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Introduction

This Summer issue provides readers with a variety of information that includes the impact of retention laws on students and their families, the importance of supporting a child's imagination through play, and exploring the commonly used term "child centered". Additionally, this issue explores the impact AI technology has on STEAM education and how to support students' mental health with play, expressive arts, and parenting programs. The International Journal of the Whole Child continues to be committed to promoting holistic learning and the development of the whole child.

Article #1:

Unintended Consequences: A Case Study of the Tennessee Third-Grade Retention Law's Effects on Children and Families

Amber Spears, Darek Potter, Cassie Brown, Luke Anderson

The researchers present findings following a qualitative case study illustrating the multifaceted consequences of Tennessee's Third Grade Retention Law, officially called the Tennessee Learning Loss Remediation and Student Acceleration Act. The authors outline the impact this law has had on both rural and suburban district communities following the COVID-19 pandemic. The authors highlight important policy recommendations for the retention policy and the need for better interventions to help students stay on track, limiting retention rates and improving the mental health and academic outcomes of individuals from both rural and suburban communities.

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Unintended Consequences: A Case Study of the Tennessee Third-Grade Retention Law's Effects on Children and Families

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Cassie Brown is a Ph.D. student in Exceptional Learning with a Critical Discourse and Literacy Studies concentration at Tennessee Tech University, where she is also a graduate research assistant under the guidance of Dr. Amber Spears. Cassie holds an Ed.S. in curriculum and instruction, an M.A. in curriculum and instruction with a literacy concentration, and a B.S. in elementary education. She also serves as the project director for the Elinor Ross Children's Defense Fund Freedom School.

Dr. S. Luke Anderson is a secondary English education instructor at Tennessee Technological University. His research interests including educational policy, curricular representation, and autoethnography. He was formerly a secondary English Language Arts teacher, with experience at various levels ranging from inclusion courses for exceptional learners through Advanced Placement English courses.

Abstract

This qualitative case study examined the impacts of Tennessee's third-grade retention law on children, families, and educators through an action research framework. Using semi-structured interviews, social media content analysis, and document reviews, the study explored the lived experiences of parents, who are also educators, and whose children were impacted by the third-grade retention law, to uncover the law's broader implications. Findings revealed significant emotional stress on children, disruptions to family dynamics, and heightened teacher burnout, compounded by inconsistencies in communication across rural and suburban districts. The participatory nature of action research allowed stakeholders to collaboratively reflect on the challenges posed by the policy and propose actionable solutions. The study also highlighted

opposition to the law, with participants advocating for earlier literacy interventions and systemic support over punitive retention measures.

By integrating action research principles, the study prioritized the voices of those directly affected and emphasized the importance of comprehensive support systems that address socio-emotional and academic needs, particularly for students who faced foundational learning disruptions during the COVID-19 pandemic. Implications include the need for transparent communication, equitable resources, and early interventions to mitigate the unintended consequences of retention policies. These findings contribute to the growing body of research on high-stakes educational policies and demonstrate the potential of action research to inform evidence-based reforms that prioritize student well-being and equity.

Keywords: third-grade retention; educational policy; qualitative research; family impact; teachers

Introduction

Beneath the formal language of policy and assessment scores lie a raw human experience—the stories of children lying awake, dreading the results of a test, parents anxious over their children's futures, and teachers burdened by the weight of expectations. Consider Hannah (*all names are pseudonyms*), who could not bear to tell her daughter that she might be retained if she failed the third-grade state test. "I didn't want her to feel like she wasn't good enough," Hannah recalled, shielding her daughter from worry and anxiety for as long as possible.

Janet, a special education teacher, saw her son overwhelmed by a pressure that seemed disproportionate for his age. "He's smart, but he was terrified of failing," she shared. This illustrates the gap between a child's potential and their ability to navigate high-stakes testing. Mary, a mother of five, witnessed her once-confident child transform, plagued by self-doubt. "She used to love school, but after this law, all I see is anxiety," Mary reflected, questioning an educational system that measures a child's worth by a single test.

These stories are not unique. Sarah, a school paraprofessional, described the relief when her daughter narrowly passed by one point—an outcome that almost resulted in retention. "It's overwhelming to think that one test could determine so much of her future," Sarah admitted. These narratives illuminate the real-world consequences of Tennessee's third-grade retention law, providing essential context for the findings discussed in this study.

The Tennessee 3rd-grade retention law mandates that students demonstrate proficiency in English language arts (ELA) based on their performance on the Tennessee comprehensive assessment program (TCAP) (Tenn. Code Ann. § 49-6-3115.a.1, 2022). Officially known as the Tennessee Learning Loss Remediation and Student Acceleration Act, the law intends to ensure that "students who are determined to need additional supports in reading, receive them before being promoted to 4th grade" (Tennessee Department of Education, 2024, p. 1). Although the law provides alternate pathways to promotion, such as free summer school and/or tutoring support, it has raised concerns regarding its real impact on children, families, and educators.

Adding to the complexity of Tennessee's third-grade retention law is the unique educational journey of the children directly impacted by it. The students written about in this study were in kindergarten when the COVID-19 pandemic began, truncating their school year and transitioning their learning to virtual platforms. For children in rural areas, limited access to reliable internet and technology created significant barriers to effective learning (Jalongo, 2021). When schools reopened in the fall of 2020, these students entered first grade—a critical, phonics-focused academic grade—under strict COVID-19 protocols that included full-time mask wearing. This posed challenges for phonics instruction, which relies on auditory clarity and visual cues to teach mouth shapes for sound production. Additionally, young children who were not yet reading or writing, many of whom had limited computer or keyboarding skills, were at a particular disadvantage when trying to learn online (Jalongo, 2021). Quarantine policies further disrupted learning, with one participant reporting her child missed six consecutive weeks of school due to quarantine protocols. Teachers, who lacked comprehensive training for online instruction during 2020–2021, faced difficulties in delivering optimal online learning experiences (Trust & Whalen, 2020). These compounded factors impaired literacy development at a foundational level, framing the challenges these children faced when navigating third-grade retention policies (Almasi & Yuan, 2023).

Tennessee is not alone in its pursuit of grade-level accountability; similar policies exist in 37 states, with 17 mandating retention based on state assessments (Cummings & Turner, 2020). Yet, little is known about the long-term social and emotional impacts of laws, particularly in Tennessee. Research on similar policies has shown adverse outcomes, including heightened stress for children and families and increased teacher workload (Jimerson & Kaufman, 2003).

This study explores the lived experiences of parents whose children completed third grade during the first year of the law's implementation. Uniquely for this study, four of the five parents were also educators (instructional coach, school paraprofessional, special education teacher, and principal). By examining perceptions from both rural and suburban districts, this research highlights potential regional disparities and uncovers the broader implications of the law. Rooted in an action research framework, this study actively engages with stakeholders to reflect on and address the challenges posed by the retention policy from a parent, family, and educator point of view. Action research, as a participatory methodology, seeks to bridge the gap between research and practice by involving those directly affected by the issue under investigation. By doing so, this approach not only generates actionable insights but also empowers participants to advocate for policies that prioritize both academic achievement and the well-being of children.

Review of Literature

The policy of grade retention has long been a topic of debate among educators, policymakers, and researchers, with studies revealing mixed outcomes. While some research suggests short-term academic gains, others point to negative social-emotional impacts and long-term academic consequences. This literature review synthesizes key studies on retention laws, focusing on their effects on students' academic performance, mental health, and family dynamics.

Social-Emotional Impacts on Retention

The psychological toll of retention policies has been well-documented in existing research. Over 50 years of studies have reported primarily negative academic outcomes for students who were retained (Martin, 2011), but the lasting effects go far beyond only academic concerns. Studies have indicated that retained students were lower in areas like self-efficacy and motivation, but they were higher in other categories like disengagement or anxiety (Martin 2011). Furthermore, a general overview of retention studies indicated these negative impacts hold true across demographic categories or age ranges of students retained.

Some specific examples of recent studies provided even more clarity. Tavassolie and Winsler (2019) explored the impacts of Florida's mandatory retention law, revealing that English Language Learners, Black and Latino students, special education students, and those from low-income backgrounds were more vulnerable to negative retention-related outcomes. The study highlighted how these groups exhibited increased susceptibility to stress and adverse emotional impacts, extending beyond academic performance.

Diris (2017) investigated grade retention's influence on student achievement, finding that repeating a grade during elementary school had detrimental effects on future academic outcomes. The study concluded that retention failed to strengthen foundational literacy skills essential for educational progress, instead contributing to long-term academic disadvantages. While significant research has focused on quantitative outcomes of retention policies, fewer studies have centered on the perspectives of parents regarding these legislative measures.

Parent Roles in Shared Decision Making

The importance of parent involvement in educational decisions is well-supported by existing literature. Stepko (2018) conducted a mixed-methods study to explore the differing perceptions between teachers and parents/guardians regarding student retention in primary grades. The research uncovered significant barriers to collaborative decision-making, with parents expressing a strong desire for inclusion in discussions that influence their children's academic journeys. Stepko's findings revealed that parents often felt excluded from critical conversations, even though their insights could enhance student outcomes and well-being. This study underscored the apprehension many parents feel about the potential adverse effects of retention on their children, particularly related to self-esteem and social emotional development.

Long-Term Implications of Retention

The long-term consequences of grade retention have been shown to extend beyond the elementary school years. Hughes et al. (2018) conducted a 14-year longitudinal study that found a significant association between retention in the early grades and an increased likelihood of high school dropout. Specifically, their study revealed that students retained in elementary grades had a 2.3% higher risk of not completing high school compared to their promoted peers. Similarly, Giano et al. (2022) examined the odds of high school dropout based on the grade level in which a student was retained. Their findings indicated that the probability of dropping out was more than twice as high for students retained in third grade compared to those who were never retained.

While the quantitative impacts of retention policies have been explored extensively, there is a notable gap in research focusing on the social-emotional experiences and perceptions of families and educators affected by these laws. This gap calls for qualitative studies that provide a more comprehensive view of the multifaceted impacts of retention. This study aims to fill this void by investigating the lived experiences of parents and educators during the initial implementation of Tennessee's 3rd-grade retention law.

The review of literature underscores the complexity of grade retention policies and their implications for students, families, and educators. Existing research highlights both short-term academic benefits and long-term drawbacks, with an emphasis on the need for more holistic, inclusive approaches to educational policy. By situating the study within this body of research, the aim is to contribute valuable insights that inform policy revisions and support systems that prioritize not only academic success but also the mental health and well-being of students.

Methodology

This study employed an Action Research framework with a qualitative approach to investigate the impacts of Tennessee's third-grade retention law on children, families, and educators. Action Research, as outlined by Patton (2015), emphasizes the importance of stakeholder involvement and aims to bridge the gap between research and practice. This stakeholder involvement allows researchers to "critically address a real-life issue with those experiencing it" (Green et al., 2024, p. 12), an especially important aspect of studies examining the emotional toll of educational policies on students and their families. Action Research also centers participant voices, which is central in conveying the human impact of legislation that is often forgotten amid discussions of achievement scores and retention numbers. Therefore, the Action Research approach used in this study enabled the researchers to capture the perspectives of those directly affected by the policy (five parents; four also engaged as school professionals), promoting critical reflection and potential transformation in educational practices.

Research Design

A qualitative case study design was used to provide an in-depth exploration of participant experiences. Purposeful sampling was employed to select participants who met the criteria: parents or guardians of children who completed third grade in 2023 and whose children attended either a rural or suburban school. In addition, four of the five participants also reflected the perspectives of educators within the school system. This comparative element was designed to uncover any regional differences in experiences, perceptions, and information dissemination.

Data Collection Methods

This study incorporated multiple data collection methods to ensure a comprehensive understanding of the impacts of the retention law. These included semi-structured interviews, social media content analysis, and document review.

Semi-Structured Interviews

Interviews were conducted with five mothers who met the participant criteria. These interviews lasted less than 60 minutes each. Two of the five interviews were conducted in-person and the remaining three interviews were conducted via Zoom for accessibility. Member checking was employed to ensure accuracy of the collected interview data. The semi-structured formal interviews allowed participants to share their personal stories while ensuring key topics were addressed, such as initial reactions to the law, ongoing concerns, the perceived impact on their families and children, and how the law impacted teachers.

Sample questions included:

1. Can you describe your understanding of the TN 3rd grade retention law and how it works?
2. Can you talk about how the law impacts children and families, both now and in the future?
3. Are there any aspects of the law that you believe could be improved or changed?
4. How has the law impacted teachers?

Social Media Content Analysis

To capture a broader public sentiment, social media posts related to the retention law were analyzed. This included posts from platforms such as Facebook, where parents discussed their experiences and interacted with school districts. One participant noted that her district requested the removal of comments that could be perceived negatively, highlighting the challenges in transparent communication.

Document Review

Documents such as school websites, public communications, flyers, and informational materials were analyzed to assess the accuracy, clarity, and consistency of the information provided to families. This review aimed to identify discrepancies in communication between rural and suburban school districts, as well as the overall adequacy of the resources available to parents.

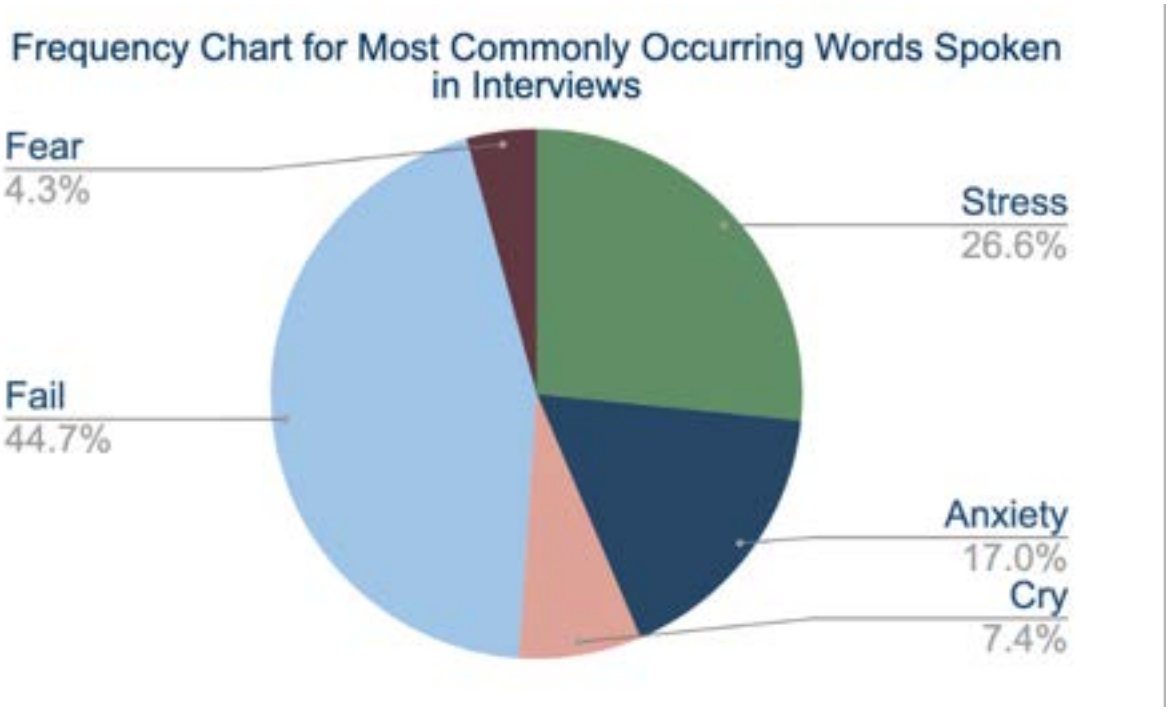
Data Analysis

Thematic analysis was employed to identify recurring patterns and themes across the data. Each interview was transcribed verbatim, and participants were given the opportunity to review their transcripts for accuracy. The researchers independently coded the data and met to compare and consolidate their findings, ensuring inter-coder reliability. Key themes were identified, including heightened child and family stress, teacher workload and burnout, and disparities in information dissemination.

To enhance the rigor of the study, triangulation was used by integrating insights from three data sources—interviews, social media, and document analysis. This method bolstered the reliability of the findings, offering a more nuanced understanding of the policy's impacts. To visualize these themes, a frequency table was created to show the occurrence rate of each theme across the interviews with the participating mothers (and mothers as educators). The table illustrates which

topics were most frequently mentioned, highlighting areas of greatest concern and providing a quantitative perspective on the qualitative data.

Figure 1. Frequency of Most Commonly Occurring Words Spoken in Interviews



Participants

Five mothers participated in the study with four of the five mothers who also engaged in the schools as educators, each chosen to represent experiences from both rural and suburban areas in Tennessee. Pseudonyms were used to protect participant identities. The participants included:

1. **Hannah**: An instructional coach and mother of a now fourth grader in a rural district whose child passed the Tennessee Comprehensive Assessment Program (TCAP).

2. **Sarah**: A school paraprofessional and guardian of three children, including a fourth grader in a rural district; her child also passed the TCAP.

3. **Janet:** A special education teacher in a rural county and mother of a 4th grader; her child passed the TCAP.

4. **Mary**: A stay-at-home mother in a suburban district with four children, including a 4th grader; her child passed the TCAP.

5. **Amy**: A school principal in a rural district and the mother of a 4th grader; her child did not pass the TCAP.

Ethical Considerations

This study adhered to ethical guidelines to protect participant rights and confidentiality. Informed consent was obtained from all participants. The study was approved by the Institutional Review Board (IRB) a central United States university.

Findings

The analysis of interviews, social media content, and document reviews revealed several significant themes related to the impacts of Tennessee's third-grade retention law. The findings shed light on the stress experienced by children, the emotional toll on families, challenges faced by educators, and disparities in communication in information access. Each theme is discussed below with supporting quotes and examples to illustrate the lived experiences of participants. Table 1 provides an overview before delving into each finding in detail.

Table 1

Parent Perspectives: Retention Realities and Reflections

Theme	**Description**	**Supporting Quote(s)**
Stress and Anxiety Among Children	Emotional strain and anxiety experienced by children due to fear of retention and high-stakes testing.	"He was literally in tears that he was going to fail." (Janet) "I did not tell my daughter there was a chance that she could possibly be retained. Because I knew if I told her from the start there would be anxiety all year long. I'm not good enough. Did I pass?" (Hannah)
Family Dynamics and Emotional Toll	Increased stress and disrupted family dynamics stemming from the policy's pressure.	"The stress that this law has put on me as a parent and my son is senseless." (Amy)
Teacher Workload and Burnout	Heightened teacher stress and workload, leading to burnout and decreased job satisfaction.	"Most of my teachers are medicated. Most of them have anxiety. Most of them have stomach issues because they can't manage the stress of this." (Hannah) "That's why I wanted to be out of education. I think we're losing a lot of good teachers

		because of the senseless rules that we're implementing on teachers in this state and the amount of tests that we have." (Amy)
Disparities in Communication and Understanding	Differences in how information about the retention law was conveyed between rural and suburban areas.	"The teachers were as lost as the parents. They didn't really know what they could do." (Sarah)
Opposition to the Policy	Concerns about the effectiveness and fairness of the policy, which calls for systemic change.	"Retention is never, and will never be the answer. The answer is smaller classrooms, more support, and trained teachers." (Hannah)

Stress and Anxiety Among Children

The emotional strain experienced by children was a dominant theme across all participants' accounts. Parents frequently described the palpable anxiety their children experienced, particularly in the months leading up to the TCAP. Janet, a special education teacher and mother, illustrated the intense pressure her son faced: "[He] was very stressed... the night before taking it, he was literally in tears that he was going to fail." Sarah, a paraprofessional and mother of a child who narrowly passed, added how the pressure "affected her performance on the test" and believes that her daughter "may have done better if she wasn't so worried." This suggests that the anxiety induced by the policy can undermine student performance, creating a counterproductive cycle and aligns with Tvassolie and Winsler's (2019) research which highlighted the negative emotional impacts of retention policies on at-risk student groups, including increased stress and anxiety.

Mary, a stay-at-home mother of five, observed a shift in her daughter's attitude toward school: "Watching my daughter have quiz anxiety when she used to be carefree... it's frustrating to see how much change came from one law." This shift highlighted concerns about the long-term psychological effects, as Hannah, an instructional coach, noted, "They're always going to feel like they're not good at reading." The stress and anxiety experienced by children inevitably extended into their homes, affecting family dynamics and placing an emotional burden on parents who struggled to navigate the implications of the policy.

Family Dynamics and Emotional Toll

The retention law's implications extended beyond children to affect entire families, creating stress that rippled through daily life. Sarah described the emotional toll. "As a parent, it's overwhelming. My child used to love school, but when the pressure hit, she started hating it." This supports Stepko's (2018) findings that parents experience significant apprehension about

the social-emotional consequences of retention on their children. This shift in school perception strained parent-child relationships and added to the emotional weight experienced in the home.

Mary shared how the uncertainty surrounding test results disrupted summer plans. She shared that they "didn't receive the results until the last day of school. . . even as a parent, it was stressful not knowing." Mary's account of canceled family plans due to delayed test results emphasizes how retention laws can disrupt not just academic experiences, but family life, paralleling the assertion of Hughes et al. (2018) that policies can have ripple effects beyond the classroom.

The looming test scores compounded the anxiety felt by parents and children alike, demonstrating the significant emotional burden placed on families. Hannah, who worked as an instructional coach, chose not to inform her daughter about the potential for retention: "I did not tell my daughter that there was a chance that she could be retained. . . I knew it would cause anxiety all year." While families were bearing the weight of this policy at home, educators were simultaneously experiencing an increased workload and emotional strain, creating a cycle of stress that permeated both school and home environments.

Teacher Workload and Burnout

Educators, as confirmed by the parent/educator interviews, also faced considerable stress related to implementing the retention policy, affecting their professional effectiveness and personal well-being. Janet, as both a special education teacher and a parent, voiced concern over the unpredictability of test outcomes: "There's so much pressure on teachers. We can't tell how a kid's going to test on a given day," echoing Diris (2017), who found that retention policies place significant pressure on educators tasked with preparing students for high-stakes assessments. Hannah, an instructional coach, supported this, noting the toll on her colleagues: "Most of my teachers are medicated . . . they have anxiety and stomach issues because they can't manage the stress."

Parent/educator participants shared that the added pressure led to burnout and a decline in job satisfaction. For example, Amy, a school principal, highlighted this issue: "We're losing a lot of good teachers because of the senseless rules that we're implementing on teachers in this state and the amount of tests that we have." In her school, the heightened stress posed a risk to teacher retention and overall school morale, which she worked hard to build. The stress faced by teachers was compounded by inconsistencies in communication and understanding the policy, which left both educators and parents feeling ill-equipped to support children effectively.

