Jurnal PAJAR (Pendidikan dan Pengajaran)
Volume 10 Nomor 1 January 2026 | ISSN Cetak : 2580 - 8435 | ISSN Online : 2614 - 1337
DOI : http://dx.doi.org/10.33578/pjr.v10i1.107

Comics for Literacy in MI Asih Putera: A Sequential Explanatory Study in Elementary Education

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ABSTRACT

Although the pedagogical benefits of comics have been widely proven, attention to the operational aspects needed to support visual literacy strategies in resource-limited environments remains minimal. This study aims to analyze the gap between students' visual literacy preferences and the availability of school library resources at MI Asih Putera using the Dual Coding Theory. Using a sequential explanatory mixed-methods design, this study integrates survey data from 30 students in grades 3-5 with in-depth interviews with the principal, teachers, and librarians. Quantitative findings reveal a disconnect where, despite students' high preference for comics (73%) and interest in physical facilities reaching 93%, there is a sharp gap where 93% of students report unmet needs, particularly in library collection availability, as well as minimal interaction with librarians (13%). The qualitative phase explains that although comics successfully serve as a strategic cognitive hook, library services fail to keep pace with this need due to structural barriers, including a phased procurement budget system, irrelevant book donations, and administrative burdens stemming from manual library management. This study concludes that schools' operational capacity hampers the success of visual literacy strategies. To overcome this, the study recommends cost-effective transformations, such as adopting open-source library automation to ease administrative workload, using open-access e-comics displayed on classroom projectors to address hardware deficits, and formalizing comics into the curriculum to ensure budgetary priority.

Keywords*: *comics, elementary school, literacy, school library, sequential explanatory

Submitted	Accepted	Published
23 June 2025	26 January 2026	30 January 2026

Citation	:	Waluya, M.R., Hadiapurwa, A., & Wulandari, Y. (2026). Comics for Literacy in MI Asih Putera: A Sequential Explanatory Study in Elementary Education. *Jurnal PAJAR (Pendidikan dan Pengajaran), 10*(1), 96-109. DOI: http://dx.doi.org/10.33578/pjr.v10i1.107.

INTRODUCTION

Literacy is important for cognitive, academic, and lifelong learning development (Gillon et al., 2024; Su et al., 2017; Zubrick et al., 2015). Literacy skills that begin to develop before a child enters school are critical for predicting how they will read later in life and their overall educational achievement (Petscher et al., 2020a). Conversely, if children lack an early literacy foundation, they will struggle to catch up in their learning, with long-term consequences (Zubrick et al., 2015). However, many factors challenge children's development of basic literacy skills, such as socioeconomic status, access to educational resources, and limited opportunities to learn (Ferrer et al., 2015; Farver et al., 2009; Gámez et al., 2017).

In Indonesia, inadequate elementary school libraries and low student interest in reading hinder literacy (Amikratunnisyah, 2022; Munawar, 2021; Yulvira et al., 2022). Recent Programme for International Student Assessment (PISA) 2022 data underscores this urgency. Indonesia's average reading literacy score fell from 371 in 2018 to 359, well below the OECD average of 476 (OECD, 2023). In Creative Thinking, Indonesian students scored 19, again below the OECD average of 33. Despite low scores, these students performed better in "visual expression" and "written expression" than in complex abstract problem solving (OECD, 2024). This suggests visual-based media can help unlock students' potential.

Comics are multimodal texts that combine visual and verbal elements to help improve literacy, especially for children who are less motivated to read (Estrella, 2024). By presenting information through a combination of attractive visuals and light text, comics have been shown to increase children's interest in reading and help them understand information more effectively (Dhienaqueen & Megawati, 2023; Golding

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& Verrier, 2021; Rahmi, 2022). In addition, visual media, such as comics, can complement traditional approaches to support early literacy development (Hamzehnejadi, 2023; Rina et al., 2020).

