemented during classroom lessons led by the teachers. These media were generally more engaging, interactive and appealing to young students. The table below presents implementation of educational media reported in studies.

	Table 3. Implementation of the Educational Media
Target of Educational Media	Implementation
Educators/ Staff/Parents	The video material was shown in teacher training. (22,37) Media was used in digital platfrom with series of modules for staff member profesional development and training program, included pre- and post-program surveys. (30,32,42,43,47) Social media platform was used to communicate with parents and communities. (28)
Students	Picture books, textbooks, comic books, storybooks were used as an educational tool in classrooms by led teachers. (31,35,36,38,39,40,41,46,48) The mobile app media was delivered in games, more engaging and interactive, (29) animated videos, animated TV shows were shown in classrooms by teachers. (44,45)

The Impact of Educational Media in Promoting Disability Sensitivity

This research revealed significant impacts of various educational media on promoting disability sensitivity and fostering inclusivity in educational settings. The findings indicated that the educational media played a critical role in improving knowledge of disability rights, accommodations, and inclusive practices. For example, an online platform which was integrated with a series of modules⁽³⁰⁾ was effective in providing educators with resources to better understand and implement inclusive practices. In addition, training modules⁽³²⁾ reported a significantly enhanced staff members' ability to address the needs of students with disabilities. Furthermore, interactive modules⁽⁴³⁾ were also identified as improving teachers' pedagogical competence, providing valuable tools for fostering inclusive educational environments.

Table 4. Impact of the Educational Media		
Domain of Impact	Impact	
Knowledge of Disability Rights and Practices	Increased faculty sensitivity about disability rights and reasonable accommodations, (30) staff members became more competent in addressing the needs of students with disabilities, (32) teachers' understanding of disability-friendly education improved significantly, (42) improved pedagogical competence in inclusive education among teachers, (43) improved knowledge about epilepsy. (36)	
Sensitivity and Attitudes Toward Disabilities	Improved communication and community understanding of inclusive education, ⁽²⁸⁾ significant enhancement in children's sensitivity and understanding of disabilities, ⁽²⁹⁾ increased representation of disability in children's TV programming, ⁽³³⁾ positive impact on children's attitudes toward peers with disabilities, ⁽³¹⁾ reduced misconceptions about epilepsy, ⁽³⁶⁾ positive changes in students' attitudes toward peers with special needs, ⁽³⁹⁾ Enhanced cognitive attitudes towards peers with disabilities. ⁽⁴¹⁾	
Positive Social Impact and Behavioral Change	Reduction of stereotypes and promotion of social inclusion among students, positive influence on children's attitudes and empathy toward peers with disabilities, positive behavioral changes, fostering a more inclusive school environment, enhanced behavioral intentions towards peers with disabilities.	

This research finding also highlighted how these media influenced perceptions and attitudes toward people with disabilities. For example, social media platforms were particularly effective in strengthening communication and sensitivity toward inclusive education among parents and communities. (28) Social media

enabled schools to reach families and local communities, bridge gaps, and promote a greater understanding of the challenges faced by students with disabilities. Additionally, interactive educational media, such as the Kuis Disa trivia game, (29) also demonstrated a fun and engaging way to increase children's sensitivity and attitudes toward people with disabilities. This research also found that television programming⁽³³⁾ and picture books about disabilities(31) positively influenced children's attitudes, supporting better acceptance of peers with disabilities. Comic books⁽³⁶⁾ and storybooks⁽³⁹⁾ were also effective in reducing misconceptions and improving sensitivity about specific disabilities, such as epilepsy.

Furthermore, the educational media had a positive impact on the social and behavioral domains in promoting disability sensitivity. For instance, educational media such as picture books⁽³⁴⁾ and literary works⁽³⁵⁾ played a significant role in promoting social inclusion, allowing students to welcome people with disabilities. Animated TV shows⁽⁴⁵⁾ and online picture books⁽⁴⁸⁾ also showed significant positive changes in children's behavioral responses, leading to a more inclusive and accepting school environment. These research findings highlighted the broader impacts of educational media on promoting disability. These impacts influence the knowledge, attitude, and behavior domains among students, educators, staff, and parents. By targeting some domains/aspects, these media forms effectively contribute to solving barriers and creating more inclusive learning environments for students with disabilities. The table below presents the impacts of educational media identified across studies.

