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Positive Education and Student Wellbeing: A Review of Relationship between Gifted and Non-Gifted Students' Wellbeing and High Achievement

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Abstract

In the pursuit of fostering creativity and technology for innovative economies, students' wellbeing has grown globally. Positive education, which emphasises nurturing strengths for wellbeing and peak performance, plays a crucial role. Yet, research on its impact in disciplines, especially STEM areas, is limited. This article reviews 57 studies limited to gifted and non-gifted students, including STEM subjects, to analyse the relationship between positive education and gifted student achievements. Examining literature from 1999 to 2023, the study highlights the significant connection between wellbeing-focused education and academic success. Findings reveal that not only individuals' character traits, constitute inward restorative defenses against mental health issues across all age groups but also the gifted, particularly gifted males, are more susceptible to mental disorders compared to their non-gifted and normal or average-intelligence counterparts. The research highlights the importance of identifying gifted students early, utilising their potential for wellbeing and improved outcomes, especially in interdisciplinary fields such as STEM. Incorporating gifted education and wellbeing into pre-service teacher education through holistic institutional approaches is crucial, particularly in the context of developing African nations. The study also suggests socio-emotional development for advancing academics, especially in STEM. This research suggests future exploration into the intersection of positive education and students' academic accomplishment.

Keywords: Positive psychology; gifted students; mental health; STEM subjects.

Background to the Study

This study illuminates both the problem under investigation and the study's overarching purpose. At its core, this research embarks on an exploration of the relevant academic literature concerning the intricate relationship between positive psychology and gifted students' wellbeing. In particular, it delves into the examination of the positive emotion, engagement, relationship, meaning, and accomplishment (PERMA) Model, with a specific emphasis on its hedonic and eudaemonic dimensions. Additionally, the study investigates key concepts such as positive education, institutional initiatives, and transnational practices in promoting well-being. This contextual exploration has a twofold aim: Firstly, to furnish a comprehensive framework that enables a rigorous assessment and extension of prior research findings. Secondly, it entails a meticulous analysis and exhaustive discussion of the research findings. The purpose of this review is not only to explore the relationship between positive education and well-being among both gifted and non-gifted students, and to analyse its impact on their academic performance, but also to understand the specific group of the youthful population that may be at risk of developing psychological disorders if their learning needs are not addressed.

Problem Statement

The wellbeing of gifted students' mental health in schools, is a crucial indicator of their psychological health (Sharma, 2017). A global survey conducted across 30 nations comprising 35 indicators revealed that only eight high-income countries, representing eleven percent of the total youth index coverage, provided substantial levels of youth well-being with a significant number of young people worldwide experiencing traumatic lives or mental ailments (Global Youth Well-being Index, 2014; Global Youth Well-being Index Ranking, 2017; Sharma, 2017).

Within highly developed nations, one can find disparities in youth satisfaction with their lives (Högberg, 2019). In countries such as Canada and the United States, the youth have shown some minimal levels of life satisfaction, compared to the United Kingdom which exhibits slightly higher levels (UNICEF, 2013). However, there are important variations in other regions, including the Middle East, South Africa, and North Africa, where the youth experience the lowest levels

of life fulfillment and higher unemployment rates, with West Africa experiencing a significant increase in psychological disorders among its youth (Sharma, 2017). A case study by Arslan, Allen, and Ryan (2020) in Turkey highlighted the need for wellbeing educational intervention programs in schools to improve youth belongingness, life satisfaction, and overall mental health.

This assertion suggests that the youth in developing nations may be more vulnerable to mental health challenges. Poor infrastructure in these nations may hinder educational well-being and individual ability development for goal pursuit (Ryan & Deci, 2001). Consequently, a lack of youth well-being in society can lead to setbacks, including low socio-economic standing, suicide challenges, and migrations (UNICEF, 2016). Ryan and Deci (2001), in their examination, highlight that in less prosperous nations, there is often a prioritisation of materialistic and financial goods over psychological well-being. This emphasis tends to revolve more around the acknowledgment of giftedness and unique qualities. These barriers can hinder equal access to opportunities for a worthy and enjoyable life, potentially contributing to mental health conditions among students despite their high academic achievements.

Schools play a significant role in students' well-being and their development (OECD, 2014). Promoting well-being through positive education and integrating traditional education models with interdisciplinary areas including science, technology, engineering, and mathematics (STEM) can assist in fostering positive life outcomes for all students (Morrison & Peterson, 2013; Seligman et al., 2009). According to Ozkan and Kettler (2022), such integration of disciplines can make a difference as STEM education positively influences the intellectual and socio-emotional development of the gifted.

This review investigates the association between positive education and well-being among students and its effects on their academic achievement. It focuses on research conducted from the well-being perspective, particularly the PERMA model of Seligman (2011) and the PERMA-H model of Norrish, Williams, Connor et al (2013), by reviewing relevant literature in positive psychology and its application from 1994 to 2023. By identifying potential gaps and exploring the well-being of different student groups such as the gifted, non-gifted, and average intelligence, this study seeks to better

understand the relationship between positive education and high attainment.

Purpose of the Review

The prevalence of mental health issues among the youth is a pressing international concern; however, there exists a significant gap in our understanding of the specific categories of youth affected. This gap includes whether the challenges are experienced by those who fall within the average intelligence range, those who are gifted, or those who are non-gifted. This study endeavours to address this knowledge gap while also investigating potential gender-related disparities in mental health issues among the youth. It is well-established that students possess diverse learning capabilities and experiences. Consequently, there is a compelling need for an integrated approach to education that includes well-researched intervention programs tailored to accommodate these learning needs (VanTassel-Baska, 2018). The inadequacy of a one-size-fits-all education model in meeting the diverse needs of students has been emphasised by various researchers (Allotey, 2019; Allotey, Watters, & King, 2020; Tofei-Grehl & Callahan, 2017).

