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Exploring Educators' Perceptions of Gifted Students' Identification in Ghana: Bridging the Gap

Ami Gladys Allotey[1], Eric Ananga[2] & Jophus Anamuah-Mensah[3]

Abstract

In the dynamic landscape of rapid economic growth and societal shifts towards sustainability, investing in gifted and talented students emerges as a crucial avenue. This study focuses on Ghana, a nation committed to educational reform and inclusive learning in alignment with SDG 4. Drawing insights from 174 educators, this research sheds light on their perspectives regarding gifted and talented education (GATE). Using quantitative data from a 16-question survey, the study uncovers prevalent misconceptions, exclusiveness, inequities, and naive ideologies surrounding GATE among educators. Notably, the study highlights the underservice of gifted and twice-exceptional (2E) students and the overlooked strategies of differentiation and identification. The findings emphasise the urgent need for educational reform policies and advocate for integrating GATE initiatives into teacher education programs in Ghanaian colleges and universities, coupled with a comprehensive in-service workshop. These initiatives aim to rectify misconceptions and elitism issues to enhance educators' understanding of GATE principles, fostering a more inclusive and supportive educational environment across the nation's educational institutions.

Keywords: gifted and talented students; misconceptions; identification; educators' conceptions of giftedness; diverse learning needs students.

Introduction

Early conceptualizations of giftedness were primarily based on intelligence quotient (IQ) test results, a focus highlighted by researchers such as Terman and Hollingworth. However, the definition of giftedness has evolved, incorporating various educational and social factors (Cross et al. 2019). According to Subotnik, et. al., (2011), giftedness is demonstrated through actions and performances, significantly above the norm, with developmental stages encompassing potential, achievement, and eminence. Giftedness comprises cognitive and psychosocial variables that require encouragement to facilitate growth across these defined levels. Gagné (1991, 1995) presents the Differentiated Model of Giftedness and Talent (DMGT), distinguishing between innate potential (giftedness) and developed ability (talented). Gagné identifies intrapersonal factors such as motivation, maturity, and environmental factors that act as support and stimulation for vital influencers of development. According to Gagné, approximately ten percent of the

[1]Ami Gladys Allotey, Pidasmo Technologies Group Limited, Accra. Email: ceedordor015@gmail.com. ORCID ID: https://orcid.org/0000-0002-2277-4846.

[2]Jophus Anamuah-Mensah, Faculty of Science Education, University of Education Winneba, Winneba. Email: jophusam@gmail.com

[3]Eric Ananga, Faculty of Social Studies Education, University of Education Winneba, Winneba. Email: edananga@gmail.com

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population falls under the gifted category, with varying levels such as moderately, highly, exceptionally, and extremely gifted. Borland (2005, 2009) argues that the precise definition of giftedness is less critical than adapting teaching techniques to accommodate students who have significantly progressed in their development.

Moreover, the conception of giftedness holds paramount, serving as a cornerstone for identification processes and the formulation of policies and practices within and beyond gifted education programs (Sak, 2011; Sternberg & Zhang, 1995; Subotnik & Jarvin, 2005). Sak (2011) emphasises that the cultural dimension of giftedness not only shapes its definition but also exerts a profound influence on a range of belief patterns, encompassing misconceptions, myths, contradictions, dogmas, and limiting attitudes that pervade both giftedness and its educational strategies. Sternberg's (2007) perspective extends this notion by asserting that educators must not solely rely on definition models for identifying the gifted but also consider the inherent values rooted in individuals' cultural heritage.

Identifying giftedness in children involves a multifaceted process. Experts in gifted and talented education (GATE) suggest a holistic approach, considering multiple factors beyond just test scores (Gottfried, Gottfried, Bathurst, & Guerin, 1994; Mendaglio, 1995; Renzulli & Reis, 1997; Subotnik et al., 2011). Importantly, acknowledging students' cultural and socio-economic backgrounds in the identification process is central. Investigative gifted individuals and their giftedness require careful evaluation and combining different kinds of evidence. While standardised tests like IQ tests offer a glimpse into cognitive abilities and potential for giftedness, they have limitations and should not be the sole basis for identification (Gottfried et al.,1994; Renzulli & Reis, 1997). Identifying giftedness in students is complex because someone may have the potential to be gifted but not show it immediately due to various circumstances. Factors including inadequate resources or hidden disabilities can hinder performance. Comprehensive testing can unveil individuals' potential to excel (Renzulli & Reis, 1997). Therefore, involving stakeholders in education including parents, teachers, researchers, and policymakers is essential to gather insights on abilities, interests, potential giftedness, and preventing untapped talent.

The construct of giftedness holds intricate layers, given the diverse global population with its array of socio-cultural ideologies, which in turn can influence the understanding of cultural groups and individuals toward its conceptualization. Within every cultural cohort, there is an implicit anticipation of achieving remarkable levels of exceptionalism (Baudson & Preckel, 2013; Kogan & Scelfo, 2017). This stems from the belief that every child's distinct learning needs, along with requisite resources and opportunities, ought to be addressed to inspire them follow in the footsteps of their role models. However, the pursuit of identifying and developing giftedness faces challenges stemming from resource provision and cultural norms, thus, giving rise to significant disparities (Freeman, 2015). These complexities are dynamic, as giftedness is an evolving trait that matures over time (Dweck, 2006). The conception of giftedness varies across cultures (Bevan-Brown, 2011; Freeman, 2006), while gifted individuals display diverse traits such as creativity, social and emotional behaviours, personality, developmental pace, and learning styles, they share a common attribute; the potential for excellence in their chosen domains (Bevan-Brown, 2011; Freeman, 2015; Meier et al., 2014). Consequently, giftedness can be understood as the potential

to exhibit exceptional achievements across one or more areas of endeavour.

In contrast to the dearth of research on GATE practices in emerging nations, developed countries have extensively explored education for the gifted and talented (GT), yielding a multitude of findings (Gagné, 2004; Gardner, 1983; Renzulli, 1978, 2002; Sak, 2011; Sternberg, 2007; Subotnik et al., 2011), which in turn have informed policy and practice. Literature attests to the relative neglect of gifted students' education in many African countries (Allotey et al., 2020; Deku, 2013; Gidraph et al., 2013; Ngara, 2017). In the context of developing nations, gifted students' characteristics often have unsuitably challenging opportunities within the mainstream instructional classrooms, teachers are uncertain and lack the knowledge and understanding of gifted students' characteristics (Al-Hadabi Dawood, 2010; Ivarsson, 2023). Consistent with Ghana, the scenario remains the same, due to limited giftedness exposure, particularly with a lack of formal teacher education, to tailor instructional strategies toward the needs and identification of GT individuals' characteristics (Allotey et al., 2020; Deku, 2013). Moreover, inadequate giftedness research in Ghana and an inclusive education (IE) approach appears more exclusive owing to the absence of appropriately formulated policies and support mechanisms for the development of GT students (Allotey et al., 2020; Deku, 2013). According to Deku (2013), gifted students constitute one of the most marginalised groups within the Ghanaian educational landscape.

Furthermore, the notion of IE in Ghana, as indicated by Opoku et al. (2017), varies in comparison to Western conceptions. Their study draws on Ghanaian educators' perspectives about IE practices, and reveals that despite the national commitment to provide educational accessible to all, irrespective of cultural backgrounds, the current system primarily addresses the learning needs of physically challenged students. This highlights the discrepancy between policy reform agendas and the actual provision of support services for GT students, as underscored by Opoku et al. (2017). A recent study based in Ghana garnered sentiments from science and mathematics junior high school teachers, revealing their outdated perceptions that GT individuals are inherently proficient and do not require additional support to develop (Allotey et al., 2020). This echoes the conclusions drawn by Moon and Brighton (2008), who observed analogous traditional philosophies held by primary grade teachers in the United States expressing that the gifted are self-sufficient and do not necessitate supplementary assistance. These notions extend to their views on students from minority cultures, non-native English speakers, those with dual exceptionalities (2E), and other distinct attributes. Notably, these beliefs shape educators' program interventions, socio-cultural attitudes, and academic support services endorsed for gifted students.

Despite these challenges, Ghana has committed to the 2030 education declaration, pledging to leave no student behind by the principles outlined in the Sustainable Development Goal 4 (SDG4) (UNESCO, 2015). SDG4 emphasises the provision of inclusive, high-quality, and equitable education for all learners, fostering lifelong learning opportunities irrespective of diverse cultural backgrounds and distinct learning requirements (UNESCO, 2015). Consequently, the implementation of free education for senior high school students by Ghana's current president, Nana Addo Dankwa Akufo-Addo since 2017 stands as a significant achievement and a step towards realising comprehensive inclusive education policies in the country (Ministry of Education Ghana, 2016).