DISCUSSION

Links of Disability Sensitivity

The VOSviewer co-occurrence map generated from the twenty-two studies reflected a consistent connection between educational media and attitudes, which ultimately led to the practice of inclusivity. The clustering of disability awareness/sensitivity with picture books, positive attitudes, students, training, access, diversity, and inclusion indicated that the implementation of the educational media, especially picture books for students, (31,46) and modules for educators' training programs created a positive attitude change in school settings. (30,49) The included studies implied a sequential logic: the educational media made disability visible, discussable, and understandable in classrooms or training programs, which led to a guided reflection and consolidated perceptions. This process then led to supportive environments transforming dispositions into daily routines that welcome learners with disabilities. This pattern is consistent with well-established opinion that understanding disabilities will lead to acceptance toward students with disabilities in schools. (5,50)

Educational Media and Implementation

For educators and staff, the results converged on the value of structured, modular training, which is often delivered online, to build foundational knowledge about disability rights, accommodations, and inclusive pedagogy. These programs were integrated into pre/post assessments, indicating relatively short-term knowledge retention. Meanwhile, educating and providing supports for students with special needs requires more than just short-term memory/knowledge. It requires real-life practice, opportunities to rehearse skills, receive feedback, and solve context-specific barriers. (13) The new knowledge may not be directly implemented into teachers' and staff members' behaviors in routine activities. Consequently, educators and staff need longterm and scalable e-learning media, which will have a more durable impact when integrated with mentoring and collaborative planning. (51)

The educational media for students emphasized the age-appropriate aspect and teacher mediation in the implementation process. Picture books, (31,40,46) storybooks, (38) comics, (41) and related literary texts (35) that portrayed disability in everyday contexts were consistently associated with improvements in empathy, reductions in stereotyping, and greater willingness to befriend peers with disabilities. During the implementation, the teachers delivered the material, then facilitated short discussions that addressed misconceptions and connected narratives to classroom realities. Additionally, animated videos and television programs reported a similar pattern in some studies. Exposure to the materials alone helped students better understand, however effects were reported to be stronger and more consistent when viewing was followed by guided reflection activities, such as discussions with teachers after the videos were played in the classrooms. (38) These results align with the idea that adult scaffolding consolidates learning by naming emotions, clarifying terms, and linking stories to school norms. (52)

Interactive educational media can improve students' time-on-task and motivation to complete the learning activities. The trivia-style "Kuis Disa" app, for instance, offered challenges in playing the game and gave immediate feedback. This feature is best known for sustaining engagement with the students. (29) In the included studies, this approach showed improvements in sensitivity and attitudes toward people with disabilities, particularly among younger learners who responded well to game-based activities. Notably, the app's effects were most evident when it was age-appropriate, incorporated with classroom activities, and followed by a discussion session led by teachers that echoed the conclusion of the topics. (53)

Digital communication platforms helped deliver messages from schools to homes and communities.

These platforms aided in sharing accurate information about disability, celebrating inclusive practices, and coordinating expectations from parents and local stakeholders. This finding highlighted the importance of family and community involvement in practicing inclusive education. Participation from family and community is indeed crucial and beneficial for students with disabilities in inclusive education settings. (54,55)

Impact of the Educational Media

The implementation of educational media was reported to have positive impacts in numerous aspects. Both digital and non-digital media enhanced knowledge, attitudes, and behavior of students, educators and staff. Modules used in professional development and training programs were reported to be effective and significantly improved knowledge and perceptions of instructors and staff toward people with disabilities. The educational media implementation for students also affirmed that narratives (e.g., picture books, comic books) and audiovisual (e.g., animated video) content improved knowledge and shifted attitudes among students toward their disabled peers. These attitude changes were reinforced by teachers' mediation. This finding resonates with previous research, which stated that animated video increased student's academic scores. (56) These media were also reinforced by teachers' mediation as teachers play a crucial role in reinforcing knowledge during the learning process. (57) The interactive app also resulted in a positive impact, due to its engagement with motivation, by showing that brief, repeated, feedback-rich activities can lead to better mastery.