The unique characteristics of gifted students, including strengths and personality attributes, require targeted educational interventions towards integrating positive psychology in fostering achievement. The work by Andersen, Rod, Holmberg, Ingholt, Ersbøll, and Tolstrup (2018), explores the impact of positive psychology interventions on the academic performance of gifted students, offering specific strategies and assessing their effectiveness. Historical and contemporary studies, including Frasier and Passow (1994), Pfeiffer and Stocking (1999), Reis and McCoach (2000), and VanTassel-Baska (2018), collectively affirm the significance of character strengths in giftedness. These studies provide insights into the distinct susceptibility and specific character strengths that gifted individuals exhibit, thereby strengthening the argument presented in this review. Thus, naturally, the gifted character strengths, talents, or inward abilities make others perceive them as habitual idiosyncratic thinkers. The authors described this personal quality as the innermost psychological risk factors of the gifted traits. This characterisation requires increasing global attention of educational practitioners; researchers and stakeholders in education to provide appropriate education and policies toward fostering students'

resilience, and positive wellbeing on mental health preventive therapeutic interventions for both the gifted and the non-gifted at all levels of education (Chan, Purcell, & Power, 2016). These gifted characteristics encompass a range of abilities and virtues that can facilitate their academic achievements (Carman, 2011; Frasier & Passow, 1994) and overall wellbeing (Seligman, 2011; Norrish et al., 2013).

Additionally, gifted students, like other students, may face psychological challenges mostly when the traditional curriculum does not cater to their specific learning and emotional needs, which can lead to stress, depression, boredom, social exclusion, limited self-esteem and contribute to underachievement and school dropout (Allotey et al., 2020; Matheis et al., 2017; Reis & McCoach, 2000).

Moreover, other studies have shown that gifted youth have higher stress levels and lower life satisfaction compared to their non-gifted peers (Altay, Kilicarslan, & Yildiz, 2017; Fouladchang & Vahideh, 2010), and they may not fully enjoy overall well-being in schools due to inadequate positive emotional support (Matheis et al., 2017; Pfeiffer & Stocking, 1999). A comprehensive review spanning the years 2007 to 2017 examined eleven studies focused on the healthcare and family-related concerns of gifted children and youth, aged between two and eighteen (2-18) years old (Altay et al., 2017). Findings revealed that 81% of emotional health complications are prevalent amongst the gifted cohort. Similar to these findings is Amini (2005) work about students' life stress inventory and self-esteem inventory stressors with 340 high school students both gifted (156) and non-gifted (184) from four high schools in Shiraz. Findings indicate that gifted students not only show high levels of self-esteem but also exhibit a considerable level of cognitive reaction to stress, with boys having a high degree of frustration compared to girls. Congruently, Bennett-Rampell and Northcote (2016) work suggested that both the gifted and non-gifted individuals require motivation toward purposeful life, resilience to achieve, with Busch and Nuttall's (1995) reporting that, a student with motivational difficulties is likely to have attention deficit.

The above discussion suggests that, the characteristics of gifted students make them susceptible mental health issues leading to underachievement if their diverse learning needs are not addressed effectively compared to the non-gifted. The review indicates that

cultivating a strong resilience constitutes a safeguard in advancing individuals' inward ability. Nevertheless, there is limited research about the association between positive well-being including the gifted, non-gifted, and normal intelligent students' achievement. This study will examine this relationship by reviewing literature relating to PERMA model of Seligman (2011) and Norrish et al., (2013) PERMA-H model; to compare, analyse and explore some linkage (s) (if they exist) among students' well-being and achievement in the subsequent sections.

Contextual Exploration

Positive psychology promotes well-being and positive life qualities among individuals, communities, and societies (Park et al., 2014; Seligman & Csikszentmihalyi, 2000). It encompasses both hedonic and eudaemonic well-being, which are interconnected and essential for achieving optimum results, including high academic performance and less psychological health concerns among students (Keyes & Annas, 2009). Positive psychology emphasises individual strengths and character development (giftedness and talents), which are crucial in fostering resilience and overall well-being (Ryan & Deci, 2001). Focusing on positive psychology interventions can address emotional challenges experienced by high-ability students and enhance their resilience and defensive fitness (Duan, Chen, & Ho, 2020).

Donaldson, Dollwet, and Rao's (2015) review showed the frequent use of well-being with a focus on resilience and character strength development. Positive psychology interventions can contribute to students' overall functioning and contentment by fostering positive social-emotional aptitudes and cultivating resilience. However, there remains limited research on the association between positive wellbeing and academic performance among different groups of students, including the gifted, non-gifted, and those with normal intelligence.

Positive psychology does not only denote positive life functioning but also uncovers giftedness and talents as personal attributes, now character strengths, as character strengths among exceptionally high-achieving youth are interrelated. Salmela and Uusiautti's (2015) evaluation of the character strengths of the highest achieving graduates in upper secondary education in Finland, revealed the occurrence of ten-character strengths, including 24 positive traits which are valued across all cultures. Specifically, descriptions reflected

strengths of wisdom and knowledge such as curiosity, love for learning; courage or mental fortitude, perseverance, and authenticity with love representing valuing of close relationships and fairness (Salmela & Uusiautti, 2015). Regarding knowledge and passion for learning, gifted youths are comparable, tied with grit and sovereignty, gratitude and cheerfulness from social relationships and support.

PERMA Model with Hedonic and Eudaemonic Relationship

The two components of well-being hedonic and eudaemonic denote positive traits and the act of good feeling and life gratification (Keyes & Annas, 2009; Ryan & Deci, 2001). Hedonic notion concerns achieving pleasure and well-being through experiences of pleasure and enjoyment. For example, hedonic experience is to maximise pleasure and minimise displeasure or painful life. The eudaemonic concept also deals with achieving well-being and happiness through purpose and meaning. That is, the consequences of pursuing self-growth and self-actualisation lead to optimal life functioning and satisfaction. Unlike hedonic well-being, which is achieved through pleasant and enjoyable life experiences, eudaemonic happiness is accomplished through meaningful and purposeful events, including a well-functioning life of character development and determination in life through positive social operation, community involvement, and meaningful relationships (Keyes & Annas, 2009; Ryan & Deci, 2001). Although eudaemonic and hedonic well-being are empirically and conceptually different, they are interconnected with other variables (Kademas, 2007; Keyes & Annas, 2009) with Coulombe, Hardy and Goldfarb (2021) suggesting that promoting all-inclusive students' wellbeing is required of every educational policy and intervention.

