

(REVIEW ARTICLE)



The role of mindfulness in giftedness and the contribution of ICT to the education of gifted students

Maria Lialiou *

Department of Greek Philology, Democritus University of Thrace, Greece.

GSC Advanced Research and Reviews, 2025, 25(02), 119-127

Publication history: Received on 03 October 2025; revised on 08 November 2025; accepted on 11 November 2025

Article DOI: <https://doi.org/10.30574/gscarr.2025.25.2.0341>

Abstract

Giftedness is a condition characterised by a high degree of innate talent, ability, or intelligence. Gifted individuals are distinguished by their perceptiveness, creative imagination, empathy, perfectionism, and strong self-confidence. Mindfulness refers to a state of focused attention on the present moment and is associated with reduced stress, enhanced self-regulation, and improvements in both mental health and overall quality of life. Mindfulness interventions can be beneficial for gifted students, as they contribute to better attention control, strengthened social skills, and improved academic performance. Since gifted students possess creativity and exceptional memory abilities, they require learning environments that provide stimulation and motivation, such as those supported by new technologies. This article, through a literature review, seeks to explore the role of mindfulness in relation to giftedness. It also examines the importance of utilising ICT—such as Robotics and Artificial Intelligence—in the education of gifted students.

Keywords: Mindfulness; Giftedness; ICT; Virtual Environment; Robotics; Artificial Intelligence.

1. Introduction

Giftedness is defined by the American Psychological Association as a condition characterised by a high degree of innate talent, ability, or intelligence that manifests at an early age. According to Gagné, giftedness refers to the utilisation of innate talents that can place a child among the top performers of their age group in at least one domain [21]. It is also worth noting that Gagné was the first to distinguish between the concepts of giftedness and talent, asserting that “no one can become talented without being gifted” [40]. Renzulli also maintained that giftedness occurs when high ability, strong motivation, and a high degree of creativity interact. More generally, the difficulty of formulating a specific definition of giftedness leads to challenges in its assessment. Nevertheless, defining the concept of giftedness is of vital importance for the design of appropriate educational programmes for gifted children. It is often difficult, however, to clearly distinguish between the notions of the genius child, the gifted child, and the prodigy, as these terms are closely interrelated [21]. Education for gifted individuals is based on the view that such persons demonstrate exceptional abilities in areas such as intelligence, creativity, the arts, athletics, and leadership [25]. Gifted individuals are characterised by their perceptiveness, creative imagination, empathy, strong sense of justice, perfectionism, respect for others’ opinions, responsibility, and high levels of self-esteem and self-confidence. In order to identify a gifted student and provide appropriate guidance, it is essential to establish an educational framework designed to meet the needs of both pupils and teachers. For this reason, both educators and parents play a crucial role in identifying gifted students and nurturing their abilities. A gifted child will reveal their talents only when they feel genuinely acknowledged and valued. Constructive collaboration between teachers and parents will ultimately lead to the development of individuals who can make valuable contributions to society. The use of digital tools in the education of gifted students aims to cultivate creativity and metacognitive skills. Indeed, gifted individuals tend to use digital media with particular proficiency [21].

* Corresponding author: Maria Lialiou

The nine-level model of giftedness emphasises the importance of cognitive and self-regulatory skills in the learning process. Self-regulation refers to an individual's ability to observe themselves and maintain control. This model of giftedness provides guidance for both the cultivation of the mind and the improvement of behaviour—elements essential to achieving happiness. In the Triarchic Theory of Intelligence, Sternberg refers to three types of intelligence: analytical, practical, and creative. Analytical intelligence concerns cognitive and metacognitive abilities; practical intelligence relates to the acquisition of knowledge through observation; and creative intelligence involves innovation arising from the integration of experience and knowledge. Sternberg argued that intelligence depends on both environmental and inherent factors, such as impulsivity, lack of self-confidence or motivation, fear of failure, and procrastination. The nine-level model of giftedness demonstrates that adaptability and emotional regulation are higher-order cognitive processes upon which behaviour and success depend. Therefore, a student's success is determined by their ability to utilise all three types of intelligence. In conclusion, the nine-level model of giftedness represents a holistic approach that seeks to promote students' physical, intellectual, and psychological well-being, fostering a mindful way of life [18].

