Leveraging Faculty Strengths: Building Awareness for Twice-Exceptional Learners

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> Explicitly focusing on the characteristics of gifted learners is especially beneficial for dual certification PSTs by helping them identify 2E learners whose achievement data might not accurately reflect giftedness.

ABSTRACT

Despite increasing attention to diversity in gifted education, twice-exceptional (2E) learners remain underidentified and underserved, likely due to persistent gaps in teacher preparation. This article presents a collaborative initiative between gifted and special education faculty to embed gifted education content into initial teacher preparation programs. Through a pilot lesson using fictional case studies, preservice teachers (PSTs) engaged in an authentic decision-making lesson to identify potential giftedness, particularly among students with disabilities. The lesson highlighted the need for sustained, scaffolded instruction for PSTs on the nature and needs of gifted and 2E learners. We advocate for integrating gifted education across PSTs' practicum experiences, leveraging faculty strengths, and aligning with revised CEC-NAGC standards. The discussed initiative is a replicable model for other teacher preparation programs seeking to address the complexities of gifted and 2E identification and instruction through intentional collaboration and evidence-based practices.

KEYWORDS

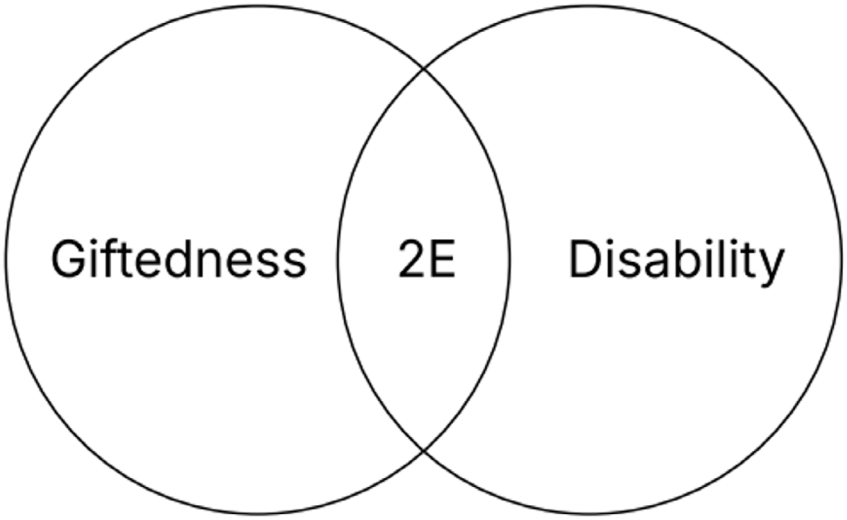
Gifted education, gifted identification, preservice teachers, teacher preparation, twice-exceptional

Special education and gifted education share similar goals focused on the growth and development of individual students. However, divergent approaches between the fields have led to misconceptions among educators and hindered the acceptance of twice-exceptional (2E) learners (Kalbfleisch, 2013). Therefore, intentional collaboration among teacher educators is necessary to prepare teachers to recognize and develop children's gifts, thereby avoiding "a tremendous loss of potential" when 2E students are not identified or provided with necessary services (Hughes, 2019, p. 11).

Although there is no universally agreed upon definition of giftedness, the National Association for Gifted Children (NAGC) identifies a gifted child as one who "perform[s] at higher levels compared to others of the same age, experience, and environment in one or more domains" (2019, p. 1). The term 2E first emerged in 2013 in a letter from the U.S. Department of Education's Office of Special Education Programs, which specified that it is possible to be both gifted and have a disability (Musgrove, 2013). Currently, 2E students are identified as those who are both gifted and eligible for special education services under the Individuals with Disabilities Education Act (IDEA, 2004; Reis et al., 2014). Although gifted students are considered to have exceptionalities regardless of 2E status, the IDEA does not identify giftedness as an eligibility category. Therefore, states are not legally obligated nor funded to provide a free and appropriate public education to students identified as gifted (IDEA, 2004). 2E students are guaranteed services for their disability, but they are not guaranteed services for their giftedness. A newly recognized field of twice-exceptionality has emerged in response to implications for students who have both a disability and giftedness (Hughes, 2018).