This present study aims to examine the perceptions held by educational practitioners regarding the identification of GT students and the extent to which education addresses their diverse learning needs within the Ghanaian educational system. By doing so, this study seeks to enhance opportunities and services necessary for the promotion of effective GATE practices, precisely with identification processes in the school system.

Background

The exploration of educators' conceptions of giftedness carries a dual significance, as it not only serves to inform best practices in gifted and talented education (GATE) policy (Sternberg, 1993) but also shapes educators' comprehension and acceptance of contemporary instructional approaches that integrate students' inputs (Brighton & Wiley, 2013; Tomlinson, 2013). Brighton and Wiley (2013) emphasise the fusion of advanced subject matter expertise with giftedness strategies, recognising their pivotal role in fostering analytical and creative thinking, effective communication, problem-solving abilities, and experiential learning. This symbiotic integration of elevated content knowledge and tailored strategies for giftedness has the potential to address the diverse learning needs of students within traditional curricular frameworks, necessitating the application of differentiated learning, curriculum compacting, and subject or grade-level acceleration (Rimm et al., 2018) and the processes of identification. Such educational paradigms, when coupled with advancement of the 21st-century skills in science, technology, engineering and mathematics (STEM), non-curricula fields, technical and vocational domain areas, agriculture, and the arts, empower students to embrace lifelong learning and contribute meaningfully to the competitive society's workforce. For example, a South Korean study has revealed the link between the identification of gifted students, the implementation and growth of specialised software-gifted classes, and the pivotal role played by the educational process and content (Lee, 2021). Furthermore, this research underscores the profound impact of gifted students' interests on their achievements and career trajectories. These findings illuminate a path towards a promising future, emphasising the importance of nurturing individual talents and passions, as highlighted by Lee's research in 2021. It is noteworthy that educators' perceptions of content knowledge and giftedness are interwoven, a perspective reinforced by the works of Lupart, and Martens (2016), Shavinina (2009), Tomlinson (2013), and Subotnik et al. (2023).

Concerning the discourse of giftedness, differentiation strategies have emerged as a favoured avenue to foster the aforementioned skills and accommodate a spectrum of learning needs (UNESCO, 2004), particularly evident in areas including STEM, sports, the creative industry, and the arts. However, despite educators' endorsement of differentiation principles for curriculum design, identification, and acceleration among gifted students (Rimm et al., 2018; Tofel-Grehl & Callahan, 2017), an alarming trend emerges; educators often prioritise rote learning skills, essential for excelling in nationwide assessments, inadvertently relegating differentiated learning within pedagogical frameworks (Callahan et al., 2015; Chen & Leung, 2015; Tofel-Grehl & Callahan, 2017). Moreover, a study in Norway has shown that GATE is a relatively non-existent phenomenon, and research in the area has been scarcely explored (Furnes & Jokstad, 2023). Findings revealed that teachers' attitudes towards GATE result from cultural influences, and thus educators' attitudes require more informed evidence-based practice with less culture, to avoid its

impact on access to equal and adapted education for the gifted in the mainstream classroom pedagogy.

Turning the lens to the Ghanaian context, a study conducted by Allotey and associates, (2020) revealed findings that echoed a recurring theme of inadequate awareness among participating teachers concerning giftedness and its associated strategies. Differentiation and acceleration strategies were often underemphasised due to misconceptions about their practical application. This study underscores the critical need for formal policy documents within the realm of IE, along with implementation of targeted teacher education programs, both for preservice and in-service educators. Such initiatives aim to rectify misconceptions and augment the understanding of GATE strategies within the Ghanaian educational landscape.

Furthermore, as educators strive to cater for gifted and talented (GT) students' diverse learning needs, only a minority integrate limited differentiation strategies into the conventional curriculum, often during sporadic intervals; a pattern that resonates with Archambault et al. (1993), Megay-Nespoli's (2001), and Johnson and Sullivan (2021) in the US educational framework. To heighten educators' understanding of the significance of tailored teaching methods for gifted and exceptionally talented students, it is imperative to emphasise the relevance of professional development in the area of GATE. Such ongoing learning is vital to ensure that these exceptionally GT students are provided with the means to fully realise their academic potential. In addition to a contemporary perspective, recent works by Karyn, (2021), Sullivan (2011), and VanTassel-Baska (2018) in the US also emphasise the importance of tailored teaching approaches in fostering the unique GT students, highlighting the need for innovative strategies to accommodate their diverse learning requirements. In Africa and Ghana, little research has been done on GATE, and this study solicits educators' perspectives on the identification process and the development of appropriate instructional strategies and intervention programs they suggest to support students in Ghana.

Literature review

Giftedness is multidimensional, requiring a move beyond IQ test scores to include various psychological dimensions in its definition (Chart et al., 2008; Gagné, 2004; Hodges et al., 2018; Renzulli, 2005; Sternberg, 2007). Modern definitions of giftedness transcend high IQ test scores to avoid misidentifying students (Borland, 2009; Chart et al., 2008; Gagné, 2017; Worrell, 2009), and considering multiple domains across various areas when assessing potential is essential, as giftedness can manifest in academics and non-academics including, arts, creative arts, athletics, or music (Winner & Martino, 2000, 2003). Within the educational contexts, giftedness adopts ability growth and high achievements (Gagné, 2004, 2010; Shavinina, 2009; Subotnik et al., 2011), necessitating a positive multi-criteria approach in nominating individuals for gifted programs (Bishofberger, 2012; Callahan, 2005).

Educators' perceptions about gifted children do not only play a role in their development but also have consequences on identification in the school system. For example, one study has shown that preschool educators misjudged the gifted right from early childhood education by modeling policies and practices to recognise and serve these children (Kettler et al., 2017), and others see giftedness as maladaptive socio-emotional behavioural challenges (Baudson & Preckel, 2013; Matheis et al., 2017; Neihart, 1999, 2007) which will have negative consequences on identification and development. However, previous and current studies have shown that these stereotypes in educators can be bettered

through professional development (Carman, 2011; Copenhaver & Mc Intyre, 1992; Eren et al., 2018; Johnson, & Sullivan, 2021; Knudson, 2006; Kuo et al., 2010; Megay-Nespoli, 2001; Scott, 1992).

Gifted and talented students are rare statistically and are often considered valuable human capital resources and required not be abandoned (Freeman, 2006; McClain & Pfeiffer, 2012; Robinson, 2003). While not all students can be gifted, each school likely has some gifted individuals (Yakavets, 2014). GT individuals are known for their creativity, motivation, innovation, and intellectual capital (Gallagher, 2008; Sternberg, 2003). Thus, giftedness encompasses diverse traits like artistic, leadership, linguistic, performance, intellectual, and non-intellectual abilities. Hence, these individuals possess exceptional abilities but require appropriate educational interventions to be recognised and avoid underachievement (Bennett-Rappell & Northcote, 2016; Gallagher, 2008; Callahan, 2005; Reis & McCoach, 2000). The methods used to identify high-ability students are crucial in determining who needs gifted services. However, the challenge lies in selection procedures that provide for the GT learning needs (Renzulli, 2013), as defining giftedness is either straightforward or static; and relying solely on one indicator as identification may overlook late developers (Freeman, 2006; Gottfried et al., 1994; Renzulli & Reis, 1997).

Educator Perspectives on Identifying Gifted Students

Educators often define gifted or talented individuals by focusing solely on intelligence and academic accomplishments, which can exclude high-ability students with non-academic talents (McClain & Pfeiffer, 2012). Nevertheless, the definition of giftedness has evolved over the past decades to encompass a broader range of abilities, including sports, leadership, language, creativity, music, and the arts (Cramond, 2004). Despite this expansion, identification procedures heavily rely on students' high scores in standardised IQ tests (Pfeiffer & Blei, 2008; Robinson, 2005; Worrell, 2009). While intelligence is a component of giftedness, it inadequately represents the complex factors contributing to exceptional achievement and falls short in promoting equity and inclusion. Currently, giftedness is often associated with achieving a specific score on an IQ test, typically representing the top 3-5% (Borland, 2009; Pfeiffer & Blei, 2008; Worrell, 2009).

However, using IQ tests for identification limits the scope of the gifted population. Terman's (1925) IQ test, for instance, only acknowledges the top 1% of students in terms of overall academic ability, as measured by instruments such as the Stanford-Binet Intelligence Scale. Litster (2004) and Renzulli (2002) argue that this method is narrow and conservative, overlooking various abilities such as music, leadership, athletics, technology, engineering, language, entertainment, and the arts. This narrow focus confines giftedness to intellectual and cognitive aspects, disregarding other valuable talents. That is, relying solely on high IQ test scores is restrictive, lacks flexibility, and does not adequately capture the diverse nature of giftedness (Almeida et al., 2016; Borland, 2009; Worrell, 2009).