Mindfulness is a state of focused attention on the “here and now”, accompanied by an absence of judgement [23, 19, 22]. The practice of mindfulness among adults is associated with well-being, whereas an inability to remain focused on the present moment negatively affects happiness. It has been suggested that Montessori educational practices constitute a form of mindfulness education. Indeed, both mindfulness practice and Montessori pedagogy place particular emphasis on deep concentration, which contributes to personal development, balance, joy, and the formation of healthy interpersonal relationships. Moreover, Montessori education highlights techniques reminiscent of mindfulness practices, such as the integration of mind and body or specific exercises like “Walking on the Line” and “Silence”. In Buddhist practice, mindfulness is cultivated through meditation, where focusing one's thoughts—for example, on breathing—enhances attentional concentration. However, focused attention is not confined to meditation; rather, it is recommended as a continuous practice applicable to all aspects of life, such as listening or eating [22]. Mindfulness meditation as an intervention for pain reduction has been employed in Western behavioural medicine for more than three decades. The Mindfulness-Based Stress Reduction (MBSR) programme was originally designed for adults with chronic pain and anxiety disorders [28]. It is an eight- to ten-week programme involving 10 to 40 participants, organised into either homogeneous (according to disorder) or heterogeneous groups. Sessions include mindfulness meditation and the practice of mindfulness during yoga postures as well as in stressful situations [12]. Teaching mindfulness has been shown to reduce stress, enhance self-regulation, and improve focused attention, mental health, and overall quality of life [28]. Nevertheless, mindfulness exercises are often perceived by participants as difficult or demanding—an understandable reaction, given that the human mind tends to wander, ruminate on the past, or worry about the future. Mindfulness exercises, however, require a conscious effort to remain anchored in the “here and now”. Through this process, individuals can strengthen their insight, learning, and self-regulation [6].

The positive and useful contributions that digital technologies provide to the field of education should be highlighted as a final point. Mobile devices (41–43), a range of ICT apps (44–48), AI & STEM ROBOTICS and games (49–52) are some examples of the technologies that enable and improve educational processes including evaluation, intervention, and learning. Additionally, the use of ICTs in conjunction with theories and models of metacognition, mindfulness, meditation, and the development of emotional intelligence [53–66], accelerates and improves educational practices and outcomes, especially for gifted student's education.

2. Mindfulness in Giftedness

Gifted students are not easily protected from stress and depression, even when enrolled in specialised learning programmes [10]. According to one study, gifted students following the International Baccalaureate (IB) curriculum exhibited the same level of stress as their non-gifted peers [32]. The challenges some of these students face may be related to familial and social factors, neurodevelopmental issues (such as learning disabilities or autism), or interpersonal difficulties [10]. Mindfulness strategies can address both the academic and emotional needs of gifted students. Specifically, practising mindfulness enhances attention and concentration, reduces stress, and can induce structural and functional changes in the brain, including modifications in the hippocampal cortex and amygdala. Moreover, mindfulness strategies positively influence executive functions, including working memory, cognitive flexibility, and self-control in gifted learners. The practice of gratitude is a mindfulness strategy through which an individual recognises the goodness in their life, fostering connections with others, with nature, or even with a higher power. Through practising gratitude, gifted students develop an appropriate emotional foundation to cope with life's adversities. Other mindfulness techniques that can remodel the brain and support gifted students in emotional regulation include deep listening and storytelling [33].

The two core elements of mindfulness are self-regulation and curiosity. Self-regulation is closely associated with the ability to maintain focused attention, which is why mindfulness-based interventions typically incorporate techniques to enhance attention and present-moment awareness. Such programmes contribute both to the reduction of negative emotions and depressive symptoms and to the cultivation of empathy. Similar outcomes have been reported in studies conducted with children and adolescents. Mindfulness interventions are particularly suitable for gifted students, as they support self-regulation, enhance social skills, and improve academic performance. Given that gifted students may struggle with attention and self-regulation, mindfulness interventions can be especially beneficial for this population [31]. A study by Heshmati & Ahmadkhanloo (2017) examined the relationship between mindfulness, emotional intelligence, and self-regulation in gifted students. The sample consisted of 144 students (77 boys and 67 girls) aged 14 to 18 from Tabriz. The research instruments included the Bar-On EQ-i, the Five Facet Mindfulness Questionnaire (FFMQ), and a self-regulation questionnaire (SRQ). The results indicated that mindfulness contributes to attentional self-regulation and reduces stress by enhancing positive emotions. Furthermore, gifted students' mindfulness appears to be largely shaped by interpersonal relationships. Individuals with high mindfulness levels demonstrate strong metacognitive awareness and are highly effective in all tasks they undertake. In conclusion, mindfulness and emotional intelligence play a crucial role in the emotional self-regulation of gifted students [15].

Additionally, Alfodhly et al. (2021) highlighted the decisive role of the family environment in shaping mindfulness among gifted students. They also found that mindfulness is closely associated with metacognitive and social skills in gifted learners [1]. Individuals who practice mindfulness enjoy a higher quality of life, managing both pain and everyday challenges more effectively. Heshmati & Maanifar (2018) investigated the relationship between metacognition, mindfulness, and spiritual well-being in gifted students. Their sample consisted of 160 gifted students from Tabriz, Iran, and questionnaires were used as research tools. Results indicated that mindfulness is directly associated with spiritual well-being [14]. Similarly, a study conducted with 41 adults found that Mindfulness-Based Stress Reduction (MBSR) training induces brain changes, enabling more effective responses to negative emotions under stress. Specifically, the intervention was found to activate the left hemisphere of the brain, which is linked to positive emotional responses. The programme lasted eight weeks, with effects observable for at least four months post-intervention [34].

