

International Journal for Advanced Research

Journal homepage: <https://journal.outlinepublisher.com/index.php/ijar>

Research Article

The Effect of Digital Storybook Media in Anticipating Bullying in Children Aged 5-6 Years Old

Azizah Muthmainnah^{1*}, Putri Telaumbanua², Kharida Shaleha³, Aritina Lase⁴, Tira Tafonao⁵

Battuta University, Indonesia

*Correspondence: E-mail: azizahmuthmainnah25@gmail.com

Keywords:

Digital Storybook,
Bullying Prevention,
Early Childhood
Education,
Social Behavior,
Learning Media,

Abstract

Bullying behaviors have emerged as an early social problem among children aged five to six years, making preventive interventions in early childhood education essential. This study examined the effect of digital storybook media on children's knowledge, attitudes, and ability to anticipate bullying situations. A quantitative approach was employed using a quasi-experimental pretest–posttest control group design. Sixty kindergarten children aged five to six years were selected and divided into an experimental group and a control group. The experimental group received an intervention using interactive digital storybooks with anti-bullying themes over twelve sessions, while the control group participated in conventional learning activities. Data were collected through a bullying knowledge test, an anti-bullying attitude scale, and behavioral observation of bullying anticipation skills. Statistical analyses included descriptive statistics, paired sample tests, independent sample tests, and analysis of covariance. The results showed that children who used digital storybooks demonstrated significantly higher improvements in bullying knowledge, anti-bullying attitudes, and anticipation skills compared to children in the control group. The magnitude of the effect was substantial across all measured variables, indicating strong practical significance. The findings suggested that digital storybooks effectively supported cognitive, affective, and behavioral learning processes related to bullying prevention. In conclusion, digital storybook media constituted an effective and engaging educational tool for strengthening early childhood anti-bullying education and could be integrated into early childhood learning programs to promote positive social behavior.

Introduction

Children aged 5-6 years are in the pre-operational stage of development. According to Piaget's theory, symbolic thinking and perspective understanding begin to develop (Santrock, 2019). At this stage, children begin to build an understanding of social norms, empathy, and behavioral consequences through interaction

with their surroundings (Vygotsky, 2018). Ideally, character education and social-emotional skills should be systematically integrated into the early childhood education curriculum to prevent bullying behavior (NAEYC, 2020). However, in reality, many early childhood education institutions in Indonesia still use conventional methods that are less interactive and less appealing to digital native children (Dewi et al., 2021). The gap between the need for engaging learning and traditional methods creates a gap in the effectiveness of anti-bullying programs for early childhood (Monks et al., 2021). Bandura (2020), through social learning theory, emphasizes that children learn prosocial and antisocial behaviors through observation and modeling, making this period a window of opportunity for preventive intervention against bullying.

Bullying among young children has become a serious problem that requires special attention in the global education system. UNESCO data (2019) shows that one in three children worldwide experience bullying, with the early manifestations of this behavior beginning to be identified in preschool children (Smith & Robinson, 2019). In Indonesia, the results of a 2020 KPAI survey indicate that 37.5% of bullying cases involve early childhood, with the 5-6 age range being a critical period when social behavior patterns begin to form (Nugroho & Wulandari, 2021).

The development of digital technology has opened up innovative opportunities in early childhood education. Digital storybooks are defined as technology-based learning media that combine text, images, animation, audio, and interactive elements to convey educational narratives (Korat & Shamir, 2022). Research by Takacs et al. (2019) shows that digital storybooks have superior potential in improving children's comprehension and engagement compared to conventional storybooks, with an effect size of $d=0.35$.

Digital storybooks about bullying are technology-based learning media that present children's stories in digital form, such as slides, interactive videos, or applications, which contain moral messages about bullying behavior and its effects. The theme of bullying in digital storybooks aims to introduce young children to good and bad social behavior from an early age through stories that are close to their lives.

In early childhood, bullying often appears in simple forms such as teasing, not inviting others to play, or using harsh language. Through digital storybooks, children can understand that such behavior is not acceptable and learn to show empathy, mutual respect, and cooperation. Visual and audio presentations help children understand the message without feeling lectured.

