



OPEN ACCESS

EDITED BY

Arya Ansari,
The Ohio State University,
United States

REVIEWED BY

Martin Knollmann,
LVR Hospital Essen, Germany
Jeremy Singer,
Michigan State University,
United States

*CORRESPONDENCE

Christopher A. Kearney
chris.kearney@unlv.edu

SPECIALTY SECTION

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Education

RECEIVED 15 August 2022

ACCEPTED 01 September 2022

PUBLISHED 20 September 2022

CITATION

Kearney CA and Graczyk PA (2022)
Multi-tiered systems of support
for school attendance and its
problems: An unlearning perspective
for areas of high chronic absenteeism.
Front. Educ. 7:1020150.
doi: 10.3389/educ.2022.1020150

COPYRIGHT

© 2022 Kearney and Graczyk. This is
an open-access article distributed
under the terms of the [Creative
Commons Attribution License \(CC BY\)](#).
The use, distribution or reproduction in
other forums is permitted, provided
the original author(s) and the copyright
owner(s) are credited and that the
original publication in this journal is
cited, in accordance with accepted
academic practice. No use, distribution
or reproduction is permitted which
does not comply with these terms.

Multi-tiered systems of support for school attendance and its problems: An unlearning perspective for areas of high chronic absenteeism

Christopher A. Kearney^{1*} and Patricia A. Graczyk²

¹University of Nevada, Las Vegas, Las Vegas, NV, United States, ²University of Illinois Chicago, Chicago, IL, United States

School attendance problems (SAPs) are a vexing challenge for many educational districts given their complexity, heterogeneity, and opacity. One potential coordinated, integrated approach to ameliorate SAPs and boost school attendance is to leverage existing school-based systems already designed to address multiple individual domains of functioning in students. Multi-tiered systems of support frameworks for school attendance and its problems have been developed but remain in the nascent stage. The purpose of this perspective article is to begin a discussion as to how such frameworks for SAPs could be fundamentally reconfigured in areas with very high rates of chronic absenteeism. Recommendations are provided at each tier, with the understanding that original notions of how tiers are ostensibly constructed and aimed must be unlearned in these circumstances.

KEYWORDS

school attendance, school absenteeism, chronic absenteeism, truancy, unlearning, multi-tiered systems of support

Introduction

School attendance problems are a vexing challenge for many educational districts given their complexity, heterogeneity, and opacity. The complexity of attendance problems is manifested by multiple risk factors at student, caregiver, family, peer, school, community, and macro levels (Gubbels et al., 2019). The heterogeneity of attendance problems is manifested by different forms along a spectrum (full and partial day absences, skipped classes, tardiness, mental health symptoms interfering with attendance) that vary over time (Knollmann et al., 2022). The opacity of attendance problems is manifested by concurrent, fluid characteristics such as residential mobility that make student tracking and assessment difficult (Chen et al., 2016). Furthermore, these facets have been exacerbated by recent health crises, technological and demographic changes, modified instructional formats, and global economic

challenges. In addition, attendance problems are addressed by professionals from many different disciplines, and variously across geographical areas, which has led to a wide array of systemic and analytic interventions that are rarely well-coordinated or integrated (Kearney, 2021).

One potential coordinated, integrated approach to ameliorate attendance problems (and boost school attendance) is to leverage existing school-based systems already designed to address multiple individual domains of functioning in students (e.g., academic, social performance) and to address complex systemic problems such as school safety, violence, disciplinary issues, mental health challenges, climate, and inequities in access to student services and supports. These systems of support can be arranged in tiers (multi-tiered systems of support) based on individual student need that include Tier 1 strategies to help prevent a problem or to augment an area of strength, Tier 2 strategies to provide early intervention to those in need of extra assistance, and Tier 3 strategies to provide later, intensive intervention to those in need of substantial assistance.