Countering the limitations of attainment-based identification in tracking 130 one-year-olds and their families based on exceptionality and overall development (Gottfried et al.,1994); individuals with IQs of 130 or higher on the Wechsler intelligence test were identified as gifted for comparison. Parents played a pivotal role as judges, identifying potential in their children based on early signals. Gottfried and colleagues believed that giftedness is a dynamic concept that can

change over time, suggesting that relying solely on high IQ test scores might overlook late developers and will fail to capture the evolving nature of giftedness. Thus, while high IQ test scores are one facet of identifying gifted students, they should not be the sole criterion due to their limited scope. Giftedness encompasses a diverse range of talents and abilities that extend beyond intellectual prowess, emphasising the need for more comprehensive and flexible identification procedures.

Practical Approaches to Identifying Gifted Students

Identifying techniques for gifted children can be categorised into quantitative and qualitative approaches (Borland, 2005, 2009; Renzulli, 2002). Quantitative methods involve standardised tests, including IQ tests, achievement, and performance tests. Qualitative methods consider behaviour and personal traits, emphasising observations and profiling (Subotnik et al., 2011). Flexible assessment, a contemporary model incorporates various measures such as portfolio assessment, performance evaluation, personal records, and interviews to holistically identify giftedness within individuals (Gagné, 2017). Flexible assessment offers a comprehensive view of students' abilities, exceeding traditional testing's limitations (Lloyd & Bowers, 1999; Subotnik et al., 2011). Renzulli et al. (2000) found a mix of assessment methods to be more effective than intelligence tests in identifying gifted students. Callahan et al. (2010) work suggests that teacher ratings and self-evaluation better predicted mathematically gifted students' success than aptitude tests. Flexible assessment's inclusivity and responsiveness are evident in Gagné's (2017), showing its effectiveness in identifying diverse gifted students' potential.

Contrary to traditional methods, flexible assessment acknowledges strengths and talents not captured by standardised testing (Subotnik et al., 2011), and advocates consider it a contemporary approach (Callahan et al., 2010; Gagné, 2017; Renzulli et al., 2000; Renzulli, 2002; Subotnik et al., 2011), promoting equitable identification and support for the gifted (Borland, 2005, 2009; Cramond, 2004). Thus, flexible assessment's adaptive offers a progressive way to recognise and nurture giftedness across diverse profiles compared to the traditional approach.

Compared to traditional methods, flexible assessment offers a more comprehensive and accurate insight into students' abilities and potential for giftedness (Lloyd & Bowers, 1999; Subotnik et al., 2011). Renzulli et al. (2000) conducted a study by comparing identification processes for a US enrichment schoolwide model, revealing that a combination of assessment methods including performance evaluation, portfolio assessment, and student self-evaluation was superior to traditional intelligence tests in identifying gifted students. Similarly, Callahan et al. (2010) and Jarosewich et al.'s (2002) work revealed that a mix of teacher rating scales and student self-evaluation outperformed conventional aptitude tests in predicting success to advanced mathematics classes for mathematically gifted students.

In contrast to outdated approaches, flexible assessment is more inclusive and responsive to diverse GT student needs, acknowledging strengths and talents that traditional standardised testing may miss (Subotnik et al., 2011; Worrell, 2009). Gagné's (2017) work on flexible assessment of giftedness showcased its effectiveness in identifying gifted students from varied backgrounds. This approach integrates multiple measures, including student self-evaluation, teacher ratings, and parent reports, outperforming traditional standardised testing in recognising giftedness in diverse students. This flexible evaluation technique aligns with contemporary models of identification, accentuating qualitative

processes advocated by experts in the area of giftedness (Brown et al., 2005; Callahan et al., 2010; Gagné, 2017; Renzulli et al., 2000; Renzulli, 2002; Subotnik et al., 2011; Worrell, 2009). Thus, flexible assessment stands out as a more inclusive, responsive, and contemporary approach to identifying gifted individuals.

Transnational Perspectives on Identifying Students' Giftedness

Giftedness is a multifaceted concept influenced by societal and cultural factors, resulting in various identification procedures across nations and cultures. The process involves formal and informal measures that often lack consideration for cultural contexts. Freeman (2015), Kaufman and Sternberg (2008), and Sternberg (2007) note that different cultures have unique perceptions of giftedness, leading educators to identify gifted individuals based on their understanding, potentially neglecting cultural nuances. Such approaches risk misidentification for both gifted and non-gifted individuals. Kaufman and Sternberg (2008) emphasise that giftedness is a label dependent on contextual criteria, and transcend school settings.

Case studies highlight the complexity of identifying giftedness in different cultures. For example, a three-year-old boy in Ghana perceived as gifted due to his remarkable reading abilities faced interpretations that ranged from high IQ to supernatural influences (News 360 TV3 Ghana, 2022). Ngara and Porath's (2004) work with educators in Zimbabwe's Shona culture underscores the spiritual dimensions of giftedness. This illustrates the necessity of researching giftedness identification within African and Ghanaian contexts for educational policy reforms. Socio-cultural opinions about giftedness identification stress the importance of psychological dimensions like opportunities, self-confidence, support, and inspiration (Freeman, 2006; Shavinina, 2009; Renzulli & Reis, 1997) for effective identification and adult life achievements.

Longitudinal studies, such as Freeman's (2006), a UK-based study, reveal the complexities of identifying gifted children. Using IQ tests, interviews, and personal traits assessment, Freeman's study found that labeling children as gifted did not guarantee lifelong success. Emotional challenges associated with giftedness were prevalent, with positive emotional support, hard work, and an optimistic personal outlook emerging as better predictors of adult accomplishment. While both labeled and non-labeled gifted groups achieved success in real-life outcomes, relying solely on IQ tests and interviews was insufficient. Positive education intervention dimensions with tailored education and supportive relationships, played a crucial role in fostering competent and satisfied adults (Suldo, Hearson, & Shaunessy-Derick, 2018). In general, giftedness identification is influenced by cultural and global perspectives. Current identification process often neglects cultural contexts, risking misidentification.

Western Approaches to Identifying Gifted Individuals

Western cultures, particularly focus on whether there has been a shift from solely relying on IQ test scores over the past few decades. McClain and Pfeiffer's (2012) study in the United States, investigated identification practices for the gifted minority across all 50 states. The study classified identification strategies into seven groups: IQ tests, achievement tests, nominations/referrals, performance, rating scales, creativity, and behaviour checklists. Data was gathered from Department of Education websites, associations, publicly available information, and gifted coordinators. Findings revealed inconsistency in identification techniques, with many states

using a 3 to 5% cut score to define giftedness. Nevertheless, the study also highlighted that no state in the US exclusively relies on a single test score for giftedness classification and decision-making. This shift indicates an improvement in the US's understanding and identification of giftedness. Similar to the UK, ongoing evaluation is essential to assess the long-term benefits of employing multiple identification criteria from childhood to adult functioning.

Giftedness identification and development in the United States (US) and the United Kingdom (UK) exhibit varying approaches and considerations due to cultural and socio-economic factors. Both countries emphasise traditional models of gifted education rooted in innate abilities and intelligence. However, evolving perspectives highlight the significance of factors like motivation and creativity in the US, while socio-economic status (SES) plays a pivotal role in the UK. Research conducted by Johnson (2017) in the US revealed that traditional models, largely based on intelligence and ability tests, persist but there is a growing acknowledgment of additional aspects like motivation and creativity in gifted identification. In contrast, studies in the UK, such as Smith's work (2019) highlight the substantial impact of SES on the identification and development of gifted students.

In both the US and the UK, studies consistently show that students from low SES backgrounds are underrepresented in gifted programs, limiting their access to educational opportunities. For instance, research across States in the US (Renzulli & Reis, 1997) and studies in the UK (Boman & Boman, 2010; Simic & Walker, 2015) highlight the inequities in gifted identification and support. Teacher professional development appears insufficient to cater for gifted students' diverse needs in both countries. Some teachers lack adequate knowledge on the preparation to identify and support gifted students, leading to under-recognition and misidentification. This is evident in research by Speirs Neumeister et al. (2007), Szymanski and Shaff (2013), and Cross et al. (2018).

In practice, while both the US and the UK rely on traditional models of GATE, evolving views emphasise factors beyond innate abilities. SES significantly influences giftedness identification in the UK, while the US is also witnessing a shift towards recognising motivation and creativity. These studies highlight the importance of equal access to GATE and the need for comprehensive professional development for educators to accommodate gifted students' diverse learning needs. The comparison between these cultural perspectives will provide insights into the educational landscape in Ghana.

In Australia, the approach to identifying and developing gifted students has evolved from traditional models centered on innate abilities to a more comprehensive perspective considering factors such as creativity, motivation, and cultural diversity. Recent research highlights the shift and challenges within the Australian education landscape. A study by Young (2019) employed mixed methods to investigate the identification of gifted primary school students, emphasising on a multidimensional view of giftedness. The study highlighted the importance of positive attitudes, a collaborative identification process, and embedding professional learning, policies, resources, and practices to effectively identify giftedness within schools. This informed approach combines objective and subjective measures to ensure thorough identification practices.

