Project EAGLE

Eliciting Advanced Gifted Learning Evidence

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Project EAGLE Background

Despite being the currently recommended best practice for identification, the use of universal screening and local norms with achievement and cognitive test data still fails to fully address the underrepresentation of underserved groups in gifted programs (Long et al., 2023). Using static assessment measures has simply not been effective in identifying the broad range of gifts and talents evident across diverse student populations. An identification gap, and therefore a service gap, clearly still exists for these populations. There is a pressing need for assessment systems that can be used to better identify talent across diverse populations. In Project EAGLE (Eliciting Advanced Gifted Learning Evidence), we address this issue of underidentification, which results in underservicing, by implementing a dynamic approach to identify gifted behaviors. This dynamic approach involves teachers using an observation checklist of Points of Promise to spot characteristics of mathematics potential and talent as they observe and interact with students engaged in problem-based activities that are designed to elicit gifted behaviors. Therefore, in Project EAGLE we integrate an observation checklist, problem-based learning activities, and teacher prompts to build a dynamic approach to identification in the context of classroom mathematics for Grades 3–5. Although we have focused on English Learners (ELs) and math, the process is applicable to other underserved groups, such as 2e students, and in other talent areas.

A dynamic approach has shown promise as being more effective than static measures for equitable gifted identification (Kitano & Pedersen, 2002). Dynamic measures can be administered by teachers in the classroom, and they allow teachers to delve more deeply into mathematical concepts for those ELs with high levels of understanding who might not show them on tests (Kitano & Pedersen, 2002). During the process, teachers use scaffolding and probing questions to gain insight into students' potential or talent. In Project EAGLE, we piloted and refined a dynamic approach with professional learning in several locations. Then, we employed a train-the-trainer model in outreach to three states. The goals of this project are to: (a)

develop a dynamic approach to equitably identify gifted ELs in the familiar context of classroom math instruction; (b) build classroom teachers, gifted specialists, and EL teachers' capacity for fostering and spotting gifted talent; and (c) increase the number of ELs referred for gifted services. To date, this approach has shown results for spotting potential and talent in the EL population and across other underserved populations as well.

Components and Considerations

To design Project EAGLE, we researched current literature on an approach to engage gifted ELs in classroom math instruction for teachers to elicit and spot their potential and talent. Ultimately, we synthesized findings across dynamic measures, ways to elicit and observe gifted thinking in math, behaviors that reveal mathematical potential and talent, and teaching gifted English learners in the classroom.

Dynamic Measures. Whereas most standard screening measures are static and fail to identify talent in underserved populations, dynamic measures can successfully complement them (Kitano & Pedersen, 2002) with an asset-based approach that recognizes students' strengths (Celedón-Pattichis et al., 2018). Dynamic measures (e.g., critical thinking questions, processing time, feedback, and exposure to problem-solving strategies) allow teachers to supportively intervene during student challenges to elicit gifted behaviors (Kirschenbaum, 1998) based on Vygotsky's Zone of Proximal Development (1978). Dynamic measures have positive effects on affective aspects of EL identification (anxiety, motivation) and thinking aspects (cognition, metacognition) across the curriculum (Calero et al., 2011; Lidz & Elliot, 2006; Lidz & Macrine, 2001). Gifted EL identification must be sensitive to students' levels of English acquisition and cultural contexts (Fultz et al., 2013), and both quantitative and qualitative gifted screening measures are imperative to provide a holistic view of advanced ELs (Slocumb & Olenchak, 2006).

Eliciting and Observing Gifted Thinking in Math. As students with advanced math potential or talent may not necessarily score high on tests for a variety of reasons including acquiring English and lack of prior instruction or experience, there is value in an approach to spotting mathematical talent through observation (Assouline & Lupkowski-Shoplik, 2011; Gavin, 2011). Researchers (Krutetskii, 1976; Sheffield, 2003) recommend recognizing mathematical giftedness beyond school achievement by considering students' mathematical frame of mind, organization, creativity, curiosity, and perseverance. These approaches have been used to develop a range of gifted math observation tools (Assouline & Lupkowski-Shoplik, 2011; Gavin, 2011; Miller, 1990; Peters & Gentry, 2012; Pfeiffer & Jarosewich, 2003; Renzulli et al., 2013; Sheffield, 1994), which can help teachers identify gifted behaviors that students display during lessons (Horn, 2015).

Points of Promise. To capitalize on using observation for identification in the math classroom, we have refined and are using a checklist with nine mathematical Points of Promise (POPs) through an iterative process of reviewing previous observation instruments and receiving

feedback from researchers and practitioners. The POPs checklist can be used with small group problem-based activities that are often open-ended and based in real-world scenarios (Jung et al., 2022) to recognize mathematics potential or talent. These activities allow teachers to observe how students respond to challenges.

English Learners. Gifted ELs benefit from modification, not simplification, to reduce language load and to build on their prior knowledge and experiences (Dulong-Langley & Lusk, 2022). Therefore, asking probing questions and providing strategies (e.g., realia, sentence frames, culture-fair analogies, primary language resources, visuals, body language, translations) in the context of EL math supports can allow sparks of math talent to develop into flames. Eliciting and supporting student thinking aligns to the Cognitively Guided Instruction (CGI) professional learning model (Schoen et al., 2018) and recommendations to improve mathematical problem solving (Woodward et al., 2018) from the What Works Clearinghouse.

Implementation

Project EAGLE lessons begin with a whole class introduction followed by partner/group game play in five lessons within algebraic and geometric casts (Krutetskii, 1976) across number sense and operations, algebraic thinking, geometry, and measurement domains. Although we recognized the value working in the Zone of Proximal Development, we resisted recommending grouping arrangements as we were eager to see how teachers chose to group students and hear their reflections on how it worked for spotting potential in ELs. The only recommendation was to partner an EL with a native English-speaking student for the turn-and-talk strategy during the whole class introduction. Once they moved from the whole class introduction to the activity, teachers grouped students for a range of considerations. Although some teachers either grouped randomly (e.g., drawing names) or using pre-existing seating arrangements, other teachers described purposeful grouping and weighed whether it helped or hindered them in spotting POPs. Teachers considered mathematical ability (heterogeneous, homogeneous, and Zone of Proximal Development), English language acquisition, leadership skills/the ability to teach others, and behavioral/social needs as presented in our poster.

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