Theoretically, the usefulness of comics is supported by the Dual Coding Theory (Clark & Paivio, 1991). This theory states that information processed through two channels, verbal (logogens) and visual (imagens will be remembered better than information processed through only one channel. For elementary school students, text-dominated books often overload their cognitive capacity. Comics mitigate this by engaging both systems simultaneously, acting as a scaffold that reduces cognitive load and facilitates understanding. This theoretical framework implies that students' preference for comics is not merely entertainment but an intuitive cognitive strategy for more efficient understanding (I et al., 2025; Nabila, 2025).

In recent years, academic literature has increasingly recognized comics not merely as entertainment but as a powerful learning medium that actively transforms passive learning into active engagement. Many studies show that comics effectively improve learning outcomes by simplifying the understanding of complex topics. For example, in the field of exact sciences, research on mathematics and science comics has found that visualizing abstract concepts significantly increases student engagement and understanding in various cultural contexts (Bachri et al., 2023; Fatimah & Widiyatmoko, 2014; Marhaeni et al., 2024). This aligns with findings at the elementary school level, where thematic comics are effective in helping students understand environmental material in context (Laksmi & Suniasih, 2021). Studies confirm that comics act as an effective literacy bridge, improving writing skills, vocabulary mastery, and reading comprehension for students who struggle with conventional texts (Fahyuni & Fauji, 2017; Hidayah, 2023; Matuk et al., 2021; Tampubulon, 2023). These findings collectively show that the multimodal nature of comics effectively reduces cognitive load, allowing students to focus on content mastery rather than on difficulties with understanding the text or writing itself.

Recent research also highlights the role of comics in fostering higher-order thinking skills (HOTS), which are essential for 21st-century education. Research shows that the complexity of comic narratives stimulates critical thinking, creativity, and independence in students, indicating that comics can support holistic character development (Astuti et al., 2025; Fitriyanti et al., 2023). Further bibliometric analysis confirms a growing trend in educational research supporting digital comics and animation, reflecting developments in early learning that are increasingly visual (Suprapto et al., 2024). However, the effectiveness of comics as a medium does not stand alone. Their use also depends on effective teaching. Previous studies emphasize that comics are the most powerful tool for advancing literacy development when integrated with innovative teaching methods that actively involve students in the meaning-making process (Rohani & Anas, 2022).

Although the pedagogical potential of comics has been widely established, scant attention has been paid to the operational readiness of school libraries to support this visual turn. Previous studies predominantly focus on the effectiveness of comics as instructional material, often limited to religious subjects or moral character building (Fahyuni & Fauji, 2017; Suhartina et al., 2024), while overlooking the structural ecosystem (procurement and management) required to sustain student interest. Consequently, empirical evidence on the extent to which library infrastructure can foster a culture of comic-based reading in the school environment remains limited. Specifically, initial observations at MI Asih Putera revealed a sharp gap between the school program and student response. Despite a mandatory library visit program, student interaction with text-rich books was low. Many students preferred playing or chatting, suggesting that the existing collection did not align with elementary school-aged students' visual preferences. To address this challenge, this study aims to analyze the gap between students' visual literacy preferences and the school library's readiness. By applying Dual Coding Theory through a mixed-methods, sequential, explanatory approach, this study maps the potential of comics as a bridge to literacy while identifying structural barriers that hinder their optimal use at MI Asih Putera.

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METHOD

This study aims to analyze the gap between students' visual literacy preferences and the school library's readiness at MI Asih Putera using a mixed-methods approach. Specifically, this research adapts the Explanatory Sequential Design described by Plano Clark and Creswell (1991). This design was chosen because it allows researchers to combine quantified numerical data describing general trends with in-depth narrative insights, resulting in a richer understanding of the potential of comics as a literacy medium.