Additionally, while some Australian schools still rely on conventional models, Brown's (2021) highlights a growing recognition of the need to incorporate multiple factors in gifted students' identification. The study underscored the importance of adapting

practices to acknowledge the diverse aspects of giftedness and the challenges posed by traditional processes. Furthermore, Jones (2019) explored the experiences of culturally and linguistically diverse gifted students. The study revealed the unique challenges they face and advocated for a culturally responsive approach to identification and development, aligning with Australia's shift towards a holistic perspective. Thus, Australia's approach to giftedness identification is transforming traditional models into holistic approaches. Similarly, the studies by Young (2019), Brown (2021), and Jones (2019) collectively accentuate the need for comprehensive identification techniques that encompass diverse factors to embrace cultural responsiveness.

Early or Late Identification: Benefits and Challenges

Early identification of gifted students is a crucial aspect of educational practice, involving identifying young learners with exceptional abilities or talents before they enter formal schooling (Hodge & Kemp, 2006; Hodges, Tay et al., 2018; Huang, 2008; Lange & Thompson, 2006; Renzulli & Reis, 1997). This approach is generally favoured over late identification due to its potential for early intervention and tailored educational opportunities. However, the process of early identification is not without its challenges, particularly in terms of gender disparities and cultural influences.

Early identification holds several advantages, including the provision of timely support and enrichment opportunities. Teachers often play a pivotal role in this process, employing both quantitative and qualitative means to pinpoint giftedness. Nevertheless, studies reveal that teachers' perceptions of giftedness can be biased and culturally influenced. For instance, a study in Australia showed that teachers tended to recognise strengths in reading more readily than in spelling and mathematics, possibly due to cultural attitudes and parental-teacher dynamics (Hodge & Kemp, 2006). Besides gender biases can lead to underestimation of giftedness, as teachers may subconsciously associate certain traits with giftedness based on gender (Kerr, & Nicpon, 2003; Ryckman & Peckham, 2015).

Moreover, the characteristics of gifted students are multifaceted and encompass traits such as curiosity, creativity, independence, and persistence. These characteristics can often be misunderstood or overlooked by educators who lack a wide-ranging understanding of giftedness, which can be particularly pronounced in diverse cultural contexts (Frasier & Passow, 1994; Laine et al., 2016; Lee, 1999). The gap between educators' perceptions and the true nature of giftedness requires training and awareness to ensure accurate identification.

Early identification serves as a preventive measure against underachievement and under-identification, mostly among students from diverse backgrounds (Lange, & Thompson, 2006). The importance of recognising giftedness early lies in the fact that it can help address potential issues, such as learning disabilities or socio-emotional challenges before they hinder academic and personal growth (Feldhusen, 1989; Reinke et al., 2022; Piechowski, 1991). Furthermore, early identification ensures timely access to appropriate educational interventions, maximising the potential of gifted students and fostering a lifelong love for learning.

The process of early identification goes beyond standardised testing, embracing qualitative approaches that acknowledge the complexities of giftedness. By identifying students' unique strengths, interests, and needs, educators can tailor educational experiences to their abilities and motivations, setting them on a path to success (VanTassel-

Baska, 1992, 2018). Early identification also offers the opportunity to provide advanced curriculum, enrichment, and differentiated instruction, which are vital for nurturing gifted potential.

In practice, early identification of gifted students holds significant benefits, such as timely support, tailored education, and prevention of underachievement. They can be empowered to explore their talents, develop a passion for learning, and achieve success across diverse backgrounds and cultures. However, it must be executed with sensitivity to cultural influences and gender biases, necessitating wide-ranging training for educators.

Late Identification of Giftedness: Challenges and Implications

While early identification is favored for nurturing giftedness, late identification can hinder children from fully realising their potential by missing out vital educational opportunities. Late identification refers to identifying gifted students after they have already entered school, often due to limited early identification systems, lack of awareness, or a child's self-advocacy limitations (Rogers, 2002; VanTassel-Baska et al., 1992, 1994). This practice can have negative consequences, including inadequate educational support, difficulty adjusting to new programs, and challenges in catching up with peers.

Late identification can result in missed opportunities for appropriate education and support, limiting a student's ability to excel. Gifted children identified late may struggle to catch up with peers who have had earlier enrichment opportunities, potentially impacting motivation and engagement (Rogers, 2002; VanTassel-Baska et al., 1992, 1994). Furthermore, adjusting to new educational environments can be challenging, particularly if prior learning habits do not align with the new programs (VanTassel-Baska et al., 1992, 1994). A lack of exposure to relevant subjects due to late identification can lead to disinterest and limited engagement in education. Gifted students identified late might struggle to find inspiration in areas they were never exposed to (Lloyd & Bowers, 1999; Rogers, 2002; Rogers & Smilansky, 2008).

Additionally, limited self-advocacy skills among these students can hinder their ability to access appropriate educational opportunities (Lloyd & Bowers, 1999; Rogers, 2002). While early identification is generally more effective, it does not guarantee success without appropriate educational support. Early identification equips gifted individuals with essential skills for continuous development, whereas late identification hampers the acquisition of key competencies required for future success, thus, contributing to missed opportunities and challenges in catching up. To address these concerns, this study seeks to investigate how educators in Ghana use diverse assessment procedures to identify gifted students and prevent misidentification.

Inadequate identification of both gifted and non-gifted students can result in various adverse outcomes for both groups. For gifted students, a lack of proper identification can lead to unchallenging academic environments and limited growth opportunities, which in turn can contribute to socio-emotional issues and negative long-term effects. A study conducted in the US employed a longitudinal design and used standardised tests, surveys, and interviews to assess the impact of inadequate identification (VanTassel-Baska et al., 2008). Findings revealed that gifted students who were not identified and placed in suitable educational programs exhibited lower academic achievement and motivation compared to their identified peers.

Similarly, non-gifted students who are inaccurately identified may be placed in

educational programs that do not align with their abilities, interests, and strengths, resulting in feelings of frustration, disengagement, and ultimately poorer academic performance. Another study in the US explored the effects of GATE on non-gifted students, using standardised tests, surveys, and academic records (Kettler et al., 2011). Findings showed that the non-gifted students placed in GATE programs experienced lower academic self-concept and were more likely to drop out of school, underscoring the consequences of inappropriate program placement. These findings are consistent with previous research suggesting that inadequate identification procedures can contribute to various mental health challenges for gifted students (Altay et al., 2017; Pfeiffer & Stocking, 1999). This suggests that the unique qualities of giftedness can sometimes lead to distinctive mental health risks and anxieties.

In light of these concerns, educational institutions must establish accurate identification processes that inform proper program placement for both gifted and non-gifted students. This approach ensures that each student's distinct characteristics are considered by providing students with the appropriate educational opportunities to reach their full potential. Proper identification processes not only benefit gifted students by preventing underachievement and socio-emotional issues but also aid non-gifted students by avoiding inappropriate placements that may hinder their academic success and well-being.

Research Problem

As discussed above developed countries have made significant progress in developing the gifted through robust support systems, yielding substantial research contributions in GATE practices (Borland, 2005, 2009; Gagné, 2010; Renzulli, 2002, 2005). However, the education of gifted individuals remains underdeveloped in many developing nations, especially in African countries including Ghana, where research and awareness in GATE are lacking (Deku, 2013; Ngara, 2017). While resource-constrained countries such as Singapore have leveraged creativity and intellectual innovation for economic growth, African economies have often relied more on natural resources than academic prowess (Allotey et al., 2019; Deku, 2013; Ngara, 2017). Investing in opportunities for gifted individuals, regardless of economy is critical. The dearth of research on giftedness in Ghana and other African countries underscores the need for exploration. Hence, this study aims to investigate educators' opinions of the significance of investing in human capacity development through GATE in Ghana. That is, the gifted do not only exhibit enthusiasm for learning but also contribute as societal innovators, and becoming a reservoir for economic prosperity (Shavinina, 2009; Yakavets, 2014). This study seeks to address various approaches use by Ghanaian educators' in identifying individuals' gifted abilities, transcending beyond STEM domains by addressing 16 survey questions. These research questions aim to investigate the educators' views about GATE strategies for identification, pedagogical practices, challenges, and potential benefits in Ghana, with a focus on exceeding traditional subject areas and considering the broader socio-economic context of the country.

Methodology

This study employs quantitative email survey questionnaires owing to their cost effectiveness, fast transmission, response turnaround, and highly attractive medium for data collection (Faught et al., 2004; Michaelidou & Dibb, 2006). A structured set of 16 closed-ended questions was systematically distributed to 174 educators

throughout Ghana. To facilitate data collection, various response mechanisms such as response tags, radio buttons, checkboxes, and textboxes were employed. Potential respondents received URL addresses in the form of hyperlinks embedded within email messages crafted by the researchers. These emails were disseminated through the National Council for Curriculum and Assessment (NaCCA), acting as the central registry of the targeted population. All 174 members of the sample were provided with the opportunity to respond to the survey via email. The quantitative email survey questionnaire data included respondents' identification opinions, pedagogical practices, and perceptions about gifted and talented (GT) learners' development and their education.