Comparable findings emerged from a study conducted in Spain with 22 gifted children to evaluate the effectiveness of a mindfulness programme. The intervention comprised eight 90-minute sessions, one of which involved the children's parents. Results indicated that the programme improved gifted children's emotional skills and reduced negative symptoms [37]. Additionally, research conducted with gifted adolescents in Guangzhou, China, found that mindfulness combined with life skills training is associated with increased resilience and reduced emotional and behavioural problems. The sample included 152 adolescents from low-income families, assessed using questionnaires. The study revealed that gifted girls faced more emotional difficulties than gifted boys; however, mindfulness combined with life skills education significantly contributed to reducing these emotional and behavioural issues [16]. Finally, a study involving 24 gifted students investigated the impact of a mindfulness programme. The research questions addressed: (1) how students would describe their experience learning mindfulness techniques; (2) their reactions to the techniques; (3) emerging patterns or themes in the data; and (4) potential consequences of mindfulness instruction for gifted learners. Participants, aged 7 to 11, attended a public school in southeastern Florida and engaged in a ten-week intervention comprising ten mindfulness techniques, delivered once weekly for 30 minutes. Data were collected through interviews and observations. Findings indicated that mindfulness contributed to better emotional regulation, reduced stress, and enhanced awareness and creativity among gifted students [13].

3. The Contribution of ICT to the Education of Gifted Students

Gifted children learn more quickly than their peers and are capable of assimilating a wide range of information [39, 30]. They often begin reading at an early age and are distinguished by their creativity, extensive vocabulary, and exceptional memory skills. They frequently encounter difficulties in communicating with peers and therefore tend to prefer the company of older children or even adults. Additionally, gifted students have their own learning pace, exhibit synthetic thinking, and enjoy collaborating with peers who share similar interests. Consequently, they require a personalised learning environment that provides autonomy, allowing their intellectual abilities to flourish [39]. Gifted learners also benefit from educational environments that are motivating and demand high-level skills, as is the case with new technologies [38]. The use of Information and Communication Technologies (ICT) in the education of gifted students contributes to the development of creativity and critical thinking while simultaneously fostering active participation within the classroom [20]. Furthermore, ICT enriches the learning process and cultivates both cognitive and social skills in gifted students [11]. For example, online discussions represent an ICT application suitable for gifted learners. These virtual classrooms facilitate synchronous or asynchronous discussion of various topics, enabling gifted students to communicate with one another and reducing feelings of isolation [20]. The "digital classroom" is an innovative method used at the Kebangsaan University laboratory in Malaysia to educate gifted students. Teachers utilise ICT tools such as

social media, online learning portals, and email to teach effectively. This approach allows unrestricted access to knowledge. Gifted students require a curriculum capable of equipping them to face forthcoming challenges. Differentiated instruction or computer-based autonomous learning enhances the learning potential of these students [5]. Differentiated instruction is a method specifically employed in teaching gifted students and can be implemented through various techniques, such as curriculum compacting and enrichment [24]. Within a differentiated instruction framework, gifted learners can select their preferred learning methods and pace, thereby strengthening their self-confidence [8]. Curriculum compacting is a teaching technique that modifies content to meet the specific needs of gifted students. Curriculum enrichment, on the other hand, makes the learning content more challenging and allows students to explore cognitive topics in greater depth [24]. Moreover, through online learning platforms such as Massive Open Online Courses (MOOCs) and the Khan Academy, gifted students can access courses from top universities or participate in virtual classrooms. Within these classrooms, teachers select resources that facilitate better comprehension of the material and allow monitoring of student progress. Online learning portals also provide videos covering topics across various subjects, effectively bringing the classroom experience into the home, while access to these online learning programmes is free of charge. In conclusion, the “digital classroom” enables gifted students to interact with others using multiple communication methods, including chat rooms, email, webinars, and video conferencing, all facilitated by computer technology [5].

3.1. Virtual Learning Environment

The education of gifted students can be conducted within a virtual learning environment. In such a learning setting, the curriculum is integrated with technological tools, enabling differentiated instruction. Students can complete their assignments by utilising the Internet, electronic databases, and hyperlinks. Within the virtual learning environment, students gain exposure to culture through visits to museums and cultural institutions and are introduced to a variety of ideas. As the Internet represents an inexhaustible source of information, it renders learning an engaging and stimulating process for gifted students. More generally, computers modernise traditional teaching methods and enhance the education of gifted learners. In addition to virtual museum tours, educators can employ online educational games. Numerous websites offer high-quality educational games for gifted students, who tend to enjoy stimulating and challenging exercises [24]. Gifted students require personalised learning programmes [2], and research has shown that they often combine the use of the Internet with traditional textbooks to optimise the learning process. These learners benefit from a student-centred environment that promotes autonomy, innovation, and flexibility online. Younger gifted students, in particular, prefer online lessons, finding them less demanding. Through online learning, gifted students can access courses not offered in their schools, accelerate the learning process, and benefit from flexible schedules, allowing time for other pursuits. Furthermore, virtual classrooms encourage social interaction and the exchange of ideas and opinions among gifted students. A similar preference for online courses has been observed among gifted adolescents, as these help them achieve high academic performance. Additionally, online discussion forums enable gifted students to engage in deeper thinking on various topics, while the sharing of images and videos fosters peer-to-peer communication [27]. A study conducted in a virtual learning laboratory found that online instruction is particularly effective for gifted secondary school students, as it allows for personalised work [35]. Finally, a study investigating the perspectives of gifted students regarding virtual learning programmes involved a sample of five gifted boys aged 11 and 12. The participants expressed a preference for the opportunities to interact with their peers, while the content and quality of instruction were equally important to them [29].