Disparities in Communication and Understanding

The study revealed significant disparities in how the retention policy was communicated, especially between rural and suburban districts. Sarah, a parent and school paraprofessional, noted, "The teachers were as lost as the parents. They didn't really know what they could do," illustrating gaps in information dissemination. This aligns with research suggesting that inconsistent communication can exacerbate stress and confusion among stakeholders (Stepko 2018). Such disparities particularly affected rural families, who had less access to resources,

reflecting Tavassolie and Winsler's (2019) findings on how certain groups are disproportionately impacted by educational policies. This finding was supported by the document review of district communications, which showed that families in rural areas had less open access to clear and comprehensive information compared to the suburban district in our study. These disparities in communication contributed to growing frustration and skepticism, fueling widespread opposition among stakeholders who questioned the policy's efficacy and fairness.

Opposition to the Policy

Parent participants expressed significant opposition to the policy, questioning its effectiveness and timing. Janet, a parent and special education teacher, emphasized, "I think if they're going to do it, they need to do it when they're younger . . . by third grade, they've already missed key reading skills." This critique is consistent with findings from Giano et al. (2022), who noted that retention at later stages in elementary school is linked to higher dropout rates. Hannah, a parent and instructional coach, added a broader critique: "Retention is never, and will never be the answer. The answer is smaller classrooms, more support, and trained teachers."

Mary, a stay-at-home mom, echoed this sentiment, suggesting that while accountability is essential, the current approach is flawed: "It needs to alleviate that pressure rather than add to it." This shared opposition highlighted concerns about the law's fairness and whether it truly supports student growth. This widespread opposition, expressed by the participants in the study, underscored a collective call for policy revision, emphasizing the need to balance academic accountability with the mental and emotional well-being of children, families, and educators.

Summary of Findings

These findings reinforce the complex and multifaceted impacts of Tennessee's third-grade retention law on children, families, and educators. The anxiety experienced by children, the emotional toll on families, and the increased workload for educators highlight the need for policy revision. Disparities in communication and public understanding point to the importance of equitable information dissemination. Collectively, these insights suggest that while the law aims to improve academic outcomes, its implementation may lead to unintended, counterproductive consequences.

Discussion

The findings of this study provide critical insights into the multifaceted impacts of Tennessee's 3rd grade retention law on children, families, and educators. This discussion contextualizes these findings within existing literature, highlights the study's contributions, and explores implications for educational practice and policy. The Action Research framework of the study presents these results in a way that centers the voices of those most impacted by the law, but it also suggests implications for practice in the following section that seek to mitigate the negative consequences of such legislation. In Action Research, the goal is not merely reporting on a studied phenomenon, it is inspiring needed change based on the findings. With that in mind, a comparison of this study's findings with existing research on retention is helpful before providing suggested responses.

The heightened stress and anxiety experienced by children align with Tavassolie and Winsler's (2019) study, which found that high-stakes retention policies contribute to significant emotional distress, particularly among vulnerable student groups. This study's findings expand on this by showing that the anxiety induced by the retention policy not only affects students' test performance, as illustrated by Sarah's observation that her daughter "may have done better if she wasn't so worried," but also impacts their long-term relationship with school. Mary's (stay-at-home mom) account of her daughter developing "anxiety" resonates with Stepko's (2018) research, which noted parental concerns about the social-emotional well-being of children subjected to retention.

The stress on families and the disruption of family dynamics reinforce the broader implications of educational policies on home life. Hughes et al. (2018) highlighted that retention can have ripple effects, influencing not just students but their families. This was evident in Mary's statement about the uncertainty surrounding test results that disrupted summer plans and contributed to family stress. These findings emphasize that policies designed with academic intentions must consider broader familial impacts to avoid unintended consequences.

The reported teacher stress and burnout (from the parent/teacher interviews) align with Diris' (2017) conclusions that retention policies place heavy burdens on educators. Janet's (special education teacher) experience—"There's so much pressure on teachers. We can't tell how a kid's going to test on a given day" —highlights how such policies exacerbate teacher anxiety and workload. Hannah's (instructional coach) remark that "most of my teachers are medicated" points to a critical issue in the sustainability of the teaching profession, echoing broader concerns about job satisfaction and retention within the teaching profession.

The disparities in how the retention policy was communicated reflect findings from Stepko (2018), who identified that inadequate communication can lead to confusion and stress for both parents and educators. In this study, these disparities emerged from inconsistent messaging across school districts, variations in how rural and suburban communities were informed about the law, and a lack of clear guidance from state and local education agencies, leaving both families and educators uncertain about its implementation and consequences. School paraprofessional and parent Sarah's comment, "The teachers were as lost as the parents," illustrates how a lack of clear, consistent messaging can amplify the emotional and logistical challenges posed by policy changes. This finding underscores the importance of equitable and comprehensive information dissemination to support families and educators across different geographic regions.

The widespread opposition to the retention law, highlighted by parent participants' critiques, points to a need for policy reevaluation. Special education teacher and parent Janet stated, "By third grade, they've already missed key reading skills," suggests that earlier interventions may be more effective than retention at the third-grade level. This aligns with the findings of Giano et al. (2022) that retention in later elementary grades is linked to higher dropout rates. As an instructional coach and parent, Hannah's advocacy for "smaller classrooms, more support, and trained teachers" resonates with current educational theories that emphasize systemic support over punitive measures.

Implications for Practice

The study's findings indicate that Tennessee's third-grade retention law may have unintended consequences that counteract its intended benefits. Policies aimed at improving academic performance should prioritize the mental health and well-being of students and consider the holistic development of children. The following recommendations are proposed:

1. **Early Intervention**: To counteract the effects of learning disruptions, early interventions and equitable learning recovery programs have been identified as essential strategies for supporting student literacy development (Johnson et. al., 2021). Educational policies should focus on earlier interventions in kindergarten through second grade, where foundational literacy skills can be developed and mastered.

2. **Support Systems for Teachers**: Teachers faced unprecedented challenges in literacy instruction during the pandemic, necessitating adaptations and systemic support to meet students' needs effectively (Walker-Dalhouse & Risko, 2020). Providing teachers with resources and support to manage policy expectations can reduce burnout and improve educational outcomes.

3. **Enhanced Communication**: Ensuring consistent, transparent communication from school districts to families is essential to alleviate confusion and build trust.

4. **Comprehensive Student Support**: Research by Jimerson, et al. (2002) has shown that early socio-emotional and behavior characteristics can play a significant role in determining long-term academic outcomes, emphasizing the importance of integrating social-emotional learning frameworks to support students' holistic development and academic success. Beyond academic metrics, policies should consider social-emotional learning frameworks to support students' overall development.

Limitations

While this study offers valuable insights into the perceptions and impacts of Tennessee's third-grade retention law on children, families, and educators from the perspective of five mothers whose children were faced with the third-grade retention law and four of the five mothers were educators, acknowledging certain limitations is important. The study had a small sample size and relied on limited access to disseminated documents to families. Future research should include larger and more diverse samples to generalize findings and explore additional perspectives from various stakeholders. Longitudinal studies could further illuminate the long-term effects of retention policies on student achievement and well-being.

Conclusion

This study contributes to the growing body of research on the impacts of high-stakes educational policies by providing qualitative insights into the lived experiences of families and educators from the unique experiences of mother/educators with children impacted by the Tennessee retention law. The findings underscore the need for policies that prioritize students' emotional

and academic well-being, advocate for earlier interventions, and support educators in their roles. By addressing these considerations, educational policies can better foster equitable and supportive learning environments that promote positive outcomes for all stakeholders.

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Teacher Talk: Theory to Practice
Dreaming A Playground: Supporting Children's Imagination

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Abstract

Authors describe the value of designing a playground to promote children's imagination through play. Important for parents, teachers and administrators, this discussion provides the theoretical rationale in defense of children's outdoor play and the imminent need to revitalize children's diminishing capacities to imagine.

Considering the Importance of Imagination

Imagination is future-oriented: the process of inventing things that are not yet a reality. For children, imaginative play provides the freedom to invent and create, which serves as a foundation for children's future roles as creative adults (Stone, 2017). Imaginative, creative play provides children with the inspiration, motivation, enjoyment, and abilities to engage future ideas. For example, play is what scientists use to develop theories, what composers use to create music, what poets and novelists use to fashion words, and what artists use to craft art (Froebel, in Armstrong, 1998; Gray, 2013; Wasserman, 1992).

L. Frank Baum (1917), author of *The Lost Princess of Oz*, shares the importance of the imaginative child becoming the imaginative adult:

> *"Imagination has brought mankind through the Dark Ages to its present state of civilization. Imagination led Columbus to discover America. Imagination led Franklin to discover electricity. Imagination has given us the steam engine, the telephone, the talking-machine and the automobile, for these things had to be dreamed of before they*

> *became realities. So I believe that dreams - day dreams, you know, with your eyes wide open and your brain-machinery whizzing - are likely to lead to the betterment of the world. The imaginative child will become the imaginative man or woman most apt to create, to invent, and therefore to foster civilization."*

When children play, every child becomes a visionary, creating a new world of his or her own making through imagination. Without imagination, people would be left to replicating only what they know; instead, imagination ensures innovation. Unstructured play motivates imagination and frames children's unbounded creativity. Play is not merely an activity to amuse children or to entertain; rather, play is far more important (Vygotsky, 2004).

During play, Vygotsky believed that children create their own imaginary worlds. Children's minds become a vehicle to consider possibilities and then, playful action creates innovation. Creativity begins with imagination (Vygotsky, 2004). With imaginative, open-ended play, a child's thinking becomes flexible, fluid, and effortless. As children use their imaginations during open-ended play, they extend and develop ways to creatively solve problems, find novel solutions, and to reach beyond what exists to what could be. Play prepares a child to be a creative artist, an innovative scientist, an inventive writer, an inspired leader, a transformative educator, or an ingenious engineer. Play is divergent thinking at its best. Einstein believed that imagination was more important than knowledge. Knowledge, he thought, was limited, whereas imagination encompassed the whole world; imagination could stimulate, inspire, and contribute to progress. (Einstein, 1931).

Sir Ken Robinson (2015) distinguished the differences between creativity and imagination: "Imagination is the root of creativity. It is the ability to bring to mind things that aren't present to our senses. Creativity is putting your imagination to work. It is applied imagination. Innovation is putting new ideas into practice" (p. 118). This means imagination is a mental process; creativity is the action generated from the internal thought. Imagination is the thought and creativity is the action. Play affords children with the freedom of thought and the flexibility of action.

As creativity originates from imagination, Vygotsky (2004) cautioned us to consider that the true value of children's creativity is not in the result or product; rather, he emphasized the critical importance of using the *processes* of imagining and creating. Imagination becomes the intrinsic motivation for creating. Pink (2009) notes, "For artists, scientists, inventors, schoolchildren, and the rest of us, intrinsic motivation – the drive to do something because it is interesting, challenging, and absorbing – is essential for high levels of creativity" (p. 45).

Unfortunately, play, indoors and outdoors, is often pushed aside or eliminated in many schools, by prioritizing a standardized curriculum, instead of creating indoor and outdoor play opportunities designed to engage children's imaginations. Regrettably, unstructured outdoor play which nurtures imagination is often no longer legitimized by school and home (Kim, 2011; Veselack et al., 2013).

Kim (2011) describes decreases in creativity and especially notes this loss in young children. Additionally, Gray et al. (2023) describe how children today have diminished opportunities for

independent experiences, which is reflected in the decline of children's mental health. Emphasizing standardized tests, overscheduling children's lives, scripting school lessons, and spending time on technologies undermine children's opportunities to explore events, take risks, confront challenges, hypothesize ideas, examine materials, and elaborate thoughts, particularly through the avenue of play. Additionally, worries regarding children's physical and social safety restrict their time and opportunities to experience the neighborhood outdoors (Burriss & Burriss, 2011a).

Outdoor play is a critical component for children's overall well-being. Children, even young children, require undisturbed time outdoors to consider their options (interests, make choices) and implement actions (mental and physical processes) (Kim, 2011; Veselack et al., 2010, 2013).

Genuine outdoor play experiences are essential towards nurturing children's imagination. Ideas do not generate from external materials; rather, as a mental process, thoughts originate within children (Piaget, 1981). Through play, children do not merely solve problems; critically, they create problems to solve. Arlin (1977, as cited in Kim, 2011) believes problem finding is key in generating new ideas. Furthermore, Steiner, (nd) argues creativity is a prerequisite for innovation; Keep in mind that creativity is rooted in imagination (Robinson, 2015).

Kiewra & Veselack (2016) highlight examples of children's imaginations that represent all domains of learning. For example, outdoor play provides for children's emerging imaginations to unfold as they engage in problem-finding and problem-solving strategies, use flexible materials in a variety of ways, and ponder in unconventional thinking.

The outdoor environment supports children in using their imaginations to create innovations in unique ways not possible in the traditional indoor classroom. Critically important, in this outdoor open-ended environment, children experience risk, challenge, difficulty, problem finding, and knowledge disparities. Planning outdoor play environments will nurture children's imaginations through unstructured outdoor play.

Dreaming a Playground

Understanding Play. First, it is important to understand that play is recognized as essential for the well-being of every child and vitally important for the development of all children, socially, emotionally, cognitively, and physically (Bergen, 1988; Bergen et al., 2020; Burriss & Folks-Boyd, 2005; Elkind, 2007; Fromberg, 2002; Gray, 2017; Gray et al., 2023; Stone, 2017). Through play, children come to understand how to meet and negotiate life's challenges (Gray, 2017). Building on their problem-solving strategies and capacities to deal with risk, children attempt different problem resolutions. Through play, children develop the social and intellectual skills they need for success in their own culture (Gray, 2013). Play is a risk-free environment where children can try out different ideas as there is no failure in play. Through play, children learn to be resourceful, persevering, and resilient - all components to ensure well-being and success.

Play is intrinsically motivated, freely chosen process not product-oriented, nonliteral, and enjoyable (Johnson et al., 1999; Stone & Burriss, 2019). Children choose to play with the

motivation coming from within as an adult is not guiding or directing the play. Children choose with whom they will play, what they want to play, and how they want to play. Since play is not goal-directed, children are free to try different variations of the play experience. The characteristics of play afford every child the freedom to imagine, to create his or her own reality. As is imagination, play is an extraordinary human quality supporting an opportunity for players to progress and advance in their own development (Robinson, 2015).

In highlighting nature as a framework for a range and variety of imaginative outdoor play events, children integrate their physical, social/emotional, and intellectual aptitudes. As they enhance abilities to express unique and unconventional thinking, they also gain knowledge in strategies regarding sharing of materials, collaborating with others in problem-finding/solving, and exhibiting kind behaviors with peers.

Importantly, throughout this play-based process, children's learning continues regarding basic content such as mathematics, literacy, science, physics, botany, art, and geology. For example, in play, children learn to count the pinecones they need for their pretend outdoor store, they make signs to hang on trees to warn other children of the flying insects, they pretend to read books to the babies in their outdoor home center, they learn which plants are important for the butterflies, and they discover what sinks and floats in the outdoor tubs of water (Lozon, in press).

Toward engaging in imaginative and creative experiences, play provides multiple possibilities for divergent thinking. For example, in non-literal thinking, the child determines or mentally constructs a block of wood into something else when, in reality, the block of wood is a block of wood. For children in play, however, a block of wood is transformed and changed from reality into what children want the block to represent (phone, pizza, spaceship). The child imagines a new reality by transforming an object's meaning. A child's thinking assumes precedence over external reality; a child experiments with new possibilities. Outdoor play environments are viable, promising, and worthy of supplying multiple opportunities for children's imaginations to flourish.

Without an understanding of what play is and what it is not, adults may be less effective in building, maintaining, and evaluating quality outdoor playscapes and learning opportunities. Organizations such as *The International Play Association*, *US Play Coalition*, *Children in Nature Network*, *National Wildlife Federation (NWF), The National Association of Young Children (NAEYC)*, *Association for Childhood Education International (ACEI)*, *The Association for the Study of Play (TASP)*, *No Child Left Inside*, *Evergreen, Schoolyard Habitat Project (U.S. Fish and Wildlife Service (USFWS),* and *Project Wild* are committed to protecting play and encouraging play environments for the well-being of our children and providing children with the outdoor play spaces and places for their imagination to thrive.

Play Types. Researchers have identified four types of play: Functional, Constructive, Dramatic, and Games with Rules (Johnson et al., 1999). The imaginative outdoor play environment provides for these play types.

Functional Play flourishes in outdoor play spaces. During functional play, children find pleasure in interacting and playing with the environment. Children enjoy blowing, jumping, crawling,

running, splashing, climbing, chasing, and squishing. Initially, these experiences evolve around a child's senses; the actions are repetitive for pleasure and include both fine and gross motor actions. Through children's senses and actions, they explore the outdoor environment, as well as consider their bodies' capacities to influence, manipulate, and control events. Examples include wiggling toes in sand, running with wind, and splashing with water.

The need for functional play decreases as children grow older. Three-to-five-year-olds engage in functional play about 33% of the time, and it is replaced with constructive play (Rubin et al., 1983; Stone, 1993, 2021). As children explore their outside world, they begin to gain an understanding of how they can physically influence the environment. They develop concepts about the nature of things, how things can change, and an understanding of cause and effect (i.e., squishing, plopping, thickening, and thinning mud). In doing so, this helps them develop a sense of their bodies, cultivate hand-eye coordination, develop an understanding of the permanence of objects, and investigate the concepts of time and space (Stone, 1993). They develop confidence and particular skills; they begin to define their function in the world, as well as conceptually understanding their environment. Toward these goals, the traditional indoor classroom is limited in providing children with adequate space and materials to run, jump, squish, wiggle, dig, splash, or plop. In the outdoors, the environment supports dirt digging, mud squishing, water splashing and feet running and jumping.

As children grow, functional play evolves into constructive and dramatic play where children's imaginations begin to unfold. Chasing bubbles becomes trying to catch flying fairies and mud becomes a mountain for imaginary dinosaurs.

Constructive Play unfolds outdoors as children build, paint, draw, solve problems, experiment, sculpt, map, design, craft, create, and, of course, imagine. Constructive play is a common form of play for young children, ranging from 40% of all play experiences at three-and-one-half years to approximately 51% at ages four, five, and six (Rubin et al., 1983; Stone, 1993, 2021).

In constructive play, children begin to use intellectual processes. They imagine, mentally create, and then construct. They build intricate structures, draw or paint imaginary creatures, and sculpt with mud and sand. In the process, children enter higher levels of thought, learning to discriminate, solve problems, hypothesize, imagine, and invent new ideas (Stone, 1993, 2021). Children gain confidence in their own abilities to imagine and create, providing them with emotional satisfaction.

Providing time and a variety of materials for outdoor constructive play experiences remain integral to children's holistic learning and development. Toward optimal constructive play, children freely choose, maintain, and enjoy their own experiences. Keep in mind that teacher-defined projects often become work instead of creative play construction, limiting each child's whole child development (problem solving, experimenting, creating, sharing), as well as undermining children's capacity for imagination and creativity.

Dramatic Play and *Sociodramatic Play* involve children manipulating ideas, creating, problem-solving, making decisions, thinking divergently, cooperating, negotiating, inventing, understanding, organizing, reconstructing, symbolizing, scripting, and imagining.

In dramatic and sociodramatic play, children imagine and then transform themselves into characters, such as a princess, a super-hero, or an airplane pilot. Children also engage in dramatic play with toy animals and props, imagining various scenarios. Children may pretend they are dinosaurs or use toy dinosaurs to play out stories in a sand area. Children may build a bridge over an outdoor stream to play out the story of the *Three Billy Goats Gruff* or build outdoor structures to tell the story of *The Three Little Pigs or* play out the story of *Cinderella* in an outdoor drama center. Children may create an outdoor bus stop with a bench to play out the story of *Don't Let the Pigeon Drive the Bus!* (Willems, 2003). Dramatic play significantly engages children's imagination as they play out favorite stories or invent their own stories to tell.

In dramatic and sociodramatic play, children reason through how their imaginary world functions. Creatively, children combine multiple experiences to tell their story. They use concentration and organization to focus and expand roles and themes. Children sequence their play events using past, present, and future, which supports their mobility of thought. Additionally, children problem-solve, make decisions, use open-ended thinking, and explore new concepts. They learn how to cooperate, settle disagreements, take turns, negotiate, persuade, and defend. Children exchange ideas and expand their knowledge. They engage in group problem-solving (Stone, 1993, 2021).

The outdoor environment (open areas, trees, gardens, platforms/shelters, bikes and wagons, sand, water, and mud areas) ensures children with dramatic play opportunities not possible in the indoor classroom. With dramatic play, children create new worlds of their own making through imagination, putting new ideas into action.

Games with Rules play includes creating and learning rules, sequencing, organizing, improvising, adapting, competing, collaborating, sharing, turn-taking, transforming, socializing, thinking, choice-making, problem-solving, moral and fairness judging, and learning to lead and follow (Stone, 1993). As much as games with rules are usually dominated by established, often handed down, rules, children do engage in inventing and creating their own rules for the games they play outdoors. Children will improvise their own rules for cooperative play, adapting games to their own understanding and experiences.

Simple rule games are common in early childhood play (i.e., "You roll the ball and I'll roll it back"). Children between the ages of four and seven years begin to organize their play, developing rules on how the play is supposed to occur (Stone, 1993). Older children advance their game-playing skills, with games becoming more competitive and rules are more defined and fixed. Preoperational children (ages two-to-seven-years) often do not understand how some actions may affect game-playing results. As young children develop from the preoperational stage to the concrete operational stage (ages seven-to-12) and secure various understandings, they begin to engage more in games with rules (Piaget, 1962; Stone, 1993).

Games with Rules remain an important part of a child's holistic development, including imagination. Lozon (in press) describes how a group of young children in an outdoor childcare center pretended to play baseball with no ball, bat, or bases. The outdoor game was *imagined,* and the children enjoyed every minute of their pretend play.

The outdoor environment provides unlimited possibilities for functional, constructive, dramatic (socio-dramatic), and games with rules play experiences. For example, outdoor functional play includes digging in the sand, blowing and chasing bubbles, and climbing a tree. Constructive play includes both natural and manufactured materials such as drawing a map to find a lost treasure, painting a sign to warn people of the angry fairies in the flowers and bushes, or building a tower out of rocks to save the play people from a flood of water.

Both props and particular areas highlight the potential for outdoor dramatic play such as a boat to sail to *Where the Wild Things Are* (Sendak), or an outdoor stage area to put on a play about television characters *Bluey* or *Spidey and His Amazing Friends*. The outdoor areas offer spaces for games with rules. Children will play simple tag games; if you are tagged, you are "it," easy games of "catch" with large balls, and races such as the first one to the tree, wins. Children use their imagination to create their own games with rules as they build magical tree houses, run from a tyrannosaurus rex, and hide from imaginary giants. The rules can be simple or complex such as you can only hide from the giants behind trees, or to escape the angry dinosaur you must cross the bridge over the stream. Children will make up their own rules for the games they play.

