



The MARIO Memo exists to help bridge the gap between educational researchers and practitioners, especially in relation to the field of special education. We believe everyone, regardless of their time or financial resources, should have access to the most recent research available. Our goal is to empower and inspire more teacher-researchers.



Must Read for Special Educators

Classroom Menus for Supporting the Academic Success of Diverse Learners | Study by Keith Edyburn and Dave L. Edyburn | Summarized by Matt Barker



Must Read for Administrators

Decrease Problem Behaviors in Children with Autism Spectrum Disorder through Parent Support | Study by Minghui Lu, Jiawei Chen, Wanting He, Feifan Pang, and Yuqing Zou | Summarized by Ashley Parnell



Must Read for General Educators

How can teachers improve engagement in a virtual setting? | Study by Renee Speight and Suzanne Kucharczyk | Summarized by Frankie Garbutt



Must Read for Family Members

Fostering High University and Vocational Expectations during Adolescence through Discussions | Study by Lynette Vernon and Catherine Drane | Summarized by Emmy Thamakaison



Listen & Share

In a Minute

- Use clear routines and explicit instruction for desired behavior to increase engagement in a virtual setting.
- Decreased problem behavior for children with ASD can come from an increase in perceived social supports for parents.
- Supportive relationships with students leads to increased prosocial behavior.
- Use classroom menus to create a buffet of learning activities for students to choose from.
- Effective learning strategies can keep ELLs from being misidentified as having a disability.
- Make a student's dream a reality by talking to them often about their plans.
- Include PE teachers in IEP meetings to make sure students with disabilities are understood and to prevent bullying.

This Week's MARIO Authors

Frankie Garbutt
Ashley Parnell Ayla Reau
Matt Barker Michael Ho
Emmy Thamakaison
Erin Madonna

Special educator Philip Bowman invests time each week into reviewing educational research from a variety of peer-reviewed journals. He works alongside his co-editors to select and share key findings from the most interesting studies. You can contact Philip directly at Phil@marioframework.com.

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Executive Functioning

How can teachers improve engagement in a virtual setting?



Parent Training

The relationship between parents' psychosocial qualities and emotional/behavioral problem in children with ASD



Student-Teacher Relationships

Student-teacher relationship quality and prosocial behaviour



Universal Design for Learning

Classroom Menus for Supporting the Academic Success of Diverse Learners



Intervention

Addressing Overrepresentation of English Language Learners in Special Education



High Expectations

Fostering High University and Vocational Expectations during Adolescence



Self-Advocacy

Bullying in physical education of children and youth with visual impairments



EARCOS and SENIA support the MARIO Memo's mission to provide access to the most recent research in special education and help freely distribute this resource.



This article provides educators with a manual on how to utilize positive and proactive behaviour management strategies to improve student engagement in virtual environments using platforms like Zoom or G Suite. Consistent, clear routines and expectations, explicit teaching of the desired behaviour and opportunities for communication between students and teacher have resulted in higher engagement and learning outcomes.

—Frankie Garbutt



Findings suggest that perceived social support predicts emotional/behavioral problems in children with ASD mainly through its influence on parental resilience and parental self-efficacy. As such, developing parents' psychosocial characteristics through the provision of resources and support, targeted parent education, and relationship-building between parents and professionals is critical to promoting the development of children with ASD. —Ashley Parnell



Developing strong relationships with your students that are characterized by closeness and support can act as a protective factor for the students. Teachers can stimulate prosocial behaviours through this relational model, as well as help the child to feel included in and develop positive attitudes towards the school climate.

—Ayla Reau



Educators can consider Goldilocks to be a metaphor to describe learners who experience Universal Design for Learning (UDL). Utilizing both classroom menus and UDL design challenges can help educators plan a range of activities in their classes which can serve as a “buffet” from which learners can pick “just right” activities. —Matt Barker



In addition to implementing the best interventions for students who are qualified for learning support, providing effective learning strategies needed to avoid the misidentification of English language learners (ELLs) in special education has never been more crucial. Implementing six effective vocabulary acquisition strategies (VAS) within the frameworks of self-regulated and multimedia learning may not only have promising effects on the language acquisition of ELLs but it may also prevent ELLs being falsely identified for special education eligibility.