Special education supports students in accessing the curriculum, while gifted education focuses on instruction and curriculum that identify and nurture strengths

FIGURE 1:



(Hughes, 2019). Experts in the field of 2E consistently work to disentangle and integrate instruction that scaffolds for access and that differentiates for depth and complexity. Collaboration and co-teaching are critical when navigating these learners' intersectionality, as their needs extend beyond those identified with only giftedness or a disability (see Figure 1). One such collaboration exists between the Council for Exceptional Children (CEC) and the NAGC. These organizations recently revised their Initial Practice-Based Professional Preparation Standards for Gifted Educators (CEC & NAGC, 2024) to train teachers to identify, nurture, and develop the gifts and talents of these children, as well as their uniquely complex needs.

In this article, we present a lesson taught in a dual certification program at a large teacher preparation program in the southeastern United States. Preservice teachers (PSTs) in the dual program will receive certification in both elementary general education and elementary special education. Through collaboration between gifted education and special education faculty members, resources were developed to support dual PSTs in recognizing and addressing masked potential in their future students. In addition, this article examines gaps in teacher preparation programs for gifted education and discusses how the newly revised CEC-NAGC teacher preparation standards for gifted education can be used to advance broader objectives within such programs.

PROBLEM

Many PSTs are naturally inclined to work with gifted learners, which is an asset, given that most elementary gifted students in the United States receive services in inclusive classrooms (Bochkareva, 2018; Hodges, 2025). As a result, incorporating gifted education training within teacher preparation programs has been consistently requested and emphasized by experts in the field (Rinn et al., 2022). Yet, the most recent State of the *States in Gifted Education* report lists only four states (i.e., Idaho, Iowa, Oklahoma, and Virginia) that require university-level coursework in gifted education for all PSTs (Hodges, 2025). A demoralizingly low number considering PST training in gifted education has been linked to greater understanding of giftedness, more positive attitudes towards giftedness, higher self-efficacy for teaching gifted students, and increased awareness of differentiating for the needs of gifted and talented students (Bangel et al., 2010; Opoku et al., 2023.

As one might expect, new teachers continue to report poor readiness and self-efficacy for teaching gifted students (Bochkareva, 2018; Rowan & Townend, 2016). Just as all teachers are expected to meet the needs of their learners with disabilities, all teachers should be prepared to identify and support gifted learners and help them reach their full potential. Given that professional learning on gifted students is seldom provided to special education professionals upon entering the field, teacher preparation programs must create space to prepare PSTs for the unique needs of gifted learners (Hodges, 2025; Şahin, 2021).

Twice-Exceptional Learners

The identification of 2E learners is thought to have originated from researchers' observations that exceptionally gifted students also exhibited traits of specific disabilities, such as Asperger's syndrome and hyperactivity disorders (Reis et al., 2014). Educators today face numerous challenges in identifying 2E learners. For example, individuals with disabilities and giftedness exhibit a wide range of presentations, which can be perceived differently (Ronksley-Pavia, 2015). Research shows that both PSTs and in-service teachers inaccurately perceive gifted learners as being less agreeable, more neurotic, and more emotionally demanding, as well as having poor social skills, being resistant to criticism, and tending to perseverate on their interests (Bianco & Leech, 2010; Golle et al., 2023; Weyns et al., 2021). These harmful misconceptions may prevent teachers from identifying strengths to develop in both gifted and 2E learners.

The perceived contradiction educators face in understanding the duality

of giftedness and disability could lead to reduced identification and services (Chen et al., 2023; Ronksley-Pavia, 2015). Often, teachers fail to refer 2E learners for gifted testing, likely because these students do not fit the traditional gifted learner profile (e.g., lower IQ scores, perceived negative classroom performance, poor ability to foster relationships with others; Chen et al., 2023). In other words, the disability *masks* the identification of giftedness (King, 2022). Masking may result in students not being identified as gifted and, as a result, being unable to receive necessary services from gifted or special education programs. Additionally, one study found that special education teachers were less likely to refer students with disabilities for gifted education than were gifted educators or general education teachers (Bianco & Leech, 2010). Environmental shifts, such as altering the views of parents and teachers, are necessary to counter the misunderstandings of 2E learners and their unique needs (Ronksley-Pavia, 2015).

Recent graduates of teacher preparation programs have reported feeling underprepared to teach and support the full participation of learners with a range of disabilities, including 2E students (Rowan & Townend, 2016). Educators must be equipped to offer equitable educational opportunities for all learners, which "requires that every student receives appropriately challenging and culturally relevant instruction that helps them fulfill their academic potential" (Dixson et al., 2020, p. 24). Unfortunately, some teachers remain unaware of twice-exceptionality (Gierczyk & Hornby, 2021).

