

A Systematic Review of Studies on the Education of Gifted Individuals in the Field of Visual Ability: A Bibliometric Analysis

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Abstract

Gifted individuals-those with exceptional academic, artistic, social, or leadership potential-represent an important resource for societies. The processes of revealing and developing the potential of gifted individuals in the field of visual arts require the systematic support of multidimensional skills such as creative production, aesthetic judgment, and visual-spatial thinking. However, the literature lacks a comprehensive overview showing general research trends on visual-arts gifted education, which countries and scholars lead this work, and how researchers connect through collaboration, co-citation, or interdisciplinary approaches. Mapping the existing body of research is therefore necessary to inform future programs and studies. Based on this rationale, the aim of this study is to examine studies on the education of gifted individuals in the field of visual arts using the bibliometric analysis method. In line with this objective, a search was conducted in the Web of Science (WoS) database using the keywords “gifted”, “art”, “craft”, “visual ability”, “education”, “train*”, “develop*”, and a total of 19 keywords derived from these words. Articles in English were included. The research's review process began in January 2026 and ended in June 2026, with a total of 439 publications included in the analysis. Content analysis and bibliometric analysis were employed in the analysis of the collected data. The study examined the distribution of publications by year, identified the most prolific authors, the most frequently published journals, and the countries involved. It is believed that the study contributes to the literature by presenting the results of co-author, co-citation, and co-keyword analyses in visual maps, revealing current focuses and research gaps.

Keywords: gifted, visual ability, talent development, bibliometric analysis

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Introduction

Throughout history, gifted individuals have made significant contributions to the world's development thanks to their extraordinary potential in various fields (Uğulu, 2020). Today, giftedness is understood not merely as a one-dimensional concept of superior intelligence, but as a multidimensional construct that can manifest itself in cognitive, artistic and leadership domains (Clark, 2002). Renzulli (2011), one of the leading researchers in the field of giftedness, provided one of the earliest definitions of the multidimensional nature of giftedness. Accordingly, giftedness is defined as the interaction of three fundamental human characteristics: above-average general ability, a high level of commitment to a task, and a high level of creativity; gifted individuals are defined as those who possess these three characteristics, are able to develop them, and can apply them in any field that holds potential value for humanity (Renzulli, 2011). In Turkey, in line with this multidimensional definition, gifted individuals are defined in the Regulation on Special Education Services as those who learn more quickly than their peers, excel in creativity, the arts and leadership, possess special academic ability, are able to understand abstract ideas, enjoy acting independently in their areas of interest, and demonstrate a high level of performance (Ministry of National Education [MEB], 2018).

Within this multidimensional framework, the domain of visual ability stands out. Visual-spatial ability, defined as the capacity to generate, store and transform visual images (Lohman, 1994), is regarded as a cognitive component closely linked to both artistic productivity and, in particular, academic engagement and success in science and engineering fields (Aldhorman, 2025; Andersen, 2014; Xie et al., 2020). Gifted individuals in the visual arts demonstrate exceptional manual dexterity and motor control, the ability to generate independent ideas and evaluate situations from multiple perspectives, outstanding talent in one or more areas of the visual arts, high leadership potential (Boland, 1986), high motivation to produce original ideas or innovations, problem-solving skills (Cukierkorn, 2007; cited in Genç, 2017), advanced drawing skills, and high levels of concentration and memory (Genç, 2016). Conversely, visual-spatial ability lags behind verbal and numerical abilities in giftedness identification processes, a situation which leads to students with visual talents being overlooked (Andersen, 2014; Budakova et al., 2021; Lakin & Wai, 2020). Given that investment in the education of gifted individuals is considered to contribute directly to a country's development, the importance of this gap in the field of visual ability is thought to be all the more evident.

