

Mathematics has been labeled a gateway for future academic success. The mission of the US Math Recovery Council (the Council) is to transform numeracy education, to connect research with practice, to empower educators to advance student mathematical thinking and success through Math Recovery® principles. Math Recovery is a vehicle for improved equity for historically underserved groups.



Past Equity Work

Early implementations of Math Recovery at Roye-Williams Elementary School in Maryland and through the *National American Indian, Alaskan & Hawaiian Educational Development Center* (NAIAHEDC) [later renamed *The First People's Center for Education*] with historically underserved populations demonstrated the power of Math Recovery to drastically improve access to high quality mathematics instruction and student level success among traditionally underserved populations. For details on these evaluations, please consult the Math Recovery [Efficacy and Effectiveness Research White Paper](https://www.mathrecovery.org/pdfs/research/Efficacy-and-Effectiveness.pdf?v=01282021) [https://www.mathrecovery.org/pdfs/research/Efficacy-and-Effectiveness.pdf?v=01282021]).

This early success was further validated by a Randomized Control Trial (RCT). The research found Math Recovery principles are equally effective with diverse student populations. Smith, Cobb, Farran, Cordray, and Munter (2013), in an external evaluation funded by an IES grant that employed hierarchical linear models (HLM) to analyze student growth data, found that Math Recovery intervention was equally effective with urban students as it was with suburban students. Furthermore, there was no statistical difference between the success of Students of Color and White students. Gender and socio-economic status were also not significant variables impacting growth. The intervention was more effective with students who were in the lowest quartile at baseline than those higher performing peers, regardless of gender, ethnicity, socio-economic status, or school location (urban or suburban). Analysis of the nationally normed standardized assessment data found for students originally in the first quartile, significant effect sizes. These findings indicate that Math Recovery intervention is equally effective with historically underserved groups as it is with those groups who have been historically over-represented in STEM-related fields. Math Recovery helps students develop the critical mathematical foundation on which all future STEM careers rest.

Recent and Future Equity Work

Two new books focusing on historically marginalized populations have just been published in the Math Recovery Series:

1. Tabor, Dibley, Hackenberg & Norton (2021). *Numeracy for All Learners: Teaching Mathematics to Student with Special Needs*. Thousand Oaks, CA: Corwin Press.
2. Grindle, Hastings & Wright (2021). *Teaching Early Numeracy to Children with Developmental Disabilities*. Thousand Oaks, CA: Corwin Press.

Chapter 12 of Tabor et al. addresses issues of equity beyond students with disabilities. The purpose of the chapter is to stimulate discussions around these critical topics. Work is currently underway to design professional learning experiences that incorporate these texts. Also, current courses are being revised to ensure all course videos portray an assets model of females and Students of Color. This revision was initiated based on feedback submitted by clients about perceptions associated with the proportions of representation from various historically underserved groups among the training videos.

In March 2020 the Council approved an organizational charter for the Diversity, Equity and Inclusion Special Interest Group (DEI SIG) whose charge is to write a position statement and develop a new organizational DEI strategic priority. Time, staff, and funds were allocated for this work. The SIG consists of nine staff members which is a third of the staff. The SIG has read and investigated topics including: institutional and personal bias; microaggressions/subtle acts of exclusion (SAE); history of systemic racism, white supremacy, and antiracism efforts; culturally responsive instruction and professional development; supporting English Learners; universal design and the Americans with Disabilities Act; and strategies for improving diversity and more global access. By April 2021, the DEI organizational statement and the organizational strategic priority for the next 3-5 years will be established. This strategic priority is anticipated to include the creation of safe channels for anonymously submitting feedback about our products and services. This will improve the current processes which are not fully anonymous. The on-going work of the DEI SIG will involve our continued review of all products and services through an equity lens.

The development process that USMRC utilizes in the creation of all new course offerings and products includes a system of internal evaluations including trialing of individual components, pre-pilot of all new courses, and pilot of all new courses. Feedback from end users, in the form of surveys, interviews, and focus groups is solicited and incorporated in an iterative process to improve all products and services. Members of the DEI SIG are involved in these evaluations of all new products and courses to ensure an equitable presentation of all groups. Feedback is solicited from focus groups to make sure content is effective with and respectful of a wide array of individuals from different demographics.