Importantly, integrating both hedonic and eudaemonic wellbeing constructs to form the popular PERMA model developed by Seligman (2011) is warranted, particularly, because of the relevance of the five constructs; positive emotion, engagement, relationships, meaning and accomplishment. The model contains components that recount both hedonic and eudaemonic wellbeing as a multidimensional model of well-being or 'flourishing'. This model is central to this study because its associated measure is relatively comprehensive but transitory, with each mechanism including more than one item per construct (Hone et al., 2014). Although there are other related frameworks, the nature of this study compelled the authors to review

papers regarding youth wellbeing and attainment; positive emotion, engagement, relationships, meaning, and accomplishment, which are contained within the PERMA model. This study considers the five facets as essential in aiding the discourse on the topic. Moreover, every element of the model is linked to endorsing individuals' well-being (Seligman, 2011) to foster achievement, which is the object of this paper.

The conception of well-being comprises both hedonic and eudaemonic wellbeing and is crucial to understanding students' successes (Norrish et al., 2013; Slee & Skrzypiec, 2016). Whereas few studies advocate that adolescents experience high levels of hedonic well-being with a shortfall in eudaemonic well-being, other studies emphasise the opposite (Keyes & Annas, 2009; Kryza-Lacombe, Tanzini, & Neill, 2019). Consequently, most studies conducted with students have shown that both eudaemonic and hedonic wellbeing are essential in achieving high academic performance with fewer psychological health concerns (Keyes & Annas, 2009). Thus, the relationship between meeting one's highest potential and achievement may be addressed through a focus on positive psychology.

A German study conducted by Lo, Wong, Lam, and Shek (2018) and an Australian investigation by Matheis et al., (2017) explored the perceptions of high-ability preservice teachers, revealing concerns about the inadequate development of positive social-emotional aptitudes among high-ability students. In contrast, another study conducted by Duan, Chen, and Ho (2020) has demonstrated that positive psychology holds promise in addressing these issues. To Duan et al., (2020), individuals' inward abilities develop resilience amid difficulties and adaptation right from preschool; indicating that, individuals' internal power or ability assists in overcoming emotional maladies and defending psychological health and wellbeing as individuals' aptitude or giftedness is malleable and subject to change.

This personal facility appears to be a complementary 'self-restorative protector' if highly developed with a positive social touch, cultivates a strong resilience to guard against negative mental conditions. Therefore, analysis of the literature is in line with Duan and associates' (2020) application of positive psychology which denotes individuals' ability and psychological needs development and can address the achievement of youthful life functioning and contentment. Whereas positive psychology constitutes the experiential study of

meaning, success, and wellbeing, positive education combines traditional education principles with the study of happiness and wellbeing, especially Martin Seligman's PERMA, which draws on positive psychology's emphasis on individual strengths and personal motivation in promoting learning. Unlike traditional school approaches, positive schooling teachers use systems that focus on the wellbeing of every student. The application of these psychological sciences not only increases mental well-being but also guards against the development of mental illness.

Positive Education and Institutional Initiatives

Positive education, which promotes wellbeing and high educational attainment, has become an important topic in educational research (Seligman et al., 2009). Many studies and intervention programs have been conducted to foster positive youth development, resiliency, and character strengths (Adler, 2016; Bonell et al., 2016; Duan et al., 2020), constituting nurturing 'giftedness and talents' in individuals.

Global organisations like the International Positive Education Network and the Positive Education Schools Association have embraced the concept of positive education, and educational policies are increasingly prioritising students' wellbeing (Coulombe et al., 2021). Countries like Bhutan and Peru have implemented positive education initiatives in their school systems to improve happiness and well-being among students (Adler, 2016). Positive education also aims at enhancing students' functioning and achievement, with character strengths being linked to positive youth development and overall well-being (Duan et al., 2020; Schutte & Malouff, 2019).

The impact of a whole-school positive education approach on students' learning experiences was examined in a case study conducted at a boys' private school in Australia (Riedel et al., 2020). The study precisely delved into the transformative initiatives, revealing that they not only promoted meaningful active learning experiences but also demonstrated an inclusive scope and methodological rigour. Riedel et al. (2020) detailed the interventions employed, showcasing their effectiveness in fostering active learning. Importantly, the study method utilised in this case study involved an exploration of the student learning experience among ten senior high school students within an all-boys private school in New South Wales, Australia, where a whole-

school positive education initiative was implemented. Employing semi-structured focus group interviews, the study identified that active engagement and participation were central to the observed positive effects. This approach enhances the credibility and reliability of the study's claims, contributing to the depth of evidence supporting the positive influence of the whole-school positive education approach.

One significant aspect highlighted in the study was the pivotal role of family and community involvement in the successful implementation of these initiatives. By incorporating this vital element, the researchers emphasised the practical implications of their findings and reinforced the real-world applicability of the positive education approach. Moreover, positive psychology and positive education programs do not only share the common goal of developing individuals' character strengths and growth in abilities (Howell & Hill, 2009; Ryan & Deci, 2001) but also influence students' perceptions of success and prosperity, with their participation in social associations and well-being activities (Trask-Kerr, Chin, & Vella-Brodrick, 2019). However, students without positive education exposure tend to define success based on traditional stimuli (money or natural resources) and cultural norms. Overall, positive education is essential for promoting students' well-being which goes beyond money and natural resources by expanding their definitions of success and prosperity through character development and growth (Howell & Hill, 2009; Ryan & Deci, 2001; Trask-Kerr et al., 2019). This is critical for society's wellbeing. Positive education exposure can therefore help shift students' beliefs and contribute to their overall positive development.

Transnational Practices of Positive Education and Wellbeing Characteristics

Positive education is becoming crucial in promoting students' wellbeing and ensuring their overall success. Studies have shown that focusing on a wellbeing curriculum do not only improves students' wellbeing but also enhances their academic performance (Adler, 2016; Seligman, 2011). One study that examined the effects of integrating the teaching of well-being with traditional subjects and its impact on students' academic performance in Peru, Mexico, and Bhutan, revealed that explicit teaching of useful skills embedded into academic subjects positively impacted students' engagement, quality of relationships, and

perseverance, leading to improved wellbeing and academic achievement (Adler, 2016).

Unlike the developed nations where the gifted students learning needs are catered for, studies about giftedness in Ghana and Africa have shown that gifted students' diverse learning needs are overlooked as they challenge teachers' authority, and make them appear inferior, have magical powers, and that both the gifted, non-gifted, average, and struggling students go through the school system unnoticed (Allotey, 2019; Allotey, Watters, King, & Anamuah-Mensah, 2023; Ngara, 2017). Deku's (2013) work on the identification of giftedness in Ghana disclosed that the gifted are the most marginalised in the Ghanaian educational system.