After a detailed presentation on the study's topic, the researchers clarified the study's purpose and invited email recipients to click on a provided hyperlink. The web-based questionnaire was hosted on an academic website facilitated by the National Council for Curriculum and Assessment (NaCCA). Subsequently, upon completion, the questionnaires were sent anonymously to the designated sender for analysis.

Sampling Frame

The subject of the study was on educators' views about gifted students' identification and their differing learning needs support. The questions measure Ghanaian educators' attitudes and beliefs towards identifying gifted students and their educational development. The sampling frame was constructed based on the research objectives, focusing on individuals with experience using email. This approach was considered beneficial, and targeted respondents agreed to participate when contacted. Consequently, concerns regarding generalisability can be justified theoretically as a non-probability sampling technique (Michaelidou & Dibb, 2006). Despite potential compromises in sample coverage, the promptness of responses outweighed such concerns, as the respondent profile matched the sample requirements. Therefore, this sampling method was representative of the specific population in the research context. Additionally, the high response rate observed in the study context supports the relevance of the topic (Sheehan & McMillan, 1999), warranting appropriate consideration. Responses were collected via email in a format suitable for transfer to Microsoft Excel and subsequently to SPSS. The questionnaire was distributed on a weekday morning, allowing sufficient time for responses. Remarkably, 98% (172 out of 174 respondents) of the received responses were received on the same day without errors, indicating high-quality data. This suggests that individuals are inclined to respond to surveys that are relevant or interesting to them. The email questionnaire was specifically tailored to a sampling frame comprised of individuals interested in the topic, leading to increased response rates. This sampling frame is closely aligned with the research aims and the topic being investigated.

Participants

This study was conducted in Ghana between June and December 2022. 174 participants were recruited through NaCCA during curriculum development workshops. Based on our search criteria, participants were invited across the nation's universities, colleges of education, secondary schools, officials from the West African Examination Council (WAEC), and Non-governmental organisations to form the study's cohort. The study's participants consist of a diverse range of educators including those from tertiary institutions and high schools both public and private, urban and rural, governmental and non-governmental institutions, and private organisations in Ghana. The demographic representation is shown in Table 1.

Table 1 Participants' demographic representation

Gender	Total Participant	Doctoral Degree	Master's degree	Bachelor degree
Male	120(69%)	42(24.14%)	65 (37.36%)	13 (7.47%)
Female	52 (29.9%)	12 (6.9%)	31 (17.82%)	9 (5.17%)
Non-disclosure	2(1.1%)	0	0	0
Total	174	54	96	22

In this study, although participants were easy to reach and readily available, researchers chose the census survey approach over the convenience sampling technique due to its limitations, particularly in terms of generalisability. The sample may not be representative of the larger population, as it includes only those individuals who were convenient to survey. In our case, all 174 educators who attended the workshops and participated in the "Quick Polls" survey were included in the study, and we collected responses from all participants, and data was collected from the entire population rather than from a sample. Censuses provide a complete and accurate representation of the population being studied (Creswell, 2015; Devine, Sink, DeSalvo, & Cortes, 2010).

Data gathering procedure

A structured questionnaire of 13 survey questions were developed based on the research questions. The questionnaire included both closed-ended questions to gather quantitative data (Ugulu, 2021) on educators' knowledge and theories of giftedness, identification techniques, perceived barriers and challenges, and educators' attitudes related to gifted education practices (see Appendix A). Trained research assistants helped to distribute and collect the questionnaires from participating educators. The study was completed electronically and in person through gifted and talented "quick poll" as feasible and convenient for participants. Prior to data collection, a presentation was made regarding findings of previous work similar to the topic of concern. A general introduction which explained the aim of the study, methodology and benefits such as researchers contact details were provided to participants. Ethics approval was obtained from our respective institutional research committees prior to recruitment. Further, a consent form was provided (Creswell, 2013; American Psychological Association, 2017) that clarified that data was anonymous and participation is voluntary. Participants agreed to take part and were directed to complete the poll.

Data Analysis

In this quantitative survey, we employed a meticulous census research data analysis process, following the methodologies outlined by Devine and colleagues (2010) and Gilmore et al. (2022) to explore educators' perceptions concerning the identification of GT students in Ghana. Unlike conventional sampling methods, our study embraced a census design, capturing data from the entire population of 174 educators recruited across diverse educational settings and organisations.

This exhaustive approach ensured a comprehensive and precise understanding of educators' perspectives on GT students' identification. By opting for a census

approach, our research aimed for a nuanced analysis, striving to bridge existing gaps in comprehending the complexities of identifying and supporting GT students within the Ghanaian educational context.

To analyse the collected data effectively, we applied rigorous descriptive statistical methods, as detailed by Agresti and Finlay (2018) and Ho and O'Farrell (2006). These methods facilitated summarising and presenting the dataset accurately, revealing crucial characteristics of the surveyed educators. Using structured survey instruments comprising 16 open-ended questions, including multiple-choice, yes-or-no queries, rating scales, and checkboxes, we meticulously examined each question to gather comprehensive data, covering every aspect of the surveyed population.

Data for each element of the population was gathered to provide a comprehensive statistical survey. Response rates for the online surveys were calculated concerning the total number of participants within the census sample model. By using Microsoft Excel, we conducted data entry and analysis, incorporating the quantitative responses. Numerical data were analysed to identify patterns, trends, and relationships, discerning strategies and approaches suggested by participating educators for identifying and developing GT students.

Themes derived from the analysis were synthesised, organised, and validated to offer a cohesive understanding of educators' perceptions. This rigorous quantitative approach not only yielded objective insights but also allowed for swift responses grounded in factual data, capturing the viewpoints of the 174 participating educators on gifted education, identification strategies, and developmental practices in Ghana. The outcomes of this analysis shed light on how educators conceptualise and discuss the strategies proposed for identifying and supporting GT learners in the country. Our study addresses the questionnaires effectively, contributing to the discourse on GATE practices in Ghana.

Results

Findings of this study are reported based on the responses from the 174 participants' cohort using the survey questions that reinforced the strategies suggested in supporting and developing GT learners in Ghana.

When participants were asked whether or not GT learners have learning needs, the majority of the participants (97%) responded" yes" and 3% responded "no". If yes, what are the learning needs of a GT learner? Participants were to complete the checkboxes. Thus, "provide challenging tasks" is the most frequently mentioned learning need (80.7%), followed by providing multiple tasks" and "differentiation (see Table 2)." Other needs like "curriculum compacting", "they need their response to issues to be listened to and analysed carefully" are mentioned less frequently, (see Table 2). Thus, data gathered suggests that GT learners have diverse learning needs, including intellectual challenges, differentiated instruction, opportunities for independent study, a

Table 2 Whether or not gifted students have learning needs

Learning Needs	Percent
a) Provide challenging tasks	80.7%
b) Provide multiple tasks	52.4%
c) Differentiation	52.4%
d) Encourage safe risk-taking	43.4%
e) Independent study	39.2%
f) Seek positive peer connections	36.7%
g) Acceleration	36.7%
h) Curriculum compacting	14.5%

supportive and risk-friendly environment, and interactions with like-minded peers. The majority of the participating educators believe that GT learners' needs vary. Educators should consider these needs when designing educational programs for both students in mainstream classrooms and gifted students to ensure pedagogical fairness and inclusion.

Respondents were asked to express their opinions about GT learners. The most frequent responses were 82% describing them as those who can achieve well with or without support, 59% of the participants viewed them as high achievers, all GT individuals are gifted 15%, trouble getting along with others 9%, well-endowed family/homes, and seen as unsociable (3% each), and GT learners as seen as disrespectful (1%), (see Figure 1). Educators' views about GT learners vary due to elitism challenges resulting from insufficient GT education or professional training (Scott, 1992).