In addition, when identified, instruction for 2E learners often emphasizes weaknesses rather than focusing on developing a learner's strengths and talents (Gierczyk & Hornby, 2021). This misstep can be modified with appropriate teacher preparation and professional learning, which could lead to a more equitable nomination process for their future students (Rowley, 2012). It is essential that teacher preparation programs introduce PSTs to the complexities of gifted education, thereby equipping them to more accurately identify gifted characteristics in their learners, capitalize on students' gifts and talents, and effectively navigate their dual roles as both special educators and teachers of the gifted.

OUR SOLUTION

Recognizing that all teachers will work with gifted students at some point in their careers, PSTs must develop a deeper understanding of those students within their teacher preparation program. Our initiative began in one of three undergraduate teacher preparation programs at a large university in the southeastern United States. This dual certification program prepares PSTs seeking certification in both K-5 general and special education. Coursework in the dual certification program includes content area methods (e.g., science and mathematics methods), assessment, and 15 credit hours of special education coursework.

Throughout their two years in the program, PSTs participate in practicum courses, which include field placements and in-person seminars. These practicum courses were identified as a potential outlet to infuse information on giftedness. The practicum courses' associated on-campus seminars meet several times throughout the semester to help PSTs prepare, evaluate, and reflect on teaching within the practicum setting. By utilizing the diverse classrooms in which PSTs are placed, we recognized an opportunity to capitalize on the unique demographics they encounter. Below, we discuss a specific lesson using case studies to help PSTs identify giftedness, and then explain our program's trajectory to embed elements of gifted education into practicum courses across our initial teacher preparation program.

APPLICATION

The initial lesson was structured around four case studies of fictional elementary students, following a methodology similar to that of Siegle and colleagues (2010; see Appendix A). PSTs simulated serving on a school's gifted committee and collaborating to determine if a student should be nominated for a formal evaluation based on the local school district's gifted eligibility criteria. We embedded common misconceptions into the fictional case studies for PSTs to confront. For example, one student has an individualized education program (IEP) and shows signs of giftedness. This complex task, which mirrored the process used by local school districts for identification, offered authenticity of the learning process and motivated our PSTs to actively engage (Dieker et al., 2014). The task also illustrated how vague identification criteria can lead to complex and, at times, subjective decisions.

We first introduced PSTs to the local school district's gifted program eligibility criteria and identification process (see Table 1). They then selected a learner's profile (see Appendix A), ensuring they did not choose the same case study as their neighbors, thereby modeling a differentiation strategy (i.e., differentiating the process according to students' interests). PSTs individually read their selected learner profile, annotated evidence, and decided if they would recommend the student for a formal gifted evaluation. These initial conversations served as a pre-assessment for lesson facilitators to informally assess PSTs' prior experience with gifted programs and identify misconceptions they held.

The lesson continued with a brief introduction and history of gifted education, focusing on the recent shift from traditional, IQ-based identification

TABLE 2: Local School District's Eligibility Requirements

• **Option A:** A student must: **(a)** score at the 99th percentile for grades 1 to 2, or the 96th percentile for grades 3 to 12 on the composite or full-scale score of a standardized mental ability test, and **(b)** meet one of the achievement criteria described below; or • **Option B:** A student must qualify through a multiple-criteria assessment process by meeting criteria in any three of the four data categories listed below.
Mental Ability
• Standardized Test of Mental Ability: • Full scale or appropriate component score • Option 1: 99th percentile on the composite score (by age) for grades 1 to 2; ≥ 96th percentile on the composite score (by age) for grades 3 to 12. • Option 2: ≥ 96th percentile (by age) on the composite or appropriate component score for grades 1 to 12.
Achievement
• Standardized Test of Academic Achievement: • Score ≥ the 90th percentile (by age or grade) on Total Reading or Total Math or Total Battery
Creativity
•Standardized Test of Creative Thinking: • Score ≥ the 90th percentile (by age or grade) on the Total Battery
Motivation
• GPA ≥ 3.5 (as defined in Rule and Regulations) on a 4.0 scale; ranks within top 10% of grade level Average; **or** • Standardized Motivational Characteristics Rating Scale: Score ≥ the 90th percentile