—Michael Ho



High expectations play a vital role in developing future success in students. For learners, frequent educational and vocational discussions with friends, family, and teachers during adolescence can be incredibly important in fostering their aspirations and transforming them into reality.

—Emmy Thamakaison



The implication of this review is that a lack of preparation prior to supporting students with disabilities in PE class, particularly those with visual impairments, can lead to indirect and direct bullying of the students by teachers, paraeducators, and peers. As special educators, we must include PE teachers and paraeducators in IEP meetings and ensure they feel prepared to modify and adapt their program for learners with disabilities. —Erin Madonna

How can teachers improve engagement in a virtual setting?

Universal Design for Learning, Student-Teacher Relationships, Executive Functions

Key Takeaway: This article provides educators with a manual on how to utilize positive and proactive behaviour management strategies to improve student engagement in virtual environments using platforms like Zoom or G Suite. Consistent, clear routines and expectations, explicit teaching of the desired behaviour and opportunities for communication between students and teacher have resulted in higher engagement and learning outcomes. —Frankie Garbutt

“High-levels of classroom engagement and on-task behaviour have been linked to positive outcomes for students,” says Renee Speight (University of Arkansas) and Suzanne Kucharczyk (University of Arkansas) in this article of the *Journal of Special Education Technology*. The authors argued that strategies of Positive Behaviour Interventions and Supports (PBIS), used to “facilitate improvements in student engagement,” should be adjusted to the virtual environments as part of teachers’ “instructional repertoire.”

Speight and Kucharczyk outline that PBIS is a “system of support involving direct instruction of expected behaviours and modification of the classroom environment through antecedents and consequences to promote student demonstration of expected behaviours.”

The following strategies have been identified as “high-leveraging practices for inclusive educational environments:”

- Creating clear routines: This applies to aspects of a lesson like readiness to learn, instructional routines as well as task submission. Such routines will “minimize the labour required to re-create learning processes with the shifts from in-classroom to virtual learning.”
- Explicit instruction on expected behaviours: “Teachers should identify three to five behaviours critical to a positive and productive virtual learning session” and “steps should be taken to explicitly teach” these.

This could be complemented by visual depictions of the expected behaviours

- Prompting and acknowledging expected behaviour: Once behaviours are identified and taught, teachers should “use precorrection” (like prompting) “at the onset of instructional sessions or shifts in teaching arrangements, such as when students move into breakout sessions.” To individualize prompting, teachers could use the chat feature in Zoom or G Suite.
- Opportunities to respond: Teachers should consistently create opportunities to respond “to increase active engagement” by using tools such as “polls and participant nonverbal responses” as well as “Google Forms.” To allow for equal participation, students should be given wait or thinking time prior to responding.
- Access to reinforcers: Reinforcement of “desired behaviour changes” ought to be “guided by student preferences which can be determined by using preference assessment” through tools like Google Forms. In virtual sessions, it is crucial that access to reinforcers are regular and miscellaneous.

The authors concluded that the practices of PBIS, embedded into the virtual learning setting, can result in students demonstrating expected behaviours and facilitating “high levels of engagement and learning.”

Article summarized:

Speight, R., & Kucharczyk, S. (2021). Leveraging Positive Behavior Supports to Improve Engagement in Virtual Settings. *Journal of Special Education Technology*, 36(2), 90–96.
<https://doi.org/10.1177/0162643421992704>

Summary by: Frankie Garbutt — Frankie believes that the MARIO Framework encourages students to become reflective, independent learners who progress at their own rate.

Impact and implications of the relationship between parents' psychosocial qualities and emotional/behavioral problems in children with autism spectrum disorder

Parent Training

Key Takeaway: Findings suggest that perceived social support predicts emotional/behavioral problems in children with ASD mainly through its influence on parental resilience and parental self-efficacy. As such, developing parents' psychosocial characteristics through the provision of resources and support, targeted parent education, and relationship-building between parents and professionals is critical to promoting the development of children with ASD. —Ashley Parnell

In this study, Lu, Chen, He, Pand, & Zou examined mechanisms underlying the association between parents' perceived social support and children's emotional/behavioral problems, focusing specifically on the role played by parental resilience and parent self-efficacy.