This research begins with a quantitative phase to collect baseline data. Consequently, the quantitative phase focuses on mapping: (1) student demand for visual/comic materials, and (2) structural barriers (availability and facilities) hindering their literacy activities. The subsequent qualitative phase involves semi-structured interviews with teachers, librarians, and principals to explain the statistical trends and explore the institutional challenges in implementing a Dual Coding-based literacy strategy. This approach is reinforced by studies showing that explanatory sequential designs are practical for exploring complex educational phenomena in which student perceptions need to be contextualized by teacher expertise (Ivankova et al., 2006; Tashakkori & Teddlie, 2010).

Participants

In the quantitative phase, purposive sampling was applied to select 30 students from grades 3-5 at MI Asih Putera. The participants were chosen based on specific inclusion criteria: (1) students who frequently visit the library based on attendance records; (2) students with sufficient reading fluency to understand the survey questions; and (3) students in grades 3-5 who are considered capable of expressing their opinions in written form. This method enables the researcher to focus on relevant participants effectively, thereby saving time and resources (Campbell et al., 2020). This quantitative sample consisted of 30 students, with a balanced distribution across grades 3, 4, and 5. This sample selection aimed to represent a diverse range of ages and literacy levels. In the qualitative phase, one teacher, one librarian, and one principal were purposively selected as key informants based on their roles in literacy education and school management. This approach ensured that relevant data were available to answer the research questions.

Instruments

Quantitative data were obtained through a Student Open-Ended Questionnaire designed to evaluate reading interest and perceptions of library conditions. Crucially, the instrument was designed to capture students' authentic voices regarding the library ecosystem. The questionnaire consisted of five key open-ended questions: (1) "Do you like reading books in the library?" (2) "What books do you like the most in the library?" (3) "Have you ever wanted to read a specific book, but it was not available?" (4) Do you feel comfortable reading in the library? Why?" and (5) "What do you usually do when you visit the library?" These questions allowed students in grades 3-5 to express their views freely about their conditions.

In the qualitative phase, interview guides were developed for the Principal, Teacher, and Librarian. The questions focused on library policy, budget constraints, and pedagogical views on comics to explain the gaps identified in the student survey. As a complement, an Observation Instrument was used to observe the physical condition of the library and student interaction with the collection. However, the open-ended questionnaire and semi-structured interviews remained the main instruments (Hennink & Kaiser, 2022).

Data Collection

Quantitative data collection was employed to gauge student preferences and perceptions. The open-ended questionnaire was distributed to 30 students in the school library during class hours for approximately 45 minutes. The researcher was available to assist participants who had trouble understanding the questions, but did not influence the responses. All 30 questionnaires were returned and usable (100% response rate).
Subsequently, semi-structured interviews were conducted with the teacher, librarian, and principal, each lasting 45-60 minutes. The interviews were audio-recorded after obtaining informed consent. Participatory

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observations of library activities were conducted during three sessions to validate survey findings on student behavior and facility conditions.

Data Analysis

Quantitative data collected from the 30 students were processed using a data transformation or quantizing technique (Sandelowski et al., 2009). Since the raw data were obtained in the form of open-ended text (qualitative), a systematic coding process was applied to convert them into numerical data to be analyzed using descriptive statistics (frequencies and percentages). The process began with categorization based on a codebook. Subsequently, the frequency of each code was calculated to identify dominant patterns, such as the percentage of students who reported specific issues as structural barriers. To complement this, qualitative interview data were analyzed using thematic analysis to explain why these statistical patterns occurred. Data integration occurs at the interpretation stage, where the qualitative expert insights explain quantitative trends. It should be noted that the coding process was conducted entirely in the original language (Indonesian) to preserve the authenticity of the students' responses, while the code labels displayed in this paper have been translated into English. The codebook used for coding the open-ended questionnaire responses is presented in Table 1 as follows:

Table 1. Open-ended Questionnaire Codebook

Code	Sub-Code	Value	Description
Reading_Interest	High Interest	1	Students express a positive (strong or moderate) interest in reading activities in the library.
	Low Interest	1	Students express a lack of interest, low reading frequency, or hesitation towards reading activities.
Reason_Interest	Knowledge Gain	1	Students like reading to gain knowledge or become smart
	Fun / Entertainment	1	Students like reading because it is fun or exciting
	Visuals / Comics	1	The student mentions pictures or comics as the reason
	Barriers (Busy/Play)	1	The student dislikes reading due to a lack of time or a preference for playing.
Library_Comfort	Comfortable	1	Student explicitly states comfort
	Situational	1	The student feels comfortable only sometimes
	Uncomfortable	1	The student explicitly states discomfort
Comfort_Factors	Quiet Environment	1	Comfort attributed to silence/calmness
	Facilities	1	Comfort is attributed to physical aspects
	Distractions	1	Discomfort attributed to negative factors
Preferred_Services	Librarian Interaction	1	The student likes the staff's attitude
	Books / Borrowing	1	The student likes the book or the borrowing process
	Atmosphere	1	The student likes the physical space
	Facilities	1	Students like the facilities service
Book_Preferences	Comic / Visual	1	Visual-based fiction
	Novel / Story	1	Text-based fiction
	Knowledge / Encycl.	1	Non-fiction/Educational
Availability_Issues	Unmet Needs (Yes)	1	Student confirms missing books
	Satisfied (No)	1	Student says books are available/and they have never missed one

Qualitative data obtained through semi-structured interviews were analyzed using descriptive analysis methods, adopting the interactive model of Miles, Huberman, and Saldana (2014). This framework includes three simultaneously running activities: data condensation, data display, and conclusion drawing/verification. This approach allows research data to be organized and interpreted based on themes that explain the quantitative findings.

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RESULTS AND DISCUSSION

Quantitative Phase

This section presents the quantitative findings derived from the open-ended questionnaire administered to 30 students in grades 3-5 at MI Asih Putera. As the first phase of an explanatory sequential mixed-methods study, this data aims to map the baseline demand for literacy materials and identify structural barriers within the library ecosystem. The descriptive statistical analysis focuses on students' reading interest, library comfort, preferred services, and specific book preferences. These findings address the research questions regarding the gap between students' visual literacy needs and the current library infrastructure. To provide an initial overview of student engagement, the baseline data on students' reading interests are summarized in Table 2.

Table 2. Student Reading Interest in the Library

Response Categories	Frequency (n=30)	Percentage (%)
Like	23	77
Do not like	7	23

Table 2 shows that the majority of students showed a high level of interest in library reading activities, with 77% (23 students) falling into the High Interest category. Only a small proportion of students (23%) showed low interest. This high initial participation rate is an important asset for the school, indicating that the literacy problem at MI Asih Putera does not lie in a lack of student motivation, but rather in how a relevant collection facilitates that motivation.

Table 3. Reasons for Reading

Reason	Frequency	Percentage (%)
Knowledge Gain	2	7
Fun / Entertainment	13	43
Barriers (Busy/Play)	8	27

Table 3 reveals that recreational factors drive student engagement in the library, with 43% citing "Fun and Entertainment" as their primary motivation. Students stated that reading storybooks and comics is a fun activity. In contrast, only 7% cited academic motivation. Additionally, 27% identified barriers like preferring to play with friends, time constraints, or distractions in the library. Although libraries are seen as pleasant spaces, their potential as learning centers is underutilized.

Table 4. Student Comfort in The Library

Comfort Level	Frequency	Percentage (%)
Comfortable	19	63
Sometimes	9	30
Uncomfortable	2	7

Table 4 maps students' perceptions of the comfort of the library as a place to read. The data show that 63% of students reported feeling generally comfortable. However, a more critical finding is that 30% of students reported their comfort as situational. This group emphasized that their comfort was highly dependent on external conditions at the time (e.g., "comfortable when it is quiet" or "comfortable as long as no one is running around"). Meanwhile, 7% of students explicitly stated that they felt uncomfortable. The high rate of situational discomfort indicates that the library environment remains vulnerable to disturbances, which could disrupt students if not appropriately managed. To understand what triggers this instability, the specific factors causing comfort and discomfort will be further elaborated in the following table.