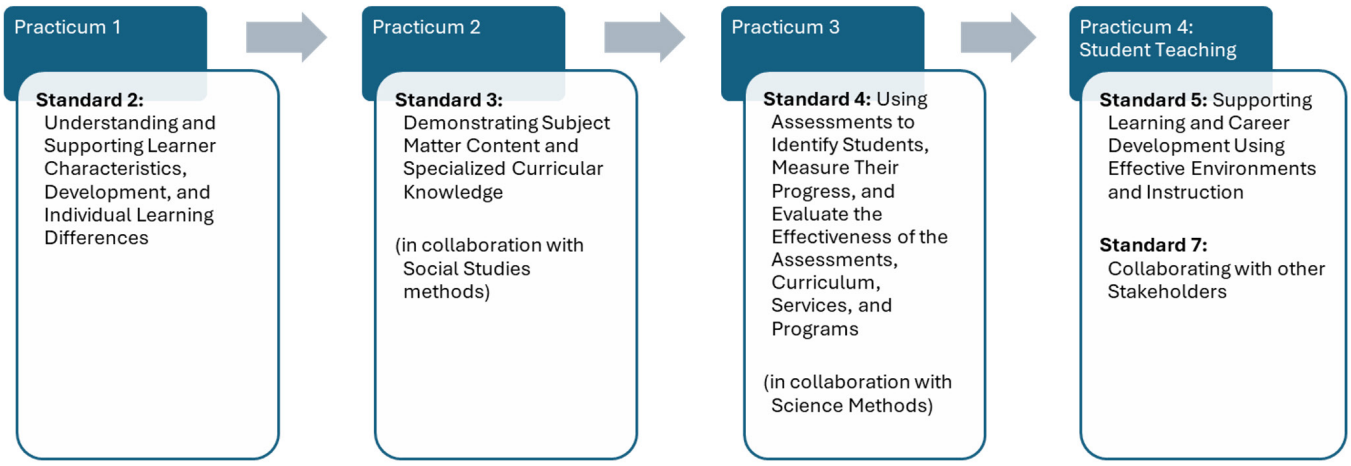
Note: From Bulloch County Schools Gifted Education Services

practices to the updated talent development model (Renzulli & Reis, 2021). PSTs engaged in conversations comparing the state and national definitions of a 'gifted student' before learning about common characteristics of gifted learners, such as asynchronous development and overexcitabilities (Dabrowski, 1964; Silverman, 1997). Our decision to begin with the examination of traits commonly associated with gifted learners was deliberate, as educators must have a strong grasp of these characteristics to make effective referrals for gifted program identification and participation (Speirs-Neumeister et al., 2007). Explicitly focusing on the characteristics of gifted learners is especially beneficial for dual certification PSTs by helping them identify 2E learners whose achievement data might not accurately reflect giftedness.

Throughout the lesson, PSTs were asked to apply the content to their chosen learner profile. We provided them with notes on gifted characteristics before the lesson and directed them to annotate them with the most relevant information to inform their decision on whether to nominate their learner for a formal evaluation. Next, PSTs moved into small groups with students who had selected the same learner profile. They were given ten minutes to determine whether the learner exhibited characteristics of potential giftedness. To scaffold this conversation, groups were provided with sentence starters, such as "I agree/disagree because..." and "I would also like to add...". These scaffolds supported PSTs' ability to listen to their peers' ideas, critically respond, and practice professional discourse.

Most small groups did not reach a unanimous decision on whether or not to nominate their fictional learner for formal gifted evaluation. This indicated that the PSTs were actively navigating the complexities of the decision and genuinely invested in it. Small groups had to make some compromises before sharing final decisions and justifications regarding their case study student. After

FIGURE 2: Progressions of CEC-NAGC Standards in Our Program



the groups shared their decisions, the PSTs were disappointed to hear that we, the instructors, would not provide a concrete yes-or-no answer as to whether each case study student was intended to be gifted. Our decision not to provide concrete answers intentionally mirrors authentic scenarios and invites PSTs to navigate the inherent ambiguity that accompanies the identification of giftedness.

The lesson concluded with a discussion of differentiation, as outlined by Carol A. Tomlinson (2000), and drew parallels between previous seminar content on students with disabilities and 2E learners. We provided visuals and examples of differentiating content, process, and product based on student readiness, interests, and learning profiles (Tomlinson & Imbeau, 2010). PSTs explored the intersection of accommodations and differentiation as part of this discussion, capitalizing on faculty collaboration and areas of expertise. We emphasized that IEP services and accommodations are legally required to provide individual students with a free and appropriate public education (IDEA, 2004), whereas differentiation is an intentional planning strategy to support, motivate, and enrich all students (Tomlinson & Imbeau, 2010). We repeatedly reminded PSTs that accommodation is not the same as differentiation. Lastly, we set aside dedicated in-class work time for PSTs to differentiate a component of a unit plan for their practicum placement, aligning it with the specific learning needs, strengths, and interests of their students.