Kearney and Graczyk (Kearney and Graczyk, 2014, 2020; Kearney, 2016; Kearney et al., 2019; Graczyk and Kearney, 2022) outlined the main parameters of a multidimensional multi-tiered systems of support (MD-MTSS) framework for school attendance/problems and issued preliminary recommendations for implementation. Tier 1 includes universal interventions to enhance school climate, safety, health, student skills, parental involvement, and school readiness; as well as district-wide attendance initiatives and school dropout prevention components. Tier 2 includes clinical approaches for acute/emerging attendance problems related to mental health issues; student engagement initiatives; and teacher and peer mentoring programs. Tier 3 includes expanded Tier 2 strategies and intensive case study and management, among other elements. An MD-MTSS framework can be modified to simultaneously accommodate numerous domains (e.g., developmental levels; see Kearney and Graczyk, 2020) and special circumstances (e.g., health emergencies; Kearney and Childs, 2021). MD-MTSS frameworks for attendance problems remain in the nascent stage but the individual components that can comprise each stage have moderate to strong empirical support (McIntosh and Goodman, 2016). In addition, researchers have implemented strategies to address school attendance and its problems utilizing MD-MTSS as a theoretical context (e.g., Young et al., 2020).

Kearney and Graczyk (2020) noted that emerging MD-MTSS frameworks for attendance problems may have restricted applicability to school districts, particularly large urban ones, with very high rates of chronic absenteeism. In the United States, 30.2% of students attend urban schools, some of which are part of the largest districts in the country and some of which have substantially elevated school absenteeism and dropout rates (National Center for Education Statistics, 2017). Three key challenges help explain why emerging school-based MD-MTSS frameworks may have restricted applicability in

these districts. First, many school districts with very high rates of chronic absenteeism are in areas with external and deep structural inequalities and multiple fundamental barriers to school attendance (Singer et al., 2021). Second, many school districts with very high rates of chronic absenteeism are in areas where support services are fragmented and uncoordinated (Singh et al., 2017). Families of youth with attendance problems must often navigate sparse and/or splintered avenues of support. Third, many school districts with very high rates of chronic absenteeism are faced with enormous student caseloads that overwhelm in-house support services (e.g., school-based counselors, psychologists, social workers) (Braun et al., 2020).

MTSS approaches in general are designed to accommodate 10–15% of students transitioning to Tier 2 and 1–5% of students transitioning to Tier 3 (McDaniel et al., 2015). In districts with very high rates of chronic absenteeism, however, Tier 2 and 3 cases can surge to 50% or more; schools are not typically equipped to provide Tier 2/3 services to more than 20–30% of students (Kilgus and Eklund, 2016). The purpose of this perspective article is thus to begin a discussion as to how MD-MTSS frameworks for attendance problems could be fundamentally reconfigured in areas with very high rates of chronic absenteeism. Recommendations are provided at each tier, with the understanding that original notions of how MD-MTSS tiers are ostensibly constructed and aimed must be unlearned in these circumstances. At Tier 1, this can include root cause analysis and remediation of barriers to school attendance as well as shared alliances and community schools. At Tier 2, this can include mapping community assets, reducing barriers to care, and modifying supports based on cultural relevance, existing resources, and equity. At Tier 3, this can include a centralized catchment and intervention process linked to a coordinated system of care as well as alternative, creative, and viable pathways to school completion.

Tier 1

Researchers have noted that fundamental intervention processes for areas of high absenteeism severity must include a root cause analysis of systemic barriers to attendance, many of which can be *external* to educational centers and sometimes unique to a specific geographical area (Lenhoff et al., 2020). Systemic barriers can include digital divides, food insecurity, poor housing quality, frequent residential mobility, transportation challenges, lengthy and unsafe avenues to school, and resource deprivation via underemployment and limited access to support services (Gottfried et al., 2022; Kearney et al., 2022). As such, Tier 1 interventions must include identifying primary community aspects that impede school attendance *as well as* partnering with external agencies to ameliorate these barriers. The surrounding community must thus become an additional and sometimes primary target of intervention (Childs and Grooms, 2018). Political and organizational challenges

to this process can include decentralized school districts and service agencies, varied lines of authority, and ingrained deficit-oriented beliefs; schools have been encouraged to fund and develop research partnerships to enhance connectivity with key social welfare entities, examine empirical evidence on root causes and solutions, and utilize data to shape policy decisions (Lenhoff and Singer, 2022).