On June 4, 2020, USMRC's Executive Director emailed the entire membership community with respect to the organizational position on systemic racism, inequity, and injustice and the measures the organization is taking to mitigate these inequities (Miller, 2020).

Other equity work beyond the SIG includes an entire staff book study on *Subtle Acts of Exclusion: How to Understand, Identify, and Stop Microaggressions* (2020) by Jana and Baran in the summer of 2020. Also, in the summer of 2020, a staff member facilitated a book study on Kendi's *How to be an Anti-Racist* (2019). The study included both staff and members of the larger Math Recovery community. Additionally, twelve employees, the Executive Director, the Director team, and the entire Instructional Coach team participated in the Department of Elementary and Secondary Education in Massachusetts' Anti-racism Training offered in the Fall of 2020. The leader of the DEI SIG and another SIG member are currently participating in the University of South Florida's MUMA College of Business' "Diversity, Equity, and Inclusion in the Workplace Certificate Program." The entire Instructional Coaching team will engage in a book study in 2021 on *Coaching for Equity* by Aguilar (2020) to support their work with students, teachers and administrators.

Historically, as a small non-profit organization, the districts we have served have come to us via word-of-mouth advertising. However, in the past 12 months, a marketing plan has been developed with two main goals. The first, with the pandemic, is to find districts able to engage in the work to keep our organization viable through the pandemic and second, to get our professional development to historically underserved communities. Our work as the current vendor for the Massachusetts Tiered Math Academy has provided us with the opportunity to demonstrate our effectiveness with many historically underserved communities in Massachusetts including Holyoke, Springfield, and Orange.

The Council offers scholarships in the form of tuition assistance to teachers from districts serving historically underserved students. Preference is given to individuals who either work with students, or are themselves, from underrepresented groups. In this way, we seek to improve diversity of the Council. We

are intentionally inclusive in our marketing materials of a wide range of underrepresented groups. Our research and evaluation initiatives, as well our application to STEMworks, are both geared toward improving and communicating rigorous evidence to meet ESSA regulations. As a result of an accomplished rating from STEMworks and Level 2 ESSA evidence rating, Math Recovery will be more visible and accessible to schools and districts serving predominately underrepresented groups.

Concerted efforts to further diversify the board of directors as well as the organization as a whole are occurring. Efforts to recruit and hire People of Color on our staff are beginning to bear fruit as evidenced by recent new hires. We are committed to putting resources into getting our professional development to teachers in a wide range of diverse communities and building a larger staff that reflects all the communities we serve.

Conclusion

We have an expectation of equity throughout our organization in everything we do. Our work provides teachers with interview assessment tools which identify assets within their students and push beyond possible pre-conceived ideas about what a student can and cannot do. Focusing on equity is challenging, ongoing and critical for us to have the impact we strive to make. We are committed to continual learning and growth and supporting our client’s growth in this area as well.

References

- Aguilar, E. (2020). *Coaching for equity: Conversations that change practice*: Jossey-Bass.
- Grindle, C. F., Hastings, R. P., & Wright, R. J. (2021). *Teaching early numeracy to children with developmental disabilities*. Thousand Oaks: Corwin.
- Jana, T., & Baran, M. (2020). *Subtle acts of exclusion: How to understand, identify, and stop microaggressions*. Oakland, CA: Berrett-Koehler Publishers, Inc.
- Kendi, I. X. (2019). *How to be an antiracist*. New York: One World.
- Miller, C. (2020, June 4). [Letter to the Math Recovery community about systemic racism in the wake of George Floyd's death].
- Smith, T. M., Cobb, P., Farran, D. C., Cordray, D. S., & Munter, C. (2013). Evaluating Math Recovery: Assessing the causal impact of a diagnostic tutoring program on student achievement. *American Educational Research Journal*, 50(2), 397-428.
- Tabor, P. D., Dibley, D., Hackenberg, A. J., & Norton, A. (2021). *Numeracy for All Learners: Teaching Mathematics to Students with Special Needs* (J. Clark Ed.). Thousand Oaks, CA: Corwin.

