A Call to Action to Mobilize Education Community Stakeholders

The **Launch Years Math Organizations Leadership Network** (LY-MathLN) calls on the mathematics, statistics, and education communities to work to improve the mathematics experiences and outcomes for students in their last two years of secondary and first two years of postsecondary education. LY-MathLN advocates for policies, practices, and structures that enable students to transition seamlessly through their PreK–12 and postsecondary mathematics experiences, and their entry into fulfilling careers and active participation in our data-driven society.

LY-MathLN consists of key leaders and content experts from 12 national organizations[*] interested in mathematics and statistics education. The Charles A. Dana Center at The University of Texas at Austin convened the network to determine actions for its organizations:

- to make changes on a big scale; and,

- to equip their collective membership to act as local change agents.

The resulting **Call to Action** statement, and the six supporting recommendations, mobilize action across sectors and stakeholder groups to improve the experiences and outcomes for students transitioning from high school into postsecondary education.

Each recommendation begins with a general statement to the collective community stakeholders and includes guidance for analysis of relevant aggregated and disaggregated data. A description of the expected result follows, and specific actions to enact each recommendation are listed for distinct stakeholder groups.

- *Mathematics and statistics education community* refers to PreK–16 educators and administrators of mathematics and statistics.

- *General education community* refers to PreK–16 educators, counselors/advisors, admissions officers, and administrators outside of the mathematics and statistics education community, including state-level leaders and other staff in the education community.

- *Students, families, and community stakeholders* include PreK–16 students and their families, and community stakeholders outside of the education community.

Explore additional resources
for these recommendations

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[*] Launch Years Math Organizations Leadership Network Partners: Alliance of Indigenous Math Circles, American Mathematical Association of Two-Year Colleges, American Statistical Association, Association of Mathematics Teacher Educators, Association of State Supervisors of Mathematics, Benjamin Banneker Association, Conference Board of the Mathematical Sciences, Just Equations, Mathematical Association of America, National Council of Teachers of Mathematics, NCSM: Leadership in Mathematics Education, TODOS: Mathematics for ALL.

Recommendation 1

Promote rigorous mathematics and statistics pathways from the junior year of high school through postsecondary education (e.g., the algebraic path, statistics, quantitative reasoning), leading to equitable opportunities that support students' diverse interests and goals.

Analyze aggregated and disaggregated data by student groups to identify, dismantle, and replace policies, practices, and structures that restrict students' access to rigorous pathways that align to interests and goals.

Vision

When Recommendation 1 is enacted, students who are transitioning from PreK–12 to higher education and to careers, and between higher education institutions or different careers, will be prepared to meet expectations in their chosen fields. Transfer and placement policies and practices will be clear, transparent, and equitable.

Mathematics and statistics education community	• Develop course pathways that provide opportunities to support students' diverse interests and goals, and align content across the PreK–16 spectrum, particularly attending to transition points between levels and sectors (i.e., early childhood, elementary school, middle school, high school, two-year, four-year, and workforce). • Engage in collaborative discussions on the alignment of teaching practices, assessment, and rigor or depth of understanding. • Support opportunities for students, families, and community stakeholders to understand what modernizing mathematics and statistics coursework means, and the resulting benefit for students in their future college and career opportunities. • Collaborate across all levels—PreK to higher education—to create smooth transitions across sectors and within and across the pathways.
General education community	• Develop or expand policies and practices that ensure equitable advising on the relationships between coursework and career pathways, including valuing a variety of mathematics and statistics courses for students' futures in higher education and careers. • Implement policies that afford flexible choice and transitions as students' interests and intentions change. • Inspect data regularly to identify emerging or changing obstacles and barriers to students' college and career opportunities. • Provide opportunities for students, families, and community stakeholders to understand what modernizing mathematics and statistics coursework means, and the resulting benefit for students in future college and career opportunities.
Students, families, and community stakeholders	• Engage in opportunities to understand what modernizing mathematics and statistics coursework means, and the resulting benefit for students in future college and career opportunities.

Recommendation 2

Build policies, practices, and structures that open access to high-quality mathematics and statistics education for all students.

Analyze aggregated and disaggregated data by student groups to identify, dismantle, and replace policies, practices, and structures that restrict students' access to high-quality mathematics and statistics.

Vision

When Recommendation 2 is enacted, students will have access to, can equitably enroll in, and succeed in high-quality mathematical experiences. Systems will support high-quality instruction for all students and not discriminate.

Mathematics and statistics education community	• Dismantle and replace inequitable structures and practices with ones that promote equitable outcomes for students from marginalized groups, such as flexible grouping, placing students with the highest needs with the most qualified teachers, providing additional support for struggling learners within the school day, and ensuring that all math pathways provide rigorous opportunities for students to engage in rich mathematics. • Build strong collaborations with families and community partners to inspect existing practices and create new practices. • Be prepared to respond to concerns from those who are vested in keeping current structures and practices that need to change.
General education community	• Collaborate with the math and statistics education community to develop plans to replace inequitable structures, policies, and practices with ones that promote equitable outcomes for students from marginalized groups. • Build strong collaborations with families and community partners to inspect existing practices and create new practices. • Continue to analyze aggregated and disaggregated data by student groups to guard against unintended consequences of new structures and practices, and ensure that disparities in outcomes are addressed. • Inform teacher education programs of the system's plans to replace inequitable policies, structures, and practices. Seek program directors' input and get their commitment to support these changes in their programs.
Students, families, and community stakeholders	• Develop awareness of how policies, practices, and structures impact student access to high-quality instruction and become prepared to challenge all obstacles and barriers. • Advocate for all students learning high-quality mathematics and statistics, not just to those perceived as worthy or ready.