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Table 5. Reasons for Comfort or Discomfort

Reason	Frequency	Percentage (%)
Quiet Environment	6	20
Facilities	17	57
Distractions	9	30

Table 5 shows that library facilities primarily support students' literacy experiences. The data indicate that facilities such as cushions, clean carpets, and reading tables make students feel more comfortable. These are cited by 57% of respondents (17 students). Additionally, 20% of students need a quiet environment for reading as a non-negotiable. However, the data also show weaknesses in the library ecosystem. For example, 30% of students identify distractions, mainly noise from peers, as significant issues. These findings show that adequate physical facilities exist, but managing visitor behavior is a challenge for students who need quiet. The interplay of facilities and distractions shapes students' activity patterns, as shown in the following table.

Table 6. Preferred Library Services

Type of Service	Frequency	Percentage (%)
Book Borrowing	27	90
Librarian Friendliness	4	13
Facilities	28	93
Atmosphere	1	3

Table 6 shows which library services students use most. Student interaction centers on Physical Facilities, with 93% (28 students) using them. Activities include watching TV, playing with educational toys, or sitting and relaxing. Books/Loans follow at 90%, confirming the library's core function. However, only 13% interacted with Librarians. This gap between facility use (93%) and human interaction (13%) suggests students use the library independently or may be hesitant to seek help, an issue explored further in the next table.

Table 7. Types of Books Preferred

Book Type	Frequency	Percentage (%)
Comic/Visual	22	73
Novel/Story	17	57
Encyclopedia	11	37

Table 7 shows that 73% of students (22 out of 30) chose Comic Books/Visual Books as their favorite reading material. This category, which includes popular titles such as 'Why?' and 'KKPK', far exceeds the preference for conventional textbooks. In comparison, text-based books such as Novels/Stories were preferred by 57% of students, while purely non-fiction books (Knowledge/Encyclopedias) were chosen by 37% of students. The dominance of visual preferences is not merely an entertainment trend; it also indicates that students are actively seeking material that reduces cognitive load through images, in accordance with the Dual Coding principle. However, this high preference for visual books often outpaces their actual availability in schools.

Table 8. Book Availability Issues

Aspect	Frequency	Percentage (%)
Unmet Needs (Yes)	28	93
Satisfied (No)	2	7

Table 8 reveals a gap between demand and availability of library collections. The data shows 93% of students (28 out of 30) have unmet needs. Many report disappointment because desired books, especially new

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comic series or genres like horror and mystery are either unavailable or borrowed by others. Only 7% of students (2 people) are satisfied with the current collection. This high level of dissatisfaction is strong evidence of a structural barrier. Students' established reading interest is hindered by limited infrastructure.

Overall, these quantitative findings describe a literacy ecosystem with great potential but constrained by limited resources. Empirically, the data align with the principles of the Dual Coding theory. Students show a very high visual collection demand (73%) as a cognitive strategy for engaging in reading activities. However, this demand currently faces a critical shortage of availability. The high figure of 93% for unmet needs, coupled with the finding that students interact much more with physical facilities (93%) than with librarians (13%), indicates that libraries currently function more as physical recreational spaces than as fully guided literacy centers. Although students' desire for visual materials is very real, their literacy growth is hampered by structural barriers. Specifically, there is a lack of relevant comic book collections and physical environmental distractions. Statistical evidence of this gap between needs and availability raises the fundamental question: why does this deficit exist when schools are committed to literacy? The following qualitative phase will answer this question by exploring the managerial and pedagogical perspectives of school leaders and staff.