The relationship between wellbeing education and academic achievement is also evident in other studies. A study by Lindorff found a positive connection between well-being enhancement and academic outcomes, although more research is needed to establish the exact measure of effect sizes (Lindorff, n.d). Well-being may have a motivating effect on academic attainment. However, students from low socioeconomic backgrounds may face challenges in maintaining this relationship, highlighting the need for tailored approaches to accommodate their specific learning ability needs (Adler, 2016; Lindorff, n.d).

Additionally, parental contributions are crucial in promoting positive education and wellbeing among students. Studies have shown that parental involvement is highly beneficial, especially for students from low socioeconomic status families (Adler, 2016; Riedel et al., 2020). Academic socialisation, which refers to the process by which individuals acquire the knowledge, skills, and values necessary for academic success, is positively associated with academic attainment. Simultaneously, participation in home-based activities is correlated with overall school performance. This suggests that both school and family involvement play crucial roles in contributing to students' success (Duan et al., 2015; Trask-Kerr et al., 2019). Positive education integrates well-being components, such as positive emotions, engagement, relationships, meaning, and accomplishment, into traditional subjects and instructional practices (Lee, Krause, & Davidson, 2017). Successful music programs in Australian schools demonstrate the importance of teamwork and partnership between teachers, school staff, students, parents, family, local community

members, entrepreneurs, and musicians in promoting students' wellbeing and aptitudes (Lee et al., 2017). Positive education practices, therefore, extend beyond the school context and content, involving various stakeholders to create a holistic environment for students.

While positive education has positively affected students' academic and non-academic development, poorly structured intervention programs may lead to negative outcomes (Humphrey, Lendrum, & Wigelsworth, 2010). A national evaluation of the social and emotional aspects of learning program in England found inadequate influence on students and school outcomes, highlighting the importance of professional exposure and well-structured intervention programs for positive results (Humphrey et al., 2010).

Research Questions

Three research questions drive this review:

1. What are the links between wellbeing promotion in schools and students' high achievement?
2. How do positive psychology-based interventions contribute to fostering positive emotions and mental health among students from diverse cultural backgrounds to flourish in both academic and personal aspects?
3. How or What roles do positive psychology interventions play in preventing/reducing socio-emotional and mental health concerns among gifted and non-gifted students to enhance their academic achievement?

These three research questions (RQs) will be addressed based on the analysis described in Phases One, Two, and Three in the subsequent sections.

Results and Discussion

Wellbeing Components and Students' High Attainment

Phase One Analysis of RQ1: What are the links between wellbeing promotion in schools and students' high achievement?

This section explores the connection between well-being education and students' high achievement. We evaluate literature concerning flourishing (hedonic and eudaemonic) to note the trade-off and relatedness in addressing RQ1. Interestingly, while some studies

believed that hedonic or eudaemonic wellbeing is linked to students' high academic performance, others endorse both concepts.

A study investigated students' academic attainment and its relationship with hedonic and eudaemonic wellbeing among urban college students in the United States, especially in Washington (Kryza-Lacombe, Tanzini, & Neill, 2019). Students who were dissimilar and came from diverse socio-economic backgrounds and cultures were at risk for poorer academic outcomes. Findings unveiled that while eudaemonic levels of motives are positively connected to students' GPA and emotional outcomes for college success, hedonic reasons were unrelated. However, individuals with high levels of hedonic and eudaemonic motives (total functioning life) had higher GPAs compared to students with low levels of eudaemonic. Nevertheless, they did not vary from those with high eudaemonic and low hedonic. Kryza-Lacombe and associates' (2019) work showed that eudaemonic construct negatively correlates with depression and stress, indicating that individuals with elevation levels of eudaemonic possessed the lowest level of such emotional disorders compared to those with low levels of eudaemonic. Thus, the eudaemonic domain may hold promise for high college results.

Another study in the US re-examined MIDUS national data on mental health from previous papers about the unwarranted nature of the distinction between hedonic and eudaemonic wellbeing (Keyes & Annas, 2009). Findings of the report revealed that only 18% are thriving out of nearly half (48.5%) of the national sample with high hedonic well-being aspect, expressing the need for high-level hedonic and eudaemonic wellbeing application in schools. Other results indicate that while the 30.5% remaining had higher levels of hedonic wellbeing, their eudaemonic wellbeing was moderately low, with a doubled rate of mental illness. The authors concluded that without distinguishing hedonic and eudaemonic wellbeing from scientific perspectives toward achievement, we incur costs as citizens of society. This position shows that relying on the combination of these two segments of wellbeing may enable total functioning and life gratification to achieve highly. It shows that we may risk the future life prospects of our youth by depending on only one facet in developing their competencies.

Arslan and Renshaw's (2018) proposed that students with advanced life gratification at school possess greater positive academic experiences toward flourishing while those with lower wellbeing are at

higher risk of behavioural difficulties and school dropout. To Arslan, Allen, and Ryan (2020), school membership was a substantial predictor of youth external and internal issues and overall life contentment, with social acceptance strongly forecasting youth's life satisfaction, while social exclusion was a strong predictor of both internal and external challenges. Thus, interventions implemented within school settings have the capacity to mitigate future mental health issues and enhance overall wellbeing. The above review highlights the complexity of the relationship between well-being and academic achievement. Some studies suggest a positive association between eudaemonic wellbeing and academic success, while others support the integration of both hedonic and eudaemonic to achieve (Keyes & Annas, 2009; Kryza-Lacombe et al., 2019). This review supports the need for a multidimensional wellbeing approach that considers students' individual strengths (giftedness), competencies, and resiliency abilities (Duan et al., 2020).

Telzer and colleagues (2014) employed reward-related neural activation toward both hedonic and eudemonic feelings, describing that while decisions on eudaemonic motives envisage longitudinal declines in depressive symptoms, hedonic decision envisions increases in depressive indications. That is, neural activation within an individual seems to be a source of both risk and defense mechanisms. Such risk factors have been unveiled in this review as ‘inward risk restorative guard’, to mean an individual’s ability and inner security factors endorsed by Duan and colleagues (2020) as a ‘competency power’ that needs to be cultivated through integration with the whole school approach to cultivate each student holistic wellbeing and high achievement. This innermost ability is ameliorated and grows over time (Dweck, 2006); with resilience (Duan et al., 2020) as an ‘inbuilt special growing facet’.