3.2. Laptops

Technology serves as a means of fostering creativity and differentiated instruction for gifted students. According to research, laptops contribute to learning and enhance the initiative of these students. The Space Race application, for instance, is a computer-based tool used to evaluate the strategic thinking skills of gifted learners. Within the game, these students demonstrated complex thinking and tended to select more challenging strategies. Additionally, the Self-Regulation and Concentration Test (SRTC) is another computer-based game that examines the importance of self-regulation for gifted students. The game revealed how students remained focused on their tasks, disregarding distractions presented on the computer screen. The findings indicated that primary school gifted students maintained concentration on their objectives, displaying high motivation and substantial memory capacity. Moreover, the use of technology in the science classroom proved particularly effective for gifted primary students. By utilising digital cameras and handheld computers, students enhanced their research skills and improved their proficiency in using technological tools. Other studies have shown that the electronic publication of student-authored books, as well as the use of online resources, was especially effective. Specifically, gifted students demonstrated a highly selective approach when using software to gather materials from the Internet for their school projects [27].

3.3. Robotics

According to research, the integration of robotics within the classroom contributed to enhancing the creativity of gifted primary school students in the Kingdom of Bahrain. Engagement with robotics generates considerable interest, particularly among gifted children. This is because gifted students tend to prefer challenging tasks that cultivate their creative and mathematical abilities. In the context of robotics activities, children can fully utilise their creativity to construct a robot. Gifted students are drawn to complex problems, making robotics projects particularly suitable for them. The use of robotics also contributed to a better understanding of STEM concepts and fostered autonomous learning skills. LEGO robotics, in particular, assisted students by improving their problem-solving abilities. In a study conducted with 75 gifted students aged 9–14, the benefits of robotics were observed in data processing and abstract thinking. Other studies corroborate the positive impact of robotics on the development of creative and critical thinking, as well as the enhancement of self-confidence. The aim of Jamali's (2020) pilot study was to examine the effect of robotics on the improvement of students' creativity. The sample comprised 15 gifted female students aged 11 from Bahrain, all from a middle socio-economic background. They had no prior experience with LEGO Robotics, only with basic LEGO toys. The students were divided into four subgroups of three to four individuals each. During the intervention, an enrichment programme using LEGO Robotics WeDo 2.0 was implemented. The results indicated that the LEGO robotics intervention significantly enhanced the creative thinking of the gifted female students [17].

3.4. Artificial Intelligence

Artificial Intelligence (AI) can be effectively utilised in education, offering numerous possibilities. Specifically, it can assess students' levels, function as an educator by providing answers, and even make decisions tailored to the capabilities of each student. AI applications are of critical importance for gifted students, as they contribute to the development of their cognitive functions. Through AI, gifted students can communicate with one another, discuss and express their opinions, and establish connections with educational institutions. Applications within virtual learning environments can be divided into three categories. The first category involves e-learning using self-training algorithms and neural networks. The second category focuses on collaborative intelligent learning, in which AI collects data regarding participating students within an adaptive environment. The third category utilises intelligent virtual reality, enabling students to interact with realistic processes and thereby become productive in generating new ideas [3]. Science and Art Centres in Turkey, which provide education for gifted students, aim to foster creativity and inventiveness, enhance social interaction, and develop skills in areas such as leadership and communication. It is therefore particularly important for gifted students to have the opportunity to explore subjects appropriate for their age, while also being offered educational opportunities aligned with their interests and talents. AI, as one of the most significant technological advancements of the modern era, is increasingly integrated across numerous systems. Consequently, it is crucial for gifted students who are interested in AI to learn how it operates, enabling them to leverage it in solving problems they encounter. The inclusion of AI as a curricular subject within the technological programmes of Science and Art Centres further underscores its importance for the education of gifted students [4].

3.5. Mobile Applications, STEM Education, and Augmented Reality Applications

During the COVID-19 pandemic, when schools remained closed, the Turkish Ministry of Education developed a mobile application aimed at providing educational support to students with special educational needs, including gifted students. The purpose of the study was to examine how gifted students experienced the learning process through the mobile application entitled "I am special, I am in education". The sample consisted of 10 gifted students, and the research instruments included interviews and student journals. The results indicated that the gifted students benefited from using the application to support their learning [36]. Furthermore, a study conducted by Seoul National University found that integrating arts and crafts into STEM education particularly benefits gifted students, as it fosters the development of their creative thinking [9].