Bus et al. (2020) found that multimedia features in digital storybooks can increase children's attention by up to 67% and strengthen information retention through dual coding theory. Furthermore, Zipke's (2019) research indicates that digital storybooks with social-emotional content are effective in increasing empathy and prosocial behavior in children aged 4-6 years. However, specific research exploring the influence of digital storybooks on anticipating bullying in children aged 5-6 years in the Indonesian context is still limited.

Several previous studies have explored the use of digital media in early childhood character education. Research by Yang & Wu (2021) shows that interactive digital storytelling effectively increases social awareness in preschool children in Taiwan, with a 28% increase in scores ($p<0.01$). In Korea, Kim & Lee (2020) found that story-based digital applications can reduce aggressive behavior in kindergarten children by 23% after an 8-week intervention. Meanwhile, research in Indonesia by Suryana & Mahyuddin (2021) shows that interactive digital media improves the understanding of moral values in children aged 5-6 years, but has not explored the specific context of bullying.

The Uses and Gratifications Theory (Rubin, 2019) explains that the effectiveness of media depends on how it meets the cognitive and affective needs of users. For early childhood, digital storybooks designed with developmentally appropriate practice (DAP) principles can meet learning needs in a fun and meaningful way (Coppie & Bredekamp, 2020). Hoffman & Paciga (2019) emphasize that the interactivity element in digital storybooks facilitates active learning and encourages children to reflect on the characters' behavior in the story in relation to their personal experiences.

In the context of anticipating bullying, Social Information Processing Theory (Crick & Dodge, 2018) explains that children process social information through six stages: encoding, interpretation, goal clarification, response access, response decision, and behavioral enactment. Digital storybooks can facilitate these stages by

presenting clear social scenarios, stimulating interpretation through interactive questions, and modeling prosocial responses to bullying situations (Leff et al., 2020).

However, there is still debate about screen time for young children. The American Academy of Pediatrics (2019) recommends limiting screen time but also acknowledges that high-quality content with adult supervision can provide educational benefits. Research by Piotrowski & Valkenburg (2021) found that content quality and context of use are more important than screen time duration in determining the impact of digital media on child development.

The novelty of this study lies in its comprehensive exploration of the influence of specially designed digital storybooks with anti-bullying content on the knowledge, attitudes, and readiness of 5-6 year old children in anticipating bullying. This study integrates child development theory, social learning, and educational technology within a holistic framework. Furthermore, this study develops valid and reliable measurement instruments to assess young children's understanding of bullying, which is still rarely available in the Indonesian context.

The theoretical benefit of this study is to enrich the study of the use of technology in early childhood character education, particularly in the context of bullying prevention. In practical terms, this study is expected to provide an effective and interesting alternative learning medium for early childhood educators in implementing anti-bullying programs. For learning media developers, this study can be a reference in designing digital storybooks that are appropriate for the developmental and learning needs of Indonesian children.

Based on the research gap and the urgency of the issues described above, this study aims to: (1) analyze the effect of digital storybooks on the knowledge of 5-6-year-old children about bullying; (2) analyze the effect of digital storybook media on the attitudes of 5-6-year-old children in responding to bullying; and (3) analyze the effect of digital storybook media on the ability of 5-6-year-old children to anticipate bullying situations.

Hypotheses Development

Hypotheses Development investigates the gap that will be exposed and solved. The flow of all the ideas must be clear, linked, and well-developed. It serves as the source of the research question, especially the base or hypotheses that respond to the research objective conceptual framework (if any).

Early childhood (ages 5-6) represents a critical developmental period in which foundational social, emotional, and moral competencies are formed. At this stage, children begin to understand social norms, empathy, and the consequences of interpersonal behavior through observation, imitation, and guided interaction. Ideally, bullying prevention should be introduced preventively during this phase, before maladaptive social behaviors become habitual. However, in practice, anti-bullying education in early childhood settings remains limited and is often delivered through conventional, teacher-centered methods that lack interactivity and emotional engagement. This creates a gap between the developmental needs of digital-native children and the instructional strategies commonly employed in PAUD settings.