Participants were asked to provide responses regarding whether they have studied any courses in special education; 51 participants (29.7%) responded yes, and appears a smaller percentage of participants have studied courses in special education, while the majority (70.3%) have not. When participants were asked to state what course, they did study, the following provides a summary of the courses mentioned, the number of mentions, their percentages, and brief descriptions of each course. 35 participants (41.67%) mentioned Introduction to Special Education; course description includes Common Introductory to provide foundational understanding of special education. 15participants (17.86%) mentioned Special Education under General Special Education course without specific details. 3.57% offered Hearing Impairment, under courses focusing on teaching students with hearing impairments. Three (3) participants (3.57%) responded Speech and Language with courses addressing communication challenges in students with speech and language disorders. Educational Psychology is three participants (3.57%) under Psychology of Learning and Teaching, relevant to special education. Two respondents (2.38%) mentioned Adapted

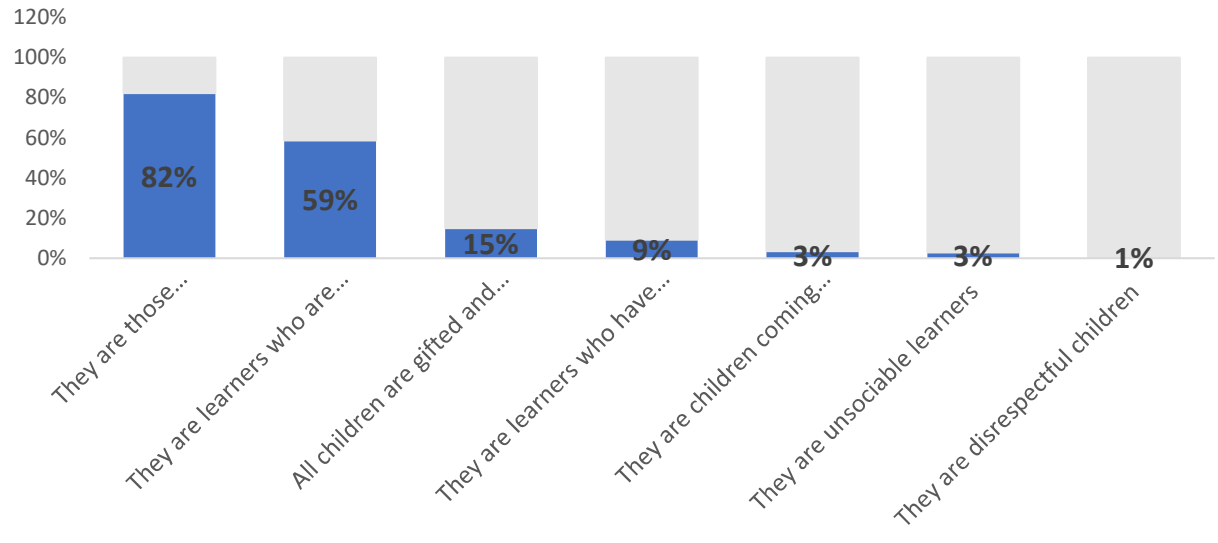

***Figure 1**: This figure shows the frequency of each learning need mentioned in the responses.*

Physical Activity; a course focusing on physical education for children with special needs. Behaviour Analysis is one respondent (1.19%) who study the application of behavioural strategies for managing and improving the behaviour of students with special needs.

Multiple Impairments is also one participant (1.19%), and study courses addressing the challenges faced by individuals with multiple disabilities. Disability and Inclusion Studies, one (1.19%) described by courses exploring inclusive education practices and policies. Postgraduate Diploma in Teaching in Higher Education, mentioned by one participant (1.19), with Pedagogical techniques for teaching in higher education settings. One participant (1.19%) also indicates CPD in Effective Teaching and Learning, under Continuing Professional Development courses enhancing teaching skills. Lastly, B.Ed. Psychology was mentioned by two participants (2.38), under Bachelor of Education programs with a focus on Psychology.

Regarding the responses of special education courses offering at the universities, majority of participants mentioned courses related to special education, with a significant emphasis on introductory courses such as “Introduction to Special Education", proposing that many respondents have a foundational understanding of special education principles. Other courses specialised such as "Hearing Impairment", and "Speech and Language," cater for specific needs and challenges. Additionally, psychology-focused programs and courses on effective teaching and learning contribute to a well-rounded understanding of special education. These responses may indicate a commitment to enhancing teaching skills and promoting inclusion within the field of special education. Although several courses are mentioned as highlighted above, there is no mention of courses related to GATE in the provided responses. These are recommended courses by respondents in special education under GATE in Ghanaian universities. The focus appears to be primarily on courses related to learners with disabilities only. This may reflect participants' experiences and response rates and areas of expertise in the area of education, which may be more oriented toward addressing the needs of students with disabilities.

Importantly, GATE components are not specifically featured under the special education courses, and in the context of this study, the special education focus is mainly centered on academics. Renzulli's Three-Ring Conception of Giftedness (Renzulli, 1978) stands as one of the pioneering frameworks in this regard. This model accentuates that giftedness not only transcends a mere cognitive ability; it is an intricate interplay of above-average ability, creativity, and task commitment. This conception underlines the importance of acknowledging GT students as not just high achievers but as individuals possessing exceptional talents and potentials that extend beyond conventional academic benchmarks.

Another course that has been somewhat overshadowed under special education provision is giftedness with disabilities or twice exceptional (2E), thus, individuals who are gifted but with one or two disabilities (Baum et al., 2001; Baum et al., 2017; Jung & Hay, 2018). In the area of special education, the Individuals with Disabilities Education Act (IDEA) Amendments of 2004 place a strong emphasis on individualised education and support for gifted students with disabilities, promoting an educational model responsive to diverse learning needs. This supports the argument that the gifted are the most marginalised students in the Ghanaian educational setting (Allotey, 2019, Allotey et al., 2020; Deku, 2013), with Ngara’s (2017) work in Zimbabwe, both the GT, and 2E individuals go through the school system without providing identification and

developmental support for their potential growth. Additionally, Avoke and Avoke (2004) argued that teacher preparation in universities in Ghana predominantly focused on assessment and teaching methods that do not accommodate the specific learning needs of students with disabilities. Consequently, the principle of equality is not effectively upheld in Ghana's inclusive education system (Opoku et al., 2017). Thus, currently, education in Ghana can be described as "inclusivity by default", meaning all students are included in the system, however, not every student's learning needs are catered for (Allotey, 2019).

When participants were asked if they have come across a learner that can be described as gifted and talented (GT), 148 nearly (86%) answered they have come across a GT learner, while 26remaining (14%) have not. Participating educators were asked that if yes why do you think that the learner is a GT: The most common reason for identifying a GT learner is "fast learner" thus, (52.05% of participants). This suggests that the ability to quickly grasp concepts and learn at an accelerated pace is a frequently observed characteristic. Other reasons, such as exceptional abilities and academic excellence, are also mentioned by a significant number of participants and the least being leadership skills (6.85%), and innovative thinking (6.16%). Importantly, these percentages are based on the responses provided and may not be representative of the general population's views for identifying GT learners.

Participating educators were asked to identify an attribute or a characteristic of a GT learner among the multiple choice of answers. Their responses vary regarding opinions of GT learners, highlighting the diverse perspectives on what constitutes giftedness and the different characteristics associated with these learners. However, there is a common theme of associating them with high achievement, innate abilities, creativity, curiosity, and independence. Analysis of the attributes mentioned include: Cognitive Abilities**,** personality traits, social traits, intellectual capacity, work habits, adaptability, independence, and communication skills. Although GT learners can exhibit a wide range of attributes not all of these attributes are universally present in every gifted individual. These characteristics are often observed to varying degrees in different individuals. Additionally, some participants mentioned attributes related to social and emotional aspects, such as being isolated or not emotionally sensitive. While some respondents mentioned potential social challenges or socio-economic factors, the prevailing view is positive, focusing on the unique qualities and potential of these learners. Moreover, there is a recognition that all children have some level of giftedness or talent, highlighting the importance of developing and supporting individual abilities. Thus, while these attributes can be associated with some GT individuals, it is essential to recognize that giftedness is a complex and multifaceted concept that goes beyond intellectual abilities to include social and emotional characteristics (Gagné, 2009; Renzulli, 1978).

When participants were asked to identify strategies for identifying GT learners, 172 responded. Whereas 68.75% participants responded "Yes," indicating that they are familiar with the strategies for identifying these learners, 28.13% responded "No," indicating that they do not know the strategies. There were a few participants (3.13%) with mixed responses. These percentages provide a clearer picture of participants' knowledge regarding strategies for identifying GT learners. Although the majority of the respondents are familiar with these strategies there is still a notable percentage of respondents who either do not know or

provided mixed responses. Following from the yes or no responses, respondents were asked to indicate the required strategies for GT learners identification, and there were 130 response rate; 46.8% mentioned teacher observation as a strategy, 28.3% mentioned reviewing work samples, profiling was mentioned by14.9% respondents, 16.9% of respondents referred to using IQ scores for identification, peers nomination was mentioned by 10.4% respondents, teacher nomination was 6.0%, awards was 3.0% respondents, parental observation was 1.5%, **c**hecklists 0.5%, the strategy of providing learners the opportunity to express themselves was 1.0%, and 1.0% of respondents mentioned using a combination of strategies. These percentages provide an overview of the strategies that respondents believe can be used to identify GT learners. Teacher observation and reviewing work samples are the most commonly mentioned techniques, followed by profiling and IQ score assessment. Importantly, some respondents may have mentioned multiple strategies. This suggests that there may be varying levels of familiarity and understanding among the participants regarding the strategies used for identifying GT learners. To gain more insights into their knowledge, it would be beneficial to provide specific strategies and ask participants to elaborate on their responses, as this could help identify the depth of their knowledge on the topic. Additionally, participants responses about identification strategies show a variety of strategies and methods that respondents believe can be used to identify GT learners. These strategies often involve a combination of observation, assessment, and recognition of students' abilities and achievements.