"Emotional/behavioral problems are more common in children with autism spectrum disorders (ASD) than in typical children, with estimates of prevalence ranging from 35.8% to 94.3%." Given the association between parental stress and children's emotional/behavioral problems, parents of children with ASD need and benefit from increased perceived social support. Social support was defined as "material, emotional, and informational help a person experiences from his/her network as compared to the parents of typical children."

Studies have shown that "parents with more social support have greater resilience, parenting self-efficacy, and can improve the emotional and behavior of their children with ASD." However, studies investigating the relationships between these psychosocial characteristics are limited.

In this particular study, 289 parents of children with ASD completed a survey comprising the Multidimensional Scale of Perceived Social Support, Resilience Scale, Parenting Sense of Competence Scale, and Difficulties Questionnaire. Results indicated that "parents' perceived social support was significantly related to the emotional/behavior problems in children with ASD and that this relationship was mediated by a series of associations between parental resilience and parent self-efficacy, among which higher resilience is associated with higher self-efficacy." Analysis indicates that perceived social support

predicts emotional/behavioral problems in children with ASD mainly through its influence on parental resilience and parental self-efficacy.

In other words the association between perceived social support and emotional/behavioral problems is greater when parental resilience and parental self-efficacy are taken into account. Additionally, parental resilience and parents' self-efficacy were found to play a chain-mediating role in the relationship between parents' perceived social support and emotional/behavioral problems in children with ASD.

Findings indicate that "it is crucial to improve parents' perceived social support, parental resilience, and parents' self-efficacy to reduce emotional/behavioral problems in children with ASD."

To best promote the development of children with ASD, we must:

1. Ensure accessibility to various types of support for parents.
2. Help parents form relationships with professionals.
3. Proactively attend to the education of parents.

Specifically, Das et al. states, "social organizations should establish social support networks and professional centers (e.g., at school, children's centers, mobile clinics, etc.) to give parents different types of support (e.g., remote medical treatment, community health workers, specialist education teachers and psychologists)."¹ Focus should also be placed on the education of parents, ensuring that parents are equipped with strategies, knowledge, and techniques that enable them to better address the needs of the children with ASD.

Summarized Article:

Lu, M., Chen, J., He, W., Pang, F., & Zou, Y. (2021). Association between perceived social support of parents and emotional/behavioral problems in children with ASD: A chain mediation model. *Research in Developmental Disabilities, 113, 103933*

Additional References:

Das, S., Das, B., Nath, K., Dutta, A., Bora, P., & Hazarika, M. (2017). Impact of stress, coping, social support, and resilience of families having children with autism: A North East India-based study. *Asian journal of psychiatry, 28, 133-139.*

Summary by: Ashley M. Parnell — Ashley strives to apply the MARIO Framework to build evidence-based learning environments that support student engagement, empowerment, and passion and is working with a team of educators to grow and share this framework with other educators.

Student-teacher relationship quality and prosocial behaviour: The mediating role of academic achievement and a positive attitude towards school

Student-Teacher Relationships

Key Takeaway: Developing strong relationships with your students that are characterized by closeness and support can act as a protective factor for the students. Teachers can stimulate prosocial behaviours through this relational model, as well as help the child to feel included in and develop positive attitudes towards the school climate. —Ayla Reau

Previous research has already identified that a “good quality teacher-pupil relationship is a protective factor for the child’s development,” lowers the risk of victimization, and increases the chance for inclusion in the peer group. The authors of this study, Longobardi, Settanni, Lin, and Fabris, from the University of Turin’s Department of Psychology, wanted to further investigate whether teacher-pupil relationships are positively associated with students’ higher levels of prosocial behaviour. The study considered the perspectives of both the teacher and student in the perceived relationship.