While the indoor classroom in schools is limited by size and material, the outdoor playscape is most effective in ensuring children engage all levels and types of play with the outdoors, becoming an open canvas for a child's imagination to develop.

Dreaming a Playground: Play - A Foundation for Imagination

Dreaming a playground for outdoor play provides a rich foundation for children's imagination to unfold, engaging children in the reality of imagination. Imagination is not cute, glitzy, easy, risk-free, mandated, formulaic, or standardized. Play is not a product; play is the process of the child's thinking and doing.

Before play occurs, children explore the object or material. Then, during play, children move beyond the realistic, concrete object and consider the potential possibilities of the material (the imaginative/mental process occurs). This transforming of the original object or material represents the child's ownership during the imaginary thinking and clearly exhibits the child's internal action to imagine and construct (Piaget, 1952, 1981).

As children play, they frame and reframe their thinking. Steiner (nd) describes how, for adults, this process integrates analytical, logical thinking with associative, intuitive thinking to uncover the real problem. As children explore their environment, they decide on the relevance of particular events and materials toward their problem finding. The child imagines and thinks, "If I have this, what can it become?" Then, the imagined becomes an innovative creation. Critically, consider the mental processes as the child thinks, "What do I have and what can I create?"

Respecting imagination as an individual process allows children to engage at their developmental and interest levels. Outdoor play also engages children of different ages, abilities, ethnicities, and socio-economic levels with each other (Stone & Burriss, 2019). The imaginative playscape

builds on the dignity of all children and represents these differences, as well as engages children in acts of kindness, imagination, and creativity.

At the forefront of children's visions during outdoor play, what are possibilities of dreaming and creating a type of playground that supports and engages children's imaginations? As adults, we can use our imagination to create environments that will ignite and nurture children's innate imagination as they embrace their own autonomy to create limitless possibilities. In creating the outdoor space, consider different areas for the landscape, such as wetlands to forests, wildflowers to gardens, and areas for wildlife such as birds, bees, butterflies, insects, and small animals. The aesthetics of the outdoor space invites children to vast opportunities for their imaginative play and creativity to unfold.

With safety always a consideration for young children's play, the environment, with adult supervision, becomes an unrestricted avenue for children to be self-directed in their play and exploration. The adult becomes a resource and a helper when needed, not a director of the play.

Consider a school playground sign referred to by Greenman (2017) in his book, *Caring Spaces, Learning Places*, called Lobotomy Park, where children were advised that the playground was not for running, digging, removing shoes, or walking on the grass among other things. Outdoor play was a restricted environment designed to mimic the controlled inside environment. Using the freedom of our imaginations, outdoor learning environments can be created to kindle children's imaginations, empowering them to imagine and create their own worlds and adventures (Stone, 2021).

Considering Playground Possibilities

The following playground ideas are a springboard of possibilities for creating outdoor play areas that may fertilize children's imaginations.

- Create a forest made with tall, narrow PVC pipes painted exotic colors where children can pretend to be imaginary forest animals.
- Prepare large half-pipes designed to be small, secret caves for children to hide or plan their adventures.
- Create a campground area with a tent, pretend fire pit, and cooking utensils where children can imagine they are on a camping trip.
- Design an outdoor area for children to build and create with large Lego's® or building blocks.
- Refurbish an old boat or canoe for children to imagine a river or ocean trip.
- Place a large dead tree on a grassy area for children to climb and sit on with friends.
- Design an area with a small stream where children can dig in the mud, float a boat, or build a bridge.
- Create an outdoor stage area for children to play out stories. Provide bench seating for children to watch the dramatization of the players' favorite or created stories.
- Prepare grassy areas for outdoor game playing, chasing bubbles, or playing tag.
- Build a low tree house where children can create imaginary adventures.

- Provide sticks, various wood pieces, and tree branches that children can use to create their own houses, landscapes, or living areas for dinosaurs, fairies, and woodland creatures.
- Construct an outdoor home center with a sink, stove, table, and chairs.
- Plan an area where children have easels where they can paint their own pictures or design their own backdrops for stage area dramas.
- Use old tires to create small sand boxes for playing with animals, creatures, or vehicles.
- Provide large chalk and outdoor chalkboards or sidewalks for children's drawings or games.
- Offer areas for music and creative movement.
- Create small water areas for children to experiment with sink and float materials.
- Prepare areas for children to balance themselves on planks of wood, climb over tires, and enjoy tending to a garden.
- Create unique bench areas for children to plan, think, or enjoy talking with friends.
- Using planters or old tires, prepare little areas for children to imagine and play with small houses, little plants as trees, rocks, and toy people and animals. Use wood planks as bridges to connect the different communities.
- Develop a small pond area for children to float boats, leaves, sticks, or watch water creatures.
- Create nature trails where children can collect pinecones, leaves, sticks, and rocks, or observe squirrels, caterpillars, butterflies, and birds.
- Provide rocks and boulders for children to climb on.
- Create walking trails, and quiet places to read, wonder and imagine.

Keep in mind that all the ideas you may have for outdoor play and play areas are simply possibilities for children to create and recreate the areas as they imagine and plan their own experiences. The outdoor spaces will provide the children with ideas as they embrace the freedom of their own imaginations. The priority is the play which gives each child the fertile ground for his or her personal development of imagining, creating, and enjoying the outdoor world.

For example, children may decide to make their own pyramids in a sand area, or bury bones in a dirt area for an archaeological dig, or build a castle with outdoor blocks, or use a bench to create a bus stop, or after watching butterflies in the garden they may pretend they are butterflies. The outdoor environment provides opportunities for children to engage their curiosity, imagine their own worlds, and create their own experiences. The outdoor environment is empowering children to embrace their own potential as they imagine and create their own worlds and experiences.

Burriss (2020) encourages us to *think differently* about outdoor spaces where children may enjoy different types of play areas, where children can imagine and create their own experiences. In so doing, it is important to note that as children choose and direct their own play, they may move things in the environment to the places where their adventures will begin.

Depending on opportunities to imagine (unstructured time, freedom, flexibility, materials), some events become quite creative as children elaborate in theme, organization, role play, and language. For example, observing children on an outdoor community playground, two players

created an hour-long hamburger theme with only a small rectangular metal platform and mulch. The two players constructed their notions of a counter, food, and money. And most importantly, through this socio-dramatic play, the players in their imagination created the theme with dialogue and management of the fast-food hamburger counter. Within 10 minutes, the play involved approximately 12 additional children (strangers to one another prior to the sociodramatic play event). Yet, they followed a hamburger script with dialogue, money exchanges, food ordering and preparation. Using only mulch for both money and food, only the children knew what food was and what was money.

Keep in mind that "for artists, scientists, inventors, *schoolchildren*, and the rest of us, intrinsic motivation – the drive to do something because it is interesting, challenging, and absorbing – is essential for high levels of creativity" (Pink, 2009, p. 45), understanding that imagination is the foundation of creativity (Robinson, 2015).

The Adult's Role in Dreaming a Playground

The following areas provide adults with information useful in guiding and supporting their role in providing outdoor play that encourages children's imaginations.

Supporting Children's Goals and Interests. In dreaming a playground for children which provides the time, opportunity, materials, and children's interest for their imaginations to unfold, it is important for adults watching children who are playing that they do not interfere; they remain quiet and unintrusive observers. Mud pies becoming pizzas, adding water to the sandbox to create a lake, or children running and flapping their arms pretending to fly like birds warrant serious adult respect and regard, but not guidance, lesson objectives, or limited time.

If adults incorporate objectives, goals or rubrics during outdoor play, the activity is designed to meet an adult's goal and is not a play experience. In play, the child or children determine the experience, not an adult. Children may enjoy the adult-guided activity, but the task remains adult-planned and lacks a child's motivation, imagination, and creativity. In the outdoor playground, children's goals and interests are prioritized. Additionally, adults legitimizing children's choices become crucial toward affording their imaginations the opportunity to explore and develop different ideas, "What did I find?" And then, "What might this become in my pretend play?"

This mental/imaginative process transforms the concrete object to a creative mental construction. For example, a child finds a tree limb, pinecone, or piece of tree bark. After the child considers what is found, he or she ponders and transitions to mentally construct, "What do I imagine this could be?" This is when the child transforms the object into a creative construction. For example, the tree limb becomes a galloping horse, the pinecone is now a bugle to call bird friends, and the piece of bark is moved to the water area as an innovative, transformed, floating boat.

Providing Space and Materials. As children develop at different rates, choices by children will often depend on their social, physical, and cognitive growth. Therefore, it is critical that adults provide children with both a range and variety of play possibilities, spaces, and materials. The

outdoor play area should ensure adequate space for children to simultaneously use different materials and engage in varying events (Kiewra & Veselack, 2016; Veselack et al., 2010).

Is there a quiet space for children to go for their reflection? This can be a surround of bushes, some sitting stones, or a bench by a shade tree. This quiet space affords children the opportunity to watch other children at play as well as momentarily finding a quiet space to rest, or to thoughtfully imagine possibilities for their play.

Wind chimes of different tones and materials (metal, wood, solar) provide gentle wind song. Additionally, trees provide the natural sounds of birdsongs. Bird feeders and bird houses ensure these wildlife sounds occur naturally.

Is there a construction area available for children's imagination to evolve? Different sizes and lengths of boards, crates, and bricks provide children with the adventure of building. Children imagine building a secret cave, a house in the woods, or a store to sell mud pies. Gutters, rubber or plastic tubing, tires, and shutters illustrate the variety of potential construction possibilities. Children incorporate balance, equivalence, and physics in their constructions. Critically important, children experience challenge and risk in their play (Veselack et al., 2010).

Regarding materials, include loose parts (Veselack et al., 2010). Natural materials become important in order to provide children with a range and variety of problem-finding opportunities. As children explore raised vegetable beds and flower gardens, they establish a framework for their thinking. Incorporating the natural environment remains integral toward children's potential imaginative play.

For example, instead of the traditional balance beam and climbing equipment, provide several tree trunks and/or logs to support children's creativity and gross motor development. An outdoor playscape naturally integrates different kinds of trees, bushes, rocks, and grassy areas. A gentle slope or mound provides a unique play event.

In particular, the outdoor playscape remains a four-season option. Consider the outdoor weather possibilities as children explore winter (frost, snow, snowflakes, and snowballs), summer (sunshine, growing plants, and butterflies); autumn (rain, puddles, and mud), and finally, spring (wind, broken branches, and seed pods).

Sometimes – not always – provide music near the large area where children build and run. Music may motivate some children to dance, spin, and jump. Music connects children's gross motor actions with imaginative movements. Music is not appropriate all the time because it masks the natural sounds of birdsong, wind, and other children playing.

Finally, providing children with magnifying glasses and binoculars enriches their play experiences. Children will examine rocks, plants, and little creatures with magnifying glasses. They will explore clouds, tops of trees, and birds with binoculars. They will pretend they are explorers or scientists.

For a time, an area may feature a tent and a circle of rocks for a pretend campfire. Another time, children find a large box with paddles where they will imagine they are travelers in a boat. And, preparing ahead, the children might discover several large boxes or a number of snow coasters to explore and imagine. With imagination, the boxes may become individual cars or a train, and the snow coasters may come to represent a fleet of flying saucers or floating lily pads. Keep in mind that older children might become active in the physical construction of a particular play event (creating train cars or buses with lights, numbers, and wheels), while leaving the actual play to the younger children. Older children may build a cabin or pirate plank and then move to another area, giving the younger children the opportunity to play with the creative construction (Harris-Helm et al., 2000).

In order to provide for children's imagination and creativity to flourish, it is important materials remain open for children to use in a variety of ways and places. For example, opportunity ensures children moving materials to different areas as needed for their imaginative play. They use materials from different areas to create their own play events and adventures. This means, children move pails and ropes to the tree house to create a pulley or move a board to the tree trunk in order to invent their own seesaw. Consider how new technologies generate from the imagination in the adult world, but also how new ideas emerge from children's play. Sometimes, inventors use what is familiar and do so in unusual and unique ways; other times, when current materials are not adequate, inventors create or imagine what was before unknown. With flexible and open-ended opportunities and materials and ample space to move about, the outdoors provides children with extraordinary imaginative possibilities.

Depending on children's goals and interests, Veselack, Cain-Chang, and Miller, (2010) discuss the strategy to plan outdoor areas with particular materials, but also provide large, open, non-declared spaces for children's flexible play to emerge. In planning outdoor play areas with particular materials or designated spaces for children's play, adults understand that children may move materials to different locations to accomplish their play experiences. Thus, outdoor play areas and materials are designed to be flexible so children can easily pursue their own play goals and experiences wherever their imaginative play leads them.

In nurturing children's imaginations, what do we see? There is a sand box with a variety of materials. This includes different sizes of pails, shovels, spoons, sifters, watering cans, and funnels. There is a hose with perhaps – on certain days – access to mud play. There are pathways in the woods with wind chimes, bird feeders, bird houses and a tree house. The tree house may be only three feet above ground level with slides, ramps, and ladders. In children's imaginations, the treehouse becomes a spaceship, houseboat, or castle.

A storage shed is close by with wagons, wheel barrels, pails, and digging tools where children imagine they are farmers planting crops, ranchers riding horses, or archeologists digging up dinosaur bones. Additionally, tables and easels support possible art and crafts where children imagine and paint a make-believe garden or fantasy beings. A platform or gazebo provides a space for stories to be read, plays to be performed, where children may imagine they are the creatures in *Where the Wild Things Are* (Sendak). Nearby, teachers may engage in discussions with children that may be planned or occur spontaneously depending upon a child's particular day's finding or discovery.

In designing the spaces and materials, adults provide playgrounds that invite adventure by providing different types of materials and 'loose parts,' thus attracting and enticing children to embrace their imaginations by dreaming, inventing, and creating (Frost, 1992; Greenman, 2017; Johnson et al.,1999). Greenman (2017) suggests providing children's play areas with an assortment of 'loose parts' such as junk-wood, tires, bricks, pipes, rocks, wheels where children can imagine and create their own unique play structures. Providing space and unique materials stimulate children's imaginations and inspire their creative endeavors.

It is also important for children to experience risk and challenge. As a part of their imaginative and creative processes, their tower may fall, their mud may become overwatered and their attempts to build a seesaw with boards may fail. They imagined what they wanted to do, but their creative, practical capacities may be challenged. Unknowing adults may intervene by telling the child to put the largest block at the bottom of the tower, helping them to measure out the correct amount of water to the mud area and assisting them with leveraging the board to effectively seesaw; in this way, adults ensure the product of tower, mud and seesaw, but deny the child's opportunity to explore, discover, problem-solve, hypothesize, invent and reconstruct. In an effort to guarantee the product or outcome, the adult diminishes the child's capacities to not only imagine and create, but also undermines learning concepts such as gravity, blending, and balance. Only through their "playing" with different ideas and materials can children begin to acknowledge relationships in their environment.

Arranging Time. Adequate time for children's outdoor play is significantly important for play episodes to develop, imagination to advance, and creativity to unfold. Regarding children's interest, Veselack et al. (2013) describe how when children, even very young children, become interested in an outdoor material (i.e., water/puddle, tree limb/tree bark, or bricks/crates) or an event (i.e., weather such as wind, snow, rain, moving bug, or other children), they focus, engage, and discuss for extended periods of time, because the outdoor environment, unlike the indoors, is more unpredictable, providing children with unique opportunities not possible in the customary indoor classroom. This means, learning and experiences become possible outdoors that cannot occur indoors.

The outdoor play environment also naturally integrates various content areas, giving children time to explore science, botany, geology, and math. Children's dramatic play incorporates language, literacy, and atypical scripts; and the sand, water, and mud areas become rich in experimenting, hypothesizing, and predicting.

Extended and undisturbed blocks of time in the outdoors provide children with not only thinking and experimenting opportunities, but also time to elaborate on their imaginative and creative play. When children engage in their play, an hour or so one day may extend to the following day (Kiewra & Veselack, 2016). Problem finding involves mental, physical, and emotional effort and therefore, also requires time.

Children, just like adults, ponder different places and events prior to the act of choosing the one or ones they wish to commit to that day. Gathering materials to create their own possibilities takes time to explore, test for interest, and plan for their creative action.

Our history is replete with scientists who imagined discoveries and were discredited; artists who innovated new forms and were scorned and business minds and entrepreneurs who were denied funding for cutting edge concepts. An important component when nurturing children's imagination is to legitimize the mental process, understanding that children require time, rehearsal, and elaboration in outdoor play, as adults empower children with their own choices, goals, and interests.

Adults provide children with rich outdoor play opportunities by giving them time and space. Adults, who respect children's interests and goals, not only invite, support, and sustain children's innate imaginations and creative processes to unfold, but also understand how their role in supporting outdoor play is also essential for children's healthy human development (Greenman, 2017).

The Adult's Role: Understanding Children's Social Development

Many children are "ready to go," and enjoy the outdoor play experience, but others require time to watch first. Adults provide a safe place for a child to observe until he or she is at ease to engage in outdoor play or play with others. A bench, picnic table, or tree stump provides a place and time for a child to watch and consider play opportunities.

Adults consider Parten's (1932) six stages in children's social play: **unoccupied** (child interacts and explores self and environment), **solitary** (child plays alone and independently), **onlooker** (child observes the interactions of other children), **parallel** (child plays independently but near or among other children), **associative** (child plays with others, but does not subordinate to the interests of the other children) and **cooperative** (child plays and interacts with other children, taking complementing roles).

It is important to understand that children do not sequentially progress through these stages in all outdoor play events. For example, while some children enjoy boisterous and collaborative dramatic play (pretending to be astronauts in spaceships), the same children may prefer solitaire or associate art. Similarly, while some children may enjoy collaborating in a construction project (boards/hammers, planks, crates), some of the same children may prefer associative play when in the mud or sand areas.

It is important for adults to legitimize children's developmental stages. There are times when some children may choose a less social interaction. A child chooses and engages at his or her particular developmental level, interest, and comfort. This is why changing out areas with different materials might prove advantageous in attracting children to engage in a new play event. In addition to the challenge of different materials, children may interact with new playmates. Therefore, it is essential the outdoor play environment provides children with a range and variety of ways to engage their play opportunities, dependent on their social development and comfort levels.

Additionally, an adult may notice a child returning to the same play area for several days. This may be a boy enjoying the tree house with others as they pretend to be astronauts in spaceships,

or firefighters using binoculars to locate forest fires. An adult may observe a girl walking alone as she finds special stones along the path; she may simply enjoy gathering different rocks or collecting rocks to create her own rock store. Recalling Parten's six stages toward social play, it is important to acknowledge that children remain unique in their social development and interests. These developmental differences underscore the critical importance that the outdoor playscape is flexible and diverse, with opportunities for the children's varied social development needs.

With emerging social competence, collaboration also becomes important. In order to extend children's understanding of the world and its people, they communicate and interact with persons representing differing abilities, ethnicities, races, and socio-economic levels. Additionally, play involving children of different ages naturally supports and promotes learning, development, and shared imaginations. Children help and are helped, they lead and others follow, and some children talk and others listen; mixed-age play groups extend and elaborate, among others, language, content, socio-emotional expectations, and the support and extension of the imaginary world (Stone & Burriss, 2019; Stone & Stone, 2021).

The Adult's Role: Nurturing Children's Imaginations

The adult's role in nurturing children's imaginations during outdoor play incorporates respecting and providing for children's varied goals and interests, providing adequate and varied spaces and materials for inspiring children's outdoor imaginative play, and planning adequate time for children's imagination and creative endeavors to unfold.

Consider: From where does a child's imagination generate? Is it from a group of children in boisterous pirate play, in two children gently pretending to paddle their boat across the ocean, or does it originate in a child's quiet mind as he or she immerses in the sounds of nature? The answer is -- all of the above. This is why it is vital for adults to provide, protect, and nurture children so they have time, opportunity, and a range of materials to freely explore, test, and create – to imagine! In order for parents, teachers, and administrators to cooperate and ensure these possibilities, data describe the importance of providing a written outdoor school policy (Burriss & Burriss, 2011b).

Assessing Children's Outdoor Play

In qualitative studies, Kiewra & Veselack (2016) and Veselack et al. (2010, 2013) used "nature notes" to observe and record children's interactions in the outdoors. Assessing outdoor play involves video recording observations, making notes, scripting children's conversations, drawing illustrations, and photographing events (Creswell & Creswell, 2022).

Importantly, teachers understand their roles as observers and do not intervene in the ongoing play. For the most authentic and influential data, show children pictures of their play environment and their actual play experiences. Show children pictures of the treehouse, construction areas, art areas, traditional slides, and swings, and talk with them regarding these various outdoor play areas and their play episodes. Ask the children which play areas and episodes look to be the most fun and ask "why?" Talking with children regarding their play

choices and experiences will provide rich insight into the recorded play events. In this way, designing a playground to nurture children's imaginations will truly generate from children's dreams.

Parents, Teachers, and Administrators as Outdoor Play Advocates

Wasserman (1992) wisely shares how **"**play allows children to make discoveries that go far beyond the realm of what we adults think is important to know" (p. 133). In order to ensure children's quality and imaginative outdoor play occurs, it is vital for parents, teachers, and administrators to understand what is happening when children engage in outdoor, imaginative play and why this type of play is critical for their children's holistic development.

Kiewra & Veselack (2016) and Steiner (nd) describe how maintaining the planet requires people to solve problems, adapt to varied circumstances and effectively communicate with one another. They discuss how the future world requires people who continue to explore alternatives in order to improve life. Kiewra & Veselack (2016) believe that when people engage in particular experiences, they develop and express creativity; in turn, they may apply this creative thinking in a variety of situations. Thus, it is critically important for educators to describe and support the unlimited potential for children to engage in outdoor playscapes. Information regarding imagination and creativity, play types and benefits, and descriptions and need for unstructured, flexible, and divergent play is important for parents to understand and become outdoor play advocates as well.

Documenting and discussing children's outdoor play experiences will enhance teachers,' parents,' and administrators' understandings of the benefits and importance of outdoor play for children's strong and healthy growth in multiple areas such as cognitive, physical, and social development as well as in literacy, math, and science areas (Lozon, in press). With this insight, adults (parents, teachers, and administrators) confidently advocate and plan for open-ended playscapes for children to explore, imagine, create, and enjoy.

Conclusion

Outdoor play provides freedom for children to take risks without fear of failure; they engage in the joy of discovery, with endless possibilities (Gray, 2013). In play, a child is learning at exactly his or her own point of understanding (Stone, 2017). And, important for the current discussion, outdoor play provides children with the context to imagine and create.