However, even though some educator and staff programs reported improvements in knowledge and self-efficacy, (30,32), these results did not align with changes in observed classroom practices. (58) This does not diminish the value of training but highlights the need for continuous coaching, peer observation, and leadership support to bridge the gap between intention and action. (51) In addition, media-only exposure for students sometimes led to minimal or short-term improvements, which aligns with the studies presented here. The effects were stronger when teachers framed the content, prompted reflection, and connected story elements to concrete inclusive behaviors students could practice in their daily activities. (31,48) Therefore, educational media are most effective when integrated into a supportive instructional and structural framework.

In summary, the present synthesis supports a practical, multi-layered theory of change for promoting disability sensibility in schools. Content matters-stories, images, games, and videos make disability visible and relatable to everyday activities. Pedagogy matters such as teacher-led dialogue, which helped students better understand and transfer to more practical social situations. Professional learning media of sequenced modules about disabilities built staff capacity and signaled institutional commitment. Communication platforms such as social media extend reach and normalize inclusive values in families and communities. These are some of the factors that could impact the effectiveness of educational media. Therefore, every educational media, both digital and non- digital, for students, educators, staff, families, and communities, work together to create an inclusive environment.

The included studies that used pre/post assessments and triangulated outcomes (knowledge, attitudes, behaviors) provide stronger evidence for conclusions, consistently pointing toward the same pathway while clarifying boundary conditions related to implementation and access. Future research can build on this foundation by pairing media interventions with systematic coaching and by measuring longer-term behavioral and participation outcomes, particularly in classrooms where accessibility improvements are in progress. In short, the evidence reviewed here aligns with established theories and earlier findings, and it underscores a practical message: combine engaging media, purposeful pedagogy, sustained professional development and training, coordinated communication, and tangible access to turn disability sensitivity into durable inclusion.

Limitations

This review has several limitations. First, this study only included English-language and open-access studies from Scopus and ScienceDirect databases which may excluded relevant research published in other languages or databases. Second, the synthesis relied solely on secondary data, which may have influenced the depth of analysis. Future studies should broaden search coverage, include multilingual databases, and employ mixed synthesis methods to strengthen the robustness of evidence on educational media and disability sensitivity.

CONCLUSIONS

This review indicates a consistent pathway from educational media to disability sensitivity, which has an impact on more positive attitudes. The integration of age-appropriate educational media (such as picture books, comics, video animations/TV shows) and interactive apps for students is most effective when teachers facilitate structured reflection. Educators' and staff members' e-learning training using modules strengthens knowledge and confidence but requires coaching and institutional support to shift daily behaviors. Social media aligns schools with families' and communities' expectations, which also improves attitudes toward inclusion.

While keyword co-occurrence mapping does not establish causality, the overall pattern aligns with established theories and prior evidence. Educational media matter, content matters, pedagogy and professional

together

learning matter, and communication matters. The impacts are strongest when these elements work together. Practically, schools should pair engaging media with guided discussion, provide ongoing staff development with opportunities to practice, and sustain school-home communication so that disability sensitivity becomes durable and demonstrates long-term, daily practice.

