



Project Update: Summer 2017



OVERVIEW OF NC²ML

The North Carolina Collaborative for Mathematics Learning (NC²ML) is a research-practice partnership with the University of North Carolina at Greensboro, the North Carolina Department of Public Instruction (NCDPI), and universities and school districts across the state of North Carolina. The overarching goal of our partnership is to create a network, with accompanying systems and supports, where state and district math leaders, teachers, and teacher educators come together to support mathematics education in North Carolina.

the standards implementation. To this shared problem of practice, partners brought a broad range of resources. Teachers, researchers, and leaders collectively brought expertise in mathematics content, research on teacher learning, mathematics education, educational leadership, state and district policy, and the contexts of classrooms. Some brought experience in establishing systems for communication, others knowledge of research underlying standards and skills at conducting research.

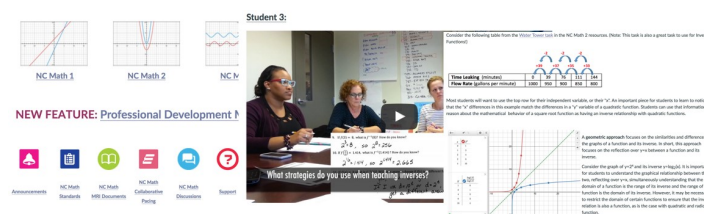
HISTORY OF THE PROJECT

The partnership began when North Carolina initiated a process of reviewing and revising previously adopted mathematics content standards. A group of mathematics teachers, district and state leaders, mathematicians, and education researchers were convened to review data collected from multiple stakeholder groups, a set of recommendations from a legislatively appointed committee, and research on student learning to inform a new set of high school mathematics standards for three integrated and sequenced high school mathematics courses, NC Math1, NC Math2, and NC Math 3. During the process, the group voiced concerns over previous plans to implement standards and shared their commitments to better supporting teachers, schools, and districts with timely instructional resources and quality professional learning opportunities. In June of 2016, the new standards were adopted and scheduled to be implemented the 2016-17 school year. After the official adoption, the state agency initiated a formal partnership with our institutions to co-design and study statewide professional development initiatives to support efforts to implement new standards.

Through negotiation, we agreed to focus on designing professional learning opportunities to share research on mathematics learning and teaching as a means of supporting

YEAR 1: HIGHLIGHTS AND MAJOR WORK TO DATE

Online Learning Modules & Instructional Resources



To support mathematics teachers across NC who teach the NC Math 1,2, and 3 courses, we began our work by providing weekly webinars as “just in time” supports for upcoming units of instruction. After several months, we gathered feedback from both participants and non-participants and determined that live webinars, while beneficial, may not be supportive of teachers’ immediate needs. In response to this, in January, 2017 we began to launch a series of teacher learning modules and instructional resources focused on content and pedagogy housed in a private web-space for teachers. This space provides teachers opportunities to engage with mathematics tasks aligned to the revised standards, reflect and comment on mathematical work of students, hear from standards writers and their colleagues through video clips, and interact with their colleagues around the standards and ways they may use these tasks in instruction. To date over 2,000 teachers have engaged in the space with over 145,000 page views!

Content & Pedagogy Briefs



In addition to the online space for teachers, we are developing a set of mathematics unit briefs and pedagogical briefs for members of the NC mathematics education community. These briefs clarify issues related to standards revisions, highlight important mathematics and teaching practices, promote current research on teaching and learning that can be used in instructional decision making, and contain reflective questions educators can use in their professional learning communities.

Statewide Mathematics Education Survey

In May of 2017, we released a statewide survey to gather data from the NC mathematics education community. The focus of this survey was to explore educator's *vision for good mathematics teaching*, *use of research* in their roles, and educator's professional *social networks*. Over 1,900 mathematics educators from 97% of the state's school districts across NC participated in the survey! We are currently analyzing these data and will share results soon.

Summer Curriculum Leader Workshop

The NC²ML is a research-practice partnership. We are committed to consistently bringing together practitioners and researchers to reflect on previous work, learn together, and work to support **ALL** NC mathematics educators. Recognizing the importance of context (e.g. size, resources, geography) to the work of supporting mathematics educators, in July of 2017 we convened 12 district-based teams representative of the various local education contexts across NC. These teams, made up of teachers, school and district leaders, and administrators worked together to set goals for the upcoming year and to continue the work of co-designing spaces and resources for our community.

YEAR 2: EXTENDING BEYOND NC MATH 1,2, & 3

K-8 Revisions Support

Building upon the growing success of our continued work supporting NC Math 1-3 implementation, the NC²ML has extended our research-practice partnership to advise and assist in the NC K-8 mathematics standards revisions and implementation process. As part of this work, we will coordinate among current and upcoming mathematics

projects to help develop resources to support teachers of K-8 mathematics in implementing the revised standards.

Continuing the Work of NC Math 1-3

During our summer workshop with district-based teams, the following goals were established for the upcoming year:

- *learning modules and content briefs will be finalized for all units within each of the three courses;*
- *results from the statewide survey will be shared; and*
- *research-based mathematics teaching practices promoted through the development of classroom video cases, instructional resources, promoting online discussions among teachers, and a coordinated social media campaign.*

4th Math & Community College Review

Extending beyond NC Math 3, the NC²ML will also advise and assist in revisions to the NC 4th math courses and conduct an analysis of relationships between NC 4th math courses and community college mathematics course-taking patterns. In doing so, our work will inform both the course revisions and a better understanding of the ways in which K-12 education and institutes of higher education can develop more cohesive structures and systems to best prepare our students for success in mathematics.

HOW YOU CAN BE INVOLVED

The North Carolina Collaborative for Mathematics Learning is a **partnership**. As such, its success is dependent upon stakeholders from all facets of mathematics education in NC. We welcome and need increased input and effort from teachers, teacher-leaders, school-based administrators, district content personal, and others. Consider joining with us in building a partnership that believes in the best of our teachers and students, leverages current successful partnerships, and builds sustainable structures so that each and every student in NC receives the highest quality mathematics education possible.

LEARN MORE

Join us as we journey together to support teachers and leaders in implementing mathematics instruction that meets needs of North Carolina students.

NC²ML MATHEMATICS ONLINE

For more information on accessing Canvas learning modules or additional resources please visit <http://nc2ml.org/>

SUGGESTED CITATION

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