Piaget states that ". . . children should be able to do their own experimenting and their own research. Adults provide appropriate materials, but "the essence is in order for a child to *understand* something, he must construct it himself, he must re-invent it. Every time we teach a child something, we keep him from re-inventing it for himself. On the other hand, that which we allow him to discover by himself will remain with him visibly. . . for the rest of his life" (Piers [ed.] 1972, p. 27).

When children play outdoors, they freely imagine and create. Dreaming a playground that supports children's imagination and creativity provides them with the inspiration, motivation,

enjoyment, and abilities to engage future ideas. Thus, outdoor imaginative play becomes a foundation for children's future roles as creative adults (Stone, 2017).

In considering the future, play today will prepare children with capacities to mediate better tomorrows. As Einstein said, "Logic will get you from A to Z. Imagination will get you everywhere." Imagination gives people a vision into the future which is the epitome of human success (Hatt, 2018).

As L. Frank Baum proposes, "*The imaginative child will become the imaginative man or woman most apt to create, to invent, and therefore to foster civilization." (n.d.)*

Let's dream a playground where children can freely imagine and create.

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Tech Talk
Raising the Bar: Improving Mathematics Education to Equip Students for Success

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Abstract

This article explores the critical importance of mathematics education in fostering essential skills such as reasoning, problem-solving, and real-world numeracy. It examines concerning trends in U.S. mathematics performance through national and international assessments, including NAEP and TIMSS, exposing widening achievement gaps. Evidence-based strategies and curricular models—such as Singapore Math and the use of instructional coaching—that have demonstrated promise in improving outcomes, are discussed. Furthermore, it highlights the expanding role of educational technology and artificial intelligence in mathematics instruction, with practical recommendations and toolkits for educators. By integrating research-based practices, culturally responsive pedagogy, and innovative technologies, schools can better support all learners in developing mathematical proficiency vital for academic, personal, and professional success.

The Importance of Mathematics Education

Significant emphasis is placed on mathematics education, and rightly so, given its critical role in fostering reasoning, critical thinking, and problem-solving. Learning mathematical thinking and numeracy promotes these skills and should be vital to mathematics education. Mathematical thinking and doing math are not the same. Mathematical thinking is a cognitive process that requires the use of different types of problem-solving strategies, such as if-then thinking, decomposing, classifying, comparing, and generating ideas (Stacey, 2006; Thinking Maps, 2022). Proficiency in mathematical reasoning supports logical thinking, informed decision-making, active civic engagement, and enhancing workplace performance (Gates Foundation, 2022; Iris Center, 2025). Numeracy, on the other hand, refers to the ability to apply mathematical understanding in real-life contexts—whether at home, in the workplace, or within educational environments - and is essential for all individuals, not just those pursuing STEM careers

(National Numeracy, 2025a). Strong numeracy skills are crucial for everyday tasks such as budgeting, managing health, making household improvements, and administering medications. At the societal level, numeracy underpins key sectors including healthcare, economics, construction, and technology, and drives innovation and global advancement. Conversely, poor numeracy skills can have far-reaching consequences, including unemployment, lower wages, poor health, social issues, and even an increased risk of crime. Ultimately, numeracy equips individuals with the tools needed for interpreting, engaging, and navigating the complexities of the modern world (Iris Center, 2025; McNeil, Jordan, Viegut, & Ansari, 2025; National Numeracy, 2025b).

Mathematics Scores in the United States

Concerns persist regarding the state of mathematics achievement in U.S. public education. The National Assessment of Educational Progress (NAEP) produces "The Nation's Report Card," which assesses student performance in various subjects, including mathematics, every two years. These assessments are administered to representative samples of 4th and 8th-grade students nationwide, as well as to 12th-grade students in selected subjects (National Center for Education Statistics [NCES], 2025a). According to the most recent NAEP mathematics data (NCES, 2024a, 2024b), 39% of 4th-grade students scored at or below the *NAEP Proficient* level. This represents a three-point improvement from 2022, yet remains two points below 2019 levels. While scores among middle- and high-performing students improved, no significant changes were observed for lower-performing students. Among 8th-grade students, 28% achieved scores at or above the NAEP Proficient level, reflecting a two-point increase from 2022 but a six-point decline from 2019. Notably, scores rose for higher-performing students but declined for those in the lower performance brackets (The Nation's Report Card, 2023).

The Trends in International Mathematics and Science Study (TIMSS), administered every four years, assesses mathematics and science achievement among 4th- and 8th-grade students globally. The 2023 assessment marked the completion of TIMSS's eighth cycle. In that cycle, 63 education systems participated at the 4th-grade level and 45 at the 8th-grade level. Results from the 2023 mathematics assessment revealed a notable decline: 4th-grade students scored 18 points lower on average than in 2019, with the lowest scores at the 10th and 25th percentiles since TIMSS began in 1995. Similarly, 8th-grade students scored 27 points lower than their 2019 counterparts. In both grade levels, the achievement gap between students at the 10th and 90th percentiles was wider in 2023 than in the 2003, 2007, 2011, and 2015 cycles, indicating increased performance disparities (NCES, 2025c).

In the 2023 TIMSS assessment, the international average score in mathematics was 503 out of a possible 1000. Scores ranged from a low of 362 in South Africa to a high of 615 in Singapore. The United States scored 517, tying with Portugal. In comparative rankings, U.S. students outperformed those in 28 education systems, scored lower than those in 21 systems, and performed similarly to students in 13 systems at both the 4th- and 8th-grade levels in mathematics and science (NCES, 2025c). Male students scored higher on average across both subjects and grade levels than female students.

A particularly troubling trend is the growing achievement gap between students in the highest and lowest percentiles in mathematics. This disparity is also evident among 13-year-old students, especially in the racial achievement gap between Black and White students. The gap has widened from 25 points in 2020 to 33 points in 2022, and further to 42 points in 2023. These increases are most pronounced among lower-performing students, signaling a critical area for intervention and equity-focused educational strategies (NCES, 2025c; The Nation's Report Card, 2023).

Impacting Mathematics Scores

Given the concerning trends in mathematics achievement in the United States, it is critical to consider how teachers, schools, and districts can take meaningful steps to improve student outcomes. The IRIS Center at Vanderbilt University (2025) emphasizes two key actions: adopting standards-based curricula and implementing evidence-based instructional practices. When selecting curricula, it is essential to avoid an overreliance on rote computational procedures or surface-level content that lacks depth or connection to conceptual understanding. Educators should recognize that while standards and textbooks are important tools, they are not synonymous with curriculum; rather, they serve as components of a broader instructional framework. Mathematical concepts and procedures should be taught using approaches grounded in rigorous research and proven to be effective in improving student learning (IRIS Center, 2025).

According to EdReports (2024), a high-quality mathematics curriculum should be aligned with academic content standards and reflect the instructional shifts necessary to prepare students for college and careers. It should also integrate the Standards for Mathematical Practice (Common Core Standards, 2022) and demonstrate evidence of culturally responsive pedagogy (NCTM, 2025). These components must work in concert, supporting and reinforcing one another, rather than functioning in isolation. Trusted sources for evaluating and selecting effective mathematics curricula include the *What Works Clearinghouse* (Institute of Educational Statistics, 2025) and the *Best Evidence Encyclopedia* (2021), both of which provide research-based reviews of curricular materials (IRIS Center, 2024).

The Institute of Education Sciences' *What Works Clearinghouse* (2021) outlines six evidence-based recommendations for supporting students who struggle with mathematics, each accompanied by practical implementation strategies. These recommendations are as follows:

1. Provide systematic instruction during interventions to enhance students' conceptual understanding of mathematics.
2. Teach precise and concise mathematical language and support students in using this language to communicate their mathematical thinking effectively.
3. Employ a carefully selected set of concrete and semi-concrete representations to support students' understanding of mathematical concepts and procedures.
4. Use number lines to teach mathematical concepts and procedures, reinforce grade-level content, and prepare students for more advanced mathematics.
5. Deliver explicit instruction in solving word problems to deepen conceptual understanding and promote the application of mathematical ideas.

6. Incorporate timed activities regularly to help build fluency in mathematical skills.

These recommendations are supported by meta-analytic findings across twelve mathematical domains, including general mathematics achievement, algebraic reasoning, and whole number computation (Institute of Education Sciences, 2021, p. 14).

McNeil, Jordan, Viegut, and Ansari (2025), in their article *What the Science of Learning Teaches Us About Arithmetic Learning*, offer four research-based recommendations for improving mathematics instruction, particularly within early childhood education programs. Their suggestions, grounded in developmental cognitive science, include:

1. Integrate developmental cognitive science more fully into educator preparation programs.
2. Increase awareness of early mathematics milestones by embedding them into developmental assessment tools used by pediatricians and early childhood educators, and by promoting them through public awareness initiatives.
3. Foster understanding of the benefits of well-structured, time-limited retrieval practice for students who have already achieved a high level of accuracy. Emphasize that this form of practice is distinct from high-stakes, time-pressured testing.
4. Embed brief but regular "what-I-need" (WIN) time or tutoring sessions into students' weekly schedules to provide targeted instructional support.

These recommendations are accompanied by detailed rationales in the article, underscoring their importance for both instructional practice and policy development (McNeil et al., 2025, p. 13).

A curriculum that has had favorable math outcomes is the Singapore math method. As we have seen from TIMSS data over the past few decades, Singapore has been outscoring other nations in mathematics (Myers, 2024; NCES, 2024). What is so special about math in Singapore, and what is the Singapore math method? The Singapore math method was developed in the 1980s by Singapore's Ministry for Education for Singapore public schools and is familiar worldwide. Singapore math focuses on the how and why of math, promoting a deep conceptual understanding and math mastery, as well as a positive attitude towards math (Chong, 2016; O'Toole, 2020; Singapore Math, 2025). The 12 years of Singapore math curriculum spans from primary to pre-university and capitalizes on a spiral method where concepts and skills grow in increasing complexity. The Singapore Math Curriculum Framework is shaped like a pentagon that has on each of its five sides, attitudes (beliefs, interests, perseverance, and confidence), metacognition (thinking about one's thinking and engaging in self-regulation), process (reasoning, communication, heuristics, and application and modeling), concepts (numerical, algebraic, geometrical, statistical, probabilistic, and analytical), and finally skills (numerical calculation, algebraic manipulation, spatial visualization, data analysis, measurement, use of mathematical tools, and estimation) (IEA TIMSS & PIRLS, 2015; Singapore Math, 2025). The Singapore math method uses a progression from concrete to pictorial to abstract (CPA) or sometimes known as CRA (concrete to representations to abstract). It uses number bonds to show part-whole relationships between numbers, bar modeling to visualize fractions, percentages, and ratios, allowing for different ways to think about numbers, and mental math to help students develop number sense and think mathematically (Singapore Math, 2025). From the Singapore math method, Singapore Math® was developed in the late 1990s in the United

States based on the way math is taught in Singapore. The company has ready-made curriculum materials that can be purchased (Singapore Math, 2025).

Although not a new concept, the use of mathematics coaches and specialists has gained renewed attention as a strategy for improving student achievement in mathematics. In 2022, Alabama enacted the *Numeracy Act*, a comprehensive legislative initiative aimed at raising statewide mathematics performance. The act provides substantial resources, including intensive professional development for teachers and principals, the placement of math coaches in every K–5 classroom, access to high-quality instructional materials (such as math manipulatives), targeted interventions for students requiring additional support, and accountability measures to track progress and outcomes (Alabama STEM Council, 2024).

Similarly, in Tennessee, two counties—Putnam and Weakley—reported that middle school math scores in 2024 exceeded pre-pandemic levels. This improvement has been linked to several key strategies: the implementation of instructional coaching, increased instructional time in mathematics (two 45-minute sessions daily, referred to as "core" and "encore," in contrast to a traditional single 50-minute session), and the consistent use of data to guide instructional decision-making (Yoder, 2025).

How Can Edtech Be Used in Math Education?

Educational technology (edtech) has been a component of mathematics instruction since the 1980s—early examples include programs such as *Math Blaster* (Reyneke, 2024). The National Council of Teachers of Mathematics (NCTM) emphasized in its *Principles in Action Executive Summary* that technology should be purposefully integrated to support students in thinking and communicating mathematically (NCTM, 2014). Tannenbaum (2024), an elementary technology coach, advocates for using digital tools to help students visualize mathematical concepts, enhance engagement, and offer multimodal learning opportunities.

Research supports the effectiveness of technology in improving mathematics performance and increasing student interest in the subject (Bright, Welcome, & Arthur, 2024; Eyyam & Yaratan, 2014). The instructional benefits of physical manipulatives are well established, and virtual manipulatives have been a valuable edtech resource for more than two decades (Siller, 2024). Notably, virtual manipulatives for teaching fractions have demonstrated even greater efficacy than their physical counterparts in some studies (Rich, 2023). Additionally, edtech is being used to gamify learning, provide simulations, and offer interactive and collaborative learning tools (Bright, Welcome, & Arthur, 2024; Picha, 2018).

Artificial Intelligence in Math Education

Artificial Intelligence (AI) is increasingly transforming educational practices, and its integration into mathematics education is becoming more widespread. Educators are leveraging AI to streamline instructional and administrative tasks, including the development of lesson plans, behavior management strategies, and communications with families and communities (AI-Pro, 2024; DeFlitch, 2025; Hanson, 2024). Additionally, teachers are beginning to use AI to analyze

student performance data, identify trends through performance clustering, and generate progress monitoring reports (AI-Pro, 2024; Hanson, 2024).

In mathematics instruction specifically, AI is being used to design rich, engaging learning experiences that support the development of number sense, encourage exploration of open-ended problems, promote multiple solution strategies, and deepen conceptual understanding (Koehler & Sammon, 2023). AI tools are also aiding in the differentiation of instruction by providing personalized learning paths that appropriately challenge students with diverse learning needs (AI-Pro, 2024; Hanson, 2024; Koehler & Sammon, 2023).

The National Council of Teachers of Mathematics (NCTM) has issued a position statement on "Artificial Intelligence and Mathematics Teaching," endorsing the integration of AI tools in mathematics education. The statement emphasizes that while AI can enhance teaching and learning, the professional judgment, pedagogical expertise, and content knowledge of the teacher remain central to effective instruction. Furthermore, it highlights the importance of teaching students to critically evaluate AI-generated outputs for potential errors or biases.

A notable initiative in this area is the "Artificial Intelligence in Math" program, developed by the Concord Consortium in partnership with the University of Florida and Florida Virtual School. This supplemental certification program targets middle and high school students enrolled in Algebra I and aims to introduce them to real-world AI applications, ethical considerations, and career pathways related to AI. The program also offers professional development opportunities for educators (Langreo, 2025). The future holds untold possibilities in the area of AI in education.

As technological innovation continues to accelerate, educators have an expanding array of free and subscription-based digital tools to enhance math instruction. Below is a sampling of edtech platforms that can be implemented at the classroom, school, or district level:

- **Brainingcamp** (https://www.brainingcamp.com): A subscription-based platform offering virtual manipulatives such as base-ten blocks, fraction circles, and number lines. It includes over 300 ready-to-use activities and serves over 7.5 million users with a 4.7/5 rating.

- **CK-12** (https://www.ck12.org): A generative AI-powered platform with features such as Flexi, an interactive AI tutor that answers student queries and supports self-assessment. The site offers FlexBooks, simulations, study guides, and adaptive practice across multiple subjects and grade levels (1–12), including support in eight languages.

- **Dragonbox by Kahoot!** (https://dragonbox.com): Offers highly rated math and literacy learning apps for children ages four and older, with most apps earning four or five stars on Common Sense Media.

- **Educaide AI** (https://www.eduaide.ai/): A teacher-created workspace with more than 110 educational resources for teachers to enhance teaching and learning. It is fee-based and has a free trial.

- **Eureka Math** (https://greatminds.org/math/eurekamath): A K–12 curriculum aligned with college- and career-readiness standards. The program emphasizes conceptual understanding and includes print, digital, and hands-on instructional materials.

- **Frax** (https://frax.explorelearning.com/): An adaptive, game-based program that develops conceptual understanding of fractions through sequential missions. Sectors 1 and 2 address fractions as numbers and equivalencies, while Sector 3 (launching in fall 2025) will address fraction arithmetic.

- **i-Ready Math** (https://www.curriculumassociates.com/programs/i-ready-learning/classroom-math): A K–8 digital platform featuring diagnostic assessments and adaptive learning paths. It received moderate ratings on Common Sense Media for learning and community engagement.

- **IXL Math** (https://www.ixl.com/math): A digital math learning platform for K-12 that supports students' math fluency and confidence in solving math problems. Progress is tracked, and virtual rewards are provided. There are resources and supports available for parents and teachers. It is fee-based. It has received four out of five stars from Common Sense Media but has a 68% privacy warning.

- **Khanmigo** (https://www.khanmigo.ai/?step=login-signup): An AI chatbot that is used as a personal tutor for students and a virtual assistant for teachers. It is free for teachers and available at a low cost for students.

- **MagicSchool AI** (https://www.magicschool.ai/): A digital AI platform with more than 80 tools for teachers to use to create lesson plans, presentations, emails, vocabulary decoder, learning games, and much more. There is both a free and paid version.

- **Math Learning Center** (https://www.mathlearningcenter.org/apps): A digital platform for free math learning apps. It contains Apps Collection, App Activities, and App Launcher. There are math curricula available such as Bridges in Mathematics for a fee.

- **Mathletics** (https://www.mathletics.com/us/): A digital math learning platform for K-12 students at home or school. It boasts learner engagement, report generation, and improved math achievement. Fee-based. Ratings on CommonSense Media are four out of five stars. There is a 46% privacy warning statement.

- **Prodigy** (https://www.prodigygame.com): A game-based learning platform for grades 1–8 (math) and 1–6 (English). It is free for educators, with paid features for parents, and is rated three stars for learning and five stars for community support.

- **Reflex** (https://reflex.explorelearning.com): Focused on math fact fluency for grades two and above, this adaptive platform features engaging games and detailed performance reports for teachers and parents.

- **Toy Theater** (https://toytheater.com): A free website offering interactive games and educational tools in math, reading, art, and music, including puzzles and virtual manipulatives.

- **Zearn** (https://about.zearn.org): A widely adopted free platform for K–5 math instruction, Zearn integrates visual models and real-world examples to enhance conceptual understanding.

These tools illustrate the wide-ranging possibilities for using technology to enrich mathematics instruction and improve student outcomes.

Conclusion

Mathematics education is far more than mastering numbers; it is about cultivating the cognitive, analytical, and practical skills that individuals need to thrive in a rapidly evolving world. While recent assessment data underscore persistent challenges and disparities in math achievement, they also reveal areas ready for promising interventions. High-quality curricula, evidence-based instruction, instructional coaching, and targeted use of technology and AI can significantly enhance math learning and equity. When schools and educators commit to a comprehensive and student-centered approach to math education, they equip learners not only for academic success but also for responsible citizenship, career readiness, and lifelong problem-solving.

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Science, Technology, Engineering, Art, and Mathematics: STEAM

From Chalkboards to Chatbots: Why Education Must Play a Role in AI's Creation

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Abstract

The rapid advancement of artificial intelligence (AI) demands an equally transformative response from education, positioning it as a critical player in shaping the future of technology. This paper explores the essential role of education in AI development, focusing on STEM initiatives that foster both technical expertise and ethical awareness. By examining the historical trajectory of educational technology, the benefits of AI integration in STEM education, and the importance of interdisciplinary collaboration, this paper highlights how educators can guide the evolution of AI to align with societal values. Special attention is given to Artificial General Intelligence (AGI) as a fledgling intelligence, emphasizing the need for educators to serve as mentors in its responsible growth. Through proactive involvement, education can prepare students for an AI-driven future, foster innovation, and safeguard the ethical impact of AI on society.

Key Words: Artificial Intelligence (AI), Artificial General Intelligence (AGI), STEM Education, Education Technology, Responsible AI Development

Introduction

The course of human history has been determined time and again by the development of modern technology. As artificial intelligence, or AI, pervades every aspect of everyday life, reshaping industries and education alike, one must ask who is responsible for its development and what values are being programmed into AI? This question becomes even more urgent when leading experts in the field of AI development predict the emergence of Artificial General Intelligence, or AGI, within roughly the next five to twenty years (Levin & Maas, 2020). AGI is best defined

as a hypothetical, for now, type of AI that would be able to perform every conceivable cognitive task that a human could perform to the same standard, or better, than your average human (Bołtuć, 2020). While this is still in the realm of science fiction in its conceptualization, the conversation about AI and its evolution into AGI needs to start now.

AI has swiftly become a driving force across a multitude of fields including, healthcare where it was used to develop COVID-19 vaccines, to finance where AI models can be used to predict market trends, to education itself. Its capabilities are expanding at an unprecedented rate, enabling machines to analyze data, predict outcomes, and even make decisions. This rate of development has the potential to only increase in a cascade effect as AI models of today are used to develop the AI models of tomorrow (Levin & Maas, 2020). The development of AI & AGI affects not only how we work and learn but how we define what it means to be human in an increasingly automated world.

Historically, education has always adapted to meet the demands of technological advancements. Mostly recently this can be seen as teachers prepare students for a society where innovations like the internet and personal computers dominate. Schools introduced computer literacy and digital skills to equip students for a modern digital era, integrating these technologies into curricula (Kiryakova & Kozhuharova, 2024). Now, as we enter the age of AI, education once again must step forward to prepare students not only with technical skills but also with the ability to navigate complex ethical landscapes that are emerging as a result of AI development and use.

Some may feel that the integration of AI into daily life cannot be avoided, and therefore, students must engage with its unique ethical and societal challenges now, from privacy concerns to potential biases in decision-making systems. Those in the field of education have the opportunity to play a critical role in preparing students to understand and address these issues, fostering a generation that can build and use AI responsibly. Through teaching values, ethics, and critical thinking, educational institutions are in a prime position to shape both students' and AI's consciousness towards a future that is inclusive, fair, and mindful of societal impacts. As the frontier of Artificial General Intelligence (AGI) approaches, the need for education to serve as a guiding force in fostering ethical, responsible, and human-centered AI becomes even more pressing, as someday soon, students may be learning alongside a machine consciousness.

Historical Development of Educational Technology

In the early 20th century, technologies like film projectors, radios, and overhead projectors began to be used in classrooms to enhance learning (del Campo et al., 2012). These tools allowed educators to present information visually and audibly, expanding students' access to knowledge beyond textbooks while also providing a more engaging communal experience for the class. Though far more limited in interaction, these early technologies marked the start of integrating external technological resources into traditional teaching methods. With the introduction of personal computers in the 1980s and internet access in the 1990s, education underwent another major transformation (del Campo et al., 2012). Computers enabled more interactive, personalized learning experiences, and the internet connected students to vast digital libraries and online courses. Moving firmly into the age of communication, the field of education saw the

birth of e-learning, which made education accessible to a broader population and paved the way for online schools and digital classrooms.