Implications for Practice

The described lesson occurred during PSTs' senior year. Although we quickly realized how genuinely invested and engaged PSTs were in the content, it was clear that additional learning experiences would be necessary for them to fully navigate the complexities of giftedness, 2E identification, and appropriate instructional planning. We recognized that the one-and-done approach in this pilot lesson would not be sufficient to make a meaningful change (Chamberlin & Chamberlin, 2010). Therefore, we recognized that a broader initiative was necessary and identified a palatable entry point to bring gifted education into our teacher preparation programs by focusing on differentiation.

The process of differentiating instruction and assessments in the classroom first emerged in gifted education and was subsequently adopted by special education (Spielhagen et al., 2015). Differentiation asks teachers to elevate individual students' assets, identify and develop their strengths, and support their limitations (Tomlinson et al., 2003). It has been shown to increase academic scores, increase student engagement, and maximize student potential (Johnsen, 2023; Tulbure, 2011). However, novice teachers are less likely to differentiate instruction than veteran teachers (Suprayogi, 2017). A focus on differentiation is a small step any university or teacher preparation program can take to integrate gifted and 2E content into coursework. We recommend pairing this with explicit instruction on the differences among tiered supports provided through a response to intervention (RTI) framework, gifted identification, and special education services. Discussing student profiles, whether through case studies or practicum experiences, can provide PSTs with concrete examples to practice differentiation strategies tailored to individual learners' needs.

Along with this focus on differentiation in teacher education, it is critical

that elementary special education and gifted teachers collaborate, particularly when working with 2E students. This lesson modeled a role future special education teachers will assume. Teachers serving students with disabilities, especially in inclusive classrooms, must collaborate to ensure the team receives comprehensive, valuable information about each child (Jones & Peterson-Ahmad, 2017). Communication is just as important when students have multiple needs that various stakeholders must address. As demonstrated by the lesson we piloted, productive collaboration and communication between experts in both fields can support stronger content and instruction and model effective collaboration for PSTs.

Finally, the Initial Educator Preparation Standards for Gifted Educators (CEC & NAGC, 2024) are a valuable resource for identifying where gifted education can be embedded into existing teacher preparation programs. Teacher educators can refer to these to determine which standards align with their program and capitalize on the strengths of their faculty. We chose to use practicum courses because of their authentic focus on developing and facilitating instruction in real classrooms (see Figure 2). Our method enabled practicum supervisors and content methods faculty to support PSTs in practicing authentic differentiation for students' needs.

Action Research to Reflect and Revise

Throughout this process, we found action research beneficial for supporting communication, professional development, and PSTs' growth. Along with scaffolding differentiation in theoretical settings, in a single lesson, and ultimately in a five-day unit, our iterative process for planning practicum activities included:

1. Design or find a pre-assessment to assess each practicum's assigned standard(s)
2. Analyze pre-assessment results to identify gaps in PSTs' knowledge
3. Develop learning activities to address identified gaps and reach desired learning outcomes
4. Reevaluate PSTs' success at the end of the semester to allow the faculty work group to reflect on and revise the practicum's activities.

Our differentiation faculty team aims to reevaluate the results of practicum one and continue the iterative process of pre-assessment, purposeful activity design, and reassessment as the initiative rolls out across the four practicums in the program. In future semesters, we will address additional practicum courses by meeting monthly to plan, assess, and revise. We have found it helpful to proactively invite and communicate with upcoming practicum coordinators and to frequently extend invitations to clinical coordinators and supervisors.

PSTs need multiple opportunities to learn the nature and needs of gifted learners. Pairing these experiences with fieldwork allows PSTs to understand the complexities of giftedness in authentic settings (Chamberlin & Chamberlin, 2010). We hope PSTs will move one step closer to identifying high-potential students and advocating for instruction that meets the needs of students identified as gifted. Across all teacher preparation programs, teacher educators can use practicum experiences and subsequent seminar courses to explore ways to support gifted and 2E learners, with a particular focus on the composition of practicum classrooms. This approach involves pairing explicit instruction on gifted learner characteristics with focused observations in field experiences.