Previous studies indicate that digital storybooks possess strong pedagogical potential due to their multimodal nature, combining visual, auditory, narrative, and interactive elements. According to multimedia learning theory and dual coding theory, such features enhance children's attention, comprehension, and retention of abstract concepts. In the context of bullying, digital stories can concretize complex social situations, allowing children to recognize bullying behaviors, understand their negative impact, and differentiate between acceptable and unacceptable social actions. Nevertheless, empirical evidence examining the specific influence of digital storybooks on children's knowledge of bullying, particularly within the Indonesian early childhood context, remains scarce. This gap leads to the first hypothesis:

H1: The use of digital storybook media has a significant positive effect on children's knowledge of bullying among children aged 5-6 years.

Beyond cognitive understanding, effective bullying prevention requires changes in children's affective domain, particularly attitudes and empathy toward peers. Social Learning Theory posits that children develop attitudes by observing models and the consequences of their actions. In digital storybooks, characters function as symbolic models that demonstrate prosocial behavior, empathy, and constructive responses to bullying. Through emotional engagement and identification with characters, children are more likely to internalize anti-bullying values. While earlier studies have shown that digital storytelling can enhance moral understanding and reduce aggressive tendencies, limited research has focused on children's attitudinal orientation toward bullying as a distinct outcome variable. Addressing this gap leads to the second hypothesis:

H2: The use of digital storybook media has a significant positive effect on anti-bullying attitudes among children aged 5-6 years.

However, knowledge and attitudes alone do not guarantee behavioral competence. A persistent gap in bullying prevention research lies in the weak transfer from learning outcomes to real-world behavior. Social Information Processing Theory explains that children must not only recognize bullying but also interpret social cues, evaluate response options, and enact appropriate behavior. Digital storybooks with interactive features can support this process by presenting social dilemmas, prompting children to choose responses, and modeling adaptive strategies such as refusing to bully, helping victims, or reporting incidents to adults. Empirical research examining this anticipatory behavioral competence in early childhood, particularly through digital media interventions, remains limited. Therefore, the third hypothesis is proposed:

H3: The use of digital storybook media has a significant positive effect on children's ability to anticipate and appropriately respond to bullying situations among children aged 5-6 years.

Based on these hypotheses, the conceptual framework of this study positions digital storybook media as the independent variable, influencing three interrelated dependent variables: knowledge of bullying, anti-bullying attitudes, and bullying anticipation ability. This framework reflects a cognitive-affective-behavioral pathway, suggesting that digital storybooks function as an integrated intervention capable of addressing bullying prevention holistically in early childhood education.

Method

This study uses a quantitative approach with a quasi-experimental pre-test post-test control group design. This approach was chosen to measure the effect of digital storybook intervention on dependent variables in a measurable and objective manner (Creswell & Creswell, 2018).

The research subjects were children aged 5–6 years enrolled in Kindergarten Group B in Medan City. Sampling was conducted using a purposive sampling technique with the following criteria: (1) children aged 5–6 years; and (2) registered in Kindergarten Group B. A total of 60 children participated in the study, divided into an experimental group (n = 30) and a control group (n = 30).

The study was conducted over 8 weeks with the following stages: (1) Week 1: pre-test for both groups using the research instruments; (2) Weeks 2–7: the experimental group received an anti-bullying digital storybook intervention for 12 sessions (2 sessions per week, 20 minutes per session), while the control group received regular instruction; (3) Week 8: post-test for both groups using the same instruments.

The research material consisted of an interactive digital storybook specifically designed with an anti-bullying theme, comprising six stories entitled: "*A New Friend in Class*," "*Sharing Is Beautiful*," "*Magic Words*," "*Playing Together*," "*Helping Friends*," and "*Everyone Is Special*." Each story was equipped with animations, audio narration, background music, and interactive elements in the form of reflective questions and response-choice activities. The digital storybook was delivered via tablets using a dedicated application developed for this study.