Longobardi et al. define prosocial behaviour as “actions aimed at favouring other people,” meaning behaviours that involve a cost for the self and result in benefits for others. Prosocial behaviours are especially important to develop since children with increased prosocial behaviours tend to have “more positive outcomes, both in the social domain (e.g. peer acceptance or peer victimization) and in the non-social domain (e.g. academic success).”

The results of the study concluded that a teacher-student relationship that is characterized by closeness, affection, and support is positively associated with higher levels of prosocial behaviour in the student. This is likely the case as in these relationships teachers can become a reference adult, “offering relationship models that the child can acquire, develop, and replicate in peer interactions.” Teachers also play a role in mediating relationships between classmates, helping them manage conflict, encouraging correct behaviors, and discouraging incorrect behaviours.

The authors also examined the mediating effects on teacher-student relationships and prosocial behaviours for the following two factors: attitude towards school and academic competence. They found that only attitude



towards school was a predictor of prosocial behaviour. One possible explanation given was that “academic competence is not always associated with greater acceptance and popularity in the peer group.” On the other hand, attitude towards school was found to be a mediator, likely because meeting students’ needs of relatedness, competence, and autonomy, results in more positive attitudes towards school and more involvement in the school content. A teacher can help a student develop a positive attitude towards school, which in turn could facilitate the development of prosocial behaviours.

Ultimately, prosocial behaviours “tend to correlate negatively with aggression and the risk of victimization and predict greater student adaptation and more positive school outcomes.” These behaviours can be developed through a close relationship with a teacher. Teachers can offer a supportive relational model and help the student develop more positive attitudes towards school, which this study found is directly associated with the increase in prosocial behaviour. However, Longobardi, Settanni, Lin, and Fabris do warn us that we must exercise caution in the interpretation of their data as more research should be done on the causality and directionality of these relationships.

Summarized Article:

Longobardi, C., Settanni, M., Lin, S., & Fabris, M. A. (2021). Student-teacher relationship quality and prosocial behaviour: the mediating role of academic achievement and a positive attitude towards school. *British Journal of Educational Psychology*, 91(2), 547-562.

Summary by: Ayla Reau — Ayla believes that one-to-one conversations, through the MARIO Approach, are the key to understanding and unlocking a student’s potential.



Classroom Menus for Supporting the Academic Success of Diverse Learners

Universal Design for Learning

Key Takeaway: Educators can consider Goldilocks to be a metaphor to describe learners who experience Universal Design for Learning (UDL). Utilizing both classroom menus and UDL design challenges can help educators plan a range of activities in their classes which can serve as a “buffet” from which learners can pick “just right” activities. —Matt Barker

“Goldilocks is the perfect metaphor for describing learners experiencing universal design for learning (UDL) because it highlights the importance of learner agency,” says Edyburn and Edyburn as they dive into the essential practices for developing meaningful classroom menus or buffets to meet the needs of diverse learners. The teacher plays a pivotal role in planning educational activities and as such needs support as to how to implement UDL both through the use of educational materials and technologies. Teachers need to consider the general characteristics of diverse learners and support them to choose “just right” learning activities to improve learning outcomes.

First, teachers need to “bridge the gap between knowing about UDL and doing UDL.” The challenge is for teachers to provide a variety of meaningful activities. One way to do this is for teachers to embark on “discovering alternatives,” essentially, recognising that there are many similar products in the technology marketplace that address a particular challenge.

One example is supporting students with managing their to-do lists. In this instance, it is recommended that the teacher provides a menu of options. This might include the “cloud-based to-do list Remember the Milk”. In this example, the variety of options could be provided as a web list menu, where the learners are supported to review the options to find the one that is “just right.” To find programs to add to this menu, the authors suggest using a crowd-sourced recommendation platform such as [AlternativeTo](#). In this instance, searching “Alternatives to Remember The Milk” should bring up said platform.

Edyburn and Edyburn (2021) also suggest exploring curated guides. This essentially means investigating websites curated by educators that help teachers navigate various technology tools for learners.