This shift in mindset requires less burden on under-resourced schools and more burden on shared alliances for purposes of community development and positive youth development frameworks (Zaff et al., 2015). School absenteeism is often a complex, multigenerational, and relentless (wicked) problem (Childs and Lofton, 2021). As such, shared alliances are necessary to address multilayered characteristics and can include collaborations among agencies (e.g., education, housing, legal, public health, welfare) to better track students removed from the educational process and to develop comprehensive early warning and intervention systems salient to a particular area. An example involves multiagency collaboration in areas of housing instability and residential mobility to facilitate rental assistance and transportation to a previous school for vulnerable students (Fenelon et al., 2021).

Kearney and Graczyk (2020) noted as well that the very nature of a school's purpose must change in MD-MTSS frameworks of school attendance/problems in areas of high absenteeism severity. This can include family-school-community partnerships and full-service community schools to address the needs of vulnerable students by integrating community agencies into a school setting (see Oakes et al., 2017). Such arrangements are designed to minimize cost, transportation challenges, stigma, and wait time as well as to identify families with needs that supersede school attendance. In addition, such arrangements require alignment with a surrounding community and its challenges, meaning an emphasis on democratic collaboration, educational and social justice, empowerment, equity, and strengths-based principles (Bryan et al., 2020). Best practice examples may be derived from positive behavior intervention support programs that have been adapted for large districts (Netzel and Eber, 2003) and that address barriers such as lack of training, limited financial resources, resistance, low expectations, and poor fidelity (Warren and Robinson, 2015).

Tier 2

As mentioned, school districts with very high levels of chronic absenteeism are often in areas with fragmented and uncoordinated systems of support. This is unfortunate because Tier 2 attendance problems often demand rapid, specialized, and streamlined responses. As such, a priority of Tier 2 systems of support must include thorough community asset mapping to identify mental health and academic support options, particularly for vulnerable students such as those

with disabilities (Suarez-Balcazar et al., 2021). In addition, community providers such as physicians, psychologists, and social workers can be enlisted to reduce barriers to care. Examples include providing prompt and low-cost services, resolving educational access issues, engaging in culturally competent care, conducting forensic assessments in legal settings, identifying neurodevelopmental problems, facilitating access to preschool and academic supports, and advocating for nuanced treatment rather than punitive approaches (Kearney and Benoit, 2022).

Tier 2 supports in large school districts require other modifications as well. Walter et al. (2019) noted that tiered approaches must reduce burden on school districts by emphasizing available crisis services, extended capacity building as a separate part of tier development, and shared decision making and local control. Schools can engage in self-assessment to measure existing resources, build a roadmap to develop further support services, and develop an attendance action plan (Attendance Works, 2021). Malone et al. (2021) also emphasized the importance of cultural relevance for Tier 2 systems with respect to language, goals, program content, and local community context; other recommendations included helping students navigate hostile racial school climates and promote racial identity development as well as engaging stakeholders who reflect the values and culture of students in various interventions. Others have discussed the need for enhanced equity in Tier 2 interventions involving special education as well as access to culturally responsive interventions (DeBoer et al., 2022; Raviv et al., 2022). Tier 2 approaches for these areas must also fully incorporate trauma-informed practices given elevated rates of adverse child experiences that impact school attendance (Stempel et al., 2017). Trauma-informed practices must emphasize growth mindsets and cultural responsiveness (Thomas et al., 2019) and are linked to increased school attendance via improved functioning in daily living, emotional regulation, interpersonal relationships, and fewer symptoms of mental disorder (Dorado et al., 2016).

Tier 3

As mentioned, local school-based support systems (e.g., school counselors, psychologists, social workers) are typically overwhelmed by high student caseloads in areas of very high chronic absenteeism. This is particularly problematic with respect to Tier 3 cases that demand inordinate time for data collection, analysis, and management. As such, mechanisms are needed to draw Tier 3 cases into a centralized catchment and intervention process that has the resources required to holistically assess student/family history, interface with multiple professionals relevant to a case (e.g., physician, probation officer, special education teacher), and develop and coordinate intricate and prolonged interventions. Existing entities such as district-wide panels and school review boards can be repurposed toward

this end to allow local school-based support systems to focus more on Tier 2 cases. This would involve blending school-based referrals with a system of coordinated care that addresses economic (e.g., employment, financial, nutrition assistance), logistical (e.g., housing, transportation), physical and mental health/disability (e.g., medical, counseling, psychoeducational centers), and legal and other relevant domains. Such an approach in a real-world setting requires strong district commitment and investment in training as well as collaboration between districts as students transfer from one to the other (Battal et al., 2020).