The aim of the research conducted by Önal & Önal (2021) was to examine the performance and level of engagement of gifted students following the teaching of astronomy using augmented reality applications [7]. In addition, the study explored the perceptions of gifted students regarding augmented reality applications. The sample consisted of 51 gifted students, divided into an experimental group (25 students) and a control group (26 students), all from the Science and Arts Centre in Turkey. The results revealed that teaching astronomy through augmented reality applications had a positive effect on both the performance and sustained interest of gifted students in the experimental group. Additionally, the students in the experimental group were so impressed by the augmented reality applications that they suggested their use in teaching other subjects as well [26].

4. Conclusion

The practice of mindfulness is closely associated with well-being, quality of life, and the attainment of happiness, as it contributes to the reduction of anxiety and the enhancement of self-regulation. Mindfulness strategies, such as expressing gratitude or engaging in deep listening, can contribute to the restructuring of the brain through changes occurring in the hippocampal cortex and amygdala cells. In the case of gifted students, mindfulness strategies have a positive impact on executive functions, such as working memory and attention. Furthermore, these interventions support self-regulation, enhance social skills, and improve academic performance.

Gifted students acquire knowledge rapidly, possess synthetic thinking, exceptional memory capacity, and a rich vocabulary, and are distinguished by their observance and creativity. Therefore, they require a personalised learning environment that both motivates them and demands high-level skills, as is the case with new technologies. The integration of ICT, including robotics, artificial intelligence, and augmented reality applications, into the education of gifted students enriches the learning process, cultivates their cognitive and social skills, and helps them feel actively engaged within the classroom. In conclusion, gifted students need a curriculum that equips them to face the challenges they will encounter throughout life.

Compliance with ethical standards

Acknowledgments

The Authors would like to thank the SPECIALIZATION IN ICTs AND SPECIAL EDUCATION: PSYCHOPEDAGOGY OF INCLUSION Postgraduate studies Team, for their support.

Disclosure of conflict of interest

The Authors proclaim no conflict of interest.

References

- [1] Alfodhly, R., Aljafari, A., Alabdullatif, M., Alghamdi, A., Alotaibi, B., & Alarfaj, A. (2021). Mindfulness and its relationship to social skills among gifted students. *Journal of Gifted Education and Creativity*, 8(2), 33-55.
- [2] Ali, H., & Alrayes, A. (2019). "The Role of Technology in Gifted and Talented Education: A Review of Descriptive and Empirical Research" in University of Bahrain-English Language Center: The 2nd International Conference Foundation Programs: Innovation and Technology 'Shaping the Future of ELT', *KnE Social Sciences*, 26-38. DOI: 10.18502/kss.v3i24.5165.
- [3] Al-Otaibi, A. B., Al-Taher, E., Alduraywish, A., Alkaddadat, S., & Alarfaj, A. (2023). Designing An Adaptive Environment Based On Artificial Intelligence Applications To Develop The Gifted Students' Digital Skills: A Proposed Perception In Light Of Reality And Needs. *Journal of Namibian Studies*, 34, 5616-5650.
- [4] Aydin, M., & Yurdugül, H. (2024). Developing a Curriculum Framework of Artificial Intelligence Teaching for Gifted Students. *Kastamonu Education Journal*, 32(1), 14-37. DOI: 10.24106/kefdergi.1426429.
- [5] Bakar, A. Y. A. (2016). "Digital Classroom": An Innovative Teaching and Learning Technique for Gifted Learners Using ICT. *Creative Education*, 7, 55-61. <http://dx.doi.org/10.4236/ce.2016.71006>.
- [6] Creswell, J. D. (2017). Mindfulness Interventions. *Annual Review of Psychology*, 68, 491-516. <https://doi.org/10.1146/annurev-psych-042716-051139>.
- [7] David, A., Kiose, V., Maikou, A., Tzelepi, E., & Stathopoulou, A. (2023). The impact of ICTs (Robotics, VR, AI, Games) on gifted students' education. *Eximia Journal*, 8, 31-50.
- [8] Dimitriadou, D., Emin, N., Kiremitsidou, P. M., & Mpouzou, S. (2024). The education of gifted students in Greece and Europe and the use of ICT. *GSC Advanced Research and Reviews*, 18(03), 124-141. <https://doi.org/10.30574/gscarr.2024.18.3.0086>.
- [9] Drigas, A., Kontopoulou, M. T., Gougoudi, A., Kantzavelou, K., & Mertzioti, L. (2022). Educating Gifted Students and the role of ICTs and STEM. *Technium Sustainability*, 2(4), 63-78.