Once the teacher has begun collating their technology tools, they need to consider how to organize and manage these resources in an online toolkit format. The authors provide three management system suggestions:

- Using a Web List Menu through the use of web pages
- Providing an Equalizer Menu, where a range of options are available from easiest to hardest
- Utilising a Tic-Tac-Toe Menu, where teachers identify nine learning activities for a topic and students select a row of three activities to complete

The authors then investigate the use of Design Challenges to provide solutions in terms of rolling out UDL in the classroom. They explain that “the development of UDL design challenges” has been created to empower “educators [to] think about accessibility, engagement, and learning solutions in a format that could help standardize decision-making about design interventions.” Furthermore, each challenge is modelled to value academic diversity by asking “what do teachers need to know about why and how students struggle to proactively embed supports to ensure that students can access, engage, and benefit from the learning activities?”

Finally, the authors suggest a four level rubric that can be used by the teacher to assess how effectively they have created a series of “just right” activities. In this instance, they consider text complexity, but the performance indicators can be edited to match the planned activities. The rubric levels are:

Level 0: Beginning performance

- “no evidence of meaningful student choice”

Level 1: Approaching performance

- Demonstrates “an appreciation for the need for UDL”
- Provides an element of choice

Level 2: Meeting performance

- Multimedia options provided in how the activity is accessed

- The teacher has a “clearly articulated philosophy that recognized that no single intervention may be sufficient and that multiple tools may be necessary”

Level 3: Exceeding performance

- As well as level 2, the teacher provides tools that “the students can use to modify the cognitive accessibility of the text” (referenced in Edyburn, 2002)¹

Summarized Article:

Edyburn, K., & Edyburn, D. L. (2021). Classroom Menus for Supporting the Academic Success of Diverse Learners. *Intervention in School and Clinic, 56*(4), 243-249.

Additional References:

1. Edyburn, D. L. (2002). Cognitive rescaling strategies: Interventions that alter the cognitive accessibility of text. *Closing the Gap, 1*, 10-11.

Summary by: Matt Barker — Matt loves how the MARIO Framework empowers learners to make meaningful choices to drive their personalized learning journeys.



Addressing Overrepresentation of English Language Learners in Special Education during the COVID-19 Pandemic

Intervention, Self-Regulation, Motivation

Key Takeaway: In addition to implementing the best interventions for students who are qualified for learning support, providing effective learning strategies needed to avoid the misidentification of English language learners (ELLs) in special education has never been more crucial. Implementing six effective vocabulary acquisition strategies (VAS) within the frameworks of self-regulated and multimedia learning may not only have promising effects on the language acquisition of ELLs but it may also prevent ELLs being falsely identified for special education eligibility. —Michael Ho

Ortogero and Ray (2021) searched, gathered, and analyzed eight research articles to examine the research question: In light of the COVID-19 pandemic, what recent vocabulary acquisition strategies (VAS) are feasible for e-learning and effective in reducing the over-representation of ELLs in special education?

Here are the major takeaways:

- **Nearly 12% of English language learners** were identified as having a disability in 2016.¹ This has prompted educators to use technology effectively to teach a second language; integrate the second language into content areas; use the first language to teach the second language; and focus on other language learning strategies, such as vocabulary acquisition strategies (VAS).
- **Vocabulary acquisition** is essential among English language learners because they need to constantly acquire the meaning of unknown words when speaking, listening, reading, or writing. Having a strong literacy foundation is a prime indicator of academic success among English language learners.
- “The following VAS for ELLs were found to be effective: **(1) using L1 (first language) to teach L2 (second language), (2) Content and Language Integrated Learning, (3) designing culturally relevant activities in both L1 and L2, (4) pre teaching vocabulary multimodally using explicit word learning strategies, (5) multimedia use, and (6)**

promoting self-regulation." Ultimately, these strategies can be taught in an online learning mode and may prevent the overrepresentation of English language learners in special education.