BIBLIOGRAPHIC REFERENCES

- 1. UNICEF and WHO. Global report on children with developmental disabilities: from the margins to the mainstream. Geneva; 2023.
- 2. Olusanya BO, Kancherla V, Shaheen A, Ogbo FA, Davis AC. Global and regional prevalence of disabilities among children and adolescents: Analysis of findings from global health databases. Front Public Heal. 2022;10 (1): 1-19.
- 3. Heward WL, Morgan SRA, Konrad M. Exception children: an introduction to special education. 11th ed. New york: Pearson; 2017.
- 4. Hallahan D, Kauffman J, Pullen P. Exceptional learners: an introduction to special education. 12nd ed. Edinburgh: Pearson; 2014.
 - 5. Hornby G. Inclusive special education. New York: Springer; 2014.
- 6. Hornby G. Are inclusive education or special education programs more likely to result in inclusion post-school? Educ Sci. 2021;11(6): 1-8.
 - 7. WHO, World Bank, and United Nations. World Report on Disability 2011. Switzerland; 2011.
 - 8. Kauffman JM, Hornby G. Inclusive vision versus special education reality. Educ Sci. 2020;10(9):1-13.
- 9. Cologon K. Preventing inclusion? Inclusive early childhood education and the option to exclude. Contemp Issues Early Child. 2014;15(4):378-381.
- 10. Cologon K, Cologon T, Mevawalla Z, Niland A. Generative listening: Using arts-based inquiry to investigate young children's perspectives of inclusion, exclusion and disability. J Early Child Res. 2019;17(1):54-69.
- 11. Rokhim A, Suryadi S, Supadi S. Evaluation of The Implementation of The Inclusion Program. Int J Elem Educ. 2021;5(4): 675-684.
- 12. Azwar B. The Role of The Counseling Teacher In Developing The Social Dimensions of Children With Special Needs. Munaddhomah J Manaj Pendidik Islam. 2022;3(2):126-138.
- 13. Mihajlovic C. Special educators' perceptions of their role in inclusive education: A case study in Finland. J Pedagog Res. 2020;4(2):83-97.
- 14. Ebuenyi ID, Rottenburg ES, Bunders-Aelen JFG, Regeer BJ. Challenges of inclusion: a qualitative study exploring barriers and pathways to inclusion of persons with mental disabilities in technical and vocational education and training programmes in East Africa. Disabil Rehabil. 2020;42(4):536-44.
- 15. Moriña A, Morgado B. University surroundings and infrastructures that are accessible and inclusive for all: listening to students with disabilities. J Furth High Educ. 2018;42(1):13-23.
- 16. Yusuf M, Yuwono J, Mustaqimah U, Supratiwi M, Cahyani L. Assessing Inclusivity of Faculties and School at Sebelas Maret University Utilizing UNS Inclusion Metric Standards. J Pendidik Progresif. 2025;14(2):1114-24.
- 17. Nadya A, Syaifudin AA, Fahriza I. Empowering Deaf Youth Through Vocational Training: Case Study of Participants Balai Rehabilitasi Sosial Penyandang Disabilitas Sensorik Rungu Wicara Melati Social Ministry of The Republic Indonesia. Psikoeduko J Psikol Edukasi dan Konseling. 2022;2(2):17-30.
- 18. MacKenzie A, Owaineh M, Bower C, Özkaya C. Barriers to inclusive education under occupation: An evaluative approach using Nussbaum's capabilities approach. Int J Educ Res Open. 2023;5(October):1-9.