- [10] Duplenne, L., Bourdin, B., Fernandez, D. N., Blondelle, G., & Aubry, A. (2024). Anxiety and Depression in Gifted Individuals: A Systematic and Meta-Analytic Review. *Gifted Child Quarterly*, 68(1), 65-83. DOI:10.1177/00169862231208922.
- [11] Galitskaya, V., Batzaka, M., Kasapoglou, E., & Drigas, A. (2022). Giftedness: A Three Way Approach and the role of ICTs. *Technium Social Sciences Journal*, 30, 238-251.
- [12] Grossman, P., Niemann, L., Schmidt, S., & Walach, H. (2004). Mindfulness-based stress reduction and health benefits: A meta-analysis. *Journal of Psychosomatic Research*, 57(1), 35-43. [https://doi.org/10.1016/S0022-3999\(03\)00573-7](https://doi.org/10.1016/S0022-3999(03)00573-7).
- [13] Haberlin, S., & O'Grady, P. (2018). Gifted from the "Inside out": Teaching mindfulness to high-ability children. *Gifted Education International*, 34(2), 173-180. <https://doi.org/10.1177/0261429417716351>.
- [14] Heshmati, R., & Maanifar, S. (2018). Metacognition, Mindfulness, and Spiritual Well-being in Gifted High School Students. *Health Spiritual Med Ethics*, 5(3), 22-8.
- [15] Heshmati, R., & Ahmadkhanloo, E. (2017). Emotional intelligence, emotional self-regulation and dispositional mindfulness in high school intelligent students. *Mediterranean Journal of Clinical Psychology*, 5(2). DOI: <https://doi.org/10.6092/2282-1619/2017.5.1552>.
- [16] Huang, C. C., Chen, Y., Jin, H., Stringham, M., Liu, C., & Oliver, C. (2020). Mindfulness, Life Skills, Resilience, and Emotional and Behavioral Problems for Gifted Low-Income Adolescents in China. *Front. Psychol.*, 11, 594. DOI:10.3389/fpsyg.2020.00594.
- [17] Jamali, U. A. Y. (2020). Fostering creativity using robotics among gifted primary school students. *Gifted and Talented International*, 34(1-2), 71-78. DOI: 10.1080/15332276.2020.1711545.
- [18] Karyotaki, M., Lele, C., & Skianis, C. (2022). Inclusive Education based on the 9-Layered Model of Giftedness and the Role of Digital Technologies. *Eximia Journal*, 5(1), 702-716.
- [19] Khoury, B., Sharma, M., Rush, S. E., Fournier, C. (2015). Mindfulness-based stress reduction for healthy individuals: A meta-analysis. *Journal of Psychosomatic Research*, 78(6), 519-528. <https://doi.org/10.1016/j.jpsychores.2015.03.009>.
- [20] Kontostavrou, E. Z., & Drigas, A. (2019). The Use of Information and Communications Technology (I.C.T.) in Gifted Students. *International Journal of Recent Contributions from Engineering Science & IT (ijES)*, 7(2). DOI: 10.3991/Ijes.v7i2.10815.
- [21] Küçükoba, E. (2023). Digital Parenting and Digital Childhood: Raising Gifted Children Born into the Digital Age. *Journal of Interdisciplinary Education: Theory and Practice*, 5(1), 1-10. <https://doi.org/10.47157/jietp.1178915>.
- [22] Lillard, A. S. (2011). Mindfulness Practices in Education: Montessori's Approach. *Mindfulness*, 2, 78-85. DOI: 10.1007/s12671-011-0045-6.
- [23] Mitsea, E., Drigas, A., & Skianis, C. (2022). Mindfulness for Anxiety Management and Happiness: The Role of VR, Metacognition, and Hormones. *Technium BioChemMed*, 3(3), 37-52. DOI: 10.47577/biochemmed.v3i3.7343.
- [24] Mulrine, C. F. (2007). Creating a Virtual Learning Environment for Gifted and Talented Learners. *Gifted Child Today*, 30(2). <https://doi.org/10.4219/gct-2007-30>.
- [25] Ogurlu, U. (2021). A meta-analytic review of emotional intelligence in gifted individuals: A multilevel analysis. *Personality and Individual Differences*, 171. <https://doi.org/10.1016/j.paid.2020.110503>.
- [26] Önal, N. T., & Önal, N. (2021). The effect of augmented reality on the astronomy achievement and interest level of gifted students. *Education and Information Technologies*, 26, 4573-4599. <https://doi.org/10.1007/s10639-021-10474-7>.
- [27] Periathiruvadi, S., & Rinn, A. N. (2012). Technology in Gifted Education: A Review of Best Practices and Empirical Research. *JRTE*, 45(2), 153-169. <https://doi.org/10.1080/15391523.2012.10782601>.
- [28] Perry-Parrish, C., Copeland-Linder, N., Webb, L., & Sibinga, E. M. S. (2016). Mindfulness-Based Approaches for Children and Youth. *Current Problems in Pediatric and Adolescent Health Care*, 46(6), 172-178. <https://doi.org/10.1016/j.cppeds.2015.12.006>.
- [29] Potts, J. A. (2019). Profoundly Gifted Students' Perceptions of Virtual Classrooms. *Gifted Child Quarterly*, 63(1), 58-80. DOI: 10.1177/0016986218801075.

