Opponent Testimony for Sub. H. B. 33 Senate Education Committee Tuesday, May 9, 2023

Nicole Whitaker, Ph.D. Middle Grades STEM Education Teacher Preparation Expert Ohio Association of Colleges of Teacher Education

Chairman Brenner, Representative Edwards, and members of the Senate Education Committee,

Thank you for allowing me to testify today. My name is Nicole Whitaker.

I am a former middle grades math and science teacher, now teaching at the collegiate level in teacher preparation. I earned my Ph.D. in STEM Education from The Ohio State University, a Master's in Instructional Practice from Lipscomb University, and a Bachelor of Science in Psychology from Wofford College; I hold a valid Ohio Professional Teaching License in Middle Childhood and live in Delaware County.

I am here today to oppose the inclusion of changes to grade band licensure that was included in Sub. H. B. 33 and originally proposed in H. B. 9. I am advocating for the removal of the grade band licensure changes indicated on pg. 1356, lines 41655-41672, for a wide variety of reasons, not the least of which is the fact that teacher licensure is not an appropriations-related item and, therefore, should not be included in a budget bill, rather, it should be discussed and deliberated by the appropriate education committees, educational agencies, and education specialists with the best interests of students as the primary focus.

My scholarship includes educational research on the development of self-concept and STEM identities of middle childhood students and has been published and presented at both the North American Chapter of the International Group for the Psychology of Mathematics Education and the American Educational Research Association. "The middle school years represent a distinct developmental period whereby students are expected to develop a firm sense of self, establish and maintain a positive social support network, and effectively balance social, academic, and personal demands. For many students, the transition to middle school is a particularly daunting event because of the shift in emphasis from the supportive, mastery-based orientation typical of

elementary schools to a performance-focused setting characterized by increased expectations for academic productivity, more intensive and teacher-directed instruction, and a greater focus on normative comparisons and high-stakes outcomes (Eccles et al., 1993; Midgley & Edelin, 1998; Schunk & Miller, 2002; Zimmerman, 2002)." (Cleary, 2009, p. 292). It is during early adolescence, ages 10 - 15, that students shift from play-based education in a self-contained classroom to high-stakes, performance-driven education taught by a team of teachers. For students, often, "social priorities outweigh academic priorities" (Cohen, 2023). However, middle school is also the time when academic interest is at its lowest but career paths and orientations are formed (Cohen. 2023). Middle childhood teacher candidates are taught pedagogy, instructional practice, and content knowledge designed to support the developmental, cognitive, social, and emotional growth that occurs during middle childhood. One prime example of this is the advisory system used in most middle schools. Advisory programs are designed to be student-centered but teacher driven because the programs focus on supporting the development of executive function. In the elementary grades, "playful learning, self-regulation, and close teacher-child relationships ...positively affect children's academic skills and social abilities. Playful instruction is associated with increases in children's ability in and liking of mathematics" in particular (Clements, Sarama, & Germeroth, 2016). Elementary teachers are instructed in pedagogy that supports "playful learning" and shared communities in self-contained classrooms. These skills do not translate into the distinct developmental period that is early adolescence; hallmarked by a newfound dislike of school, academic disinterest, and social competition.

Additionally, content knowledge for middle childhood teacher candidates is deeper and requires a performance orientation that will prepare middle school students for success in high school and beyond. Science content is deep and driven by cross-cutting standards established by Next Generation Science Standards (NGSS) rather than superficial and often integrated into literacy programs as in elementary schools. "Middle Level Teacher Preparation and Licensure in Ohio was enacted to ensure that students in grades 4-9 have the best opportunity to gain the in-depth knowledge, skills and dispositions provided by appropriately and professionally trained middle level educators" (White, 2017). The skills sets required to establish academic success for students in the elementary grades are not the same as those needed in early adolescence and the onset of puberty. The onset of puberty, during early adolescence is marked by significant brain development in the areas of "executive functions such as planning and strategic thinking ... and the amygdala that is associated with emotions" (Bahr, 2017 in Brinegar & Caskey, 2022). This is significant because emotional regulation has bearing on student engagement, self-regulation, and academic outcomes. The types of emotional regulation that are supported by educators at the middle childhood level are

vastly different than those in elementary. "Educators with specialized middle childhood preparation are specifically prepared to support the "distinctive characteristics of young adolescents regarding their physical, cognitive, social-emotional, and psychological development (Bishop & Harrison, 2021)" that are vastly different than early childhood (ages 5-10) and mid-late (ages 15-18) adolescent development" (Brinegar & Caskey, 2022).

Within the confines of a 120 hour, 4 year teacher preparation program, it would not be possible to provide depth of pedagogical, instructional, social-emotional, and content knowledge for two distinctly different developmental phases. The end result would be a watered down curriculum that would best support neither elementary nor middle childhood students. "There is now substantial evidence, based on multiple large-scale, multiyear studies, that [developmentally appropriate] educational alignment helps close the achievement gap (Reynolds, 2019)." (Fowler, 2019, p. 15). Additionally, "research suggests that teachers' implementation of developmentally appropriate teaching practices is associated with positive student outcomes, including higher achievement scores ... lower incidences of behavior problems and levels of peer rejection" (Donahue, Perry, & Weinstein, 2003). However, before the institution of 4-9 licensure, middle grades were often assigned K-8 teachers who would have preferred to teach younger students or 7-12 teachers who would have preferred to teach in a high school. As a result, middle grades teachers ranged widely in their commitment to middle grades students, student experiences suffered and teacher retention became a problem.

I am testifying today opposing the inclusion of changes to grade band licensure that was included in Sub. H. B. 33 and originally proposed in H. B. 9. The proposed changes will impact a wide audience - elementary and middle school students, elementary and middle school teachers, future/pre-service teachers, teacher preparation programs, accrediting bodies such as CAEP and ODHE, and will not resolve the teacher shortage. Requiring a teacher to teach outside their desired developmental level may lead to retention issues in addition to the existing shortage.

I ask that you please consider my testimony and remove the grade band licensure changes indicated on pg. 1356, lines 41655-41672, reinstating them to P-5, 4-9, and 7-12.

Thank you, Nicole Whitaker, Ph.D.