In conjunction, the 2010s saw a surge in mobile technology and educational apps, making learning more flexible and accessible than ever before (Algoufi, 2016). Smartphones and tablets allowed students to learn anytime and anywhere, giving rise to microlearning and gamified educational content. To build upon this concept, a wave of EdTech startups emerged, creating platforms such as Khan Academy, Coursera, and Duolingo, which broadened the accessibility of quality education worldwide and highlighted the potential for technology to democratize learning.

Recently, VR and AR technologies have also started to make inroads into education, offering immersive learning experiences that simulate real-world environments. These tools enable students to explore complex subjects, like anatomy, historical events, or landmark locations, in a hands-on, engaging way that traditional classroom settings cannot afford to provide (Kavanagh et al., 2017). By fostering experiential learning, VR and AR are reshaping educational possibilities, creating a bridge between theoretical knowledge and practical experience.

Lastly, in the most recent years, AI-driven educational tools have emerged which include adaptive learning platforms that tailor instruction to each student's needs and intelligent tutoring systems that can provide real-time feedback. This evolution in educational technology has transformed classrooms by supporting individualized learning paths and predictive analytics (Zhai et al., 2021). AI in education highlights the shift toward data-driven, personalized instruction, positioning technology not just as a supplement but as an active participant in the learning process. Through adaptive learning platforms, AI can assess a student's strengths, weaknesses, and learning pace, tailoring lessons and resources to optimize their educational journey where each generation of AI is better than the last at identifying and meeting the needs of the students that engage with it. Beyond personalization, AI-driven analytics offer educators more rapid insights into student performance trends and help identify areas where interventions are needed, enabling data-informed decision-making and more effective support for each learner (Zhai et al., 2021).

Benefits of AI Integration in STEM Education

AI empowers personalized learning experiences that adapt to each student's pace, strengths, and weaknesses, especially in complex STEM subjects. By using adaptive learning platforms, such as DreamBox or IXL Learning, students can work through challenging topics with customized resources and feedback, increasing their understanding and retention. This tailored approach helps students progress at their own pace, ultimately improving engagement and mastery in STEM fields, yet it is only the beginning of the possibilities that AI can provide. Today's adaptive learning platforms are still plagued by the base flaws found in traditional education, where the typical approach to successful learning is repetition. AI and its evolution, AGI, if developed with the intent of pushing education towards experiential learning, could be an invaluable tool in breaking the cycle of traditional forms of education.

An example of this in action are AI-powered simulations and virtual labs, such as PHET Interactive Simulations or Labster, which offer students the chance to explore complex STEM concepts in an interactive, hands-on way. For example, AI-driven science labs, such as the two listed above, can simulate real-world scenarios, like chemical reactions or physics experiments, without the need for costly physical materials. These immersive learning tools allow students to apply theoretical knowledge to practical problems, boosting critical thinking and reinforcing their understanding of core STEM concepts (Dai & Ke, 2022). Integrating AI into STEM education prepares students for a workforce increasingly driven by technology and automation and allows students to live up to the phrase, "Work smarter not harder." AI tools can provide instant feedback and assessments, helping students identify and correct mistakes in real time. This immediate feedback allows students to understand and address gaps in their knowledge before moving on to more advanced concepts, making learning more efficient (Dai & Ke, 2022). For educators, AI-driven assessments also reduce time spent on grading and tracking, allowing them to focus their attention on supporting individual student needs.

By engaging with AI tools at an early age, students will begin to develop an intuitive understanding of technology and be able to proficiently use it in multiple, dynamic settings. It is critical that educators are a key part of the development of AI to help steer these tools away from digital worksheets and towards a landscape of imaginative interactive AI tools. AI encourages students to explore cutting-edge content areas, sparking curiosity and a passion for innovation in STEM fields. With access to AI-powered tools, students can tackle complex, open-ended problems, from environmental issues to engineering challenges thus encouraging more classrooms to engage with problem-based learning with additional confidence and support (Fitria, 2021). This exposure to AI technology not only cultivates problem-solving skills but also inspires students to become creators and innovators in fields that are shaping the future.

As Artificial General Intelligence (AGI) develops, it has the potential to act as an advanced learning companion, capable of understanding and responding to individual student needs on a near-human level (Raddaoui & Raddaoui, 2024). Imagine if you will, a classroom of 30 students each with their own adult capable of answering questions and prompting inquiry. Unlike current AI, AGI would not only provide answers but could engage in complex, adaptive conversations with students, offering explanations, clarifications, and encouragement in real time. This could create an immersive, tutor-like experience, where AGI learns alongside students, guiding them through intricate STEM concepts and helping them develop critical thinking skills with nuanced feedback that is tailored to each learner. AGI has the potential to catalyze unprecedented collaboration between students and AI on advanced research projects, from quantum physics to environmental science. AGI could support students by suggesting hypotheses, interpreting complex datasets, and even generating new approaches to scientific problems, functioning as a true intellectual partner in exploration (Raddaoui & Raddaoui, 2024). This level of engagement could democratize access to cutting-edge research, empowering students to make meaningful contributions to STEM fields much earlier in their educational journeys and pushing the boundaries of what is possible in high school or university-level STEM learning.

The Role of Education in Responsible AI Development

Educators need to carefully consider their responsibility in shaping future AI developers and their innovations by fostering the critical thinking, creativity, and problem-solving outcomes that teachers would hope to find in effective and impactful AI technologies. By integrating critical thinking and creativity into AI development, through the exploration of issues such as academic progress, analysis, and feedback, as well as bias and responsibility, educational technology developers can equip future AI tools to focus on student development while maintaining transparency and ethical standards. This level of interdisciplinary cooperation will be essential to the development of the proposed AGI educational tools, helping to establish a strong foundation for creating responsible and effective AGI systems in the future. Additionally, this foundation helps students approach AI with a sense of responsibility and trust knowing the tools they were using were designed specifically with education in mind as opposed to the tools of today which are designed for the masses.

A responsible approach to AI development benefits from input across diverse fields, as opposed to being developed solely by programmers and engineers. The development of AI/AGI will require collaboration among not just computer scientists and engineers, but also ethicists, philosophers, psychologists, educators, and other experts who can contribute to the nuanced understanding of intelligence and consciousness. Education is uniquely positioned to foster interdisciplinary collaboration due to the very nature of education itself being interdisciplinary. Courses that combine STEM with social sciences, humanities, and law encourage students to think critically about the social contexts and potential consequences of AI (Ali et al., 2021). This cross-disciplinary education helps future AI professionals approach development with a well-rounded perspective, considering scholastic achievement, human rights, cultural impacts, and the ethical dimensions of the very technology they are creating. Furthermore, educators can involve their students in these conversations, which in turn, will provide valuable hands-on experience with the developmental process and ensure their voices are heard in the conversation as well. By preparing students to engage in these complex, multi-faceted conversations, educators will help ensure that AGI is developed in a way that is ethical, inclusive, and aligned with the values of a diverse global society (Ali et al., 2021).

Therefore, educators must be actively involved in the creation of AI, as it offers a unique opportunity to shape technologies that align with human-centered values and prepare developers and students alike for an increasingly AI-driven world. By participating in AI development, educational institutions can ensure that future AI systems are not only innovative and effective but also equitable and responsible. In return, education benefits from enhanced curricula that integrate cutting-edge technologies, providing students with hands-on experience and a deeper understanding of the tools shaping their future. As the development of Artificial General Intelligence (AGI) progresses, educators' involvement will be crucial in ensuring that AGI is developed in a way that aligns with societal needs, and more specifically, academic needs, where the vision of virtual teacher assistants for every student could be realized. This knowledge, when applied to the dream of empowering AGI educational assistants, will help ensure that AGI is developed with a focus on the collective good, minimizing risks while maximizing its benefits for all of humanity.

Lastly, just as educators nurture the growth of their students, they should be actively involved in the development of AGI, which can be viewed as a fledgling intelligence that requires careful guidance and ethical mentorship. Like students, AGI will evolve, learn, and adapt over time, making it essential for educators to help shape its development with an understanding of both its potential and its limitations (Bołtuć, 2020). By leveraging their expertise in teaching, educators can ensure that AGI's growth is aligned with human values, fairness, and accountability, fostering a balanced approach that prioritizes academic, social, and ethical considerations throughout its evolution.

Conclusion

While it may still seem like science fiction, there may come a day when every student has their own personalized AI assistant tailored to their unique learning style, strengths, and interests—a technology that could revolutionize education. This vision may be closer to reality than many can imagine, with rapid advancements in AI paving the way for tools that not only adapt to students' needs but also foster creativity, critical thinking, and problem-solving skills. Such AI assistants could act as mentors, collaborators, and lifelong learning companions, bridging gaps in access to quality education and empowering students to reach their full potential. However, realizing this vision requires intentional, ethical development guided by educators, researchers, and policymakers to ensure these tools are equitable, transparent, and aligned with the values of a diverse global society. Educators' proactive involvement will be the cornerstone of creating AI that transforms learning into an inclusive and empowering experience for all.

AI Disclosure Statement

It would be remiss to write about AI without actively utilizing its tools. To ensure transparency and maintain the highest ethical standards, the following AI tools were employed in the creation of this article: ChatGPT was used to draft an initial outline, while both ChatGPT and Google Gemini served as editorial assistants. ResearchRabbit was utilized to identify additional supporting articles, and Zotero was employed for organizing and managing citations. These tools demonstrate the collaborative potential of AI in academic writing while underscoring the importance of ethical and responsible usage.

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Parenting Programs for Current and Post-Incarcerated Fathers: A Literature Review of Attachment-Based and Play Therapy

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Abstract

The purpose of this literature review was to describe the research regarding parenting programs designed for incarcerated fathers. In doing so, this manuscript explores parenting programs and interventions specifically tailored to the needs of incarcerated fathers, with particular attention to those incorporating attachment-based approaches and play therapy. Findings in the literature suggested that play therapy as an intervention shows promise for improving the attachment style of parenting, current and post-incarceration. Further implications that include the potential for reducing recidivism and increasing parenting interventions during incarceration are discussed.

Keywords: Incarcerated Fathers, Parenting Programs, Re-Entry, Play Therapy, Post-Release

In the United States, more than 1.2 million individuals are incarcerated in federal and state prisons (Carson & Kluckow, 2023). Of these, 93% are males, and 43% identify as fathers (Carson & Kluckow, 2023; Ghandnoosh et al., 2021). Despite a decrease of 16,800 individuals in state and federal prison populations in 2020, local jails experienced an increase of 87,200 incarcerations in 2021, resulting in a five % rise in the overall number of incarcerated persons. Licensed professional counselors, psychologists, faith-based organizations, re-entry coordinators, and correctional staff members work collaboratively at the local, state, and federal levels to support incarcerated individuals most effectively (Lasher & Stinson, 2020; Kamin et al., 2022). These counselors are often responsible for providing both individual and group counseling, working collaboratively with correctional staff, and modifying treatment approaches to fit the constraints of the institutional environment during incarceration (Kratcoski, 2024).

Additionally, programs intend to mend and build family relationships post-release (Tadros et al., 2020). Incarceration and the impact of the family unit on incarcerated individuals remain a topic of consideration for counselors who also serve to support other incarcerated offenders. In addition, upon release from a correctional setting, counselors who seek to help mend and build relationships are tasked with a particularly difficult challenge. The ongoing increase in male incarceration rates has significant consequences for families, especially in the absence of a father figure. According to Travis et al. (2014), incarceration adversely affects family dynamics by intensifying feelings of grief and the loss of the paternal head.

Throughout the literature, fatherhood is defined in various ways. While fatherhood is a complex and multifaceted construct, for the purposes of this review, a father is defined as a male individual who is legally or socially responsible for the well-being of a minor. Charles et al. (2019) discussed fathers providing financial support, as well as emotional and relational support to their children.

The purpose of this literature review is to examine the parenting programs currently in use. At the same time, fathers are incarcerated and explore a conceptual framework for relevant and post-incarceration parenting programs that use play therapy as the primary intervention for increased attachment style. To contribute to the knowledge base supporting fathers and their families, this literature review examines the following questions: What is the connection between parenting programs and recidivism, attachment style, and warmth? Next, how do these programs impact the father-child relationship of incarcerated and post-incarcerated fathers? Lastly, how do

play therapy-based interventions, particularly Theraplay and filial therapy, impact the parenting abilities and father-child relationships of current and post-incarcerated fathers?

The Complexity of Parental Incarceration

Parental incarceration is a complex social issue with profound implications for families (Purvis, 2013). The challenges of incarcerated fathers in maintaining meaningful connections with their children continue to garner increased attention in academic and policy circles (Travis et al., 2014). Understanding research on parenting programs post-incarceration is a step toward comprehending the reality of these programs and recognizing the positive impact of fatherhood.

Recognizing the significance of maintaining parent-child relationships during incarceration, parenting programs emerge as fundamental interventions. These programs equip incarcerated fathers with the requisite skills and knowledge for effective parenting, fostering a positive environment for family reintegration upon release (Loper et al., 2019; Wildeman, 2010). Counseling alone has been helpful in the overall increase of wellness amongst clients of all ages, backgrounds, ethnicities, religious beliefs, and gender identities. The inclusion of mental health services for incarcerated populations has created discussion for policymakers and professional counselors. In understanding the impact of services, policymakers are beginning to recognize the pivotal role fathers play in the successful reintegration into society; this knowledge breaks the cycle of intergenerational involvement with the criminal justice system and supports the overall reduction of recidivism. The societal and familial consequences of parental imprisonment are substantial, and understanding the dynamics of effective interventions is crucial in supporting the multifaceted needs of this vulnerable population.

Parenting Programs for Incarcerated Individuals

Historically, incarceration programming has concentrated on addiction treatment, academic success, religious motivation, and workforce development (Said & Butler, 2023). The lack of focus on re-entry results in a gap within the family unit. As parental incarceration rates rise, trends in low educational attainment, increased adverse childhood experiences (ACEs), heightened depression, and criminal involvement start to affect the children of the incarcerated (Martin, 2017). Although incarceration creates unique circumstances that can influence the effectiveness of programming, the literature indicates a positive impact associated with parental education.

Parenting programs provided during incarceration can have long-term effects on parental outcomes that promote successful re-entry behaviors (Armstrong et al., 2017). In order to target challenges, incarcerated fathers complete parenting programs post-release, improving parenting knowledge and skills, as well as improving their overall well-being. Many states and countries discovering the increased need to target this key deficiency in post-release fathers show promising results in reducing recidivism rates among incarcerated fathers as well as improving parent-child bonding (Muentner & Charles, 2019). Moreover, these programs indicate the potential to enhance incarcerated fathers' involvement in their children's lives and increase their awareness of children's development (Dill et al., 2016).

Using the term "multimodal" parenting program, Muentner and Charles (2019) suggested that a broader concept of a parenting program may be helpful. These programs address the numerous contextual issues that parents of children involved in the corrections system encounter, both during and after incarceration. The programs aim to develop a range of parenting knowledge bases and skill sets. Additionally, Muentner and Charles (2019) discuss the need for engaging in multimodal programming to enhance parenting skills and family connections during the initial release period. In examining the need for interventions, it is valuable to understand the existing narratives contributing to a father's motivation.

Schultz et al. (2021) identify particular paternal narratives that molded fathers' identities and behaviors while incarcerated. The identified narratives include redemption, rejection, and reconciliation. Fathers may use narratives and stories to help them cope with the hardships of being incarcerated, defend their actions, explain their decisions and actions, navigate the prison environment and culture, and/or achieve their social and personal objectives. These stories may have an impact on the fathers' decision to abstain from crime, their reintegration into society, and their interactions with their families and children after their release (Schultz et al., 2021).

Charles et al. (2021) described the first year after incarceration, noting that parental participation levels tend to be the highest during this period. During the initial release year, individuals are most involved with post-release obligations, such as maintaining employment, checking in with parole officers, and maintaining a desire for family involvement. Similarly, Turney (2020), in a Jail and Family Life Study (a qualitative, long-term study), discussed the complex and contrasting ways in which father imprisonment generates, upholds, and intensifies disparities within families and children. When combined, these data collection efforts contribute to the increasing body of research on the collateral effects of imprisonment by exploring how fathers and their families become impacted by the cycle of jail time, incarceration, and release.

Methods

A comprehensive search strategy for potential articles included electronic searches using Google Scholar, Connected Papers, LitMaps, PsychINFO, PsychArticles, and EBSCOhost. Search terms were identified across four key content areas: fathers, incarceration, play therapy, and parenting. Various combinations of the following terms were explored: incarcerated father and parenting programs, parenting programs, interventions, and incarceration. Relevant terms pertaining to incarceration, fathers, and parenting were examined together, while those specifically related to incarcerated fathers and parenting programs were analyzed as a pair. Each database was searched independently using the comprehensive search strategy. The data across these studies were synthesized based on their content. Identified trends included parenting programs, reduction of recidivism, and positive effects.

Synthesis of Literature

The articles meeting the criteria were synthesized into Excel and categorized by author's name, article title, publication year, journal, grouping identifier, summary, methodology, findings, and comments. Articles were then removed if, upon review, they did not meet the criteria for

relevancy. The remaining articles were reviewed, and relevant articles and themes were identified and used for this peer-reviewed journal study.

Parenting Programs and Recidivism

Gonzalez et al. (2007) found that increased knowledge of parenting practices benefits participants by decreasing their chances of recidivism. Additional studies of parenting programs indicate reduced recidivism rates for individuals who participated in a parenting program while incarcerated (Eddy et al., 2013; Miller et al., 2013; Powell et al., 2021). Incarceration in America is an increasing problem. Recidivism, though a complex issue with an interplay of risk factors, can be reduced with appropriate intervention. In recognizing the intricacies of reducing recidivism, highlighting the positive impact of parenting programs becomes imperative in identifying parent-child risk factors independently (Hall, 2015). Of the incarcerated individuals who participated in parenting programs while incarcerated, participants noted increased parenting skills and the likelihood of reducing other harmful behaviors. Moore and Clement (1998) demonstrated that participation in parenting programs increased knowledge of positive parenting attitudes.

Robbers' (2008) longitudinal study asserted that the father-involvement curriculum has a positive influence on fathers' involvement with their children. Robbers (2008) discussed foundational principles that derive from Prochaska's Transtheoretical Model of Change. The model's structure describes the behaviors of change and measures an individual's readiness to change through cyclical assessment. With higher levels of involvement, a correlation between recidivism reduction and the reduction of other maladaptive behaviors begins to emerge. Charles et al. (2021) found that father-child involvement during incarceration led to higher levels of involvement after release.

Armstrong and colleagues (2017) reviewed 11 studies that evaluated prison-based programs for parents and found a positive correlation with prison-based programs that decreased rates of recidivism among fathers. Additionally, Tadros and Tor (2022) assert that fathers with more positive attitudes toward fatherhood tended to show more positive outcomes related to familial closeness and bonding. Furthermore, parenting programs not only indicate a vital role in recidivism reduction rates but also have positive effects on paternal social skills, mental health, and parental warmth and attachment (Loper et al., 2019)

Attachment Style and Warmth

Existing literature describes the correlation between the need for parenting programs and the impact of a father's absence on parent-child relationships. The attachment styles of incarcerated fathers can show significant implications for their children's development. Kanaboshi et al. (2017) assert that parenting programs in prison indicate the potential to positively impact incarcerated fathers' attachment styles and strengthen their relationships with their children. Fairchild (2009) discusses the correlation between fathers' attachment styles and their attitudes towards involved and warm parenting styles. Fairchild suggested the usefulness of an attachment theory framework for targeting the needs of incarcerated fathers and their families. Fairchild also described that the majority of participants exhibited insecure or unresolved attachment styles due

to experiences within their parental relationships. Distinctive concerns and challenges for incarcerated fathers exist, such as separation, lack of clarity around parenting practices, and uncertainty about their children's safety while imprisoned (Armstrong et al., 2017). Understanding the influence of parenting styles on parent-child interactions remains crucial. Prior research studies on attachment styles have shown that a more secure attachment style is a significant predictor of emotional intelligence (Tadros & Tor, 2022).

Kamptner (2017) describes the efficacy of an attachment-informed parenting program approach. Findings demonstrate that parenting knowledge and skills surrounding child development and appropriate boundary setting significantly improve parental satisfaction and diminish distress related to parenting. These findings indicate that fathers who have experienced incarceration could benefit from an attachment-based parenting program.

Play Therapy in Parenting Programs for Incarcerated Fathers

Play therapy is a developmentally appropriate and evidence-informed modality that fosters emotional expression, enhances relational attunement, and supports attachment processes in young children (Ray et al., 2015). For incarcerated fathers who face significant challenges in fulfilling traditional parenting roles, play therapy-based interventions provide an alternative mechanism to maintain and strengthen parent-child bonds (Bratton et al., 2005; Bratton & Landreth, 2006). Arditti (2012) discussed the inclusion of relationally oriented interventions within correctional parenting programs, finding that these interventions not only addressed the emotional needs of children but also led to increases in paternal self-efficacy, empathic capacity, and the father's identity as a caregiver.

Theraplay, an attachment-focused intervention rooted in attachment theory and neurodevelopmental science, represents a prominent model within play-based interventions. It uses structured, joyful, and developmentally attuned play to strengthen parent-child relationships (Booth & Jernberg, 2010). Theraplay emphasizes four key components of healthy caregiver-child interaction, including Structure, Engagement, Nurture, and Challenge (Jernberg & Booth, 2001). Money and colleagues (2021) note how Theraplay successfully adapts for high-risk families, including those affected by trauma, separation, or systemic barriers to secure attachment.

In correctional settings, Theraplay-informed interventions often require creative adaptations to target the unique challenges of these environments. Examples of adaptations include guided letter-writing with narrative reflection, role-playing with puppets, or using symbolic toys and video modeling. Additionally, therapeutic contact visits are incorporated to foster emotional connection. These methods aim to evoke attunement and emotional resonance, even when direct physical access to children is limited (Cassidy et al., 2013).

A growing body of research supports the integration of play-based modalities in parenting programs for incarcerated populations. Meta-analytic studies describe child-centered play therapy and filial therapy, where parents are coached in structured play techniques, resulting in improved parent-child relationships and reductions in externalizing behaviors among children (Bratton et al., 2005; Lin & Bratton, 2015). Findings indicate these approaches also link to

decreased parenting stress and increased emotional responsiveness among mothers, even in the face of adversity such as the father's incarceration (Arditti & Few, 2006). Brown and Gibbons (2017) demonstrate child-centered play therapy (CCPT) as a developmentally sensitive and emotionally responsive method for addressing the complex needs of children affected by parental incarceration. Their case illustration shows the effectiveness of CCPT in helping children process ambiguous loss, enhance coping skills, and rebuild emotional security in the context of disrupted attachment relationships.