Qualitative Phase

The qualitative phase of this study serves as an explanatory bridge to dissect the quantitative findings. Specifically, this phase answers the question: Why did the school's visual strategy succeed in generating widespread interest (73%), but fail to meet collection needs (93%) and fail to build meaningful service interactions (13%)? An in-depth thematic analysis of interviews with the Principal, Classroom Teachers, and Librarians revealed several interrelated main causalities: (1) Implementation of the cognitive hook Strategy and visual-centric approach, (2) Structural barriers in the collection supply chain, and (3) service gap in the transition era.

Explaining the high preference for visuals, the dominance of students' preference for comics (73%) recorded in the survey was confirmed not coincidental but rather the result of an intentional pedagogical strategy (intentional design) by the school leadership. In an interview, the principal, who claims a deep love of books, emphasized that the school takes a pragmatic approach. He realizes that forcing elementary school students to read complex texts is counterproductive. Therefore, comics are positioned as a cognitive hook to build the physical habit of "opening a book" first.

> "Actually, what I hoped for when I was entrusted with being the principal of this school... was first how to get the children to grow up liking to open books first. That is why we encouraged the foundation to provide comic books first... Now comics are rapidly gaining popularity. Whatever you want to learn, it can all be turned into a comic. So if the goal is to get them to read, we have to start with what they like." (Principal, Interview, 2025).

This strategy has proven successful in creating a new reading culture in the library. Librarians confirm that borrowing trends are dominated by specific visual titles such as the Why? series, Cookie Run, and the children's novel KKPK (Kecil-Kecil Punya Karya). Classroom teachers also confirmed that this visual appeal led to intense borrowing of these books, unlike with textbooks. This explains why in quantitative data, the "Fun" factor was the primary motivator for students.

> "Children enjoy pictures, such as comics. There are comics like Why, which children really like. They even fight over them. But when it comes to fictional children's storybooks... There does not seem to be much variety." (Classroom Teacher, Interview, 2025).

The phased procurement budget and donation distortions were also major obstacles. There is high interest, but dissatisfaction with the availability of collections reaches 93%, as clearly explained by structural

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barriers. The principal honestly admits that, even though the library has been physically expanded, the volume of its collection is still far short of expectations. He even compares it to his personal collection, which he feels is more complete.

> "Alhamdulillah, now the library has been expanded. The space is there, even though the book collection is still far from expectations... In fact, for the current library collection, I dare to compare it with the book collection in my house." (Principal, Interview, 2025).

The librarian detailed this problem as a financial bottleneck. The mechanism for procuring school books is very slow because it depends on a limited monthly budget, which forces schools to make purchases gradually or in phased procurement. As a result, the speed of book procurement fails to keep up with the high rate at which students consume new series.

> "The main obstacle is certainly the budget. With limited funds each month, we cannot immediately buy books in large quantities or buy the latest series. We have to pay in phases under the procurement process. For example, this month we bought 5 books, next month 5 more. So the growth is rather slow." (Librarian, Interview, 2025).

In addition to internal factors, the librarian also highlighted distortions in quality from external sources. The large number of unmet needs is also caused by donations that are not on target. The library shelves may look full, but they often contain adult novels that are irrelevant to MI students. Statistically, there are books, but in terms of children's literacy, these books are underutilized.

> "The second challenge is the availability of age-appropriate books. Sometimes donated books arrive, but their content is too heavy or consists of adult novels that are unsuitable for elementary school students." (Librarian, Interview, 2025).

In addition, the low level of student interaction with librarians (13%) compared to physical facilities (93%) can be explained by the lack of modernization in human resource operations. Librarians reported working alone (single-handedly) to handle all administrative and service tasks without the aid of an automated system. All circulation is still recorded manually (handwritten in a ledger). As a result, librarians spend their time on clerical administrative tasks, rather than on literacy guidance or book discussions with students.

> "Considering I am alone, it is quite a heavy project if I have to do it while providing services... Our system is still manual/conventional. Loan records are still handwritten in ledgers. There is also no search catalog (OPAC). There is one computer, but it is only for my administration... not for student access." (Librarian, Interview, 2025).