When participating educators were asked of the required resources for managing a GT learner, responses were 163. The most frequently mentioned resources for managing GT learners are differentiated resource materials and mentorship (see Figure 2). These resources were suggested by a significant majority of respondents. Human resources within and outside school and the opportunity to take enrichment courses are also highly recommended. While specialist teachers were mentioned, it was by a smaller percentage of respondents. Only a very small percentage suggested part-time classes or pull-out programs as a resource. These resources can be valuable in addressing the unique learning needs of learners, providing them with the support and challenges they require to reach their full potential. The overwhelming consensus among respondents about whether GT learners do indeed have unique learning needs or not is relevant to address and support their educational development. This aligns with the common understanding in education that GT students may require differentiated instruction and enrichment opportunities to reach their full potential. It is important to note that these responses align with common practices in gifted education, which aims to provide a tailored educational experience for students with advanced abilities. These strategies aim

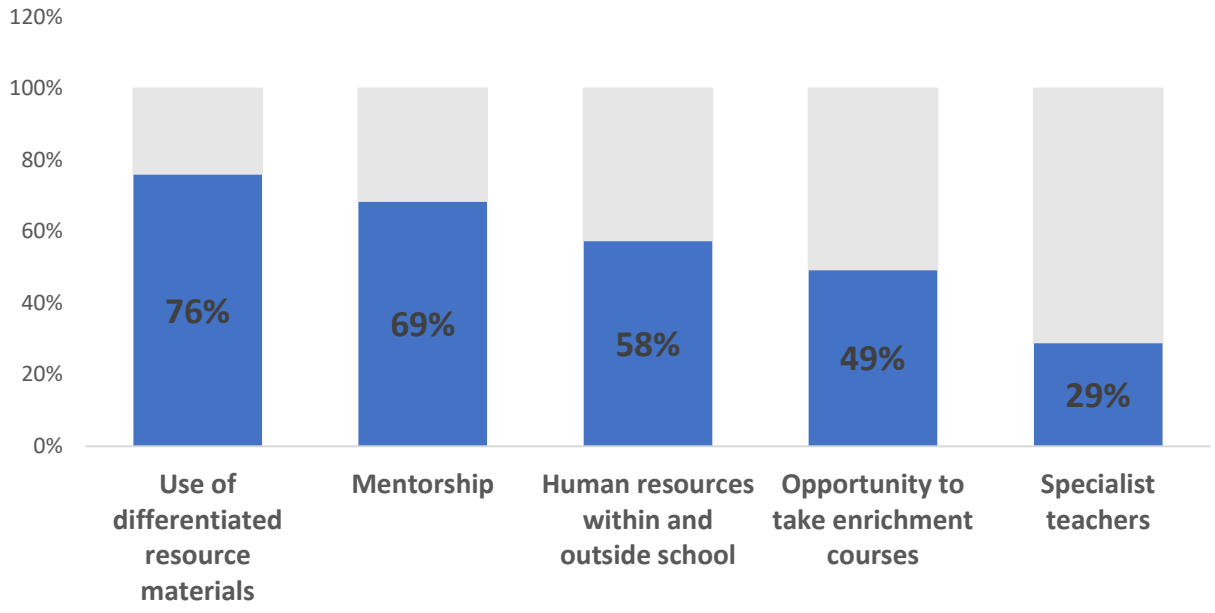

Figure 2 ***Most frequently mentioned resources for managing GT learners***

to keep these learners engaged, challenged, and supported in their educational journey.

There were 157 responses when participants were asked of their recommendation for supporting GT learners. Teacher Training (11.46%): Teachers should be trained to interact effectively with learners and use critical and socially just pedagogies. Curriculum Enhancements (7.64%): Embed provisions in the curriculum for challenging tasks and create pathways for GT students to advance. Engagement of Specialists (5.73%): Involve counselors and parents in supporting GT learners. Differentiation (4.46%): Implement differentiated teaching strategies to cater for the unique needs of GT learners. Mentorship (7.01%): Provide mentorship opportunities for GT students. Resource Provision (5.10%): Ensure access to the right environment and resources to support learners. Inclusive Curriculum (3.82%): Include different career pathways in the curriculum and integrate the Gifted and Talented Education (GATE) philosophy. Positive Encouragement (2.55%): Encourage GT learners with positive feedback and comments. Acceleration Opportunities (3.82%): Offer opportunities for learners to progress at an accelerated pace. Special Schools (2.55%): Consider establishing special schools for GT learners. Avoid Assumptions (3.18%): Avoid assuming all GT learners are always gifted; challenge them with more demanding tasks. Social and Emotional Support (2.55%): Provide social and emotional support for the wellbeing of GT learners.

Identification and Nurturing (2.55%): Identify GT learners early and nurture their talents to their full potential. Enrichment (1.91%): Offer additional learning exercises and enrichment opportunities to challenge GT learners. Differentiated Learning Materials (1.91%): Develop differentiated learning materials tailored to the needs of GT students. Financial Support (1.91%): Provide financial assistance or scholarships to learners. Challenging Tasks (1.91%): Assign learners more challenging tasks and projects to stimulate their growth. Awareness (1.27%):

Raise awareness about the unique needs of learners within educational systems. Freedom and Exploration (1.27%): Allow learners the freedom to explore their interests and talents. Supportive Classroom (1.27%): Create a supportive classroom environment that fosters the growth of GT students.

Peer Collaboration (1.27%): Encourage collaboration among GT peers to enhance their learning experiences. Customised Learning (1.27%): Implement customised teaching methods to accommodate the diverse needs of GT learners. Resource Allocation (1.27%): Allocate resources specifically to support gifted education programs. Challenge and Exploration (1.27%): Continuously challenge gifted learners to explore and innovate. Mentoring and Counseling (1.27%): Provide mentorship and counseling to help gifted learners navigate their educational journey. Safety and Creativity (1.27%): Create safe and creative learning environments where gifted students can thrive. Identification and Placement (1.27%): Identify the strengths and talents of gifted learners and place them in appropriate educational settings. These recommendations reflect collective insights and suggestions from respondents on how to best support gifted learners in educational settings.

The most commonly endorsed recommendation among the responses for supporting GT learners is teacher training (11.46%): Respondents frequently emphasised the importance of training teachers to effectively interact with GT learners and utilise critical and socially just pedagogies to meet their needs. Suggesting that providing teachers with the knowledge and skills to cater for the unique requirements of GT students is a crucial aspect of supporting their development and education. With curriculum enhancement (10.19%), respondents highlighted the importance of integrating curriculum enhancements, such as more challenging tasks and specialised pathways, to meet the unique learning needs of the gifted. This involves embedding provisions in the curriculum that offer advanced and intellectually stimulating content to prevent unnecessary delays in their progression. Therefore, along with teacher training, integrating curriculum enhancements is also a widely supported approach to support GT learners. Importantly, strategies of differentiation and differentiated learning materials are not given much recommendation compare to how advocates of gifted education attached much importance in developing the gifted.

In practice, respondents emphasise the importance of teacher professional development in equipping educators with the necessary knowledge and skills to support GT students in Ghanaian colleges and universities. Integrating courses on giftedness and twice exceptionality (2E) into education and psychology programs can promote inclusive education, as more educators will be knowledgeable in the area rather than the select few. Emphasising curriculum enhancements and differentiation strategies is crucial to meet the diverse learning needs of GT students. The study accentuates the multifaceted nature of giftedness and highlights the need for a inclusive teacher development to effectively cater for GT students' educational requirements.

Discussion

This study endeavours to narrow the divide by delving into the perspectives of educators concerning identification of Gifted and Talented (GT) students in Ghana. The findings reveal a critical gap: Ghanaian inclusive education policies lack formalised provisions for professional preparation and training to gifted and talented education (GATE). Consequently, educators find themselves ill-equipped to meet the unique learning needs of GT students. In the absence of formal training, educators rely on their individual

understanding to address these students' requirements. Furthermore, dedicating resources to GATE initiatives represents a significant investment on both national and global scales, offering a valuable competitive edge. According to Reis and Renzulli (2010), this investment is central at present, as American creativity faces challenges from European and Asian nations. Their research emphasises the critical importance of sustaining robust GATE programs in the current landscape of American education.