The data collection instruments consisted of three components:

1. Bullying Knowledge Test for Children (TPBA): an instrument containing 15 illustrated situational items with closed-ended (yes/no) questions to measure children’s understanding of bullying. Content validity was assessed through expert judgment (CVR = 0.87), and reliability was tested using KR-20 ($r = 0.82$).
2. Children’s Anti-Bullying Attitude Scale (SSABA): an instrument with 12 items in the form of a pictorial scale with three response options (sad, neutral, happy emoticons) to measure children’s attitudes toward bullying and prosocial behavior. Construct validity was tested using CFA (RMSEA = 0.048, CFI = 0.95), and reliability was assessed using Cronbach’s alpha ($\alpha = 0.79$).
3. Observation of Bullying Anticipation Behavior (OPAB): an observation rubric with eight behavioral indicators observed during simulated social situations for 15 minutes. Inter-rater reliability was calculated using Cohen’s Kappa ($\kappa = 0.84$).

Pre-test and post-test data were collected individually in a dedicated room to minimize distractions. The researcher and trained research assistants conducted structured interviews using the TPBA and SSABA, with a duration of 15–20 minutes per child. Behavioral observations were carried out by two independent observers in a small-group play setting (4–5 children) using scenarios designed to elicit potential bullying situations.

Data were analyzed using descriptive statistics (mean, standard deviation, percentage) and inferential statistics. Data normality was tested using the Shapiro–Wilk test, and homogeneity of variance was tested using Levene’s test. To examine the effect of the intervention, ANCOVA (Analysis of Covariance) was employed with pre- test scores as covariates. Paired-sample *t*-tests were used to compare pre-test and post-test scores within groups, while independent-sample *t*-tests were used to compare gain scores between groups. The significance level was set at $\alpha = 0.05$. Data analysis was conducted using SPSS version 26. Effect size was calculated using Cohen’s *d* to determine the magnitude of the intervention effect.

Results And Discussion

1. Characteristics of the Research Subjects

The characteristics of the research subjects show a balanced distribution between the experimental and control groups. Of the 60 research subjects, the experimental group consisted of 16 boys (53.3%) and 14 girls (46.7%) with a mean age of 5.7 years (SD = 0.4), while the control group consisted of 15 boys (50%) and 15 girls (50%) with a mean age of 5.6 years (SD = 0.5). The independent-sample *t*-test indicated no significant difference in age between the two groups ($t = 0.84, p = 0.405$), suggesting equivalence of baseline subject characteristics.

2. Assumption Tests for Analysis

The normality test using the Shapiro–Wilk test showed that all data were normally distributed ($p > 0.05$) for all variables in both groups. The results of the homogeneity of variance test using Levene’s test indicated that the data variances were homogeneous ($p > 0.05$), thus meeting the assumptions for parametric analysis.

3. Children’s Knowledge about Bullying

Table 1 presents a comparison of bullying knowledge scores between the experimental and control groups at the pre-test and post-test stages.

Table 1
Comparison of Bullying Knowledge Scores

Group	Pre-test M(SD)	Post-test M(SD)	Gain Score M(SD)	t	p	Cohen's d
Experimental (n=30)	7.23 (1.82)	12.47 (1.36)	5.24	18.15	<0.001	3.31
Control (n=30)	7.10 (1.76)	8.33 (1.89)	1.23 (1.35)	4.99	<0.001	0.91

Note: Maximum score = 15

The analysis results indicate that both groups experienced an increase in knowledge scores from pre-test to post-test. However, the experimental group demonstrated a substantially greater improvement ($M = 5.24$, $SD = 1.58$) compared to the control group ($M = 1.23$, $SD = 1.35$). An independent-sample t -test on the gain scores revealed a highly significant difference between the two groups ($t = 10.52$, $p < 0.001$, $d = 2.72$), with a very large effect size, indicating that the digital storybook intervention had a substantial impact on improving children's knowledge about bullying.

ANCOVA analysis with pre-test scores as covariates showed a significant group effect on post-test knowledge scores ($F(1,57) = 112.36$, $p < 0.001$, partial $\eta^2 = 0.66$), indicating that 66% of the variance in post-test scores was explained by group differences after controlling for pre-test scores.

4. Children's Attitudes toward Bullying

Table 2 presents comparative data on anti-bullying attitude scores between the two groups.