However, although research in the literature on the education of gifted individuals in the field of visual arts has been conducted in a scattered manner across different disciplines and periods, no comprehensive study has been found that systematically evaluates this body of work. It is considered essential to present a comprehensive overview of the existing literature in order to guide the development of programmes and future research into the education of these individuals. Bibliometric analysis is a powerful method that enables the intellectual structure of a research field, its leading authors and its thematic focuses to be revealed from a holistic perspective (Donthu et al., 2021). Within this framework, the aim of the study has been defined as the examination of research on the education of gifted individuals in the field of visual arts using bibliometric analysis. In line with this objective, the following questions were addressed:

1. How are studies on the education of gifted individuals in the field of visual arts distributed by year?

2. How are studies on the education of gifted individuals in the field of visual arts distributed by country?
3. How are studies on the education of gifted individuals in the field of visual arts distributed by journal?
4. How are studies on the education of gifted individuals in the field of visual arts distributed by author?
5. How are studies on the education of gifted individuals in the field of visual arts distributed by inter-author collaboration?
6. How are studies on the education of gifted individuals in the field of visual arts distributed by country and co-authors?
7. What is the distribution of research on the education of gifted individuals in the field of visual arts, based on the common keywords used?
8. What is the distribution of research on the education of gifted individuals in the field of visual arts, based on co-cited references?

Method

Research Model

Bibliometric analysis is a quantitative content analysis method that uses visual maps to reveal the interconnections between publications, authors or cited sources within a field (Zupic & Čater, 2015). This method enables the visualisation of general trends, author collaborations, citation networks and research patterns within any field. As the aim of this study was to examine publications relating to the education of gifted individuals in the field of visual arts, the bibliometric analysis method was chosen.

Database and Process

The Web of Science (WoS) Core Collection database was utilised during the data collection phase of the study. The searches began in January 2026, with the final search carried out in June 2026. The search was conducted using the following search string in the Subject (TS) field:

(gifted OR talented OR “high ability”) AND (“art” OR “craft” OR “visual art” OR “visual ability*” OR “visual-spatial” OR “visuospatial”) AND (develop* OR cultivat* OR enhancement* OR improve* OR train* OR program* OR intervention* OR instruction* OR curriculum OR education*) NOT (embryo* OR oocyte* OR zygote* OR gamete* OR “reproductive technology” OR “assisted reproduction” OR IVF OR “in vitro fertilization”)

The search string consists of 19 keywords that bring together concepts relating to exceptional ability (gifted, talented, high ability), visual/artistic terms (art, craft, visual art, visual ability, visual-spatial, visuospatial) and terms relating to educational intervention (develop, cultivate, train, programme, intervention, instruction, curriculum, education). Derivatives of the relevant words have also been included by using the wildcard character (*). During the development of the search string, it was found that the wildcard “art*” also covered publications relating to reproductive technology (e.g. assisted reproductive technology) and the field of medicine; consequently, the search was repeated with the “NOT” operator added, and the medical terms in question were excluded from the scope.

The inclusion criteria for the study were defined as follows: (1) being indexed in the WoS Core Collection database, (2) being published as an article or a review article, (3) being published in English.

The exclusion criteria are as follows: (1) studies involving medical or reproductive technology, (2) publications other than articles or reviews (book chapters, conference papers, editorial material, etc.), (3) publications in languages other than English, (4) early-access publications that have not yet been published in full text.

The initial screening yielded 800 records. Publications relating to medical or reproductive technology were excluded using the “NOT” operator ($n = 47$), reducing the number of records to 753. Following the exclusion of documents other than articles and reviews ($n = 125$), the number of records was reduced to 628; and following the removal of non-English publications ($n = 161$), the number was further reduced to 467. In the final stage, early-access publications, book chapters and conference papers ($n = 28$) were excluded from the scope, and the total number of publications to be included in the analysis was determined to be 439.