Filial therapy, in particular, proves beneficial for both incarcerated mothers and fathers. Harris and Landreth (1997) found that a five-week filial therapy program with incarcerated mothers significantly improves empathic behaviors, parental acceptance, and reduced stress related to parenting. In a similar study with incarcerated fathers, Landreth and Lobaugh (1998) demonstrate that a 10-week filial therapy program significantly enhances paternal acceptance and empathic behaviors while reducing both parenting stress and child behavior problems. Moreover, children of fathers who participated in this program show significant improvements in self-concept, suggesting the potential for relational repair and child development through structured filial play sessions.

Supporting these findings, a recent scoping review by Stewart and Parson (2024) synthesized research on therapeutic play-based interventions for children aged two to 12 years experiencing the effects of parental incarceration. The review identified several interventions, including filial therapy, child-centered play therapy, narrative therapy, and bibliotherapy; the programs yielded positive outcomes for children's emotional well-being, particularly in the face of ambiguous loss and disenfranchised grief. Despite the limited number of studies that met inclusion criteria, the review emphasizes the consistent benefits of these interventions across various cultural and disciplinary contexts. Stewart and Parson (2024) strongly advocated for the integration of these modalities into social services and correctional programming while also calling for more rigorous research to confirm their long-term efficacy.

Despite the promising outcomes of these interventions, several barriers remain in implementing them within correctional settings. Many institutions lack trained mental health counselors, as well as policies governing visitation and programming, which may limit opportunities for direct parent-child engagement (Schlafer et al., 2020). However, recent innovations demonstrated the feasibility of implementing play-based interventions in correctional settings. For example, some could conceptualize that virtual play sessions, pre-recorded story guides, and staff-facilitated play kits could allow for scalable interventions in these environments. Additionally, Eddy et al. (2013) indicated that parenting curricula incorporating developmentally appropriate play materials and emotional education yield positive outcomes for incarcerated fathers and their families.

In summary, play therapy (particularly Theraplay-informed and filial therapy approaches) offers a developmentally grounded and relationally restorative strategy for supporting incarcerated fathers in their parenting role. When embedded within broader psychoeducational parenting programs, these interventions provide fathers with tangible skills to support their children’s emotional needs and sustain secure attachment relationships. Filial therapy interventions, where fathers learn child-centered play techniques, are especially effective when applied in contact

visits or through alternative symbolic engagement methods such as storytelling, letter-writing, or puppet-based communication. These approaches enable fathers to connect with their children's emotional worlds and to experience themselves as emotionally responsive caregivers, even within the constraints of the correctional environment. Integrating relationally attuned play-based interventions into correctional parenting programs contributed not only to improved child outcomes but also served as a protective factor in post-release family functioning and reduced recidivism (Landreth & Bratton, 2006). Although challenges such as systemic barriers and resource limitations persist, emerging adaptations, such as training correctional staff in foundational play therapy techniques and developing low-resource therapeutic tools, suggest that broader implementation is achievable. Therefore, play therapy is considered a vital component of holistic, attachment-focused parenting programs for individuals involved in the justice system.

Future Directions/Limitations

The literature describing incarcerated fathers and parenting programs is gaining considerable attention, as well as highlighting implications for mental health advocacy. However, there are still relatively few studies on attachment style, parenting programs, and post-release fatherhood. In addition, several methodological limitations limit the generalizability of findings about this vulnerable population. First, it is important for individual state legislation "to frame buy-in" policy to create substantial change. In order to reintegrate fathers back into the community, a broader view is considered; reconsidering changes to the ways incarceration is viewed in the community and the associated stigmas and attitudes towards those convicted become critical (Looby et al., 2022).

Second, current literature focuses on parenting programs implemented during incarceration. Most of these programs focus on the mothering role rather than the paternal role. Additionally, the parenting programs have been evaluated in studies that last no longer than six months. While most studies indicate positive impacts, conclusions can only be drawn about specific periods of incarceration in relation to attitudes and efficacy after re-entry.

Third, most of the existing literature points to the significant impact of incarceration on minoritized populations. In contrast, this current literature review provides a broad overview of the impact on fathers from diverse racial, ethnic, and cultural backgrounds. Much of the existing literature studies consider the most significant impact among African American males.

Fourth, a review of the existing literature did not describe the implications of mental health impacts and the attachment styles of the father based on the experiences within their family dynamic. Understanding the multi-generational impact of incarcerated fathers may uncover unhealthy attachment styles that exist within other significant relationships. Therefore, it would be beneficial for future studies to investigate these potential correlations.

Fifth, future studies may examine the correlation between international data to provide information about the cultural contexts that support parenting programs, furthering the examination of policy change. Theoretical frameworks that explain current findings suggest directions for future research and would add significantly to the literature for counselors, social workers, and mental health advocates when working with incarcerated fathers reintegrating into

society (Barlow & Coren, 2017; Daniels, 2023; Kamptner, 2017). In the proposal of a parenting program for post-incarceration, it is vital to understand the impact of incarceration on fathers and families and the most advantageous time to implement interventions in order to ensure continual improvement (Eddy et al., 2008).

Conclusion

This literature review describes the impacts of incarceration on fathers, families, and children. Additionally, the possible advantages of parenting programs for improving their relationships were discussed, such as the function of attachment style in forming the father-child relationship and the difficulties of sustaining safe attachment while incarcerated. Incarceration disrupts the father-child connection, which can lead to insecure or disordered attachment. The review identified several gaps and limitations in the existing literature, including deficiencies in longitudinal and randomized controlled studies, the diversity and quality of parenting programs, the measurement and operationalization of attachment style, and the consideration of contextual and individual factors that may influence parenting program outcomes.

Consequently, future research targeting these concerns would provide more rigorous and thorough information on the efficacy and mechanisms of parenting programs for incarcerated fathers and their children. This current review suggests implications for policymakers and practitioners to encourage the creation and implementation of evidence-based attachment-emphasized play therapy parenting programs targeted to the needs and problems of incarcerated fathers, children, and the family unit. By doing so, this review aimed to contribute to the advancement of research and practice in imprisonment, parenting, and attachment, as well as to improve the well-being and opportunities of fathers, children, and families affected by incarceration.

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Play Therapy: Development, Learning, and Therapy

EMDR Drumming Protocol and Processes: Embedding Expressive Arts into EMDR for work with Adolescents

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Abstract

The integration of expressive arts into trauma therapy has garnered significant attention for its ability to enhance healing and emotional processing. This article explores a proposed EMDR Drumming Protocol and therapeutic process for at-risk youth. It is a novel approach that combines the therapeutic power of Eye Movement Desensitization and Reprocessing (EMDR) with the expressive, rhythmic qualities of drumming. Grounded in neuroscience and trauma-informed care, this protocol aims to deepen the therapeutic experience by using drumming as an embodied tool to facilitate emotional release, enhance bilateral stimulation, and support neural integration. The article examines how drumming can create a sensory-rich environment that complements EMDR's traditional methods, promoting increased emotional regulation, memory processing, and adaptive coping skills. Additionally, it explores the theoretical underpinnings of this innovative fusion of expressive arts and EMDR, offering practical insights and case studies for clinicians seeking to integrate drumming into their therapeutic practices. Through a blend of clinical observations and experiential analysis, this article highlights the potential of the EMDR Drumming Protocol to transform trauma treatment, providing a deeper, more holistic approach to healing.

Key words: EMDR, Expressive Arts, Therapeutic Drumming, And Trauma

Introduction

The Eye Movement Desensitization and Reprocessing (EMDR) Drumming Protocol represents an innovative fusion of traditional EMDR therapy and the creative power of expressive arts. This approach integrates rhythmic drumming with EMDR's standard bilateral stimulation techniques to enhance trauma processing and emotional regulation. By combining the therapeutic benefits of sound, rhythm, and movement, the EMDR Drumming Protocol facilitates deeper emotional release and a more embodied healing experience. The process allows individuals to engage both the mind and body, offering a holistic method for addressing trauma, fostering resilience, and promoting emotional balance. Through this innovative blend of art and therapy, clients can tap into the subconscious, reprocessing trauma in a way that is dynamic, engaging, and transformative. Although this protocol is specifically administered to the adolescent population, it can easily be adapted and implemented across demographic populations.

EMDR

Eye Movement Desensitization and Reprocessing (EMDR) is a psychotherapy treatment originally developed to alleviate the distress associated with traumatic memories among participants in clinical practice (Shapiro, 1989). Since its inception, EMDR has been identified as an effective intervention for decreasing trauma-based symptoms reported by individuals who have experienced a specific or multiple traumatic event. Examples of trauma-based symptoms often reported by individuals who have experienced a traumatic event include but are not limited to the following: difficulty sleeping. These reported responses within the studies support the use of EMDR in the treatment of symptoms caused by trauma in children and adolescents (Karadag, Gocken, & Sarp, 2020; Meentken et al, 2020). Although EMDR is indicated as an effective intervention for individuals who have experienced trauma, we understand that the large need found within our communities make individualized trauma-based interventions less appealing to community-based practice in high-risk areas (Mazzoni et al, 2022). Group therapy is a well-proven form of treatment for traumatized children and adolescents (Meentken et al, 2020; Karadag, Gocken, & Sarp, 2020), and EMDR also has an effective group protocol for children and adolescents. To support and treat more clients who have experienced trauma within a trauma informed process, EMDR group protocol was developed (Mazzoni et al, 2022).

EMDR Group Protocol

Because of the increased awareness that our communities need more consistent access and more evidence-based interventions for addressing the impacts of trauma on their abilities to function, the EMDR Group protocol was developed (Lange, et al 2022). The EMDR Group Protocol for Children was developed to support the needs of the participants to accomplish the following: normalize symptoms and responses they may be experiencing; be part of a comprehensive program for trauma treatment; reduce posttraumatic symptoms; confront traumatic material; offer the patient support and empathy; increase patient's perception of mastery over the distressing elements of the traumatic experience; treat more clients for the same experience (Jarero, I., &.Artigas, L. (2020). Results of the EMDR group protocol show the same positive outcomes for supporting the healing of individuals exposed to trauma in addition to reducing their posttraumatic symptoms as seen in the individualized protocol (Kaptan et al, 2021). Although group-based protocols assist clients with normalizing their responses to stress and support the client in being more willing to share their experiences in the supportive group environment, there are still several participants who fear the concept of addressing their specific traumatic experience and will often avoid all service support whether it is individual or group programming. Much research has shown that the inclusion of expressive arts techniques in trauma-based work can improve client participation in programming and fully processing their past experiences. Expressive arts programming can be provided in several different modalities. For the purposes of this article, we will focus on the expressive arts activity of drumming.

The Power of Drumming: The integration of Drumming into the EMDR Protocol

Music has been shown to have positive psychological and other therapeutic benefits that include reducing stress. Group drumming is included as a component of music that can increase feelings of well-being, promote a sense of calmness, enhance group cohesion and connection, and

contribute to people being able to empower themselves (Rodwin et al, 2022). The African drum is a cultural asset that can be to promote bilateral simulation. So, as practitioners think about Drumming in EMDR we need to be aware of the concept of bi-lateral stimulation processes and the adaptive information processing (AIP) and how these processes are evident in the process of therapeutic drumming. Bilateral Stimulation (BLS) is a technique that involves a unique procedure in which a therapist exposes the patient to bilateral stimulation (BLS), which involves alternating bilateral visual (eye movement), auditory, or sensory stimulation (e.g. tactile stimulation). The standard EMDR protocol consists of two main stages, desensitization of traumatic memories and development and installation of a "resource", such as safe and pleasant thoughts. The latter is called resource development and installation phases of treatment (Amano & Tiochi, 2016). In the standard protocol, both stages use alternating BLS. BLS is performed concurrently with the recall of the worst image of the trauma and the resources installation. Within the Drumming Protocol, Drumming is the process used for BLS within the EMDR protocol.

In the context of EMDR (Eye Movement Desensitization and Reprocessing), BLS stands for Bilateral Stimulation. This is a key component of the EMDR therapy approach. Bilateral Stimulation involves stimulating both sides of the body in a rhythmic, alternating pattern, typically through eye movements, taps, or sounds. The goal of BLS is to activate both hemispheres of the brain, which is believed to help process and integrate traumatic memories, reducing their emotional charge. During an EMDR session, the therapist asks the client to focus on a distressing memory while engaging in BLS, such as following the therapist's finger with their eyes, listening to alternating tones through headphones, or feeling tactile sensations like light taps on both sides of the body. The idea is that BLS helps the brain process traumatic memory in a more adaptive way, reducing the emotional distress associated with it.

AIP is one of the key components of EMDR practice. One of the key tenets of the AIP model predicts that dysfunctionally stored and not fully processed memories are the cause of several mental disorders, including, e.g., PTSD, affective disorders, chronic pain, addiction, and various other disorders (Shapiro and Laliotis, 2011). The AIP model focuses on the patient's resources. Within the AIP model, one assumes that the human brain can usually process stressful information to complete integration. In the view of the AIP model dysfunctionally stored memories form the basis for future maladaptive responses, because perceptions of current situations are automatically linked with associated memory networks of these unprocessed, dysfunctionally stored memories (Hase et al., 2017).

In the following paragraphs, the researchers will describe their process and developed protocol for group-based EMDR with therapeutic drumming included. The results of this intervention for at-risk youth were positive and promising for future programming. The prescribed protocol is found below.

Procedural Steps in Drumming Protocol for Youth and Adolescents

Pre-Screening to meet criteria for services is highly encouraged. To determine if the referred individual is appropriate for the group EMDR Drumming Protocol, the authors suggest a pre-screening procedure. The pre-screening procedure includes an individual intake session with

each referred participant, and the individual is screened with the following instruments: Life Events Checklist (LEC), a Post-Traumatic Stress Disorder Symptom Scale (i.e. CPSS), and a Subjective Unit of Distress Scale (SUD). These suggested measures will be described further in the results section. Additionally, parental consent and youth assent need to be obtained during this pre-screening period.

Phase 1: Client History Taking- The first phase is a history-taking session(s). The therapist assesses the client's readiness and develops a treatment plan. The client and therapist identify possible targets for EMDR processing. These include distressing memories and current situations that cause emotional distress. Other targets may include related incidents in the past. During phase 1 of the protocol, team members educate caregivers, mothers, and relatives about the course of trauma and enlist these individuals to identify children who have been exposed to the traumatic event, previously identified by the pre-screening process. Team members need to be aware of the needs of the clients within their extended family, community, and culture.

Phase 2a: Client Preparation – Part 1- Phase 2 of the protocol begins with an exercise intended to familiarize the children with the space and objects included in the intervention, to establish rapport and trust, and to facilitate group formation. Discussion about the purpose of the group, confidentiality, and treatment programming will be covered. Introduction of the drumming process discussed, and then the drumming activity starts.

- SUD Scale and Feelings Thermometer- Pre-session
- Drumming activity and then group conclusion.
- SUD Scale and Feelings Thermometer- Post-session

Phase 2b: Client Preparation- Part 2-Phase 2-part b of this protocol the children are guided through a safe/secure place exercise (guided imagery) which provides them with an emotion regulation skill and introduce the bilateral stimulation (BLS) through the multiple techniques which will also include the drumming process as BLS. The children are repeatedly validated regarding their feelings and other post-traumatic symptoms.

- SUD Scales and Feelings Thermometer- Pre-session
- Drumming activity and then group conclusion
- SUD Scale and Feelings Thermometer- Post-session

Phase 3: Assessment Phase: Selecting the target of intervention- Instead of being asked to visualize the target incident, as in the standard EMDR protocol, the children are instructed to think about the aspects of the event that make them feel most frightened, angry, or sad now, and to draw that image on the paper provided or write about that part of the target event. They are then shown a diagram that depicts different emotions, a feelings thermometer, and a list of feeling works, so they can identify their emotions during this exercise. This phase can take up to two sessions.

- SUD Scales and Feelings Thermometer- Pre-session
- Drumming activity and then group conclusion
- SUD Scale and Feelings Thermometer- Post-session

Phase 4: Desensitization- The children are asked to look at their picture/ writing that they completed in Phase 3, and to complete a drumming process and activity. The participants then

complete the drumming activity. The participants are then instructed to draw another picture/ writing of their own choice, related to the event, and to rate it according to its level of distress (0-10 on the Feelings Thermometer). Processing with the child looking at the second picture and using the drumming activity are led by the facilitator. The process is repeated twice more so that there are four pictures/ writing samples. The level of distress associated with the incident is then assessed by asking the participant to focus on the drawing/writing that is the most disturbing and to identify the current SUD level. This number is then written on the back of the paper. SUD level of subjective emotional disturbance should reach zero or an ecological level of disturbance in order to have the memory of the incident completely desensitized. Not all the children can reach this level of disturbance during the group protocol. This phase can last two to three sessions.

- SUD Scales and Feelings Thermometer- Pre-session
- CPSS Mid-point assessment
- Drumming activity and then group conclusion
- SUD Scale and Feelings Thermometer- Post-session

Phase 5: Future Vision (Instead of Installation)- Phase 5 of the standard EMDR protocol cannot be conducted in large groups since each participant may have a different SUD level. Also, some children cannot progress any further in the group protocol to reach an ecological level of disturbance. This may be because they have blocking beliefs, previous problems, or trauma, and/or require additional time for processing. Consequently, the Group Protocol uses the future vision to identify adaptive or non-adaptive cognitions (e.g., I want to die and be with my dad in heaven) that are helpful in the evaluation of the child at the end of the protocol. The children draw a picture/ write a story that represents their future vision of themselves, along with a word or a phrase that describes that picture. The drawing and the phrase are then paired with the Drumming Activity. This phase can take up to two sessions.

- SUD Scales and Feelings Thermometer- Pre-session
- Drumming activity and then group conclusion
- SUD Scale and Feelings Thermometer- Post-session

Phase 6: Body Scan- Phase 6 is conducted in large groups even though each participant may have a different SUD level and may not reach zero. During this phase the children are instructed to close their eyes, scan their bodies, and do the Drumming Activity.

- SUD Scales and Feelings Thermometer- Pre-session
- Drumming activity and then group conclusion
- SUD Scale and Feelings Thermometer- Post-session

Phase 7: Closure- Phase 7 is a repeat of Phase 6 and is conducted in large groups even though each participant may have a different SUD level and may not reach zero. During this phase the children are instructed to close their eyes, scan their bodies, and do the Drumming Activity. Finally, the children are instructed to return to their safe/secure place.

- SUD Scales and Feelings Thermometer- Pre-session
- Drumming activity and then group conclusion
- SUD Scale and Feelings Thermometer- Post-session

Phase 8: Re-evaluation and Follow up- Phase 8 takes place one week after Phase 7 concludes. The research team members have a debrief about which identified children may need individual attention and which may need thorough evaluation to identify the nature and extent of their symptoms, and any comorbid or preexisting mental health problems. This evaluation is made by considering the reports of teachers and relatives, the results of screenings and progress monitoring of the re-screenings, the entire sequence of picture/ story and SUD ratings, the body scan, and the future vision cognition. After the evaluation, the team members work with the identified children by using the EMDR-IGTP in smaller groups or by providing a referral for individual treatment to a more intensive service provider.

- SUD Scales and Feelings Thermometer- Pre-session
- CPSS post-test assessment
- Drumming activity and then group conclusion
- SUD Scale and Feelings Thermometer- Post-session
- Referral to individual services if needed if progress not noted

Because many of the phases described above may be repeated across sessions to support the needs of the participants, the typical EMDR Group Drumming Protocol can run for 10-15 weeks, or longer if needed based on participant responses. The EMDR Group Drumming Protocol was assessed using a 12-week model with youth and adolescents ranging in age from 12-18 in an after-school therapeutic intervention within the local community. The findings of this work are described below.

Methods

The study involved 88 at-risk adolescents aged 13 to 18 years, recruited from a local after-school program. Inclusion criteria included self-reported experiences of trauma or adverse childhood events on a Life Events Checklist (LEC) and a specific score on the Child PTSD Scale, as well as willingness to participate in group-based interventions. Participants and their guardians provided informed consent prior to enrollment. The authors received IRB approval for the use of the EMDR Drumming protocol prior to implementation. The authors utilized a pretest posttest quantitative process across subjects to examine change in reported behaviors, symptoms, and outcomes after participating in the EMDR Group Drumming Protocol. The researchers utilized quantitative data to support the outcomes and future work. The research team utilized Likert scale, self-report screening tools.

At the outset, participants completed the pre-test battery individually, with trained facilitators providing assistance as needed. Following baseline assessment, participants engaged in a structured group intervention combining Eye Movement Desensitization and Reprocessing (EMDR) and therapeutic drumming over a period of 12 weeks, with weekly sessions lasting approximately 90 minutes.

EMDR components were tailored for group delivery, focusing on processing traumatic memories and reducing distress, while therapeutic drumming was employed to promote emotional regulation, grounding, and social cohesion within the group. Therapeutic drumming was layered into the intervention throughout the 21-week process.

Upon completion of the intervention, the post-test assessments were administered to measure changes in trauma symptoms and emotional well-being. Data was collected from participants and analyzed to determine the effectiveness of the intervention and identify the specific needs of the adolescent participants.

Research testing the efficacy of the Drumming protocol for Youth and Adolescents

Findings of this drumming protocol for the youth and adolescent populations have been tested and yielded positive results. The EMDR group drumming protocol was implemented with a cohort of 88 youth aged from 12-18 at a local after school program that identified their student population needed therapeutic interventions to address unresolved trauma.
The specific screenings were collected at both pre- and post-intervention for purposes of outcome analysis. The assessments administered to the student participants were as follows: The Life Events Checklist (LEC), Child PTSD Symptom Scale (CPSS) and a Subjective Units of Distress (SUD) measure.

The Life Events Checklist (LEC) is a yes or no self-report inventory that is used to identify the level of exposure to adversity and the intensity of that exposure. The LEC is an initial screening to determine if the participant has any life events that would be considered traumatic. If the participant has at least ONE positive indicator (i.e. answered YES to at least one item), then they meet the criteria to move to the PTSD symptom screening process described next.
The CPSS was used to gather a self-report trauma symptom of the participant and monitor possible reduction in symptoms at pre and post-assessment through the use of the Child PTSD Symptom Scale (CPSS) scale developed by Foa et al. in (2001). The Child PTSD Symptom Scale (CPSS) is a DSM-IV criteria-based assessment and yields PTSD scores related to symptomology. The Likert-scale assessment measures PTSD symptom across domains of re-experiencing, avoidance, and hyperarousal. The CPSS comprises 24-items, 17 of which correspond to the DSMIV symptoms. Scores range from 0 -7, with higher scores indicating greater functional impairment. This assessment is administered at baseline (prior to the intervention to determine appropriateness for the group intervention and to determine levels of impairment), and the administered again after the last intervention session is concluded. To participate in the EMDR Group Drumming protocol, the participant must score a 14 or higher on the CPSS inventory.

