

Proponent Testimony for S.B. No. 144
Senate Education Committee
Tuesday, October 7, 2025

Bradford R. Findell, PhD
Associate Director, Mathematics Programs for Teachers
Department of Mathematics, The Ohio State University

Chair Brenner, Vice Chair Blessing, Ranking Member Ingram, and members of the Senate Education Committee, thank you for the opportunity to provide proponent testimony on S.B. No. 144, which aims to restore the three teacher licensure grade bands that were established in 2018 (prekindergarten to grade 5, grades 4 to 9, and grades 7 to 12), thereby replacing the two grade bands (prekindergarten to grade 8, and grades 6 to 12) that were signed into law in 2023 through H.B. 33.

I write as a mathematics teacher educator, at The Ohio State University since 2012, with policy experience, including stints at the National Research Council (1997-2001) and the Ohio Department of Education (2007-2011). I have served on various national and state committees writing and reviewing K-12 mathematics standards and assessments as well as contributing to policy documents about mathematics teacher preparation.

In particular, as a member of the advisory committee for Ohio's most recent mathematics learning standards, and based on more than 12 years of experience using such standards to inform mathematics content courses for teachers, I confidently affirm that there is too much content in the K-8 mathematics standards for teachers to become competent in this area while also mastering content in three other subject areas.

Mathematics content courses for teachers focus on understanding and explaining (in multiple ways) the concepts and procedures used in arithmetic, algebra, and geometry. For example,

- For multi-digit arithmetic, what are carrying and borrowing about?
- When we divide by a fraction, why does it work to multiply by its reciprocal?
- Why is the area of any triangle half its base times its height?
- Why is a negative times a negative positive?

Teachers need this kind of knowledge so that their students may learn with conceptual understanding, because learning without understanding is fragile, inflexible, and often short-lived.

Please consider these critical reasons that three licensure grade bands should be restored:

- A general teaching license through grade 8 seemed reasonable 60 years ago. But since the beginning of the "middle school movement" in the 1960s, there has been growing recognition of the need for specific expertise in teaching middle grades students, as the social, emotional, and cognitive needs of students in grades 6-8 are vastly different from those of students in prekindergarten through grade 2. Because of these differences in social and emotional needs, many prospective teachers are interested in teaching either middle grades or early childhood, but not both.
- Beginning with the standards movement of the 1990s, the subject matter expectations in the middle grades have steadily become too deep for teachers to be generalists. Middle grades certification, typically in two subject areas, grew as a compromise between the single-subject

preparation of high school teachers and the generalist preparation of elementary teachers. As of May 2024, 45 states and the District of Columbia offered middle grades certification.¹

- Many prospective elementary teachers are interested mostly in teaching reading and dislike mathematics. Thus, mathematics content courses must help these teacher candidates become comfortable with elementary mathematics so that they are less likely impose discomfort on their students. This teacher preparation goal will be significantly more difficult if the math content courses include the geometry and algebra needed for teaching grades 7 and 8. Some candidates will withdraw from the courses or the program, or avoid the program entirely.
- Many prospective middle grades teachers are interested primarily in teaching prealgebra, algebra, and middle grades geometry. In fact, some of them begin college intending to be secondary teachers but then struggle somewhere in the calculus sequence. In my experience, some of these students become impatient when mathematics courses focus on elementary rather than middle grades mathematics. Some candidates will withdraw from the course or the program, or avoid the program entirely.
- Most Ohio schools are departmentalized beginning in grade 6 or earlier, and in grades 4 and 5 some teachers specialize in two subject areas in order to better serve the learning needs of students. Generalist preparation is simply not a wise allocation of preparation resources for middle grades teachers.
- As I'm sure you are aware, the pandemic hit middle grades mathematics achievement especially hard. We need better preparation and professional development of middle grades mathematics teachers, not its abandonment.
- The 2023 H.B. 33 changes to the licensure grade-bands have launched a multi-year process: (1) writing and adopting rules for the new licenses; (2) writing and adopting program standards; (3) revising educator preparation programs and courses at Ohio's college and universities; and (4) submitting, reviewing, resubmitting, and approving such programs. This is an enormous undertaking for Ohio's colleges, universities, and state education agencies. Much of the work will require dismantling and diluting courses and programs rather than working toward improvement of the preparation of Ohio's teachers.

I understand that some school administrators have preferred two licensure grade bands, to make it easier to staff their schools, particularly amid the post-pandemic teacher shortage. But surveys in Ohio indicate that some students intending to become elementary or middle grades teachers might decide to attend college out of state or to abandon teacher education altogether.

In closing, the two-grade-band solution currently in law may weaken the preparation of teachers and simultaneously exacerbate the teacher shortage, for reasons described above and as detailed in other testimony. Please support S.B. No. 144 to restore Ohio's 2018 grade bands for teacher licensure. Thank you for your consideration.

¹ See <https://www.amle.org/certification-licensure-by-state/>. The Association for Middle Level Education (AMLE, founded in 1973 as the National Middle School Association (NMSA)), which is based in Westerville, Ohio, has previously supported the restoration of middle grades licensure.