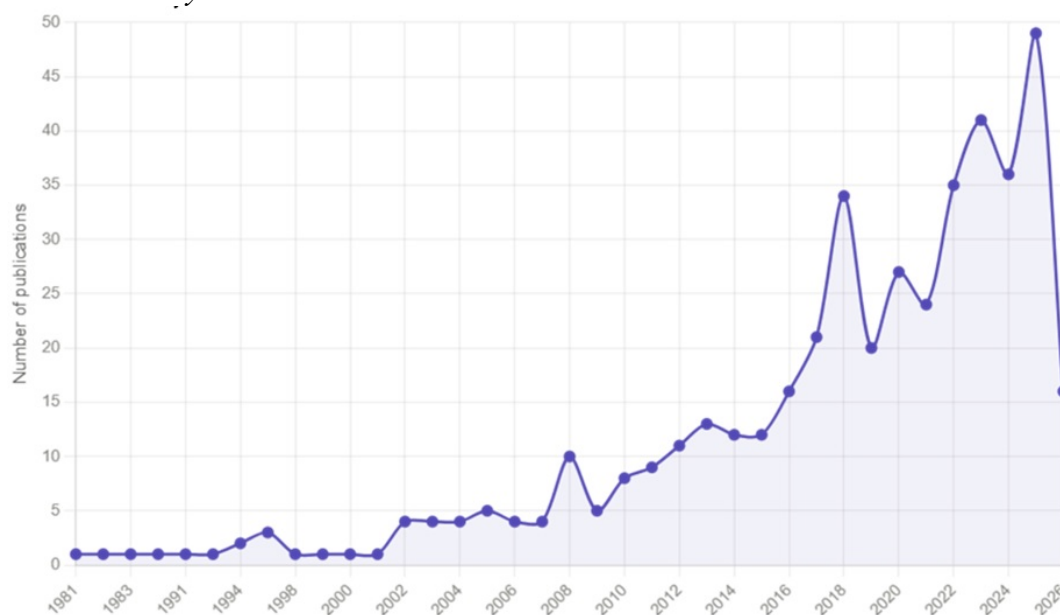
Data Analysis

The study utilised bibliometric and descriptive content analysis in the analysis of the data. During the analysis process, the Web of Science (WoS) platform’s built-in “Analyse Results” tool was used. The distribution of studies by year, the countries with the highest number of publications, the journals with the highest number of publications, and the authors with the highest number of publications were included in the content analysis process. The data in the study were also analysed using the VOSviewer 1.6.20 programme. This programme was used to conduct co-citation analysis, co-word analysis and co-author analysis of the relevant studies.

Findings

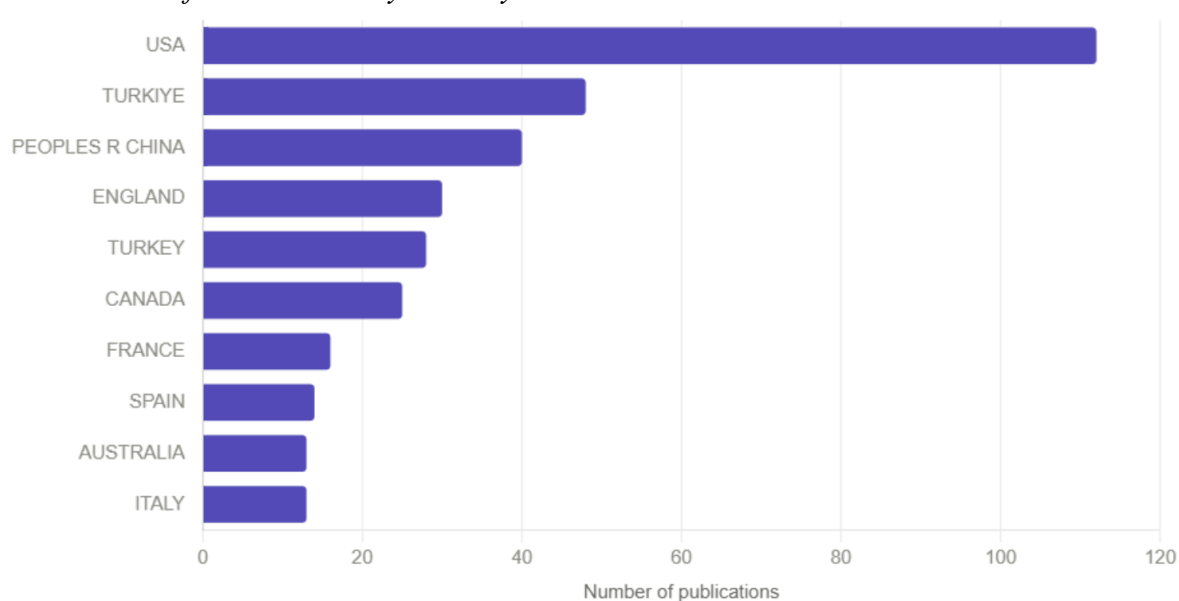
A search of the Web of Science Core Collection database, combined with the inclusion and exclusion criteria applied, yielded a total of 439 studies. It was found that the relevant publications were produced between 1981 and 2026 and across more than 70 countries. This section presents the findings regarding the distribution of these studies by year, country, author and journal, as well as analyses of co-authorship, co-citation and shared terms, organised by heading.