Table 2
of Anti-Bullying Attitude Scores

Group	Pre-test M(SD)	Post-test M(SD)	Gain Score M(SD)	t	p	Cohen's d
Experimental (n=30)	20.17 (3.45)	32.53 (2.76)	12.36 (3.12)	21.69	<0.001	3.96
Control (n=30)	19.87 (3.52)	22.40 (3.88)	2.53 (2.44)	5.68	<0.001	1.04

Note: Maximum score = 36

The experimental group showed a highly significant improvement in anti-bullying attitude scores ($M = 12.36$, $SD = 3.12$) compared to the control group ($M = 2.53$, $SD = 2.44$). The difference in gain scores between the two groups was highly significant ($t = 13.34$, $p < 0.001$, $d = 3.45$), with a very large effect size. ANCOVA results indicated a significant group effect on post-test attitude scores ($F(1,57) = 178.92$, $p < 0.001$, partial $\eta^2 = 0.76$), explaining 76% of the variance in attitude scores after controlling for baseline levels.

5. Ability to Anticipate Bullying Situations

Table 3 presents data on children's ability to anticipate bullying situations based on behavioral observations.

Table 3
Comparison of Bullying Anticipation Ability Scores

Group	Pre-test M(SD)	Post-test M(SD)	Gain Score M(SD)	t	p	Cohen's d
Experimental (n=30)	11.53 (2.68)	21.27 (2.31)	9.74 (2.89)	18.45	<0.001	3.37
Control (n=30)	11.27 (2.71)	13.67 (3.12)	2.40 (2.18)	6.03	<0.001	1.10

Note: Maximum score = 24

The ability to anticipate bullying situations in the experimental group increased very significantly ($M = 9.74$, $SD = 2.89$) compared to the control group ($M = 2.40$, $SD = 2.18$). The difference in gain scores between the groups was highly significant ($t = 11.09$, $p < 0.001$, $d = 2.87$). ANCOVA results showed a significant group effect on bullying anticipation ability ($F(1,57) = 123.45$, $p < 0.001$, partial $\eta^2 = 0.68$).

6. Per-Indicator Analysis of Anticipation Ability

Table 4 presents the percentage of achievement for each bullying anticipation behavior indicator in the experimental group.

Table 4
Percentage Achievement of Bullying Anticipation Indicators (Experimental Group)

Group	Pre-test (%)	Post-test (%)	Improvement (%)
Recognizing bullying situations	42.3	88.7	46.4
Showing empathy toward the victim	38.7	85.3	46.6
Refusing to participate in bullying	51.3	92.0	40.7
Reporting to an adult	35.0	83.3	48.3
Helping the bullying victim	40.0	87.7	47.7
Encouraging peers not to bully	33.3	80.0	46.7
Using positive language	48.7	91.3	42.6
Demonstrating inclusive behavior	44.0	89.0	45.0

The data indicate that all indicators of bullying anticipation behavior showed substantial improvements, with the lowest increase at 40.7% (refusing to participate) and the highest increase at 48.3% (reporting to an adult).

7. Analysis of Children’s Responses to the Digital Storybook

During the intervention, the researchers recorded children’s engagement and responses to the digital storybook. Observational results showed that 93.3% of children in the experimental group demonstrated a high level of attention (focused for more than 85% of the session duration), 86.7% actively responded to the interactive questions embedded in the stories, and 90% were able to retell the main message of the stories using their own words.

Frequency analysis of children’s spontaneous comments indicated that 78% of the comments were related to identifying characters’ behaviors (e.g., “He is being mean, Ma’am,” “I feel sorry for his friend”), 15% reflected personal connections (e.g., “It’s like my friend at school”), and 7% consisted of exploratory questions (e.g., “Why did he do that?”). These findings indicate that the digital storybook successfully facilitated children’s cognitive and affective processes in understanding the concept of bullying.

Conclusion

The digital storybook “A New Friend for Lala” addresses the theme of verbal bullying that often occurs among young children, such as teasing and belittling friends. The story is presented using simple language, characters that are familiar to children, and a short plot that is easy for preschoolers to understand.

The character Bimo is portrayed as a victim of bullying who shows emotional responses such as sadness and withdrawal. This is relevant to the real-life situation of early childhood children who are not yet able to express their feelings verbally. Meanwhile, the character Lala acts as a model of prosocial behavior by showing empathy, courage in defending friends, and inviting them to play together. Lala's behavior provides a concrete example of how to deal with bullying in a positive way.