Recommendation 3

Provide time, space, and opportunities for educators to engage in professional learning that promotes equitable, evidence-based teaching and learning in mathematics and statistics.

Analyze aggregated and disaggregated data by student groups to identify, dismantle, and replace policies, practices, and structures that result in inequitable outcomes in mathematics and statistics.

Vision

When Recommendation 3 is enacted, educators and other stakeholders will collaborate to implement equitable and effective teaching strategies. They will leverage students' strengths instead of focusing on deficiencies.

Mathematics and statistics education community	• Engage in professional learning of equitable, evidence-based mathematics teaching practices, including culturally relevant pedagogy that supports the academic needs of students from marginalized groups and that nurtures students' positive mathematical identities and strong sense of agency. • Apply the learning and collect data to make informed decisions about the content of future professional learning. • Collaborate in learning opportunities for students, families, and community stakeholders to engage with and understand equitable, evidence-based teaching and learning, including specificity about courses and curricular design.
General education community	• Set the expectation that ongoing professional learning is an essential part of being an educator. • Develop or expand policies and practices that provide time, space, and resources for ongoing professional learning of equitable, research-informed mathematics teaching practices. • Regularly inspect data to assess the impact of professional learning on the implementation of equitable, evidence-based practices. • Develop learning opportunities for students, families, and community stakeholders to engage with and understand equitable, evidence-based teaching and learning, including specificity about courses and curricular design.
Students, families, and community stakeholders	• Engage in learning opportunities to understand evidence-based, equitable teaching and learning practices, including specificity about courses and curricular design. • Regularly examine student work for evidence of equitable teaching and learning practices.

Recommendation 4

Promote formative assessment practices specific to mathematics and statistics that further learning, promote students' growth and self-assessment, inform instruction, and develop teachers' knowledge of curriculum and instruction.

Analyze aggregated and disaggregated data by student groups to identify, dismantle, and replace assessment policies, practices, and structures that result in inequitable outcomes in mathematics and statistics.

Vision

When Recommendation 4 is enacted, assessments, particularly as part of mathematics and statistics teaching and learning, will be an ongoing component of education rather than an end goal.

Mathematics and statistics education community	• Utilize formative assessment that values conceptual understanding, procedural fluency, and applications of mathematics and statistics. • Use the results to improve curricula, materials, and pedagogy, and to support teachers' growth. • Support students in the development of self-assessment strategies. • Support opportunities for students, families, and community stakeholders to ask questions and to learn how to support a school's assessment program and practices—what will be assessed, how the assessments will be measured and used, and how students can engage in self-assessment.
General education community	• Provide professional learning on the development, implementation, and use of formative assessment to inform improvements to curricula, materials, and pedagogy, and to teachers' professional growth. • Provide opportunities for educators to engage with students, families, and community stakeholders as they ask questions and learn how to support a school's assessment program and practices—what will be assessed, how the assessments will be measured and used, and how students can engage in self-assessment.
Students, families, and community stakeholders	• Engage in opportunities to learn about the school's assessment program and practices—what will be assessed, how the assessments will be measured and used, and how these practices can be supported at home, including encouraging and monitoring student self-assessment.

Recommendation 5

Provide support—rather than remediation— for students, especially those who have been historically underserved, to engage in grade- or course-specific mathematical and statistical content.

Analyze aggregated and disaggregated data by student groups to identify, dismantle, and replace policies, practices, and structures that restrict students' access to high-quality, grade- or course-specific content.

Vision

When Recommendation 5 is enacted, all students will be successful in on-level courses, regardless of their educational background.

Mathematics and statistics education community	• Provide all students with access to high-quality mathematics and statistics instruction focused on the essential concepts and skills for that grade or course. Focus on clear, on-level learning goals and provide research-based supports. Target interventions on needs identified through formative assessments and provide supports for students to develop their mathematical identities. • Communicate to students, families, and community stakeholders the evidence for default on-level placement with sufficient and aligned support.
General education community	• Replace remediation structures with equitable structures and practices that have evidence of moving students forward towards their learning goals. • Provide resources to support teachers in identifying and responding to student needs. • Create policies and practices that result in default on-level placement with sufficient and aligned support.
Students, families, and community stakeholders	• Advocate for on-level placement of students consistent with their age and educational background, and monitor to ensure that sufficient and aligned support is provided.

Recommendation 6

Promote equitable partnerships among education professionals, students, families, and the community to ensure that all stakeholders understand and are invested in students' options and growth.

Analyze aggregated and disaggregated data by student groups for indications that students' access or success is being restricted.

Vision

When Recommendation 6 is enacted, students, families, and community stakeholders will be visible and valued as partners in the educational process in both formal and informal settings and will be knowledgeable about a variety of career pathways.

Mathematics and statistics education community	• Engage in substantive discussions with students, families, and community stakeholders about the nature of mathematics and statistics teaching and learning, the goals of school mathematics and statistics, and future college and career opportunities. • Solicit and incorporate the mathematics and statistics needs of families and communities in the school mathematics and statistics program. • Support opportunities for students, families, and community stakeholders to learn about the mathematics and statistics requirements needed for various postsecondary careers and the importance of thinking about career interests at an early age.
General education community	• Gain a deeper understanding of the purposes of school mathematics and statistics to advocate for a diverse set of mathematical and statistical opportunities for all students. • Provide opportunities for students, families, and community stakeholders to learn about the mathematics and statistics requirements needed for various postsecondary careers and the importance of thinking about future careers at an early age.
Students, families, and community stakeholders	• Engage in opportunities to learn about the mathematics and statistics requirements needed for various postsecondary careers and continuing education and the importance of thinking about future careers at an early age.