CONCLUSION

This work highlights challenges in gifted education, underscoring the need for innovative solutions to develop more comprehensive teacher preparation programs. Through reflection, revision, and collaboration, we aim to bridge the gap between research and practice, thereby providing the best support for gifted and 2E elementary students. The project's overarching goal is to create advocates for gifted and 2E learners. This initiative serves as a model for other teacher preparation programs, emphasizing the importance of collaboration between gifted and special education faculty to better equip teachers to recognize and nurture the potential of giftedness in all learners.

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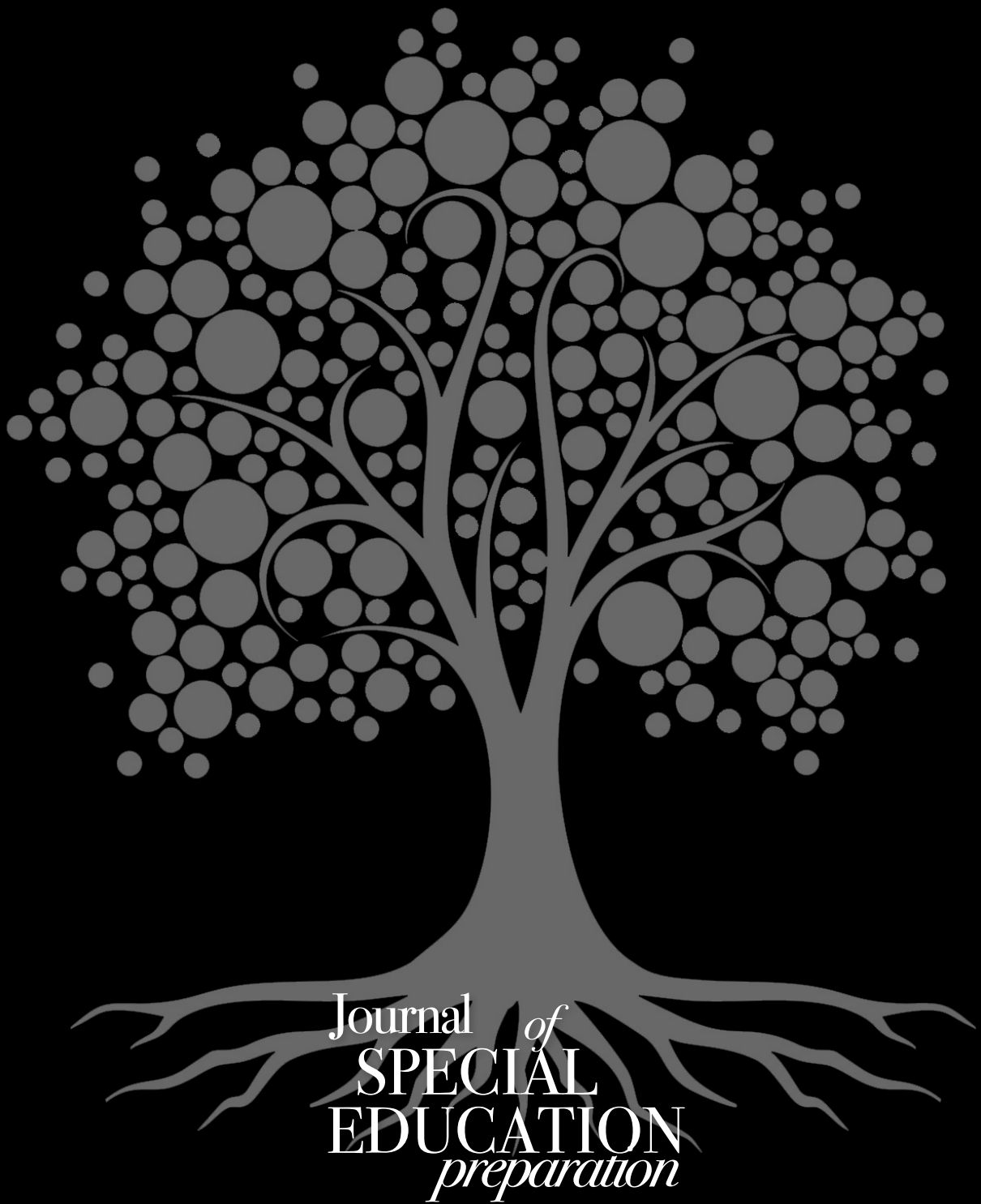

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