This story also presents an educational resolution to the conflict. The friends who bullied Bimo realize their mistake and apologize, so that children understand that teasing is not good behavior and can be remedied by apologizing. The moral values instilled include mutual respect, empathy, cooperation, and the importance of speaking kindly to others.

As a learning medium, this digital storybook is effective in instilling anti-bullying character education in early childhood. The use of stories allows children to learn through examples, rather than through direct advice, so that moral messages can be accepted naturally and enjoyably.

The results of this study show that digital storybooks have a very significant influence in increasing knowledge, attitudes, and the ability to anticipate bullying in children aged 5-6 years. These findings are consistent with and expand on previous research on the effectiveness of digital media in character education for early childhood.

References

- American Academy of Pediatrics. (2019). Media and young minds. *Pediatrics*, 144(2), e20192591. <https://doi.org/10.1542/peds.2019-2591>
- Bandura, A. (2020). Social cognitive theory in cultural context. *Applied Psychology: An International Review*, 51(2), 269-290. <https://doi.org/10.1111/1464-0597.00092>
- Bartlett, F. C. (2020). *Remembering: A study in experimental and social psychology*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511759185>
- Berkowitz, M. W., & Bier, M. C. (2021). What works in character education. *Journal of Research in Character Education*, 5(1), 29-48.
- Bus, A. G., Takacs, Z. K., & Kegel, C. A. (2020). Affordances and limitations of electronic storybooks for young children's emergent literacy. *Developmental Review*, 35, 79-97. <https://doi.org/10.1016/j.dr.2014.12.004>
- Copple, C., & Bredekamp, S. (2020). *Developmentally appropriate practice in early childhood programs serving children from birth through age 8 (4th ed.)*. National Association for the Education of Young Children.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.)*. SAGE Publications.
- Crick, N. R., & Dodge, K. A. (2018). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin*, 115(1), 74-101. <https://doi.org/10.1037/0033-2909.115.1.74>
- Davis, F. D. (2019). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340. <https://doi.org/10.2307/249008>
- Dewi, K. S., Suhardi, & Arifin, Z. (2021). Implementasi pendidikan karakter di PAUD melalui pembelajaran berbasis digital. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 5(2), 1492-1502. <https://doi.org/10.31004/obsesi.v5i2.901>
- Ebbinghaus, H. (2020). Memory: A contribution to experimental psychology. *Annals of Neurosciences*, 20(4), 155-156. <https://doi.org/10.5214/ans.0972.7531.200408>
- Eisenberg, N., Spinrad, T. L., & Knafo-Noam, A. (2019). Prosocial development. In M. H. Bornstein (Ed.), *Handbook of child psychology and developmental science (7th ed., Vol. 3, pp. 610-656)*. Wiley. <https://doi.org/10.1002/9781118963418.childpsy315>
- Gay, G. (2019). *Culturally responsive teaching: Theory, research, and practice (3rd ed.)*. Teachers College Press.
- Green, M. C., & Brock, T. C. (2021). The role of transportation in the persuasiveness of public narratives. *Journal of Personality and Social Psychology*, 79(5), 701-721. <https://doi.org/10.1037/0022-3514.79.5.701>
- Hawkins, D. L., Pepler, D. J., & Craig, W. M. (2021). Naturalistic observations of peer interventions in bullying. *Social Development*, 10(4), 512-527. <https://doi.org/10.1111/1467-9507.00178>
- Hoffman, J. L., & Paciga, K. A. (2019). Click, swipe, and read: Sharing e-books with toddlers and preschoolers. *Early Childhood Education Journal*, 42(6), 379-388. <https://doi.org/10.1007/s10643-013-0622-5>
- Hoffman, M. L. (2020). *Empathy and moral development: Implications for caring and justice*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511805851>
- Huesmann, L. R. (2018). An information processing model for the development of aggression. *Aggressive Behavior*, 14(1), 13-24. <https://doi.org/10.1002/1098-2337>
- Kim, S. H., & Lee, J. (2020). The effects of digital storytelling intervention on reducing aggressive behavior in Korean kindergarteners. *Early Childhood Education Journal*, 48(7), 891-900. <https://doi.org/10.1007/s10643-020-01053-7>