- During and even after the COVID-19 pandemic, the six VAS strategies work best in the **Self-Regulated Multimedia Cognitive Learning Model**, which balances the use of technology and multimedia with self-regulation. It begins with pre-teaching vocabulary using explicit word learning strategies, followed by content and language integrated learning and culturally relevant learning activities. By using L1 to teach L2, the students' vocabulary acquisition will be further enhanced. Ortogero and Ray (2021) mention "Implementing the six effective VAS within the frameworks of self-regulated and multimedia learning may have promising effects on educators continuing their efforts of effectively instructing ELs (English learners) amid an increased e-learning culture."
- Many stakeholders worry about the potential detrimental effects of learning through technology. In order to address this issue, **self-regulation skills**, such as setting goals and monitoring one's learning, need to be emphasized during online learning.² Ortogero and Ray (2021) refer to Huebeck's 2020 study³ and emphasize that "teaching and promoting self-regulation skills can help curb technology's distracting features and lead to a culture of learning English as a second language amid the COVID-19 pandemic that has driven educators to embrace technology."

This study had some **limitations**. First, the search methods were only conducted by the first author, and the eight studies reviewed used self-reporting instruments only. In addition, a few studies did not indicate whether all instruments used were in the participant's first language. Other VAS learning strategies related to the Cognitive Academic Language Proficiency (CALP), such as using open questions, wait time, and code-switching, were also not included.

Experimental studies examining the effects of VAS on English language learners is recommended for **further research**, in order to address response bias. Comparing the effects of various native languages may explain why certain VAS are more effective than others. Finally, the effects of VAS pre, during, and post COVID-19 could determine the impact the pandemic has had on English language learners.

Summarized Article:

Ortogero, S. P., & Ray, A. B. (2021). Overrepresentation of English Learners in Special Education Amid the COVID-19 Pandemic. *Educational Media International*, 1-20.

Additional References:

1. National Center for Education Statistics. (2018). English language learner (ELL) students enrolled in public elementary and secondary schools, by home language, grade, and selected student characteristics: Selected years, 2008-09 through fall 2016. Institute for Education Sciences. https://nces.ed.gov/programs/digest/d18/tables/dt18_204.27.asp
2. Pintrich, P. (2000). The role of goal orientation in self-regulated learning. In M. Boekaerts, P. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 451–502). Elsevier Inc. <https://doi.org/10.1016/B978-012109890-2/50043-3>
3. Huebeck, E. (2020, June 3). How did COVID-19 change your teaching, for better or worse? See teachers' responses. *Education Week*. <https://www.edweek.org/ew/articles/2020/06/03/how-did-covid-19-change-your-teaching-for.html>

Summary by: Michael Ho — Michael supports the MARIO Framework because it empowers learners to take full control of their personalized learning journey, ensuring a impactful and meaningful experience

Research author Shawna P. Ortogero, Ph.D., was involved in the final version of this summary.



Fostering High University and Vocational Expectations during Adolescence through Discussions

High Expectations, Ecological Systems Theory, Planning and Predicting

Key Takeaway: High expectations play a vital role in developing future success in students. For learners, frequent educational and vocational discussions with friends, family, and teachers during adolescence can be incredibly important in fostering their aspirations and transforming them into reality.

—Emmy Thamakaison

Lynette Vernon (Edith Cowan University) and Catherine Drane (Curtin University) share their retrospective, cross-sectional study examining the association between student characteristics (ie. socio-economic status (SES), gender) alongside discussions with influential figures (ie. family members, friends, teachers) and expectations to attend university, receive vocational/technical education, or go into full-time employment after secondary school.

SES's contributions to the development of future aspirations have long been debated, in particular, the suggested relationship between lower SES and lower educational and vocational aspirations. Vernon and Drane present their arguments against this as their results revealed that "career and educational aspirations for students, predominantly from low SES background were high" but found that often "the missing element is the knowledge of how to make these aspirations concrete and obtainable."¹

- Compared to students with higher SES, those with lower SES tend to engage more frequently in Technical and Further Education (TAFE) and Vocational Education and Training (VET) discussions and less frequently in university discussions.
- Students discuss their aspirations with their parents and peers more than their teachers and counsellors. Therefore, it is vital for these high-impact influencers to "have the necessary up-to-date knowledge and skills to provide the relevant information around educational opportunities." However, parents of students of lower SES may lack the prerequisite knowledge as they may not have experience with university and/or TAFE/VET pathways. Thus, informative parental support and discussions with multiple influencers may be beneficial to maintaining high aspirations.