Remarkably, this current review unveiled that over the last decade, there have been continuous, substantial global reductions in children’s and youth’s well-being. As noted in Clarke (2020) about the recent unavoidable ‘trade-off’ proposition made by Gabriel Heller-Sahlgren, regarding the association between children’s wellbeing and their academic success; Gabriel drew on PISA 2012 data reporting that, students' happiness and high accomplishment are not compatible; suggesting a new decision to that effect by policymakers in England. After Gabriel’s proposal, Clarke’s (2020) discussion on children’s

wellbeing reviewed the evidence that reinforces and compares multinational similarities from psychological and educational viewpoints to establish the existence of an empirically supportive connection with academic performance. In contrast to Gabriel Heller-Sahlgren's report, Clarke's (2020) results revealed that children's wellbeing and accomplishment are positively correlated.

However, this association is not up-front and involves a careful unravelling of hedonic and eudaemonic wellbeing components. Relative to this recent knowledge about children's wellbeing, Clarke (2020) further highlights the following four gaps associated with wellbeing and attainment link: (1); a conception of multidimensional and quantifying wellbeing (2); examining the mediating paradigms that describe the wellbeing-attainment; (3); objective operation of achievement, and (4); enquiry of developing changes. Clarke (2020) encouraged governments to avoid untruthful dichotomies when making policy approvals. In support of Clarke's (2020) findings, it is evident that, children's wellbeing and achievement are compatible, and this appears to be a common theme throughout this present review. Nevertheless, the linkage is entrenched and not directly noticed among students or children. However, through playful learning activities, children develop an 'excitement-resiliency flow', which manifests itself through consistent engagement of thinking toward distinct problem solving, and therefore, not forthright. Subsequent to the results disclosed by Clarke (2020), this study takes note of two key issues; that individuals are dissimilar in socio-economic status (SES), gender, and ethnic cultural background; similarly, families, friends, classmates, parental and community participation in developing children's wellbeing are key (Coulombe et al., 2021; Riedel et al., 2020).

This literature review seeks to address some of the salient gaps highlighted in Clarke's analysis. First, to measure wellbeing is to identify an individual's concomitant strength and capability (giftedness) toward growth as a predictor of increasing self-esteem and goal achievement (Coulombe et al., 2021; Seligman, et al., 2009).

Second, individuals from infancy have inner powerful facilities (Duan et al., 2020), hence, well-being effort can be quantified based on the amount of resilience developed to defend and restore ability losses. This study describes a cohort of children, youth, and students as 'high ability and non-high ability; high achieving or non-high achieving, and

the normal intelligent individuals, and that every individual is unique with an inner aptitude.

Third, this inward ability is independently owned, and intrinsic and extrinsic pleasures emerge to boost positive engagement, positive emotion, positive quality-life relationships, and realising positive achievement (Seligman, 2011; Seligman et al., 2009). The endorsement of a multidimensional and holistic approach to positive education, as highlighted by Coulombe et al. (2021), holds particular significance in developing the aptitudes of all students including STEM-gifted students. However, in Ghana, studies have shown that teachers have naïve beliefs about gifted students' development (Allotey, 2019; Allotey et al., 2020). For example, a case study examined ten Ghanaian science and mathematics teachers' opinions about the pedagogical practices they adopt in developing gifted students (Allotey et al., 2020). Findings indicate that providing for gifted students' learning needs may lead to inadequate instructional time for other students, accounting for inequality and elitism. Teachers disregard differentiation and identification strategies in Ghanaian mainstream classrooms (Allotey et al., 2020; Allotey, 2019). Allotey's (2019) work with mathematics and science teachers concerning gifted students' development in Ghana reveals that they often use gifted students for roles such as peer tutors and teaching assistants, as well as positioning them as role models and mentors in mainstream classrooms, rather than focusing on developing their competencies. This practice according to Maree's (2018) South African study in giftedness has shown that such training diverges from the conventional approach of nurturing the talents and skills of gifted students.

Support to cultivate giftedness in an individual is essential for fostering idiosyncratic pursuits and positive wellbeing. In the realm of STEM giftedness, research examining the academic achievement and social-emotional development of the gifted has consistently demonstrated by Ozkan and Kettler (2022), Cross and Dockery (2014), and Ulger and Çepni (2020), provide valuable insights into the educational interventions and support mechanisms that contribute to the optimal development of STEM talents among gifted students.

Overall, this review advocates for a multidimensional and holistic approach to positive education, considering the unique diverse needs of every student. By developing students' resiliency, competencies, and self-restorative mechanisms through positive

education, schools can foster a positive learning environment that promotes wellbeing and high academic achievement in traditional subject areas including STEM across the world.

Insights into Social-Emotional and Mental Health Challenges among Students

Phase Two Analysis of RQ2: How do positive psychology-based interventions contribute to fostering positive emotions and mental health among students from diverse cultural backgrounds to flourish in both academic and personal aspects?

This section examines the application of positive psychology in promoting positive emotion and mental health among students from different background cultures. The integration of positive education into the regular school curriculum has been found to predict lower academic impairment and reduced suicidal behaviours.

Utilising the Patient Health Questionnaire screening scales, a study explores the mental health concerns such as depression and anxiety disorders in the US involving 5,689 college students (Keyes & colleagues, 2012). This includes inquiries regarding suicidal thoughts, negative plans, and its effects on academic performance. Findings revealed that students who received flourishing experiences demonstrated lower rates of mental ailments, minor suicidal behaviours, and better academic achievement. In contrast, non-successful students exhibited higher risks of mental complications, suicidal behaviours, and academic impairment.

Furthermore, recent research by Datu (2018) highlighted the link between Filipino undergraduate students' life satisfaction, optimism, positive emotions, mental health concerns, and academic achievements. The study demonstrated that flourishing not only predicts strong intellectual insight and well-being but also envisages students' objective academic successes. This highlights the importance of developing positive emotions and mental health to enhance students' overall academic performance

Considering the importance of early intervention, Lo et al. (2018) reviewed medical records from the Mental Wellness Clinic at a university in Hong Kong. Findings indicate that anxiety, depression, and subthreshold mental and emotional indications were the three most prevalent diagnoses, accounting for 76% of all cases. In addition, a significant proportion of students exhibited dynamic suicidal thoughts

or attempted suicide, requiring urgent psychiatric intervention. Stress from academics, family, peers, and romantic relationships were identified as common themes contributing to maladjustment. The authors stressed the need for increased attention to students' cultural backgrounds. They proposed early intervention through a whole-school approach from primary to high school and undergraduate levels to promote well-being awareness.

