January 26th, 2025

Senator Donald Schaible
North Dakota State Senate
600 E Boulevard Ave
Bismarck, ND 58505

Dear Senator Schaible,

Thank you for your efforts in introducing **Senate Bill 2213** and for recognizing the importance of strengthening mathematics instruction in North Dakota. I appreciate you reading my review and input on this draft legislation. While I support initiatives aimed at improving student achievement, I would like to share some considerations regarding specific components of the bill respectfully.

Science of Math Framework

The term "Science of Math" has gained traction in educational discussions recently, but its interpretation varies widely. While I agree with the focus on foundational skills, there is a potential risk of misunderstanding or oversimplification. In Fargo Public Schools, we already have strong instructional and curricular tools that ensure students meet essential competencies. My concern is that this bill could inadvertently encourage "drill and kill" methods, which research shows do little to foster deep mathematical understanding or engagement. Instead, it is critical to balance foundational skills with opportunities for critical thinking, problem-solving, and real-world applications.

Section Two: Professional Development

Mandatory professional development has proven beneficial for literacy initiatives when it is well-planned, funded, and designed with teacher input. If similar PD is envisioned for mathematics, it will be important to ensure alignment with district goals and sufficient support for educators. We have seen in the past how initiatives tied to the Century Code can lead to unfunded mandates, creating significant challenges for districts. For example, we were fortunate to leverage ESSER funds to support the literacy mandates, but that funding is no longer available.

Section Three: Monitoring and Compliance

This section raises important questions about implementation and oversight:

- Will specific formative assessments be mandated, or will districts have the flexibility to choose tools aligned with their needs?
- How will compliance be monitored, particularly regarding PLC processes for analyzing data and adjusting instruction?

- The requirement for an annual report on implementation—is this meant to align with existing accountability data, or will it introduce additional reporting responsibilities for districts?

Without clear guidance, these requirements could add unnecessary burdens on educators and administrators. Research on large-scale education reform highlights the risk of implementation barriers when policies are overly prescriptive or lack clear frameworks.

Additional Research Considerations

Several research-based concerns also warrant attention:

1. **Balance of Conceptual and Procedural Knowledge**
   Policies that overly emphasize foundational skills risk narrowing the curriculum and reducing opportunities for students to build conceptual understanding and apply mathematics meaningfully. Research by the National Council of Teachers of Mathematics (NCTM) stresses integrating procedural fluency with conceptual understanding to prepare students for real-world problem-solving.
2. **Impact on Teacher Autonomy**
   Teacher autonomy has been linked to higher job satisfaction and retention. Mandating specific assessments or instructional practices without considering local context may erode teacher agency, ultimately impacting morale and instructional innovation.
3. **Risk of Narrow Curriculum**
   Mandates focused too narrowly on specific assessments or practices could unintentionally limit instructional time for other critical areas, such as mathematical reasoning, collaboration, and creativity.
4. **Equity and Resource Concerns**
   Districts with fewer resources may struggle to meet compliance requirements, potentially exacerbating existing inequities. Any funding allocated for implementation must be sustainable and sufficient to support all districts equitably.
5. **Student Engagement**
   Overreliance on rigid skill-based practices could reduce student engagement, especially for diverse learners. Research underscores the importance of inquiry-based and collaborative learning experiences that make math meaningful and relevant.
6. **Need for Evidence-Based Practices**
   While the "Science of Math" concept is compelling, its application must be grounded in research. Ensuring that the strategies mandated by the bill align with evidence-based best practices will be critical for meaningful and lasting improvements in student outcomes.

Collaboration and Flexibility

I appreciate the emphasis on collaboration in refining this bill and ensuring that teachers, administrators, and stakeholders have a voice in its development. Allowing districts the flexibility

to adapt the framework to their unique needs and strengths will ensure the success of this initiative without creating unnecessary burdens.

I remain committed to supporting thoughtful, research-aligned approaches to improving student learning. Please do not hesitate to reach out if further collaboration or input from Fargo Public Schools would be helpful.

Sincerely,
Liann M. Hanson, PhD (She/Her)
Director of Standards-Based Instruction
Fargo Public Schools