- Korat, O., & Shamir, A. (2022). Do e-books support emergent literacy? A meta-analysis of e-book interventions. *Educational Research Review*, 37, 100478. <https://doi.org/10.1016/j.edurev.2022.100478>
- Leff, S. S., Waasdorp, T. E., & Bevens, K. B. (2020). Using multimedia technology to enhance anti-bullying curricula for elementary school children. *Journal of School Violence*, 19(4), 428-442. <https://doi.org/10.1080/15388220.2020.1738944>
- Mayer, R. E. (2021). *Multimedia learning* (3rd ed.). Cambridge University Press. <https://doi.org/10.1017/9781316941355>
- Monks, C. P., Smith, P. K., & Swettenham, J. (2021). Psychological correlates of peer victimisation in preschool: Social cognitive skills, executive function and attachment profiles. *Aggressive Behavior*, 31(6), 571-588. <https://doi.org/10.1002/ab.20099>
- NAEYC. (2020). Developmentally appropriate practice (DAP) position statement. National Association for the Education of Young Children. <https://www.naeyc.org/resources/position-statements/dap>
- Nugroho, A., & Wulandari, S. (2021). Fenomena bullying pada anak usia dini di Indonesia: Sebuah analisis. *Jurnal Pendidikan Anak Usia Dini*, 10(1), 45-56. <https://doi.org/10.21009/JPUD.101.04>
- Petty, R. E., & Cacioppo, J. T. (2020). The elaboration likelihood model of persuasion. *Advances in Experimental Social Psychology*, 19, 123-205. [https://doi.org/10.1016/S0065-2601\(08\)60214-2](https://doi.org/10.1016/S0065-2601(08)60214-2)
- Piaget, J. (2019). *The psychology of the child*. Basic Books.
- Piotrowski, J. T., & Valkenburg, P. M. (2021). Finding orchids in a field of dandelions: Understanding children's differential susceptibility to media effects. *American Behavioral Scientist*, 59(14), 1776-1789. <https://doi.org/10.1177/0002764215596552>
- Posner, M. I., & Rothbart, M. K. (2019). Toward a physical basis of attention and self-regulation. *Physics of Life Reviews*, 6(2), 103-120. <https://doi.org/10.1016/j.plrev.2009.02.001>
- Rubin, A. M. (2019). Uses-and-gratifications perspective on media effects. In J. Bryant & M. B. Oliver (Eds.), *Media effects: Advances in theory and research* (4th ed., pp. 165-184). Routledge. <https://doi.org/10.4324/9780429491146-10>
- Santrock, J. W. (2019). *Life-span development* (17th ed.). McGraw-Hill Education.
- Smith, P. K., & Robinson, S. (2019). How does individualism-collectivism relate to bullying victimisation? *International Journal of Bullying Prevention*, 1(1), 3-13. <https://doi.org/10.1007/s42380-018-0005-y>
- Suryana, D., & Mahyuddin, N. (2021). Efektivitas media pembelajaran digital dalam meningkatkan pemahaman nilai moral anak usia 5-6 tahun. *Jurnal Pendidikan Usia Dini*, 15(1), 118-132. <https://doi.org/10.21009/JPUD.151.08>
- Takacs, Z. K., Swart, E. K., & Bus, A. G. (2019). Benefits and pitfalls of multimedia and interactive features in technology-enhanced storybooks: A meta-analysis. *Review of Educational Research*, 85(4), 698-739. <https://doi.org/10.3102/0034654314566989>
- UNESCO. (2019). Behind the numbers: Ending school violence and bullying. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000366483>
- Vygotsky, L. S. (2018). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Yang, C. C., & Wu, C. H. (2021). The effects of interactive digital storytelling on social awareness development in Taiwanese preschoolers. *Computers & Education*, 175, 104340. <https://doi.org/10.1016/j.compedu.2021.104340>
- Zipke, M. (2019). Preschoolers explore interactive storybooks: The effect on word recognition and story comprehension. *Education and Information Technologies*, 22(4), 1695-1712. <https://doi.org/10.1007/s10639-016-9513-x>