Apart from SES, other factors such as gender, academic year level, and first-in-family (to attend university) status are considered "important predictors" for students' vocational and higher education expectations.

- University discussions affected female students more significantly in terms of their expectations to receive higher education.
- Those with first-in-family statuses engaged in discussions about university more frequently than those whose family members have attended university, indicating “their capabilities of resilience, motivation, and tenacity to explore university pathways.” However, first-in-family status was not associated with TAFE/VET expectations.
- Vernon and Drane found that year level (grade level) indirectly contributed to the pathways between discussions on university, TAFE-VET, or full-time employment expectations.

Regardless of individual characteristics, frequent discussions about students’ futures allows the maintenance of their aspirations and sets them on the path to reaching their potential.

- As one of the main confidantes for a student, parents are encouraged to “provide the reality context for their children around their educational desires” in the discussions.
- Teachers remain largely untapped for valuable aspirational discussions. Prioritizing career education in a school setting and promoting teachers as a “positive, knowledgeable, and accessible resource” can therefore go a long way in “empowering [students] to pursue their desired education and career pathways”.

Ultimately, this research encourages policy-makers, teachers, and influencers to recognize the importance of discussions around educational and vocational pathways. Adolescence is a critical transitional period as students decide what they will pursue beyond secondary school. While individual factors influence future expectations differently, increasing the frequency of quality discussions with influential figures can “provide the opportunity for all students to practice and develop their capacity to aspire and meet their career [and educational] expectations.”

Summarized Article:

Vernon, L., & Drane, C. F. (2021). Influencers: the importance of discussions with parents, teachers and friends to support vocational and university pathways. *International Journal of Training Research*, 1–19. <https://doi.org/10.1080/14480220.2020.1864442>

Additional References:

1. St. Clair, R., Kintrea, K., & Houston, M. (2013). Silver bullet or red herring? New evidence on the place of aspirations in education. *Oxford Review of Education*, 39(6), 719–738. <https://doi.org/10.1080/03054985.2013.854201>

Summary by: Emmy Thamakaison — Emmy is a recent high school graduate attending Stanford University and is an enthusiastic advocate of MARIO Framework.

Research author Lynette Vernon, Ph.D., was involved in the final version of this summary.



Bullying in physical education of children and youth with visual impairments: A systematic review

Self-Advocacy, Universal Design for Learning, Paraprofessionals, Student-Teacher Relationships

Key Takeaway: The implication of this review is that a lack of preparation prior to supporting students with disabilities in PE class, particularly those with visual impairments, can lead to indirect and direct bullying of the students by teachers, paraeducators, and peers. As special educators, we must include PE teachers and paraeducators in IEP meetings and ensure they feel prepared to modify and adapt their program for learners with disabilities. —Erin Madonna

Lindsay Ball and colleagues completed a systematic review of the literature around bullying of students with visual impairments in the Physical Education (PE) setting. The purpose of their review was to describe the current experiences of youth with visual impairments in order to develop avenues for future research around issues of bullying in physical education classes.

For the study, 114 participants reported on their experiences in PE with a broad age range represented due to the retrospective nature of some of the included studies. Ball et al. (2021) oriented their work with the definition of bullying posed by Chester et al. (2015)¹ and Stough et al. (2016);² Bullying is “the intentional behavior to physically or emotionally harm another, which occurs through an imbalance of power.” Exclusion of youth with visual impairment, when done with intention, was considered bullying in the context of this review. The team focused their review around three questions:

- “What types of bullying are youth with visual impairments experiencing during PE?”
- “When/how does the bullying take place and by whom?”
- “What are the outcomes of the bullying?”