- [30] Şahin, F., & Levent, F. (2015). Examining the methods and strategies which classroom teachers use in the education of gifted students. *The Online Journal of New Horizons in Education*, 5(3), 73-82.
- [31] Sharp, J. E., Niemiec, R. M., & Lawrence, C. (2017). Using mindfulness-based strengths practices with gifted populations. *Gifted Education International*, 33(2), 131-144. DOI: 10.1177/0261429416641009.
- [32] Shaunessy, E., & Suldo, S. M. (2010). Strategies Used by Intellectually Gifted Students to Cope With Stress During Their Participation in a High School International Baccalaureate Program. *Gifted Child Quarterly*, 54(2), 127-137. DOI: 10.1177/0016986209355977.
- [33] Sisk, D. (2021). Managing the Emotional Intensities of Gifted Students with Mindfulness Practices. *Educ. Sci.*, 11, 731. <https://doi.org/10.3390/educsci11110731>.
- [34] Sisk, D. A., & Kane, M. (2019). Exploring Mindfulness to Create Conditions to Help Gifted Students Bloom and Flourish. *International Journal for Talent Development and Creativity*, 7, 141-154.
- [35] Swan, B., Coulombe-Quach, X. L., Huang, A., Godek, J., Becker, D., & Zhou, Y. (2015). Meeting the Needs of Gifted and Talented Students: Case Study of a Virtual Learning Lab in a Rural Middle School. *Journal of Advanced Academics*, 26(4), 294-319. DOI: 10.1177/1932202X15603366.
- [36] Tan, S. (2022). Remote learning through a mobile application in gifted education. *Gifted Education International*, 38(1), 95-114. DOI: 10.1177/02614294211069627.
- [37] Turanzas, J. A., Cordon, J. R., Choca, J. P., & Mestre, J. M. (2020). Evaluating the APAC (Mindfulness for Giftedness) Program in a Spanish Sample of Gifted Children: a Pilot Study. *Mindfulness*, 11, 86-98. <https://doi.org/10.1007/s12671-018-0985-1>.
- [38] Uzunboyulu, H., Ozcinar, Z., Kolotushkin, S. M., Kalugina, O. A., & Zulfugarzade, T. E. (2019). Research and Trends in Technology and Gifted Child: Results of a Content Analysis. *ijET*, 14(22). <https://doi.org/10.3991/ijet.v14i22.11751>.
- [39] Vouglanis, T., & Driga, A. M. (2023). Factors affecting the education of gifted children and the role of digital technologies. *TechHub Journal*, 6, 28-39.
- [40] Vouglanis, T., Driga, A. M., & Drigas, A. (2022). Charismatic Children: Heredity, Environment and ICTs. *Technium Sustainability*, 2(5), 1-15.
- [41] Stathopoulou, et all 2018, Mobile assessment procedures for mental health and literacy skills in education. *International Journal of Interactive Mobile Technologies (ijIM)*, 12(3), 21-37, <https://doi.org/10.3991/ijim.v12i3.8038>
- [42] Stathopoulou A, Karabatzaki Z, Tsiros D, Katsantoni S, Drigas A, 2019. Mobile apps the educational solution for autistic students in secondary education , *Journal of Interactive Mobile Technologies (IJIM)* 13 (2), 89-101, <https://doi.org/10.3991/ijim.v13i02.9896>
- [43] Drigas A, DE Dede, S Dedes 2020 Mobile and other applications for mental imagery to improve learning disabilities and mental health International , *Journal of Computer Science Issues (IJCSI)* 17 (4), 18-23 DOI:10.5281/zenodo.3987533
- [44] Drigas A, Petrova A 2014 ICTs in speech and language therapy , *International Journal of Engineering Pedagogy (ijEP)* 4 (1), 49-54 <https://doi.org/10.3991/ijep.v4i1.3280>
- [45] Alexopoulou, A., Batsou, A., & Drigas, A. S. (2019). Effectiveness of Assessment, Diagnostic and Intervention ICT Tools for Children and Adolescents with ADHD. *International Journal of Recent Contributions from Engineering, Science & IT (ijES)*, 7(3), pp. 51–63. <https://doi.org/10.3991/ijes.v7i3.11178>
- [46] Bamicha V, Drigas A, 2022 The Evolutionary Course of Theory of Mind - Factors that facilitate or inhibit its operation & the role of ICTs , *Technium Social Sciences Journal* 30, 138-158, DOI:10.47577/tssj.v30i1.6220
- [47] Galitskaya, V., & Drigas, A. (2020). Special Education: Teaching Geometry with ICTs. *International Journal of Emerging Technologies in Learning (ijET)*, 15(06), pp. 173–182. <https://doi.org/10.3991/ijet.v15i06.11242>
- [48] Chaidi I, Drigas A, 2022 "Parents' views Questionnaire for the education of emotions in Autism Spectrum Disorder" in a Greek context and the role of ICTs , *Technium Social Sciences Journal* 33, 73-9, DOI:10.47577/tssj.v33i1.6878
- [49] Lytra N, Drigas A 2021 STEAM education-metacognition-Specific Learning Disabilities , *Scientific Electronic Archives journal* 14 (10) <https://doi.org/10.36560/141020211442>