- 19. Bartz J. All inclusive?! empirical insights into individual experiences of students with disabilities and mental disorders at german universities and implications for inclusive higher education. Educ Sci. 2020;10(9):1-25.
- 20. Bunbury S. Disability in higher education-do reasonable adjustments contribute to an inclusive curriculum? Int J Incl Educ. 2020;24(9):964-79.
- 21. Gonzalez CC, Vasquez RC, Reed BJ. Disability Awareness and Inclusion. In D. Bates & C. Ortega (Eds.) Innovative Approaches in Counselor Education for Students With Disabilities. IGI Global Scientific Publishing; 2024. p. 1-32.
- 22. Tarconish E, Lombardi A, Taconet A. Disability Awareness & Inclusive Teaching Online Training Videos for College Instructors Featuring Students with Disabilities. J Postsecond Educ Disabil. 2023;35(4):339-353.
- 23. Nīmante D, Baranova S, Stramkale L. The university administrative staff perception of inclusion in higher education. Acta Paedagog Vilnensia. 2021;46:90-114.
- 24. Haegele JA, Sutherland S. Perspectives of Students with Disabilities Toward Physical Education: A Qualitative Inquiry Review. Quest. 2015;67(3):255-73.
- 25. Orelove F., Sobsey D, Gilles DL. Educating Students with Severe and Multiple Disabilities. 5th ed. Sydney: Brookes Publishing Co.; 2019.
- 26. Page MJ, Mckenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. Systematic Review. 2021;10 (89): 1-11.
- 27. Hong QN, Fàbregues S, Bartlett G, Boardman F, Cargo M, Dagenais P, Gagnon M-P, Griffiths F, Nicolau B, O'Cathain A, Rousseau M-C, Vedel I & PP. Mixed Methods Appraisal Tool (MMAT), version 2018 updated User guide. Can Intellect Prop Off. 2018; 1-10
- 28. Abualrish A, Khasawneh MAS. Using Social Media as a Platform of Communication Between School Administration and the Local Communities to Promote Inclusive Education for Children with Special Needs Maryam. Stud Media Commun. 2024;12(2):79-87.
- 29. Ardiansyah AS, Robiin B, Dahlan A, Selatan R. Android-Based Trivia Game Development to Raise Children's Awareness about Disabilities. J Inform. 2020;1(1):1-8.
- 30. Carballo R, Morgado B, Cortés-Vega MD. Transforming faculty conceptions of disability and inclusive education through a training programme. Int J Incl Educ. 2021;25(7):843-59.
- 31. Bianquin N, Sacchi F. More than Just Pictures: Using Picture Books to Broaden Young Learners' Disability Understanding. In proceedin of International and Interdisciplinary Conference IMMAGINI? Image and Imagination between Representation, Communication, Education and Psychology. 2017. p. 1-10
- 32. Moriña A, Carballo R. The impact of a faculty training program on inclusive education and disability. Eval Program Plann. 2017;65:77-83.
- 33. Carmel JM, Chapman S, Wright P. Seeing disability in children's made for television programmes: An Australian case study. Child Soc. 2024;38(6):2036-51.
- 34. Demidova J, Correro C. The Representation of Disability in Children's Picturebooks: Analysis of Four Russian Picturebooks. Int J Multidiscip Curr Educ Res. 2023;5(6):80-93.
- 35. Gulya N, Fehérvári A. The impact of literary works containing characters with disabilities on students' perception and attitudes towards people with disabilities. Int J Educ Res. 2023;117
- 36. Tekle-Haimanot R, Pierre-Marie P, Daniel G, Worku DK, Belay HD, Gebrewold MA. Impact of an educational comic book on epilepsy-related knowledge, awareness, and attitudes among school children in Ethiopia. Epilepsy Behav. 2016;61:218-23.