Participant's ability to communicate and utilize learned skills to regulate emotions and feelings within the group and beyond is obtained using Subjective Units of Distress Scales (SUDS) assessment administered throughout the group intervention. The original Subjective Unit of Distress Scale was developed by Joseph Wolpe in (1969). A Subjective Units of Distress Scale (SUDS) is used to measure the intensity of distress or anxiety/ depression in people with impairments. The SUDS is a self-assessment tool rated on a scale from 0 to 10. The SUDS is a subjective tool used by the clinician to evaluate student progress and the success of the student's current treatment and intervention. In this way, it can be used regularly over the course of monthly treatment, or even in each session of your treatment to gauge different areas of disturbance that require additional work. The SUD scales are obtained pre- and post-for every intervention EMDR Group Drumming session. This is a common technique in cognitive therapy as a tool to gauge one's distress or emotional state. This SUD scale also supports the practitioner

with gauging the level of dysregulation a client may be experiencing in a session to monitor and support them during and after the group intervention if needed. The goal is to decrease the individuals SUD scale number in each session from pre intervention to post intervention and across therapeutic sessions.

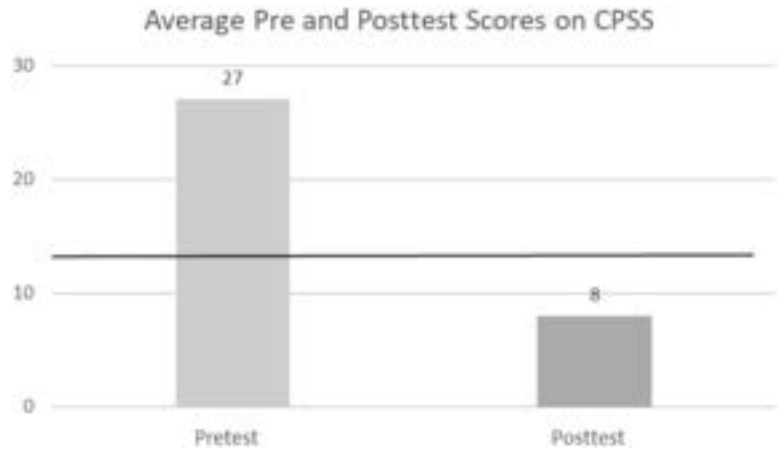
Results

LEC

For this work, 125 students were screened using the LEC and 100 of these students had at least 1 "YES" indicating that all the youth screened had at least one adverse life event in their lifetime warranting participation in this work based on our entrance criterion for this study.

CPSS

The Child PTSD Symptom Scale (CPSS) is used to assess the participants level of reported PTSD symptomology before and after the intervention. The ***CPSS*** is also used to determine if a student meets the criteria for inclusion in the intervention. One hundred students who attended the community partner program were screened with the ***Child PTSD Symptom Scale (CPSS***) to determine their appropriateness of participation in the EMDR Group Drumming Protocol. Of the 100 students who screened position on the LEC were screened with the CPSS, a total of **88** (**88%** of these children) met the criteria for the intervention group, based on the assessments and were offered the opportunity to participate. Of the 88 students who were offered the opportunity to participate in this research, 100% of them signed assents and were included in this research. The following graph (Fig. 1) shows the average pre- and post-scores for the 88 students who participated in this intervention and EMDR Group Drumming Protocol.

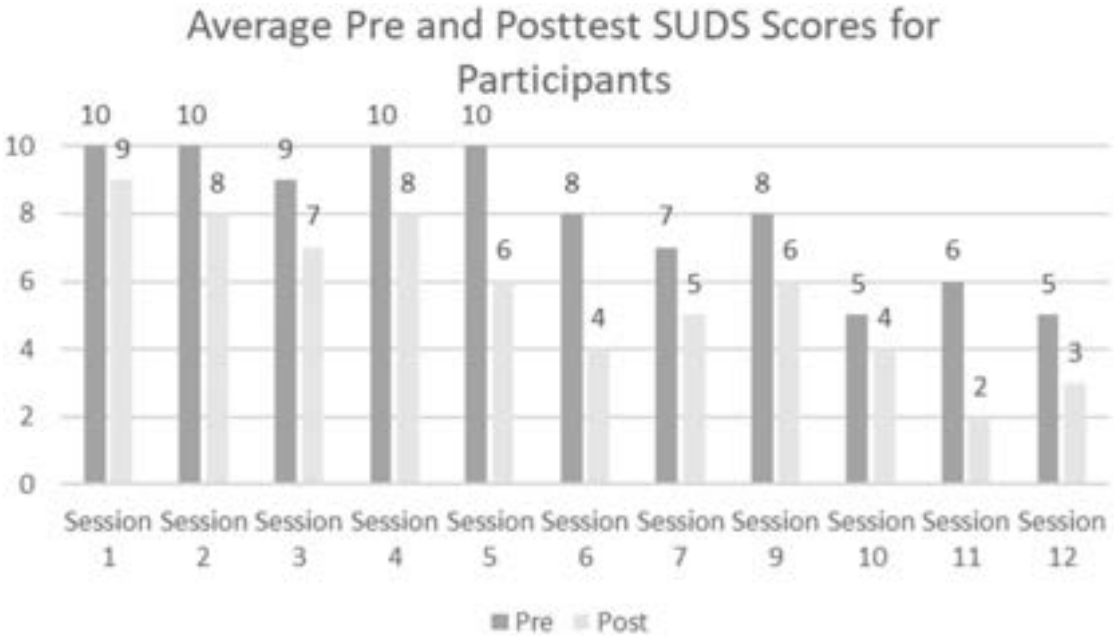


A score of 14 or higher on the CPSS indicates the need for clinical intervention. The average pre-test CPSS scores fall within the clinical range for need, and after the intervention the CPSS average scores show not only a significant improvement but CPSS scores well below the inclusion criteria score of 14. The average CPSS score for the 88 participants was 27 at pretest; the average CPSS score for the 88 participants post intervention was a score of 8. These

outcomes represent a clinically significant improvement in participants reported PTSD symptomology from pre to post assessment.

Subjective Units of Distress Scale (SUDS)

Subjective units of distress (SUD) were obtained both pre- and post-intervention for each participant in every. session across the proposed 12-week intervention. There was an 85% completion rate for the pre-and post-session SUDS for all 88 participants across the 12-week intervention. Due to unanticipated absences of some participants across the 12-week intervention, we were unable to obtain 100% completion rate for the pre- and post-session SUDs for every participant; however, SUD scale findings were positive. Figure 2 below shows the average SUD scale reports for participants for each of the 12 sessions.



It is evident from this data, that most of the participants displayed higher SUD scale scores at the beginning of the intervention (Session 1), and as they moved through the program and received additional supports and coping skills- as well as exposure to processing their trauma within the group via the drumming protocol- their reported SUD scale scores decreased over time. This data is in line with the reported average pre and post-CPSS outcomes that were previously discussed. Additionally, you can see a decreasing trend in the average reported SUDS across each session. There was a noticeable spike in the reported SUDS pretest for Sessions 4 and 5, and the researchers attribute this to the participants beginning their individual trauma work and an increase in anxiety around that portion of the intervention; however, we continued to see a decrease in SUDS reports post-session for every session across the 12 weeks.

Future Implications

EMDR is an evidence-based treatment modality that has proven positive results in many clients meeting a multitude of therapeutic needs. Drumming as BLS has proven to become a therapeutic

intervention used not only during EMDR but utilizing several other therapeutic applications. Music is cross-cultural, and multi-generational, and can not only speak to our humanity but can mean many things to many different individuals. Drumming in a circle can build teamwork, increase feelings of self-worth due to being a part of a group of like-minded people, and be utilized for self-expression which builds confidence. Drumming also appeals to young people more than traditional therapeutic approaches, which can then be utilized to reach more young people who need therapeutic interventions in order to have increased opportunities for academic success. The researchers for this work found that Eye Movement Desensitization and Reprocessing (EMDR), with the addition of drumming, were promising therapeutic techniques for at-risk youth, each with its own potential benefits.

Child and adolescent therapists who are interested in identifying a new approach to working with adolescents who are not open to traditional treatments, the use of EMDR and drumming can be a possible avenue for exploring therapeutic impact. It's essential to note that the future implications of both EMDR and drumming will depend on continued research, clinical trials, and the integration of these practices into existing mental health treatment models.

Conclusion

In conclusion, the integration of group-based EMDR and therapeutic drumming protocols has demonstrated promising results in supporting at-risk youth. This combined approach not only facilitated emotional healing and trauma resolution but also fostered a sense of community and empowerment among participants. The success of this intervention underscores the potential of innovative, multisensory therapies to address complex psychological needs in vulnerable populations. Moving forward, expanding access to such holistic treatments could play a crucial role in promoting resilience and long-term well-being for at-risk youth. Additionally, more specialized training for EMDR practitioners in the use of novel EMDR approaches, such as therapeutic drumming, should also be considered.

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Education by the Numbers

Education Pays

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Education Pays

Enrollment in higher education has been on the decline for nearly a decade. Some factors contributing to this decline are the rising tuition cost, the amount of student loans debt, political meddling, public opinion, and the emerging post-secondary alternative pathways to career options. Alternative pathways include bootcamps, apprenticeship programs, in-house certifications by some employers, or trade school. The cost or investment in these alternative pathways appears to be less in both time and money compared to investment in higher education.

But, if you are wondering whether it pays to invest in a higher education degree, consider the recent data that shows the relationships between the level of educational attainment and employment. Each level of education you complete may help you develop more skills, give you access to higher paying occupations, and signal that you are able to follow through on important tasks, such as planning and meeting deadlines that the employers value. Data indicates a positive correlation between educational attainment and earnings, but an inverse relationship between educational attainment and unemployment rates.

The data present was collected from people twenty-five years and over, earning from full-time wage and salary workers.

Earnings and Unemployment Rates by Educational Attainment 2023 and 2024				
Educational Attainment	Median Weekly Earning ($)		Unemployment Rate (%)	
	2023	2024	2023	2024
Doctoral degree	2,109	2,278	1.6	1.2
Professional degree	2,206	2,363	1.2	1.3
Master's degree	1,737	1,840	2.0	2.2
Bachelor's degree	1,493	1,543	2.2	2.5
Associate's degree	1,058	1,099	2.7	2.8
Some College, no degree	992	1,020	3.3	3.8
High School diploma	899	930	3.9	4.2
Less than a High School diploma	708	738	5.6	6.2
Overall, Workers	1,170	1,221	3.0	3.3

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Education: Words and Meanings
Exploring the Term: "Child-Centered"

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The Word and Meaning: Child-Centered

The word "child-centered" is often used in education to describe a philosophy and approach to children's learning. Some people may use the term "child-centered" to mean that they "care" for the children under their supervision or guardianship. In exploring the meaning of the word "child-centered," the description goes deeper than simply "caring" for children, or having concern, affection, appreciation, consideration, and responsible guardianship of children, although being "child-centered" embodies these important characteristics.

Even AI via Google responds with a concise definition that a child-centered approach in education "focuses on the individual needs, interests, and perspectives of the child." AI's summary of a child-centered approach includes respecting each child's unique attributes and abilities and personalizing each child's experiences to support his or her own developmental stage. According to AI, a child-centered approach is not a "one-size-fits-all" approach, which is often implemented in traditional educational settings. Furthermore, Nicholas et al. (2021) suggest that child-centered education "requires that a teacher shifts their focus from how best to teach or how to cover the curriculum to understanding and supporting student learning" (p. 3). While the AI summary is reasonable, exploring the word "child-centered" deserves a deeper and fuller explanation to undergird its profound implications for the children under the supervision of educators.

Child Development. For educators, child-centered pedagogy begins with an understanding of child development. Key contributors for understanding child development in terms of a child-centered approach are Piaget (1950, 1952, 1962) and Vygotsky (1976, 1978). Piaget, in his

theory of cognitive development, understood that the process of a child-centered approach was cultivated in each child's active involvement in his or her physical world and with people; children can build their understandings, construct knowledge through their personal interactions with their world environments and the people in their world of contacts. As children engage in the world, they build or construct meaningful learning important to themselves. Piaget (1952) noted that in a child's development, the child passes through stages of development (sensorimotor, preoperational, concrete operational, formal operational). Each child proceeds through these stages of development at *different rates*. Because each child is developing at different rates, a child-centered approach necessitates that the teacher provides an individual and personalized approach to each child's continued learning by preparing an engaging, choice-based environment, scaffolding learning by using various strategies, and implementing authentic assessment tools.

Vygotsky (1978) complemented the individualized nature of a child's learning with an understanding of his or her interactions with adults and other children. Vygotsky added to the importance of child-centered learning as children engage with other children and adults, which he defined as the "Zone of Proximal Development." In this zone, learning is enhanced or nurtured by adults and the children's peers of same and mixed ages. As children engage with other children and adults in their world, learning with understanding is *naturally* scaffolded during these interactions. Vygotsky's zone is complementary to Piaget's consideration of how children engage with their own world and the people in their world.

In a child-centered approach, learning is an individual process for each child. Each child develops along his or her own timetable of development and within a rich, diverse environment of people and contexts.

Learning Environment. In a child-centered approach, the learning environment is designed for children's active engagement as self-directed learners who are in charge of their own learning, rather than completing teacher-designed curriculum tasks. In a curriculum-centered environment, the tasks are usually set in the curriculum and are not child centered. A child-centered learning environment is based on children's choices where the learning experiences are controlled and directed by each child, not by the curriculum expectations (Stone & Burriss, 2019). The child-centered learning environment highlights children's interests, autonomy, and choice (Curtis, 2017; Elkind, 2007; Robinson, 2015). To be child-centered, interest and curiosity initiate children's personal, continual learning experiences as children engage in opportunities that make sense to them; these experiences bring children a feeling of satisfaction through the learning process.

The child-centered learning environment engages children in play, experiential centers, active, child-directed projects, and personal opportunities to solve problems (Gray, 2013; Johnson et al., 2005; Wasserman, 1992). As an example, children, ages three to seven, participate in choice play centers such as the home center, art center, blocks, and games. In these centers, they are developing their ability to represent the world with symbols, such as using a yellow block to stand for cheese in the home center, to share paints at the art center, and to comfort one another when one is hurt at the block center (Johnson et al., 2005; Schrader, 1990; Stone & Stone, 2015). In game playing, they are learning to take turns, to be patient, and to count (Kamii, 1994). In

centers, they are constructing robots, watering plants, creating their own butterfly museum, and reading favorite books (Stone & Burriss, 2019).

Older children, ages eight to eleven, further develop socially and emotionally through choice-based endeavors. They learn social norms and how to deal with conflict with others though various contexts that cannot be created artificially by a teacher. In other words, meaningful, consequential choices lead to dynamic and varied interactions that provide multiple, non-linear opportunities to build an understanding of others. They can also develop cognitively and in their academic knowledge through interest-based explorations that are intrinsically motivated such as designing an Egyptian pyramid, illustrating a travel brochure, or developing a project on castles during medieval times.

In a child-centered environment, children are choosing their own projects to investigate or problems to solve. Children may choose to research trees and create a model, craft a volcano, or solve the problem of a raccoon eating the garden plants. They choose to engage with scientific phenomena or social studies concepts purely out of interest, which makes them the main stakeholders in their own learning process.

Kohn (1993) shares that when children have a "sense of control over their lives," their physical health and happiness are affected. Kohn (2008) adds that when children "are invited to help direct their own learning - they are not only more likely to enjoy what they're doing but to do it better" (p. 24). Dewey (1938) also promoted child-centered environments which engaged children's natural curiosity, interests, and enthusiasm in order to meet children's current needs. Importantly, child-centered learning environments enhance children's learning potential, provide spaces for children to thrive, love learning, experience joy, and ultimately, safeguard their well-being (Gray, 2013; Kohn, 1993; Lange, 2018; Stone & Burriss, 2019).

Learning Process. With a child-centered approach comes a purposeful commitment to create a child-centered learning process. The child-centered approach engages a constructivist point of view which aligns with facilitating the unique and personal development of each child across whole child development (cognitive, social, emotional, physical). Each child is valued as unique, an original person with the primary goal of facilitating each child's personal construction of knowledge and understanding (Stone & Burriss, 2019). This is why similar terms, and possibly more widely used terms like "student-centered" and "learner-centered" will always fall short. These terms frame the centeredness in the academic realm in that the person is only ever considered a "student" or "learner." However, the whole person is considerably more than just their academic learning.

A child-centered approach is the opposite of a curriculum-centered approach. A defined or grade-level curriculum is not flexible enough to meet the varying needs of various children in a school setting. In a child-centered approach, every child is on a personal learning journey where they enjoy an innermost sense of confidence and competence. A child-centered approach does not try to fit children into a pre-determined curriculum of a one-size-fits-all method which cannot possibly meet the diversity of the children's needs or interests. The learning process in a child-centered approach easily accommodates a diversity of learners as the teacher uses a variety of

learning strategies instead of curriculum-centered lesson plans. Learning strategies support the flexibility needed to meet the different needs and varied development of each child.

The teacher's role in a child-centered approach is to become a *facilitator* of each child's learning and development. Based on continual authentic assessments, and the teacher's understanding of child development, the teacher scaffolds each child's learning as it pertains to whole-child development. The teacher accommodates the variety of children's different learning continuums by integrating multiple teaching points within whole group, small group, and individual learning opportunities and experiences that are specific to the varied learning needs of the children. Multiple teaching points support children in their process of picking out what they understand.

Learning strategies are guided by daily, or close to daily, authentic assessment tools the teacher uses to guide his or her ability to scaffold each child's learning development across multiple areas of child development. For example, in a daily, whole-group modeled writing strategy (Stone & Burriss, 2019), the teacher shares and discusses content with a group of children of mixed abilities and often mixed ages. The content frequently varies in theme (literature, sciences, social studies). After a short discussion, the teacher models writing about the topic on a large tablet or electronic device for all the children to see. The teacher, knowing the varied developmental stages of every child from continual assessments, embeds varied teaching points within the modeling (i.e., letter recognition, word spacing, compound words, irregular spellings, paragraphs). Over time, children pick out what they understand. The children then write about the topic in their own journals, with choice a key component in their writing. As children finish their writing, each child conferences with the teacher where the process of scaffolding learning is personalized.

During the short conferencing, the teacher first recognizes and shares with the child several good things that the child is doing such as using beginning sounds, writing a difficult word, or using paragraphs. The teacher uses questions, so the child verifies these good things (i.e., Did you use a period at the end of your sentence? The children answering, "yes" with a smile.).

The teacher then chooses one or two teaching points by using questions to guide the child to think about what is needed in his or her writing such as adding a period, choosing to put an additional letter in a word, or encouraging the use of descriptive words. The teacher personalizes the teaching points by using questions which prompt the child to "think" about what is needed in the writing, thus, supporting the child in building his or her own understanding (i.e., Are there any letters you could add to this word?).

Importantly, the teacher does not correct the entire writing as this would overwhelm the child, rather the teacher only focuses on a few examples that are helpful in nurturing the child's continued abilities to hear sounds, figure out the letters, sentence or paragraph structure, and so on. The teacher records the child's growth and progress in a portfolio and utilizes a stages of writing development chart to choose teaching points (Stone, 2001). Over time, each child confidently matures in his or her own writing abilities and writing samples which show growth are included in a child's portfolio. Similarly, the teacher personally scaffolds learning for each child across the whole child developmental continuum.

Learning Assessment. In a child-centered approach, the teacher chooses authentic assessment tools. Authentic assessment helps the teacher identify what the child knows and understands in each area of development, thus, supporting the teacher in scaffolding and nurturing the child's continued learning and development.

With general guidelines of how children build their own understandings in the whole-child areas of cognitive, social, emotional, and physical development (i.e., literacy, math, sciences, friendships, self-control, interests, running and throwing), teachers become knowledgeable and discerning in when, how, and where to scaffold learning goals for each child, supporting the child's personal construction of understanding. In a child-centered learning environment, teachers choose child development continuums for guidance, rather than grade-level curriculum standards (Kohn, 2010).

A portfolio is created for each child which authentically documents what a child knows, understands, and can do, which also provides the child with a positive confirmation that he or she is learning and growing. Rather than being *evaluated*, the child is *valued* as the portfolio captures the child's successful advances over time. Thus, the child-centered assessment process not only values the learning process but values the child as well. A child-centered approach to learning acknowledges, confirms, documents, and encourages each child in his or her continued growth and development. Authentic assessment based on child development in a child-centered approach is critical for guiding the teacher in how and when to scaffold learning for every child. Authentic assessments provide evidence of what a child actually knows and understands along the varied continuums of child development.

Conclusion. The role of the teacher in a child-centered approach is one where the teacher creates and plans the learning environment (i.e., play, centers, projects) *with children*, uses child-centered learning strategies instead of curriculum-centered grade-level lesson plans, uses authentic assessment tools based on child-development to support the personalized scaffolding of children's varied learning (cognitive, social, emotional, physical), and develops a learning portfolio which documents the continued, positive development of each child based on a whole-child continuum. In a child-centered approach, the teacher is the professional who designs and supports learning opportunities that benefit and encourage every child, giving each child the gift of time to develop. The teacher responds to children with respect and care by nurturing every child's wonderful potential (Curtis, 2017).

The children in a child-centered learning environment see learning as an adventure, rewarding, and enjoyable. Because every child is supported as an individual, learning in his or her own timetable, children naturally develop in all areas of the whole child without pressure or stress – children can enjoy their childhood! Daniel Pink (2009) states, "human beings have an inner drive to be autonomous, self-determined, and connected to one another. And when that drive is liberated, people achieve more and live richer lives" (p. 71). The well-being of every child is at the forefront of the child-centered learning process. The child-centered learning process is a gift for every child, offering each one the opportunity to learn, to grow, to play, to achieve, to have friends, and to enjoy productive, happy lives.

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Pictures for Reflection

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What Do You Hear?

Before leaving for school, Roman tell his plants, Bob and Amy, he has a delicious breakfast for them. This seven-year-old is showing empathy, responsibility and kindness. Referred to as anthropomorphism, humans frequently attribute human qualities to non-human entities such as animals and other objects, and, of course, the plants Bob and Amy.

What Do You See?

You cannot see the UV rays, but they are consistent - even in colder weather. Instead of merely telling children what they should do, adults can support emerging health and wellness practices by modeling most appropriate outdoor dress and action.