Additionally, whole-school positive psychology-based interventions positively impact non-academic outcomes among students, including motivation, mental health, self-esteem, self-confidence, and reduction of dropout rates. One notable study provides evidence for the effectiveness of such interventions. Shoshani and Steinmetz (2014) conducted a study in Israel, implementing a whole-school positive psychology-based intervention in a secondary school involving 537 students in the seventh to ninth grades. Compared to a control group of 501 students in a different school, the intervention group showed significant reductions in distress, anxiety, and depression, and increased self-esteem, self-efficacy, and hopefulness. This suggests that fostering positive emotions through positive psychology interventions can enhance students' self-confidence and mental resilience, thereby positively impacting their academic endeavours.

Consistent with a U.S. study, Ozkan and Kettler's (2022) explores the impact of STEM education on gifted students' academic achievement and social-emotional development. Analysing 28 studies through meta-synthesis, the research reveals that integrating positive psychology into STEM education positively influences gifted students' self-confidence and mental resilience by reducing their distress, anxiety and depression and enhancing self-esteem and self-efficacy. The study aligns with positive psychology principles, showcasing how a positive educational environment can contribute to the overall well-being of the STEM gifted students by addressing their academic, social, and emotional needs. This aligns with Almukhambetova and Hernández-Torrano's (2020) work in Turkey, suggesting that, positive psychology integration into STEM education helps prevents underachievement among the gifted in schools and universities.

Unlike the developed nations with several research regarding positive psychology integration with the traditional subjects' areas for students' well-being, studies in Ghana have shown that support services

for the gifted students' needs are ignored due to teacher's scant knowledge about gifted education practices (Allotey, 2019; Allotey et al., 2023; Deku, 2013). Allotey et al. (2020) work drew data from ten science and mathematics teachers' views about the strategies they suggest for supporting gifted students in Ghana. Findings revealed that giftedness strategies such as problem-solving and critical thinking are teacher-led within instructional classrooms. Moreover, gifted students are seen as threats to teachers, and do not need extra support to achieve. Hence, their learning needs are unheeded. Although positive psychology principles were not explored by Allotey et al., (2020), Deku's (2013) work in Ghana indicates that the gifted students' varied learning needs are not accommodated. Thus, the STEM gifted students' holistic needs be it positive psychology are overlooked.

Another Ghanaian case study examined the perspectives of ten mathematics and science teachers regarding the development of gifted students alongside the experiences of seven school dropouts (Allotey et al., 2023). Findings revealed a concerning trend; gifted students can achieve on their own; teachers displayed limited understanding of giftedness and lacked training in gifted education, and ignored the gifted cohort. Teachers exhibited misconceptions about gifted students' development, failing to adequately develop their potential, accounting for underachievement and school drop-outs. This oversight was exacerbated by prevalent misconceptions and stereotypes held by teachers, hindering the effective accommodation of gifted students within the educational system.

In conclusion, whole-school positive psychology-based interventions have shown promising results in improving students' mental health, self-esteem, and motivation, leading to reduced dropout rates. The presence of positive emotions contributes to students' overall well-being and strengthens their ability to face academic challenges with greater confidence particularly, STEM gifted individuals. These findings highlight the potential of positive psychology approaches in creating a supportive and flourishing learning environment for all students.

Prevailing Positive Emotions and Mental Health Ailments among Gifted and Non-gifted Youths

Phase Three Analysis of RQ3: What roles do positive psychology interventions play in preventing/reducing socioemotional and mental

health concerns among gifted and non-gifted students to enhance their academic achievement?

This section presents socio-emotional and mental health challenges faced by both gifted and non-gifted students. For example, within the educational system, gifted students and other high-ability students often experience feelings of loneliness, depression, and frustration when their educational needs remain unaddressed during their formative years (Allotey et al., 2019; Matheis et al., 2017). However, this can be addressed through the integration of positive education with the mainstream curriculum (Suldo, Hearson, & Shaunessy-Derick, 2018). While summarising positive psychological concepts, Seligman and Csikszentmihalyi (2000) expressed the relevance of enhancing individuals' lives and developing exceptional talents with a focus on positive well-being. Their goal was to promote happiness among the general population by fostering excellence through research efforts, particularly in developing the exceptional abilities of young individuals. Positive social contexts, including healthy schools, communities, families, and parental inputs, were identified as contributors to shaping positive experiences for all students, including high-achieving youths.

While numerous studies have emphasised the importance of fostering positive well-being indicators among the gifted and the non-gifted individuals, this section delves into an exploration, drawing primarily from the wide-ranging insights of (Datu, 2018; Lo et al., 2018; Seligman et al., 2009; Suldo et al., 2018), and supplemented by additional research findings that illuminate the multifaceted dimensions of their mental and emotional wellness, and positive self-perception toward high school performance. However, it is important to note that many studies on gifted students' potential and affective necessities have focused on vulnerabilities, risk factors, and deficits associated with academic subjects such as STEM (Margot & Kettler, 2019) and mental health outcomes (Mathias et al., 2017).

In the study conducted by Eren, Cete, Avcil, and Baykara (2018) in Turkey, the authors examined various aspects of life quality, mental health issues, parental and family functionality, social-emotional behaviours, and in two groups of children aged 9 to 18 years. The study compared gifted children with those categorised as having "normal intelligence." While the term "normal intelligence" was not explicitly defined in the study, it generally refers to individuals with

cognitive abilities in the average range for their age. Gifted children, on the other hand, demonstrate cognitive abilities significantly above average and may receive specialised educational provisions. The study aimed to shed light on the differences between gifted children and those with normal intelligence. Findings revealed that, unlike normal intelligence children, gifted children described themselves as highly inattentive and lively, and they showed low social functionality and perceived their physical health status poorly. When distinguished by gender, although gifted boys exhibited high symptoms of depression alongside high academic performance, gifted girls reported low depressive symptoms. Additionally, the parents of normal intelligent boys reported lower performance relative to the gifted boys, but there was no reported comparative attainment difference for girls. This variation in academic achievement exists because, by definition, gifted students experience greater attainment in school (Suldo et al., 2018).