Tier 3 interventions will also require expanded use of existing mechanisms to provide alternative, creative, and viable pathways to school completion. Accommodation plans can be used to establish part-time attendance schedules, family and mental health support, modifications in class schedule and academic work, mentoring and tutoring, assessment of learning and other disorders, and other palliative options (Kearney, 2016). More broadly, Tier 3 practices must include a district-wide policy review to reduce the use of suspensions and expulsions to address school absenteeism and to establish more restorative responses. Part of this effort can include flexible and personalized methods of school completion based on individual circumstances and interests that extend into emerging adulthood; examples include partnerships with community-based learning centers, home-based and virtual programs, year-round schooling, extra-year and credit recovery initiatives, and second-chance options (Zhang et al., 2020). Unlearning traditional notions of “seat time” and instead utilizing more flexible, valid methods to define attendance for diverse, contemporary learning formats must also be prioritized (National Forum on Education Statistics, 2021; Kearney and González, 2022).

Conclusion

MD-MTSS frameworks hold promise but remain a work in progress for addressing school attendance and its problems. Part of this evolutionary process must involve *unlearning* original notions of these frameworks to better apply them to different geographical areas with very high levels of absenteeism. Such unlearning will require innovative and sometimes radical

reconfigurations at both systemic and analytic levels. In related fashion, such unlearning must account for large-scale changes in pedagogy, technology, demographics, and macroeconomic and political factors/constraints. With respect to the latter, stakeholders have noted the tension between expectations for schools to improve attendance with existing, limited resources and what communities must do to reduce or eliminate structural inequalities that continue to exacerbate widespread attendance problems. An unlearning process must therefore absorb not only circumscribed technical and policy issues but also broader political and economic issues. We invite further discussions in this regard across disciplines.

Data availability statement

The original contributions presented in this study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Author contributions

Both authors contributed to the writing and editing of the manuscript.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

References

Attendance Works, (2021). *School team self-assessment*. Available online at: <https://www.attendanceworks.org/resources/self-assessment/> (accessed July 19, 2022).

Battal, J., Pearrow, M. M., and Kaye, A. J. (2020). Implementing a comprehensive behavioral health model for social, emotional, and behavioral development in an urban district: An applied

study. *Psychol. Sch.* 57, 1475–1491. doi: 10.1002/pits.22420

Braun, G., Kumm, S., Brown, C., Walte, S., Hughes, M. T., and Maggin, D. M. (2020). Living in Tier 2: Educators' perceptions of MTSS in urban schools. *Intern. J. Inclusive Educ.* 24, 1114–1128. doi: 10.1080/13603116.2018.151758