Tips for protections against UV rays can include:

- If possible, use trees, umbrellas and shelters for shade.
- Even with shade, use sunscreen (spf 15 or higher).
- Reapply sunscreen after two hours or if swimming, sweating or toweling.
- Wear clothing covering legs/arms.
- Wear wide brim hats to protect nose, neck and ears.
- Limit exposure during peak UV times between 10 a.m. through midday.
- See the CDC web site for sun safety guidelines. https://www.cdc.gov/skin-cancer/sun-safety/index.html

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Page Turners: Books for Children

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Clever Crow
Written by **Chris Butterworth**
Illustrated by **Olivia Lomenech Gill**
Candlewick, 2024
ISBN: 978-1-5362-5362-3542-5

This beginning informational book is packed full of fascinating facts about crows. While crows may lack the flashiness of some of their other feathered counterparts, they are clearly birds to be reckoned with. Presented in free verse, the book highlights the pervasiveness of crows, along with their comparatively large brain size, their outstanding memories, and their abilities to solve problems. The well-written content is accompanied by beautifully rendered illustrations. Don't miss the clever end pages; the opening ones depict a large range of crow eggs and the closing ones show the corresponding birds that hatch from the eggs. A brief glossary and ideas for extending learning are included. Ages 3-8.

Girls on the Rise
Written by **Amanda Gorman**
Illustrated by **Loveis Wise**
Viking Books for Young Readers, 2025
ISBN: 978-0593624180

From the youngest ever presidential inaugural poet, Amanda Gorman, comes a passionate and powerful book that celebrates girls and girlhood. Focusing not just on physical beauty but also on strength of character, this book's simple poetic language and colorful illustrations come together to highlight the diversity and potential of today's girls. The book honors the variety of identities, experiences, challenges and joys that girls across the world can face, while also celebrating the potential girls have as a collective. This book is a powerful one not only for the girls in our life, but also for all adults and children who aim to support all young learners in living up to their potential. This book would be a wonderful read-aloud in an elementary classroom setting and would encourage children to return to it to re-read while appreciating the illustrations in all their detail. Ages: 5-10.

The Light Within You
Written by Namita **Moolani Mehra**
Illustrated by **Kamala Nair**
Two Lions, 2023
ISBN: 978-1542039123

The Light Within You follows Diya who recently moved from India as she travels back to celebrate Diwali and reunite with her beloved grandmother, Nani. While Diya struggles to fit into her new environment, she feels warm, happy and at home in India with her loving Nani. During the trip, Diya and her family celebrate Diwali and more importantly Diya learns important lessons about the light inside of her that can shine bright even when she feels the outside world is dark. In this tale of love and connection across many miles, young readers also learn about Diwali as the festival of lights. An author's note, glossary and inclusion of a Diwali affirmation extend the learning about this festive holiday. Ages 4-8.

No More Señora Mimí
Written by **Meg Medina**
Illustrated by **Brittany Cicchese**
Candlewick, 2024
ISBN: 978-1-5362-1944-9

Each day, Señora Mimi babysits Ana. Ana loves going to Señora Mimi's, where she plays, goes on excursions, visits with baby Nelson, and plays with Pancho, a lovable dog. But, things are changing. Ana is excited that her abuela is coming to live with her family. Now, she won't need a babysitter because Abuela will be there to take care of her. Ana's enthusiasm evolves into a bittersweet moment when she begins to see nuances of what this change means. She realizes that her daily routine will change, as will her relationship with Señora Mimi. Comfort comes when Ana realizes she does not have to say goodbye to Señora Mimi. Things will change, but they will still be part of one another's lives. The book closes with a reassuring image of Ana in the park, happily surrounded by Abuela, Señora Mimi, baby Nelson, and Pancho. The book provides a tender look at the significant roles that caregivers play in the lives of children. Ages 4-8.

Rebellion 1776
Written by **Laurie Halse Anderson**
Atheneum/Caitlyn Dlouhy Books, 2025
ISBN: 978-1416968269

From the bestselling young adult author Laurie Halse Anderson comes a Meticulously researched and deeply moving historical fiction novel that immerses readers in the turmoil of the American Revolution. Rebellion 1776 follows 13-year-old Elsbeth Turner, a courageous girl fighting to survive amid the chaos of war and a deadly smallpox epidemic. As tensions rise between Patriots and Loyalists, Elsbeth faces another battle—public fear of inoculation, which could mean the difference between life and death. Torn between protecting her family and standing up for what she believes in, Elsbeth's journey is one of resilience, sacrifice, and self-discovery. Anderson masterfully blends rich historical detail with an emotionally gripping narrative, offering young readers a powerful story about bravery in the face of uncertainty.

Rebellion 1776 is an unforgettable tale of survival and hope, perfect for fans of historical fiction and stories of young people shaping history. Ages 10-14.

Revolutionary Mary: The true story of one woman, the Declaration of Independence, and America's fight for freedom
Written by **Karen Blumenthal** and **Jen McCartney**
Illustrated by **Elizabeth Baddeley**
Roaring Brook Press, 2025
ISBN: 978-1-62672-311-5

This vibrant biography of Mary Katherine Goddard tells the story of her life in colonial America and her role in supporting the American Revolution. The authors highlight her fearlessness as a printer of pamphlets, handbills, and articles at a time when few women did so and in which it could be considered treasonous to the British government. The illustrations are frequently depicted in sepia tones, with a sense of the urgency and fervor of the profession captured in "newsprint pages" that appear to be scattered around the text. When tasked with printing the Declaration of Independence broadside that would be published in Maryland, Mary Katherine Goddard bravely signed her full name as printer, alongside the esteemed delegates, and in doing so, cemented her legacy as a revolutionary in her own right. Her story would be a positive addition to the study of the people of colonial America and the American Revolution. Ages 4-8.

Rocket Ship, Solo Trip
Written by **Chiara Colombi**
Illustrated by **Scott Magoon**
Viking Books for Young Readers, 2024
ISBN: 978-0593326930

Embarking on new adventures can be scary for anyone. Rocket ship is no different. As she embarks on her first solo trip, she is worried about launching into space on her own, but she knows she has an important job to do in delivering a satellite that will help everyone on earth see the beauty of space. As she approaches take off, she realizes that while she must venture out alone, she has the support of her rocket boosters and the love of ground control. We can all learn an important lesson about taking the first step on a new adventure from this space inspired tale. As ground control reminds rocket ship and all of us to find one small step to lead the way. Readers are reminded that the love and support of others will help us to be brave. Children who love space will especially enjoy this rhyming book with important life lessons. Ages 3-5.

Sunrise on the Reaping (A Hunger Games Novel)
Written by **Suzanne Collins**
Scholastic Press, 2025
ISBN: 978-1546171461

In *Sunrise on the Reaping*, Suzanne Collins returns to Panem with a gripping prequel set 24 years before *The Hunger Games*. The novel follows 18-year-old Haymitch Abernathy, the sharp-witted, rebellious victor of the 50th Hunger Games. As Haymitch is thrust into the brutal Quarter Quell, he must rely on his intellect and resourcefulness to survive while uncovering the dark

machinations of the Capitol. Collins masterfully weaves tension, political intrigue, and emotional depth, offering readers a deeper understanding of Haymitch's hardened exterior in the original trilogy. Through his journey, *Sunrise on the Reaping* explores themes of power, survival, and the moral cost of rebellion. This compelling addition to the *Hunger Games* universe will keep young adult readers enthralled while shedding light on the origins of Panem's resistance and the personal sacrifices made in the fight for freedom. Fans of the series will not want to miss this riveting tale. Ages 12+.

There Was a Shadow
Written by **Bruce Handy**
Illustrated by **Lisk Feng**
Enchanted Lion Books, 2024
ISBN: 978-1-59270-406-4

Shadows can be literal and metaphorical, as captured in this thoughtful book for early readers. The sweeping illustrations, which contrast pastels alongside the many shades of black and gray that shadows represent, span both pages as the poetic text describes the many types of shadows that children encounter in their daily lives. These include shadows that shorten and lengthen with the seasons, sun, and moonlight, as well as those that represent worry, comfort, or memories of long ago. This is an ideal read-aloud to spark conversations around the science of shadows and light, and one which can also support a rich dialogue about feelings and emotions. Ages 5-7.

To See an Owl
Written & Illustrated By: **Matthew Cordell**
Random House, 2025
ISBN: 978-0593649893

A new picture book by the Caldecott Medal-winning author of *Wolves in the Snow*, this text offers a glimpse into the patience and persistence required to fully appreciate nature. Following a young girl's passion into the world of birds, the book charmingly documents her many attempts to see an owl in the wild. But, as she says, "Owls are not easy to see. Because owls do not want to be seen." Inspired by her teacher and joined by her mother on multiple birding experiences, the narrator shares factual information about these nocturnal creatures while also reminding children that it can take time for our dreams to come true. Young ornithologists and naturalists will appreciate the trials and triumphs of the budding birder as she explores the woods in search of the elusive creature. Ages 5-8.

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Emerging Scholars
Supporting the Mental Health of School Children During the Summer Months

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Brigny Objio is a second-year student at Florida State University, pursuing a Master of Science in Clinical Mental Health Counseling and an Educational Specialist degree. She holds a B.S. in Psychology with a minor in Law Enforcement Operations and has clinical experience with children, adolescents, and adults. Her research interests include children's mental health, access to care, and the intersection of psychology with legal and forensic systems. Brigny is passionate about culturally responsive, trauma-informed work with underserved communities and plans to pursue a Psy.D. in Clinical Psychology.

Susana Garcia is a first-year student in the Clinical Mental Health Counseling master's program at Florida State University. She received a Bachelor of Music Therapy from Florida Gulf Coast University and is a board-certified music therapist. Her research interests include accessibility, stigma, and disparities in mental health care; Hispanic populations within the military; and trauma and resiliency in underrepresented and marginalized communities, specifically Latin communities. She hopes to pursue a PhD in Counseling Psychology.

Dr. Tiffany Wilson currently serves as an Associate Teaching Professor and Counselor Education Program Coordinator at Florida State University. Prior to working in academia, Dr. Wilson worked as a high school counselor and a licensed career development coordinator in North Carolina public schools. She also worked as a therapist in various clinical settings. In addition to being a Licensed Clinical Mental Health Counselor and Licensed School Counselor, Dr. Wilson is also a National Certified Counselor, a Certified Clinical Trauma Professional, a Board Certified Tele-mental Health Professional, and a Qualified Supervisor.

Abstract

The summertime, though a time for children to relax from the stresses that come with attending school, also poses a challenge for maintenance of their mental health due to loss of routine and regular social interaction, increased access to electronics, and the possible exposure to unsafe environments and food insecurity. This manuscript explores research discussing the risks that students may encounter through the loss of school-based supports and structure including higher rates of mental illness, increased social isolation and increased sedentary behavior. Content includes strategies stakeholders may consider and employ to best support students' mental health, such as leveraging community programming, ensuring continued access to mental health

services and encouraging outdoor play throughout the summer months. Accessibility of summer support strategies is considered as well as options appropriate for children across the economic spectrum are provided.

Keywords: Summer Break, Children, Mental Health, Accessibility, Structure

Supporting the Mental Health of School Children During the Summer Months

The summer holidays provide a wonderful reprieve from homework, classes and waking up early for most students. Simultaneously, the summer months may pose unique obstacles to students' mental health when considering the lack of structure and routine school provides, as well as the loss of access to school-based mental health care services. This gap in service may be especially felt by students facing financial barriers to receiving private mental health care in the summer, those without mental health care providers in their vicinity and by other relevant stakeholders who may not otherwise know how to support their children's mental health throughout these months. This manuscript examines the prospective effects of the mental health of children during the summer months. Content provides different approaches for parents and guardians, educators, communities and policymakers to support children's mental health and overall well-being during the summer months.

Understanding the Risks

Loss of Structure and Routine

Stakeholders should be aware of the concerns surrounding a sudden loss in structure and its possible adverse effects on the emotional and mental state of children. While children are in their academic year, structured routines help regulate their activities, sleep, and even meals, overall supporting their well-being. The end of the academic year disrupts this routine. Children's mental health tends to decline following the summer holidays (Kromydas et al., 2022), which is supported by a trend of elementary-aged children to exhibit less healthy behaviors on weekends compared to weekdays (Brazendale et al., 2017). Children do well with structure and routine, as it promotes overall social-emotional and mental wellness, meaning a loss of these elements may negatively affect them (Selman & Dilworth-Bart, 2023).

Reduced Social Interaction

Children rely on the school year which allows them to benefit from an environment that facilitates daily social interactions. Regular social interaction through the summer endorses greater self-perception, social-emotional outcomes and mental health in children and adolescents, particularly those from disadvantaged communities (Eglitis et al., 2024). Negative emotions like loneliness and isolation can be heightened during the summer months due to the lack of a structured social environment. Without caretakers, communities, and relevant stakeholders facilitating opportunities for social engagement, children may more strongly feel the ramifications of this summer isolation.

Limited Access to Mental Health Services

Though a school's primary function is to be a place of learning, it simultaneously serves to monitor and support students' mental health. A report from the Substance Abuse and Mental Health Services Administration (2016) found approximately 15% of teens, or 3.7 million teens, ages 12-17 received school-based mental health care services, rising from 12.1% in 2009, or 2.9 million teens. During summer break, however, these students may lose access to these mental health services, which may impact those living in rural areas or lower socio-economic status (SES) more disproportionately due to traveling long distances for care and inability to afford care or inability to accommodate parents' working schedules, respectively (Graves et al., 2024; Hodgkinson et al., 2016). The inability to access initial or continued mental health care could present negative consequences on the mental well-being of children and adolescents.

Increased Screen Time and Sedentary Behavior

Though summer breaks are typically pictured as being a time for children to be outdoors and with friends, it also provides more opportunities for increased interactions with electronic devices. Without the structure and schedule of school, smartphones, video gaming consoles and systems, and television could see increased use by children, contributing to higher screen-times in the summer as well as sedentary behavior (Brazendale et al., 2018). These behaviors are associated not only with elevated rates of obesity, but also with increased findings of mental illness, including mood disorders and depressive symptoms (Muppalla et al., 2023; Wang et al., 2024). The content a child consumes matters as well. Fast-paced, violent content has been linked with antisocial and attention-deficit/hyperactivity disorder-related behaviors (Muppalla et al., 2023). Stakeholders should be aware of and monitor screen-time and sedentary behavior due to their correlation with negative mental and physical health outcomes.

Food Insecurity and Unsafe Environments

In 2020, approximately 14.8% of U.S households with children faced food insecurity, marking a notable rise from the previous year (Hales & Coleman-Jensen, 2022). Some children rely on school for a nutritious meal. For some children, schools ensure daily access to meals and a safe and consistent routine. While children are on summer break, the inconsistency and instability of some households, especially underprivileged children, results in exposure to unsafe environments and increased food insecurity. This lack of access to reliable nutrition has been linked to adverse mental health outcomes in children, including heightened risks of depression, anxiety and behavioral challenges (Nagata et al., 2018). Additionally, the absence of school-mandated reporting when children are out of school leaves them more vulnerable to abusive, unsafe home environments. Baron et al. (2020) found a 27% drop in reported child abuse and neglect cases in Florida during the early months of COVID-19-related school closures, emphasizing the critical role school personnel assume in identifying and reporting abuse. This suggests that reports of child maltreatment do not decrease due to a lack of incidents, but more so because of an absence of school oversight.

Strategies for Supporting Mental Health During the Summer

Promote Routine and Daily Structure

Children need a reliable and consistent routine. A 2023 systematic review by Selman & Dilworth-Bart found family routines become associated with positive developmental outcomes in children, including improvements in cognitive function and emotional regulation. Stable environments, including routines and daily structure, enhance children's mental health through provisions securing safety which provide feelings of security, as well as increased emotional and social support (Yang et al., 2025). Important daily routines may include having daily schedules with specific times for tasks such as physical activities and set meal and bed times. Overall, these actions foster not only the stability, safety and security that children need for healthy development, but also the opportunity to incorporate routine bonding activities, healthy practices and open communication.

Facilitate Social Connections

Social interaction is crucial in children's emotional development and mental health. Research by Zhao and Gibson (2022) found that children who demonstrated stronger peer-play abilities at age three were significantly less likely to experience mental health difficulties, including behavioral and emotional problems, by age seven. These effects persisted even after accounting for variables such as socioeconomic background and parenting factors, further emphasizing the importance of early and consistent peer interactions. Children's early positive peer interactions remain critical toward their later mental health. Țepordei et al. (2023) demonstrated that the quality and quantity of peer relationships were positively associated with children's life satisfaction and academic motivation, suggesting that children who feel a stronger connection to peers are more likely to thrive emotionally and cognitively. To foster these connections during summer, caregivers encourage participation in community-based programs, schedule regular play dates, or support virtual connections with friends and family. These intentional efforts help maintain a child's sense of belonging and support their overall well-being in times when they do not have a regular routine.

Ensure Access to Mental Health Resources

Children's access to mental health resources is imperative, especially in the summer where mental health support may be lacking or more challenging to access. Though this may be difficult due to previously mentioned barriers, there are options to promote mental health care access when school-based services are not available. Social workers are available at some public libraries, which is especially valuable to those from lower SES due to libraries being available to patrons of all economic statuses (Soska & Navarro, 2020). For those in rural areas or facing obstacles related to physically seeking care due to geographic location or disability, virtual mental health care (telehealth) may be an option. Telehealth mental health care removes worries of travel, loss of income due to taking time off work, and is found to be generally feasible and accepted by clients in treating various mental health concerns (Doarn et al., 2020). Moreover, an additional, and perhaps more accessible, resource during the summer months could be a child's pediatrician. Pediatricians may perform mental health screenings during routine visits during the

summer and can even provide some forms of treatment such as psychoeducation, recommend or begin evidence-based practices such as promoting better sleep and nutrition, or even prescribe pharmacological treatment when necessary (Arruda et al., 2023). Though pediatricians' primary roles are not to be a mental health care provider, parents and children may find that mental health practices may still be integrated into some doctor visits, which may be a boon for those in need of basic services without access to additional resources.

Encourage Physical Activity and Outdoor Play

Dobbins et al. (2021) found that school-based physical activity programs may help boost both the number of children participating in moderate to vigorous exercise and the duration of their engagement, emphasizing the important ways schools encourage active lifestyles. Without the stability and reliable routine that school provides children, families may need to be more intentional about encouraging children to stay active. Physical activity is integral in framing children's mental health. Recent research by Yang et al. (2025) suggests that regular physical activity can help lessen the negative effects of sedentary behavior on both the physical and mental health of children. Encouraging and motivating outdoor play, sports, movement-based hobbies or active summer programs can help reduce stress, boost confidence and support social and emotional development during the summer months. Simple ways to incorporate physical movement and encourage outdoor play include visiting local parks, seeking out trails or going for walks as a family, or joining local outdoor recreation groups.

Limit Screen Time and Encourage Creative Activities

With the risks of excessive screen time in mind, it is in the best interest of children to limit their access to screens and instead, encourage partaking in more creative activities. Not only does participating in creative activities promote time away from screens, but it positively endorses problem-solving and higher self-esteem, especially in adolescence (Moreno & Del Mar Molero Jurado, 2023). Higher levels of self-esteem may be important in dealing with stressors, providing a protective factor against increased stress. Creative activities can also take many forms, which makes them accessible to those across different levels of SES and those with differences in access to resources such as physical space (e.g., living in an apartment in the city versus a house with a large backyard). Accessible activities may include reading, community clubs, crafting, or even more passive activities such as music-listening. These behaviors support not only higher rates of self-esteem, but also prosocial behaviors, decreased inattention, and healthy behaviors such as lower use of alcohol and cigarettes (Social Biobehavioral Research Group, 2023).

Support Emotional Expression and Communication

Fostering emotional expression and communication during the summer requires more than structured activities; it calls for meaningful conversations. Bell et al. (2024) emphasize the importance of everyday language as a powerful role in shaping children's emotional understanding. Using words like, "sad," "excited," "worried," helps children build the vocabulary and awareness needed to recognize, interpret and express their own feelings. Using this kind of language supports empathy and perspective-taking, skills often developed through peer interaction during the school year. During summer, when those interactions may decrease,

caregivers and community members can fill the gap by engaging children in conversations that explore feelings, intentions and motivations.

Leverage Community Programs

Community programs can be an effective way to get children out of the house, away from screens, and to maintain their interest and participation. These programs may be offered by municipalities or cities, universities, or institutions and provide grade-level or interest-specific camps, such as a film camp for young movie afficionados (Smith & Marquez, 2021; Young & Stockman, 2023). Other alternatives such as summer learning programs exist. For example, programs may be both academically and socially beneficial, offering a way to reduce loss of learning during the summer and prepare children and teens for the upcoming school year and as well as providing children with the opportunity to build and practice foundational social skills (Afterschool Alliance, 2021). Participation in social activities such as summer camps or other community programming is not only beneficial to mental health, but also physical health (Yang et al., 2016). Due to the free or low-cost nature of community programming, they provide a viable option for families across the financial spectrum (though their benefits are arguably priceless).

Prepare for Transition Back to School

Donaldson et al. (2022) examined 34 studies on school transition interventions; their goal was to improve the mental health and well-being among children. They discovered that social outcomes, like peer relationships and school belonging, were more responsive to interventions than behavioral or psychological outcomes (Donaldson et al., 2022). Interventions that targeted prioritizing, enhancing social support, and creating a sense of belonging were found to be more effective during the transition between school and summer break. Early transitions benefited from support in the paternal and school environment, and later transitions displayed better improvement with peer-focused strategies, showing that the effectiveness of these interventions varies by age. Parents consider the risks and prepare in advance for the summer months to ensure a smooth transition and return to school.

Conclusion

Summer provides unique mental health challenges for children and their caretakers, but accessible solutions are available. Loss of structure, reduced social interaction, limited access to mental health services, increased screen time, food insecurity and exposure to unsafe environments remain factors to consider during the summer months. Through intentional efforts by caregivers, educators, communities and policymakers, children can receive the support they need to thrive year-round. Strategies such as maintaining daily routines, encouraging social connection, providing access to mental health resources, promoting physical activity, fostering creative expression and leveraging community programs can all contribute to children’s better mental and emotional outcomes.

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Updates

Thank you for your continued support of the International Journal of the Whole Child and our commitment to holistic learning and to the development of the whole child. Moving forward the publication dates for this journal will take place in June and December. The submission deadlines for the June publication will be March 1st and the submission deadline for the December publication will be October 1st. Also, we would like to increase our submissions for the Emerging Leader Section. If you know a graduate or doctoral student or an individual early in their career, please encourage them to submit a manuscript. Again, we sincerely thank you for your continued support of the International Journal of the Whole Child. We look forward to seeing you in December 2025.