Consistent with Eren and colleagues (2018), Papadopoulos (2018) examined the effect of a preventive program on socio-emotional learning and mental health issues among gifted Kindergarten students. The study included 120 students aged 5-6 years, randomly assigned to intervention and control groups (N=60 each). The program focused on students' self-esteem and perception using an experimental design with repeated pretest-posttest measurements. Results showed a positive impact of the programme on increasing students' self-esteem for both genders. Whereas gifted boys exhibited higher achievement scores, the performance of gifted girls was lower, emphasising the need for targeted positive intervention programs to foster positive socio-emotional behaviours among gifted girls at an early age.

Additionally, research has shown that positive teacher-student relationships play a significant role in establishing positive learning outcomes and positive school environments for gifted and high-achieving students with diverse learning needs. Capern and Hammond (2014) investigated teacher behaviours that contributed to positive teacher-student relationships with gifted secondary students (N=58), and those with emotional/behavioural disorders (N=40) in Western Australia using a mixed-method approach. Findings specify that gifted students valued teacher behaviours that promoted amiable and affectionate interactions, supporting and enhancing their learning experiences. On the other hand, students with emotional/behavioural disorders valued teacher behaviours that showed endurance, warmth,

and understanding, acting as supportive precursors to learning. The comparison between the identified behaviours by the gifted and students with emotional disorders revealed a range of core behaviours that both groups considered indispensable in cultivating positive relationships, highlighting relevance for addressing the diverse learning needs of each group.

Research has consistently shown that both positive psychology and positive education focus on reinforcing individuals' strengths or competencies and growth rather than dwelling on victimhood (Suldo, Hearson, & Shaunessy-Derick, 2018). In a study conducted by Suldo and colleagues (2018) on gifted students in advanced placement and international baccalaureate programs, positive psychology was utilised to examine their mental health. Previous research suggested that gifted students in these accelerated programs experience higher stress levels than students in the regular classes, and they may be at greater risk for academic achievement-related issues though.

Findings from Suldo et al. (2018) contrasted with these initial assumptions, suggesting that positive psychology can promote a flourishing state of well-being among gifted students, leading to increased happiness with their school experiences. This state of well-being is influenced by both the support from families and the internal traits of the students themselves. Other findings revealed that gifted students with higher life satisfaction reported experiencing a more frequent state of flow, receiving ample support from their peers, and displaying more positive attitudes towards schooling. These students also reported having more satisfactory relationships with their teachers and academic programs. Therefore, providing positive emotional support and academic opportunities for gifted youth will not only contribute to their academic accomplishment but also enhance their feelings of pleasant happiness.

The above review of analysis has shown that gifted students are at risk regarding mental health disorders (Altay, Kilicarslan, & Yildiz, 2017). Suggesting that early age identification is essential and should be a gradual process, involving repeated opportunities for effective positive education support services (Lee et al., 2017). 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 (Lee et al., 2017). Collaborative efforts involving parents and teachers are vital to

nurturing the future healthy functioning adults within a biopsychosocial domain. Fostering positive emotions and mental health well-being among both gifted and non-gifted can contribute to their high achievement and overall success in life.

Conclusion and Implication for Future Studies

In this study, we focused on reviewing multiple scholarly papers regarding positive education and positive psychology lenses on students' well-being and elevated attainment. We posed three research questions to focus on the review. First, the findings underline the endorsement of a comprehensive and holistic positive education approach, emphasising the relevance of addressing the distinctive requirements of students from diverse cultural and background contexts. The study emphasises the cultivation of students' resilience, competencies, and self-restorative mechanisms within the framework of positive education (Atlay et al., 2017; Duan et al., 2020), in particular with STEM gifted students (Margot & Kettler, 2019). The ultimate goal is to create a positive learning environment within schools, facilitating both the overall well-being of students and the enhancement of academic success.

Second, the results revealed that an association between well-being education and achievement exists (Adler, 2016; Clarke, 2020; Duan et al., 2020; Suldo et al., 2018). That is, the integration of positive psychology into STEM education, as demonstrated by the findings from this study, brings about a positive transformation in the lives of gifted students. By reducing distress, anxiety, depression, and concurrently enhancing self-confidence, positive psychology interventions contribute significantly to the overall well-being of gifted individuals. Drawing inspiration from Almukhambetova and Hernández-Torrano's (2020) and Wang, Moore, Roehrig, and Park (2011) work on positive psychology integration with STEM education not only benefits the academically gifted but also plays a crucial role in preventing underachievement, particularly among students from diverse background cultures.

This review underscores the potential of whole-school positive psychology-based interventions in enhancing students' mental health, self-esteem, and motivation, resulting in decreased dropout rates. This aligns with the broader research question, which explores how positive psychology-based interventions contribute to fostering positive

emotions and mental health among students. The evidence suggests that such interventions can promote flourishing in both academic and personal aspects, creating a supportive learning environment for students facing diverse challenges. The findings also reveal that early identification is pertinent for developing resilience and reversing underachievement (Ryckman & Peckham, 2015; Stoeger, Hopp, & Ziegler, 2017). This will assist in cultivating and activating early inward curative and defensive mechanisms.

Considering the five dimensions of the PERMA well-being model specifically relatedness, findings revealed that relationships are linked to teamwork and partnership among teachers, school staff, students, parents, family, local community members and entrepreneurs particularly for non-academic excellence endeavours (Lee et al., 2017). Overall, quality relationships, engagement, perseverance, creativity, and positive emotion appeared to be the strongest mechanisms for students' well-being (Adler, 2016; Coulombe et al., 2021; Duan et al., 2020; Suldo et al., 2018). These well-being facets are independently viable in cultural contexts outside high-income nations (Adler, 2016), although poor execution and monitoring, insufficient resources and inadequate teacher exposure may hinder progress (Humphrey et al., 2010). Positive well-being education has not only been shown to address students' emotional and mental health issues but also kindle their self-confidence to academic and nonacademic excellence (Alford, 2017).

Moreover, findings from this review also indicate that students are dissimilar with differing learning experiences and that relying on the integration of hedonic and eudaemonic well-being can enable total life functioning and gratification for outstanding accomplishment. Whereas students with advanced life gratification hold greater positive academic experiences towards flourishing, those with lower well-being are at higher risk of behavioural difficulties and school dropout.