- Bryan, J., Williams, J. M., and Griffin, D. (2020). Fostering educational resilience and opportunities in urban schools through equity-focused school-family-community partnerships. *Prof. Sch. Counseling* 23, 1–14. doi: 10.1177/2156759X19899179
- Chen, C. C., Culhane, D. P., Metraux, S., Park, J. M., and Venable, J. C. (2016). The heterogeneity of truancy among urban middle school students: A latent class growth analysis. *J. Child Fam. Stud.* 25, 1066–1075. doi: 10.1007/s10826-015-0295-3
- Childs, J., and Grooms, A. A. (2018). Improving school attendance through collaboration: A catalyst for community involvement and change. *J. Educ. Stud. Placed Risk* 23, 122–138. doi: 10.1080/10824669.2018.1439751
- Childs, J., and Lofton, R. (2021). Masking attendance: How education policy distracts from the wicked problem(s) of chronic absenteeism. *Educ. Policy* 35, 213–234. doi: 10.1177/0895904820986771
- DeBoer, J. L., Allouche, S. F., Vasquez, J. I., and Rhodes, J. (2022). Equitable practices in school mental health. *Psychol. Sch.* 59, 1222–1238. doi: 10.1002/pits.22678
- Dorado, J. S., Martinez, M., McArthur, L. E., and Leibovitz, T. (2016). Healthy environments and response to trauma in schools (HEARTS): A whole-school, multi-level, prevention and intervention program for creating trauma-informed, safe and supportive schools. *Sch. Ment. Health* 8, 163–176. doi: 10.1007/s12310-016-9177-0
- Fenelon, A., Boudreaux, M., Slopen, N., and Newman, S. J. (2021). The benefits of rental assistance for children's health and school attendance in the United States. *Demography* 58, 1171–1195. doi: 10.1215/00703370-9305166
- Gottfried, M., Page, L., and Edwards, D. (2022). *District strategies to reduce student absenteeism*. Providence, RI: Annenberg Institute for School Reform at Brown University.
- Graczyk, P. A., and Kearney, C. A. (2022). *Implementing a multi-dimensional, multi-tiered system of supports framework to promote school attendance and address school attendance problems*. Manuscript submitted for publication.
- Gubbels, J., van der Put, C. E., and Assink, M. (2019). Risk factors for school absenteeism and dropout: A meta-analytic review. *J. Youth Adolesc.* 48, 1637–1667. doi: 10.1007/s10964-019-01072-5
- Kearney, C. A. (2016). *Managing school absenteeism at multiple tiers: An evidence-based and practical guide for professionals*. New York, NY: Oxford.
- Kearney, C. A. (2021). Integrating systemic and analytic approaches to school attendance problems: Synergistic frameworks for research and policy directions. *Child Youth Care Forum*. 50, 701–742. doi: 10.1007/s10566-020-09591-0
- Kearney, C. A., and Benoit, L. (2022). Child and adolescent psychiatry and underrepresented youth with school attendance problems: Integration with systems of care, advocacy, and future directions. *J. Amer. Acad. Child Adolesc. Psychiatry*. doi: 10.1016/j.jaac.2022.03.016
- Kearney, C. A., and Childs, J. (2021). A multi-tiered systems of support blueprint for re-opening schools following COVID-19 shutdown. *Child Youth Serv. Rev.* 122:105919. doi: 10.1016/j.childyouth.2020.105919
- Kearney, C. A., and González, C. (2022). Unlearning school attendance and its problems: Moving from historical categories to postmodern dimensions. *Front. Educ.* 7:977672. doi: 10.3389/feduc.2022.977672
- Kearney, C. A., and Graczyk, P. (2014). A Response to Intervention model to promote school attendance and decrease school absenteeism. *Child Youth Care Forum*. 43, 1–25. doi: 10.1007/s10566-013-9222-1
- Kearney, C. A., and Graczyk, P. A. (2020). A multidimensional, multi-tiered system of supports model to promote school attendance and address school absenteeism. *Clin. Child Fam. Psychol. Rev.* 23, 316–337. doi: 10.1007/s10567-020-00317-1
- Kearney, C. A., Childs, J., and Burke, S. (2022). Social forces, social justice, and school attendance problems in youth. *Contemp. School Psychol.* doi: 10.1007/s40688-022-00425-5
- Kearney, C. A., González, C., Graczyk, P. A., and Fornander, M. (2019). Reconciling contemporary approaches to school attendance and school absenteeism: Toward promotion and nimble response, global policy review and implementation, and future adaptability (Part 2). *Front. Psychol.* 10:2605. doi: 10.3389/fpsyg.2019.02605
- Kilgus, S. P., and Eklund, K. R. (2016). Consideration of base rates within universal screening for behavioral and emotional risk: A novel procedural framework. *Sch. Psychol. Forum. Res. Pract.* 10, 120–130.