This situation also creates a cultural gap. The Classroom Teacher added that students today have a digital-native orientation that demands quick access, while the library still relies on manual systems. The absence of a Digital Corner makes the library less appealing to the digital-native generation, even though they still come for the comfort of the space.

> "As far as I know, there are no special computer facilities for students to access e-books... Maybe in the future it will be necessary, because children today are gadget-minded. If there is a digital corner, maybe they will be more interested." (Classroom Teacher, Interview, 2025).

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The principal recognizes the need for digitization and has included it in the long-term roadmap, but he has chosen to postpone it in order to prioritize the spirit of physical reading culture first. This explains why students have not yet found the digital services they expect, which contributes to low service satisfaction in quantitative data.

> "So, library digitization is definitely in our roadmap, but maybe not this year... Culture is the key. If the building is nice, the books are complete, but the children do not want to read, it is useless. So I am focusing on the 'spirit' first." (Principal, Interview, 2025).

Overall, these qualitative findings provide crucial context: the statistical gap at MI Asih Putera is not the result of a lack of literacy vision, but instead of operational execution imbalances. The cognitive hook strategy through comics has proven successful in building a foundation for students' visual reading interest, but this success has triggered pressure that has not been balanced by the collection's capacity and human resources. In other words, the school currently finds itself in a position where it has students with a strong need for collection resources and progressive leadership strategies, yet is constrained by its operational ecosystem, including limited budgets and manual systems that are not yet prepared to support the surge in demand.

Discussion

This study employs a mixed-methods, sequential, explanatory design (Ivankova et al., 2006) to investigate the role of comics in the elementary school literacy ecosystem. The integration of survey and interview data reveals a phenomenon in which students' success with visual literacy strategies is hampered by conventional school infrastructure. The most fundamental finding is the dominance of students' preference for comics at 73%, which aligns with their primary motivation: seeking pleasure (43%). This data, when confirmed through interviews, demonstrates that comics serve as a strategic cognitive hook. This aligns with the principles of the Dual Coding theory (Clark & Paivio, 1991), which explains that elementary school students with developing reading skills find it easier to process information when text is paired with images. Comics, which consist of images and text, can help reduce students' cognitive load, making reading material easier to understand and remember (Listiyani et al., 2025; Topkaya et al., 2023).

The success of this visual strategy is evident in students' enthusiasm in the library. The phenomenon of intense competition for books reported by teachers in interviews is not a sign of disorder but rather evidence of high student engagement with teaching materials that are suitable for their brains. Thompson (2023), in his book on graphic novels, asserts that comics are complex texts that train students' logic and comprehension, not just light reading. This finding refutes the assumption that comics serve only as entertainment; at MI Asih Putera, they are the main gateway to student literacy. This aligns with the research of Astuti et al. (2025) and Munawar (2021), who found that student resistance or reluctance to read decreased dramatically when the material was presented in an attractive visual format.

However, this high interest in reading clashes with the reality of school facilities, creating a sharp gap between demand for collections and their availability. The figure of 93% unmet needs is statistical evidence of the failure of the collection supply chain. Qualitative findings indicate that the root of this problem lies in budget constraints, with book procurement carried out gradually or in phased procurement. This condition reflects the classic challenges of school library management, as evidenced in studies by Zein et al. (2023) and Komara (2023), in which libraries often lag in responding to student needs and trends due to rigid budgetary bureaucracy. As a result, the speed of book procurement fails to keep pace with the very high rate of student reading consumption.

The incompatibility of collections from external sources exacerbates this availability problem. Interviews with librarians revealed that although the bookshelves appear full, many of them are inappropriate donations, such as adult novels with overly complex language. This creates an illusion of availability, where

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the books are physically present but functionally inaccessible to elementary school students. Amikratunnisyah & Prastowo (2022) emphasize that reading interest will grow only if the reading material is relevant to children's world. This deficit of relevant books is very dangerous for the sustainability of a reading culture (Gillon et al., 2024; Petscher et al.). As students who come with high enthusiasm often leave disappointed, this can, over time, kill their intrinsic motivation.