Aligned with both current and past studies, this study highlights the significance of professional development in enhancing participating educators' knowledge of GATE and GT students. Educators who have undergone professional training, whether during their preservice education or through in-service programs, exhibit outstanding advancements in their comprehension of GATE practices. This increased knowledge not only strengthens their confidence but also equips them with the necessary skills to provide the needs of GT students within the instructional setting (Carman, 2011; Lee et al., 2023; Hargrove & Seay, 2011; P'Pool, 2021). Also, specialised professional education focusing on giftedness cultivates positive attitudes and approaches conducive to providing suitable support for GT students (Fraser-Seeto, 2013; Geake & Gross, 2008).

In this study, a significant portion of respondents shared the perspective that giftedness is a complex, multifaceted concept encompassing more than just intellectual prowess and outstanding academic performance. It extends to include social and emotional characteristics. Nevertheless, prior research in Ghana has demonstrated a prevailing focus in preservice teacher education on assessment techniques and methodologies geared toward improving students' performance in national tests (Allotey et al., 2020). This emphasis on teaching methods and assessment, without due consideration for students with disabilities, mirrors the findings of Avoke and Avoke (2004).

Remarkably, this study echoes similar concerns, revealing a noticeable absence of course content related to giftedness and dual exceptionalities (2E) in professional development programs for GT students within Ghanaian Universities and Colleges of education. This oversight is apparent across various fields, including education, special education, and psychology programs.

In the ever-evolving landscape of education, the academic needs of gifted individuals have long captivated the attention of researchers and educators (Gallagher, 1997; Gallagher & Gallagher, 1994; Renzulli, 1978; Sternberg & Davidson, 2005; Tomlinson, 2014; VanTassel-Baska, 2018). Conversely, the area of special education has remained steadfast in its dedication to meeting the diverse learning requirements of students with disabilities and managing the intricate intersection of dual exceptionalities (IDEA, 2004; Sanchez et al., 2021; Turnbull, Turnbull, Wehmeyer, & Shogren, 2015).

Renzulli's Three-Ring Conception of Giftedness (Renzulli, 1978) emphasises the vital need to recognise GT students not merely as high achievers but as individuals possessing extraordinary talents and potentials that surpass conventional academic standards. A current study in the US by Subotnik et al. (2023) proposes a comprehensive perspective on talent development, to integrate psychological research about giftedness, creativity, eminence, and high performance. This context, central to GATE, recognises the impact of general and domain-specific aptitudes on attainment, emphasising the adaptable nature of these capabilities. Moreover, it incorporates studies on non-

cognitive factors, exploring their impact on academic success and creative prowess in specific non-academic domains.

Respondents' views about the GT individuals vary, and in relation to their responses, working with these students often face the challenge of addressing the perception of elitism in their educational programs. This thinking corroborates with both past and current studies (Borland, 1989; Gardner 1984; Lamparske & Pijanowski, 2022; Peters et al., 2019; Peters, 2022). According to Borland (1989), those involved in GATE practices are often accused of promoting elitism, with the term "program for the gifted" being seen by some as providing an unfair advantage and going against the principles of equality. Carman (2011) attributes such challenges to educators' stereotypical behaviour.

This concern has been consistently recognised in studies, highlighting that the intricate relationship between equity, excellence, and elitism is deeply embedded in the national psyche. Educators in GATE must be acutely aware of this dynamic, as indicated by the works of Brown and Wishney (2017), Gardner (1984), and Scott (1992). Brown and Wishney's (2017) research in the US highlight the divisive nature of GATE-related issues, adding to the ongoing philosophical debate between egalitarianism and elitism.

Consistent with many developing African nations, a significant challenge persists; the prioritisation of natural resource wealth and materialistic goods over nurturing individual giftedness and abilities. This issue is exemplified by a study conducted in Ghana, which revealed that the implementation of differentiation strategies in classrooms led to disparities and, thus, respondents' naïve ideological principles. Teachers, often misunderstand the concept of 'differentiation as a strategy', and fail to provide the necessary support to students (Allotey et al., 2020). Concurrently, this current research indicates that educators remained uncertain, overlooking essential approaches like differentiation with participants' response rate of (4.46%) which is less than mentorship (7.01%), and resource provisions (5.01%), but consistent with Ivarsson's (2023) work in Sweden and Al-Hadabi Dawood's (2010) study in Yemeni work relating to educators' uncertainty thoughts in providing for GT students due to inadequate exposure to GATE programs during professional development. These findings highlight the need to reassess educational priorities, emphasising individualised approaches to address diverse student ability learning needs within Ghanaian mainstream instructional classrooms.

The majority of respondents (78%) recognised that GT students can display various characteristics, making it central for teachers to be observant when identifying them for specialised services. Karnes and Bean (2005) expressed the diverse nature of GT students, emphasising the commonalities they share with other student populations. Johnsen (2018) explained the importance of allowing students time and different contexts to demonstrate their specific abilities, even if they excel in only one area.

Johnsen (2018) described the need for teachers to be aware that GT students might exhibit similar characteristics or advanced abilities in specific areas. Suggesting that educators tasked with identification must possess a deep understanding of attributes typical of GT students in one or more areas. Moreover, providing appropriate instruction and challenge along with formal identification of individuals' giftedness, is essential for placing these students in suitable academic programs. A recent study conducted by Aboud (2023) supports the notion that GT students excel in an educational setting where their teachers' personalities are prominent, proposing that students tend to appreciate teachers more for their traits than their professional qualifications. Thus, educators'

personalised support is key to enabling gifted students to reach their full potential (Moon & Brighten, 2008).

Other findings of this study suggest that most of the participating educators (68.75%) were more inclined to identify gifted students in areas where they felt confident in their knowledge. This suggests that individual educators' expertise greatly influences which students are recognised as gifted in specific domains. This corroborates with the findings of Judson, Rawlinson, and Meyer (2019), emphasising the role of educators' understanding of giftedness in their identification process. Collaborative approaches to identifying gifted students and enhancing motivation were recommended, reflecting a need for a more inclusive procedure.

Furthermore, a few respondents (2.55%) highlighted the importance of early identification for potential development, echoing Peters and colleagues' (2019) assertion that pre-identification approaches can address these issues. The study also revealed a concerning trend in Ghana's inclusive educational system, where both GT students and the gifted with disabilities or 2E are disproportionately underrepresented (Allotey et al., 2020; Deku, 2013), leading to inequities. This opinion supports Peter and associates' (2019) work, highlighting the underserved nature of twice-exceptional (2E) and gifted students in GATE practices, contributing to missing opportunities and claims of exclusiveness in GT programs. Nevertheless, these programs need to be restructured to accommodate diverse talents and prepare students for the identification process after engaging in advanced academic work.

Conclusion

This study illuminates the pressing need for a holistic transformation in Ghana's GATE practices, encompassing various critical aspects. One of the significant challenges highlighted in this research pertains to a lack of teacher knowledge regarding gifted and 2E students. Educators must receive substantial training and insights enabling them to recognise the diverse manifestations of giftedness, particularly in students with exceptionalities. Addressing this knowledge gap is fundamental to meeting the unique needs of gifted and 2E learners within the Ghanaian educational system.

Furthermore, the study underlines the role of integrating GATE programs into universities and colleges of teacher education across the country. By embedding specialised training initiatives, these institutions can equip future educators with the expertise needed to effectively identify and develop gifted and 2E students. This integration transforms higher education institutions into hubs for continuous professional development. Thereby fostering an environment of lifelong learning for both pre-service and in-service teachers (Cross et al., 2018; Fraser-Seeto, 2013; Kronborg, 2018; Say, 2018; Speirs Neumeister et al., 2007; Szymanski & Shaff, 2013). Such endeavours not only enhance teachers' capabilities but also contribute significantly to the advancement of GATE practices.

Furthermore, the study emphasises the importance of collaborative efforts among educators, specialists, curriculum developers, and policymakers. By fostering partnerships, encouraging knowledge-sharing, and promoting interdisciplinary approaches, the educational community can collectively address the challenges associated with GATE in Ghana. The integration of GATE programs into higher education institutions will not only enhance teacher preparedness but also nurture

a culture of educational inclusion, social equity, and understanding. Moreover, recognising the complexities of differentiation in education is vital in the pursuit of equitable and excellent learning opportunities. Educators must navigate the challenges posed by differentiation strategies, integrating them effectively to address diverse student ability needs. Balancing this approach with the broader concerns of equity, excellence, and elitism is essential in the promotion of a truly inclusive educational environment, where every student's unique giftedness and talents are nurtured and valued.

In general, this research underscores the multifaceted nature of addressing challenges in GATE. It advocates for targeted teacher training programs, with a specific focus on the unique needs of gifted and 2E students. Simultaneously, integrating GATE-related courses within higher education institutions is decisive for producing educators equipped with the knowledge and skills necessary to support GT learners effectively. Through collaborative efforts and continuous professional development, we can create an educational landscape where every GT and 2E student receives the tailored support they require, ensuring an inclusive and enriching educational experience for all.

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