- Knollmann, M., Waltz, E., Reissner, V., Neumann, U., and Hebebrand, J. (2022). Course of school absenteeism 1.5-3 years after initial evaluation: Symptoms, psychosocial functioning, and help-seeking behavior. *Zeitschrift für Kinder- und Jugendpsychiatrie und Psychotherapie*. doi: 10.1024/1422-4917/a000884
- Lenhoff, S. W., and Singer, J. (2022). Promoting ecological approaches to educational issues: Evidence from a partnership around chronic absenteeism in Detroit. *Peabody J. Educ.* 97, 87–97. doi: 10.1080/0161956X.2022.2026723
- Lenhoff, S. W., Edwards, E. B., Claiborne, J., Singer, J., and French, K. R. (2020). A collaborative problem-solving approach to improving district attendance policy. *Educ. Policy* 36, 1464–1506. doi: 10.1177/0895904820974402
- Malone, C. M., Wycoff, K., and Turner, E. A. (2021). Applying a MTSS framework to address racism and promote mental health for racial/ethnic minoritized youth. *Psychol. Sch.* doi: 10.1002/pits.22606
- McDaniel, S. C., Bruhn, A. L., and Mitchell, B. S. (2015). A tier 2 framework for behavior identification and intervention. *Beyond Behav.* 24, 10–17. doi: 10.1177/107429561502400103
- McIntosh, K., and Goodman, S. (2016). *Integrated multi-tiered systems of support: Blending RTI and PBIS*. New York, NY: Guilford.
- National Center for Education Statistics (2017). *Selected statistics from the public elementary and secondary education universe: School year 2015-16*. Washington, DC: National Center for Education Statistics.
- National Forum on Education Statistics (2021). *Forum guide to attendance, participation, and engagement data in virtual and hybrid learning models (NFES2021058)*. Washington, DC: U.S. Department of Education.
- Netzel, D. M., and Eber, L. (2003). Shifting from reactive to proactive discipline in an urban school district: A change of focus through PBIS implementation. *J. Posit. Behav. Intervent.* 5, 71–79. doi: 10.1177/10983007030050020201
- Oakes, J., Maier, A., and Daniel, J. (2017). *Community schools: An evidence-based strategy for equitable school improvement*. Boulder, CO: National Education Policy Center.
- Raviv, T., Smith, M., Hurwitz, L., Gill, T. L., Baker, S., Torres, S. A., et al. (2022). Supporting school-community collaboration for the implementation of a multi-tiered school mental health program: The Behavioral Health Team model. *Psychol. Sch.* 59, 1239–1258. doi: 10.1002/pits.22683
- Singer, J., Pogodzinski, B., Lenhoff, S. W., and Cook, W. (2021). Advancing an ecological approach to chronic absenteeism: Evidence from Detroit. *Teach. College Record* 123, 1–36. doi: 10.1177/016146812112300406
- Singh, G. K., Daus, G. P., Allender, M., Ramey, C. T., Martin, E. K., Perry, C., et al. (2017). Social determinants of health in the United States: Addressing major health inequality trends for the nation, 1935-2016. *Intern. J. MCH AIDS* 6:139. doi: 10.21106/ijma.236
- Stempel, H., Cox-Martin, M., Bronsert, M., Dickinson, L. M., and Allison, M. A. (2017). Chronic school absenteeism and the role of adverse childhood experiences. *Acad. Pediatr.* 17, 837–843. doi: 10.1016/j.acap.2017.09.013
- Suarez-Balcazar, Y., Early, A., Miranda, D. E., Marquez, H., Maldonado, A., and Garcia-Ramirez, M. (2021). Community-engaged asset mapping with Latinx immigrant families of youth with disabilities. *Am. J. Commun. Psychol.* 70, 89–101. doi: 10.1002/ajcp.12578
- Thomas, M. S., Crosby, S., and Vanderhaar, J. (2019). Trauma-informed practices in schools across two decades: An interdisciplinary review of research. *Rev. Res. Educ.* 43, 422–452. doi: 10.3102/0091732X18821123
- Walter, H. J., Kaye, A. J., Dennery, K. M., and DeMaso, D. R. (2019). Three-year outcomes of a school-hospital partnership providing multitiered mental health services in urban schools. *J. Sch. Health* 89, 643–652. doi: 10.1111/josh.12792
- Warren, J. M., and Robinson, G. (2015). Addressing barriers to effective RTI through school counselor consultation: A social justice approach. *Electr. J. Inclusive Educ.* 3:4.
- Young, S., Connolly Sollose, L., and Carey, J. P. (2020). Addressing chronic absenteeism in middle school: A cost-effective approach. *Children Schools* 42, 131–138. doi: 10.1093/cs/cdaa009
- Zaff, J. F., Donlan, A. E., Jones, E. P., and Lin, E. S. (2015). Supportive developmental systems for children and youth: A theoretical framework for comprehensive community initiatives. *J. Appl. Dev. Psychol.* 40, 1–7. doi: 10.1016/j.appdev.2015.03.004
- Zhang, L., Basham, J. D., and Yang, S. (2020). Understanding the implementation of personalized learning: A research synthesis. *Educ. Res. Rev.* 31:100339. doi: 10.1016/j.edurev.2020.100339