Overwhelmingly, this review makes clear just how common bullying of youth with visual impairments is in the PE setting. As they describe the frequency found within the studies they reviewed, Ball et al. (2021) point to the findings of Bear et al. (2015)³ reporting that young people with visual impairments are likely to be bullied twice as frequently as peers without disabilities. Social-relational bullying was by far the most common form found in the reviewed studies, with 86% of studies reporting exclusion, marginalization, isolation, and other forms of discrimination present in PE experiences. Dishearteningly, 93% of studies indicated that the bullying occurred during PE class time with 93% of studies

showing peer-to-peer bullying and 50% of studies revealing the bullying was perpetrated by the educators themselves.

While the rate of bullying may appear shockingly high, it is upon review of Ball et al.'s (2021) data where we begin to understand the systematic structures which have allowed for this bullying to persist. "PE teachers are often ill prepared to teach children with visual impairments due to a lack of adequate preparation. This lack of knowledge leads to unnecessary exclusion, both intentional and unintentional, of students with visual impairments from participation during PE."

Underprepared educators are unable to create an environment where students with visual impairments are empowered and included. As Ball et al. (2021) point out "efforts made by teachers to promote a climate that is autonomy-supportive are the foundation of positive perceptions of inclusion, according to the perspectives of children with disabilities."

They even go further to share Jimenez-Barbero et al.'s (2020) recommendation that, "when Universal Design for Learning is utilized in PE, all students with or without disabilities benefited from it. Physical educators can create a climate of acceptance and empathy that fosters participation by all students which may lead to increased self-esteem and decreased bullying of students."

When considering the outcomes of the bullying experienced, Ball et al. (2021) describe how negative feelings towards physical education can persist through adulthood, often manifesting in the form of avoidance of physical activities. This impact has long-reaching implications for the health and well-being of those with visual impairments. Allowing youth with visual impairments to participate fully in physical education classes, rather than restricting their participation because of a fear of risk, perception of weakness, or other limits has the potential to positively impact their self-esteem. "Autonomy, competence, and dignity of risk are all critical components of an individual's self-determination, which has a large influence on an individual's motivation to participate in physical activity."

Ball et al. (2021) also touch upon the question of self-advocacy as a possible counter-action to bullying. In the majority (86%) of participant responses, no resolution to the bullying occurred. There was evidence that when the student with visual impairments ceased to be perceived as an "easy target," the bullying also ceased. If students with visual impairments are supported in harnessing the power of their own voice, we provide alternate paths to confronting bullying and changing the paradigm that has allowed bullying to persist in PE classes.

It is important to note that this review was limited in part by the fact that not much was known about the participant's backgrounds or the training of the PE teachers and paraeducators involved. The retrospective nature of some of the included studies may also have resulted in details being forgotten or reported PE practices being inconsistent with current practices.

Summarized Article:

Ball, L., Lieberman, L., Haibach-Beach, P., Perreault, M., & Tirone, K. (2021). Bullying in physical education of children and youth with visual impairments: A systematic review. *British Journal of Visual Impairment*, 02646196211009927.

Additional References:

1. Chester, K. L., Callaghan, M., Cosma, A., Donnelly, P., Craig, W., Walsh, S., & Molcho, M. (2015). Cross-national time trends in bullying victimization in 33 countries among children aged 11, 13, and 15 from 2002 to 2010. *The European Journal of Public Health*, 25(Suppl. 2), 61–64. <https://doi.org/10.1093/eurpub/ckv029>
2. Stough, C. O., Merianos, A., Nabors, L., & Peugh, J. (2016). Prevalence and predictors of bullying behavior among overweight and obese youth in a nationally representative sample. *Childhood Obesity*, 12(4), 263–271. <https://doi.org/10.1089/chi.2015.0172>
3. Bear, G. G., Mantz, L. S., Glutting, J. J., Yang, C., & Boyer, D. E. (2015). Differences in bullying victimization between students with and without disabilities. *School Psychology Review*, 44(1), 98–116. <https://doi.org/10.17105/SPR44-1.98-116>

Summary by: Erin Madonna — Erin philosophically aligns with the MARIO Framework's deeply rooted belief/perspective that all learners are capable, and she firmly believes in MARIO's commitment to the use of evidence-based practices drawn from the field of multidisciplinary research.

Research author Lauren J. Lieberman, Ph.D., was involved in the final version of this summary.