- 37. Nantongo PS, Hetland P. Inclusive Education and Digital Divides: The Case of Video Materials in In-Service Teacher Training. Semin Media, Technol Life-Long Learn. 2020;16(1):1-17.
- 38. Jaswandi LN, Kurniawati F. The Effectiveness of Disability Picture Storybooks for Children 5-6 Years Old in Inclusive Kindergarten. Cakrawala Dini J Pendidik Anak Usia Dini. 2023;14(2):81-90.
- 39. Kesci Z, Çıkılı Y. The Effect of Story Reading Activity on Attitudes of Typically Developing Students Towards Students with Special Needs. Int J Educ Res Rev. 2023;8(4):726-39.
- 40. Maich K, Belcher C, Sohrabi T, Specht J, Sider S, MFoafo-M'Carthy M, et al. A Ghanaian Approach to Disability Literature in Picture Books. Except Educ Int. 2024;34(1):152-65.
- 41. McGrail E, Rieger A. Increasing Understanding and Social Acceptance of Individuals With Disabilities Through Exploration of Comics Literature. Child Educ. 2016;92(1):36-49.
- 42. Salim A, Hidayatullah MF, Nugraheni PP, Dian Atnantomi W. Investigating effectiveness of disability friendly education training modules in Indonesian schools. Int J Educ Pract. 2019;7(3):286-93.
- 43. Widiastuti YKW, Hermanto. Enhancing Pedagogical Competence in Inclusive Early Childhood Education through Interactive Digital Modules: A Pre-Experimental Study. Golden Age J Ilm Tumbuh Kembang Anak Usia Dini. 2024;9(3):465-74.
- 44. Kurniawati F, Sabila H. The Use of Animated Video to Increase Early Childhood Knowledge about Disability and Their Behavorial Intention Towards Disabled Peers. IJDS Indones J Disabil Stud. 2020;7(1):72-80.
- 45. Silton N. Enhancing Behavioral Intentions and Cognitive Attitudes of Typical Children towards Children with Disabilities. Med Res Arch. 2016;4(8).
- 46. Pennell AE, Wollak B, Koppenhaver DA. Respectful Representations of Disability in Picture Books. Read Teach. 2018;71(4):411-9.
- 47. Wynants SA, Dennis JM. Embracing Diversity and Accessibility: A Mixed Methods Study of the Impact of an Online Disability Awareness Program. J Postsecond Educ Disabil. 2017;30(1):33-48.
- 48. Zhang Y, Fu W, Xiao S. Online Picture Book Teaching as an Intervention to Improve Typically Developing Children's Attitudes Toward Peers with Disabilities in General Schools. Educ Sci. 2025;15(5).
- 49. Moriña A, Carballo R. The impact of a faculty training program on inclusive education and disability. Eval Program Plann. 2017;65(June):77-83.
- 50. Ujianti P. The Role of Support Group for Parents of Children with Special Needs. J Psychol Instr. 2018;2(1):31.
- 51. Adaka TA, Adigun OT, Lalu J, Mngomezulu TP. Effect of mentorship on regular teachers' selfefficacy towards implementation of inclusive education at basic education level. Spec Edukac i Rehabil. 2022;21(4):233-53.
 - 52. van Dijk J, Oral L. In support of neurodiverse participatory sensemaking. Lang Sci. 2025;110:101717.
- 53. Meedendorp A, Deunk MI. Stimulating teachers' equity literacy through drama and theatre-based work forms: A systematic review. Educ Res Rev. 2025;46(December 2024):100664.
 - 54. Martinez A. Parent Involvement and Its Affects on Student. Califonia State Univ Stanislaus; 2015.
- 55. Lo L, Xu Y. Family, School, and Community Partnerships for Students with Disabilities Advancing Inclusive and Special Education in the Asia-Pacific. Centre for Advancement in Inclusive and Special Education, Faculty of Education, The University of Hongkong. 2019.
- 56. Nur Fauziah R, Ghufron A, Muhtadi A, Restu Fauzi M. Effectivenes of Animated Simulation Video Media in Promoting Higher-Order Thinking Skills in Grade 10 High School Physics Material. Salud, Cienc y Tecnol. 2025;5.

57. Fleming DJ, Culclasure BT, Zhang D. The Montessori Model and Creativity. J Montessori Res. 2019;5(2):1-14.

58. Mangope B, Otukile-Mongwaketse M, Dinama B, Kuyini AB. Teaching practice experiences in inclusive classrooms: The voices of University of Botswana special education student teachers. Int J Whole Sch. 2018;14(1):57-92.

FINANCING

This paper is funded by RAT Sebelas Maret University for the 2025 Fiscal Year through the scheme of Postgraduate Master's Research (PPs MAGISTER-UNS) with the research assignment agreement number: 369/UN27.22/PT.01.03/2025.

CONFLICT OF INTEREST

The authors declare that the research was conducted without any commercial or financial relationships that could be construed as a potential conflict of interest.

AUTHORSHIP CONTRIBUTION

Conceptualization: Husnul Istiqomah, Sunardi Sunardi, Joko Yuwono. Data curation: Husnul Istiqomah, Sunardi Sunardi, Joko Yuwono. Formal analysis: Husnul Istiqomah, Sunardi Sunardi, Joko Yuwono.

Research: Husnul Istiqomah, Sunardi Sunardi, Joko Yuwono. Methodology: Husnul Istiqomah, Sunardi Sunardi, Joko Yuwono.

Project management: Husnul Istiqomah, Sunardi Sunardi, Joko Yuwono.

Resources: Husnul Istiqomah, Sunardi Sunardi, Joko Yuwono. Software: Husnul Istiqomah, Sunardi Sunardi, Joko Yuwono. Supervision: Husnul Istiqomah, Sunardi Sunardi, Joko Yuwono. Validation: Husnul Istiqomah, Sunardi Sunardi, Joko Yuwono. Display: Husnul Istiqomah, Sunardi Sunardi, Joko Yuwono.

Drafting - original draft: Husnul Istigomah, Sunardi Sunardi, Joko Yuwono.

Writing - proofreading and editing: Husnul Istiqomah, Sunardi Sunardi, Joko Yuwono.