- [50] Demertzi E, Voukelatos N, Papagerasimou Y, Drigas A, 2018 Online learning facilities to support coding and robotics courses for youth , *International Journal of Engineering Pedagogy (ijEP)* 8 (3), 69-80, <https://doi.org/10.3991/ijep.v8i3.8044>
- [51] Chaidi I, Drigas A 2022 Digital games & special education , *Technium Social Sciences Journal* 34, 214-236 <https://doi.org/10.47577/tssj.v34i1.7054>
- [52] Doulou A, Drigas A 2022 Electronic, VR & Augmented Reality Games for Intervention in ADHD , *Technium Social Sciences Journal*, 28(1), 159-169. <https://doi.org/10.47577/tssj.v28i1.5728>
- [53] Drigas A, Mitsea E, Skianis C 2021 The Role of Clinical Hypnosis & VR in Special Education , *International Journal of Recent Contributions from Engineering Science & IT (IJES)* 9(4), 4-18. <https://doi.org/10.3991/ijes.v9i4.26147>
- [54] V Galitskaya, A Drigas 2021 The importance of working memory in children with Dyscalculia and Ageometria , *Scientific Electronic Archives journal* 14 (10) <https://doi.org/10.36560/141020211449>
- [55] Drigas A, Mitsea E, Skianis C. 2022, Virtual Reality and Metacognition Training Techniques for Learning Disabilities , *SUSTAINABILITY* 14(16), 10170, <https://doi.org/10.3390/su141610170>
- [56] Drigas A., Sideraki A. 2021 Emotional Intelligence in Autism , *Technium Social Sciences Journal* 26(1), 80-92, <https://doi.org/10.47577/tssj.v26i1.5178>
- [57] Mitsea E, Drigas A., Skianis C, 2022 Breathing, Attention & Consciousness in Sync: The role of Breathing Training, Metacognition & Virtual Reality , *Technium Social Sciences Journal* 29, 79-97 <https://doi.org/10.47577/tssj.v29i1.6145>
- [58] Chaidi, I. , & Drigas, A. (2022). Social and Emotional Skills of children with ASD: Assessment with Emotional Comprehension Test (TEC) in a Greek context and the role of ICTs. , *Technium Social Sciences Journal*, 33(1), 146–163. <https://doi.org/10.47577/tssj.v33i1.6857>
- [59] Kontostavrou, E. Z., & Drigas, A. 2021. How Metacognition Supports Giftedness in Leadership: A Review of Contemporary Literature. , *International Journal of Advanced Corporate Learning (ijAC)*, 14(2), pp. 4–16. <https://doi.org/10.3991/ijac.v14i2.23237>
- [60] Drigas A, Mitsea E, Skianis C, 2022 Intermittent Oxygen Fasting and Digital Technologies: from Antistress and Hormones Regulation to Wellbeing, Bliss and Higher Mental States , *Technium BioChemMed journal* 3 (2), 55-73
- [61] Drigas A, Mitsea E 2021 Neuro-Linguistic Programming & VR via the 8 Pillars of Metacognition X 8 Layers of Consciousness X 8 Intelligences. *Technium Social Sciences Journal* 26(1), 159–176. <https://doi.org/10.47577/tssj.v26i1.5273>
- [62] Drigas A, Papoutsis C, Skianis C, Being an Emotionally Intelligent Leader through the Nine-Layer Model of Emotional Intelligence-The Supporting Role of New Technologies, *Sustainability MDPI* 15 (10), 1-18
- [63] Drigas A, Mitsea E 2022 Breathing: a Powerful Tool for Physical & Neuropsychological Regulation. The role of Mobile Apps , *Technium Social Sciences Journal* 28, 135-158. <https://doi.org/10.47577/tssj.v28i1.5922>
- [64] Drigas A, Karyotaki M, Skianis C, 2017 Success: A 9 layered-based model of giftedness , *International Journal of Recent Contributions from Engineering, Science & IT* 5(4) 4-18, <https://doi.org/10.3991/ijes.v5i4.7725>
- [65] Drigas A, Mitsea E, Skianis C 2021. The Role of Clinical Hypnosis and VR in Special Education , *International Journal of Recent Contributions from Engineering Science & IT (IJES)* 9(4), 4-17.
- [66] Drigas A, Bakola L, 2021 The 8x8 Layer Model Consciousness-Intelligence-Knowledge Pyramid, and the Platonic Perspectives , *International Journal of Recent Contributions from Engineering, Science & IT (IJES)* 9(2) 57-72, <https://doi.org/10.3991/ijes.v9i2.22497>