In addition to collection issues, there is an extreme imbalance in service. Data shows that 93% of students actively use physical facilities, but only 13% interact with librarians. Interviews clarify that this occurs because librarians work alone (as sole librarians) and that manual administrative tasks consume their time. In fact, Yulvira et al. (2022) emphasize that the thalibrarians' role is vital as literacy mentors who guide students, not just circulation guards. Without meaningful human interaction, school libraries ultimately serve only as physically comfortable book warehouses rather than functioning optimally as learning centers.

Finally, these findings highlight a technological gap or cultural lag. Teachers realize that today's students are a gadget-minded generation, while school libraries still operate entirely manually. Research by Yulaichah et al. (2024) and Suprapto et al. (2024) suggests that, in the current era, integrating digital comics (e-comics) is key to maintaining libraries' relevance and improving students' critical thinking skills. Because computer facilities for students and access to e-books are not yet available, school libraries are less attractive than digital entertainment outside of school. Therefore, modernizing facilities is no longer optional but an urgent necessity for libraries to keep pace with today's students' learning styles.

CONCLUSIONS AND RECOMMENDATIONS

This study concludes that the use of comics at MI Asih Putera has demonstrated significant potential as a cognitive hook that successfully bridges the literacy gap among students, while also supporting the dual coding theory, which holds that the combination of visual narratives and text can reduce cognitive load and accelerate understanding of complex material. These findings confirm that comics are not merely a medium of entertainment, but a strategic pedagogical instrument capable of transforming resistance to reading into enthusiasm for learning. However, this study also reveals that the success of this visual strategy is hampered by the school's operational capacity, particularly by financial constraints (a phased procurement system) and the realities of librarians' workloads. As a result, there is a sharp gap between the high demand for student literacy and the slow collection supply chain and manual service management, leaving libraries currently functioning more as physical hangouts than guided literacy centers.

To address this structural gap, this study recommends a strategic transformation that focuses on cost efficiency and resource empowerment. First, to address the collection deficit and reduce manual workload, schools are encouraged to adopt open-source library automation systems. Utilizing open-access e-comics displayed via classroom projectors offers a budget-friendly solution without requiring massive initial investment. Second, the status of comics needs to be formally integrated into the learning curriculum so that their procurement becomes an administrative priority rather than just a supplementary book. Finally, schools are advised to revise their donation policy from passive to active, based on a curated wish list, to ensure that every book that comes in is relevant to students' needs.

Limitation

This study acknowledges several limitations. First, as a single-site case study in a Madrasah Ibtidaiyah, the findings are context-specific. They cannot be generalized to all elementary education settings, predominantly secular public schools. Second, the sample size (n=30) consisted of purposively selected students identified as active library users, meaning participants were intentionally chosen for their regular engagement with the school library; thus, the sample may not reflect the perspectives of disengaged students. Third, the quantitizing technique structured the analysis, but coding open-ended responses still involved some researcher subjectivity. Finally, this study mapped student preferences and structural barriers but did not measure the direct impact of comics on reading comprehension scores. Therefore, future researchers should

expand the sample to include diverse demographics and use experimental designs to measure the cognitive effects of comics on literacy skills quantitatively.

Credit Authorship Contribution Statement

First Author: Research conceptualization, data collection, data processing, data analysis, research methodology, presentation of findings, and discussion. Second Authors: Guidance and direction during the writing process, as well as ensuring scientific quality and alignment of articles with academic standards. Last Author: guidance and direction during the writing process, as well as ensuring scientific quality and alignment of articles with academic standards.

Declaration Of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

Ethical Declaration

All participants provided informed consent prior to their involvement in the study. They were informed about the study's purpose, procedures, and their right to withdraw at any time without consequence.

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