Characteristics of positive psychology and understandings have shown that the concept is intended to enable individuals' cheerfulness toward progress. Nonetheless, this study's findings correlate with preceding papers about gifted students' socio-emotional health disorders and related effects including youth school dropouts, mental health disorders, and suicidal concerns. Drawing inferences from Christopher and Shewmaker's (2010) findings have shown high rates of psychological health maladies among students, and the gifted are no

exception. The authors proposed that frequent school dropouts and suicidal problems are likely to occur among children and youth. Teacher professionalism weaknesses in addressing gifted and other students' emotional learning needs require increasing worldwide attention. Despite these propositions, all students are unique with varying competencies, and support of quality relationships from both internal and external contextual environments is key (Adler, 2016; Cross & Cross, 2017; Suldo et al., 2018), to curtail mental sicknesses toward achievement and future adult life functioning.

Findings also disclosed that gifted boys perform highly amid depression and stressful conditions, although their frustrations, school dropout and suicidal levels are high. Unlike gifted boys, gifted girls perform low due to their high anxiety levels, likewise the normal intelligent or average students in addition experience lessening life functioning and satisfaction. Therefore, the general curriculum needs to be strengthened by addressing gifted students or youth's socio-emotional learning needs and psychological health conditions. Thus, injecting social-emotional learning needs support into the current gifted education programs (Cross & Cross, 2017; Zeidner & Matthews, 2017) is paramount.

Furthermore, an expectation of perfectionism from parents, and teachers on students also puts pressure on gifted students, but positive education can be a self-training concept, and if repeatedly practiced, will foster positive instructional classroom and school-community atmosphere by instilling a sense of growth and motivation (Cross & Cross, 2017; Schuler, 2002; Zeidner & Matthew, 2017). Rather than late identification, further findings unveiled that early identification of gifted students especially, gifted girls, will save society from incurring huge costs of maladjustment, future adult dysfunction, and dissatisfactory lives with suicidal, underachievement, and dropout concerns. Teacher exposure to gifted education is necessary. International attention and responsive support for positive relationships with parents, family, and community by which gifted adolescents' life satisfaction is tied to a relationship as a set of behaviours is necessary for addressing students' needs.

Additionally, early identification has shown that it can boost both gifted boys' and girls' self-confidence to participate in STEM disciplines particularly when the gifted envisage that the school cultural environment is unsupportive in promoting academic achievement

(Ryckman & Peckham, 2015), thereby accounting for students' underachievement (Dori et al., 2018; Reis & McCoach 2000). For Ryckman and Peckham (2015), while gifted girls attribute performance fiasco and lack of self-confidence to their inability to perform in STEM areas, gifted boys imagine missing peer pleasure and deliberately underperform, especially with late identification.

Other findings from this research denote that positive education holds correlations with accomplishment, well-being, health, and social relations for gifted and non-gifted individuals alike. Zeidner and Matthews (2017), Suldo et al., (2018), and other related studies supported this review that the gifted in general, are not emotionally vulnerable or dysfunctional; however, in every school, some gifted children and youth are experiencing emotional challenges and hardships, which impact negatively on gifted girls' attainment and socio-emotional dysfunction, coupled with frustration and depression amid gifted boys. As a consequence, remedial interventions need to increase specific programs, to focus on the gifted, non-gifted, and unidentified children and youths' aptitudes, which are indispensable (Cross & Cross, 2017; Högberg, 2019). Besides, the appropriateness of developing students' non-intellectual exceptional talents remains unnoticed, as disclosed in this review on musical talents (see also, Zeidner and Matthews, 2017; Lee et al., 2017), therefore, an increase of global attention is vital. This finding aligns with African nations and Ghana where STEM gifted students varied learning needs are ignored making them appear susceptible in the mainstream classrooms (Allotey, 2019, Allotey et al., 2020; Deku, 2013; Ngara, 2017).

Lastly, it is clear that high levels of grit and active approaches respond to academic pressure, and hopeful beliefs must connect to higher life satisfaction. However, some strong predictors of low life satisfaction do not only reveal maladaptive perfectionism but are also reliant on unsuccessful management of strategies with independently dealt issues and keeping problems to oneself (Clarke, 2020, see also, Suldo et al., 2018; Zeidner & Matthews, 2017), specifically, the high achieving individuals. Given this, educators need to identify and consider proactive strategies for intervening with children and youth who demonstrate these propensities. The potential consequence of students' cheerier effort may elevate youth and adults' resilience neural competencies equally. This current study including others supports the needed understanding of identifying and promoting student-level

resiliency protective abilities and skills; associated with youth happiness, which fortifies attributes by positioning students with no exception of the gifted and at-risk individuals toward decreasing contentment.

Future Research Direction in Positive Education

Understanding youth well-being education and its worldwide implications is central. This research has focused on theoretical literature from the perspectives of positive psychology to gain insightful acuities on the topic. The primary examination concentrated on the positive well-being of young individuals, both gifted and non-gifted, and their academic and non-academic achievements. Based on these findings, it is essential to highlight future research horizons to bridge the existing gaps.

Firstly, there is a need for more research on positive well-being education in developing nations precisely Africa, where little to no investigation has been conducted on positive education and gifted youth. This research should encompass schools at all levels and various types, from primary through universities, and include all students, such as high-achieving students, normal intelligent students, and those with learning difficulties. The PERMA-H well-being model can be measured to confirm or refute earlier studies.

Secondly, the role of positive school environments, positive communities, family, classmates, and parental participation in students' well-being and achievements should be highlighted (Coulombe, 2021; Suldo et al., 2018). Further research is needed to understand the impact of parental and family contributions on students' welfare and academic success. Comparative studies in this area should be conducted in African countries and other developed nations to replicate previous investigations.

Finally, there is a lack of compelling positive well-being intervention programs in STEM disciplines for gifted boys and girls, including normal intelligent students. Future research should aim to establish the benefits of positive education and mentally informed processes for educational practitioners, parents, community members, policy-makers, and other stakeholders in education. This will help replicate measures and mechanisms necessary to consistently determine the degree of individuals' 'resiliency restorative defensive guard'. Future research in positive education should focus on exploring positive well-being education in African nations and understanding the

impact of positive school environments and family involvement by establishing effective intervention programs in STEM disciplines.

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