Figure 1
Distribution by Year



Following an analysis of the data obtained, the distribution of publications relating to the education of gifted individuals in the field of visual arts by year is presented in Figure 1. According to this, it can be seen that publications in this field date back to 1981, although the annual number of publications remained fairly limited until 2008. It is noteworthy that a marked upward trend began in 2008, with this increase gaining momentum after 2016. The highest number of publications was reached in 2025, when the year took first place with 49 publications. This was followed by 2023 with 41 publications, 2024 with 36, and 2022 with 35. As of June 2026, the number of publications stands at 16. Overall, it can be said that publications from the last ten years account for approximately two-thirds of the total number of publications, and that the field is attracting growing interest.

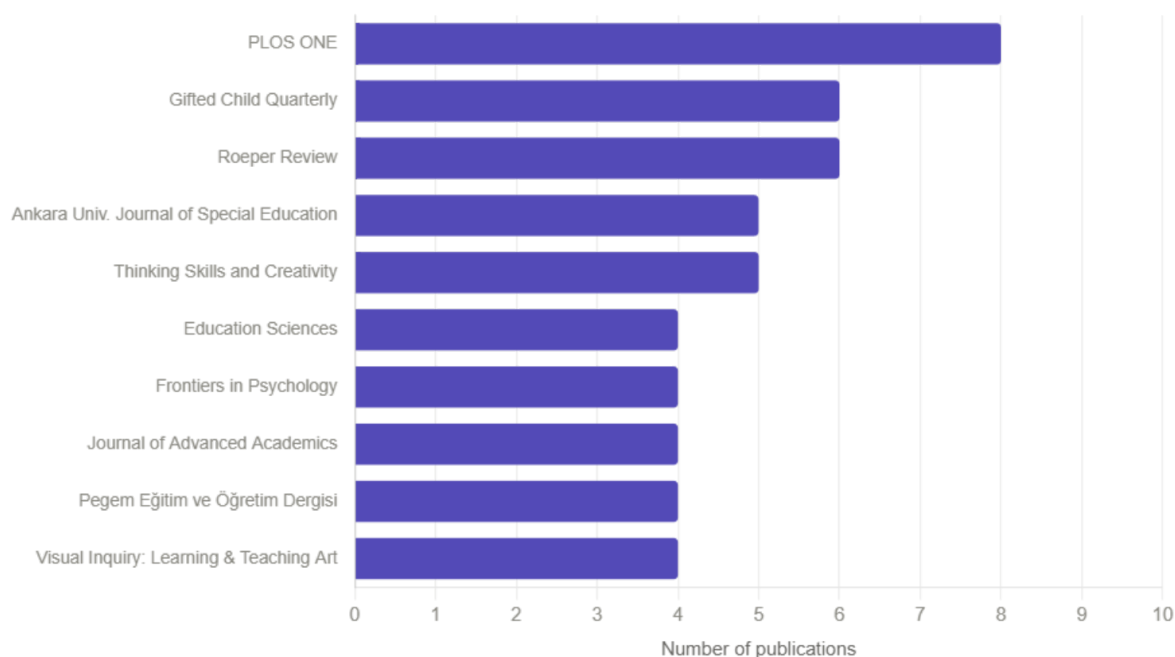
Figure 2
Distribution of Publications by Country



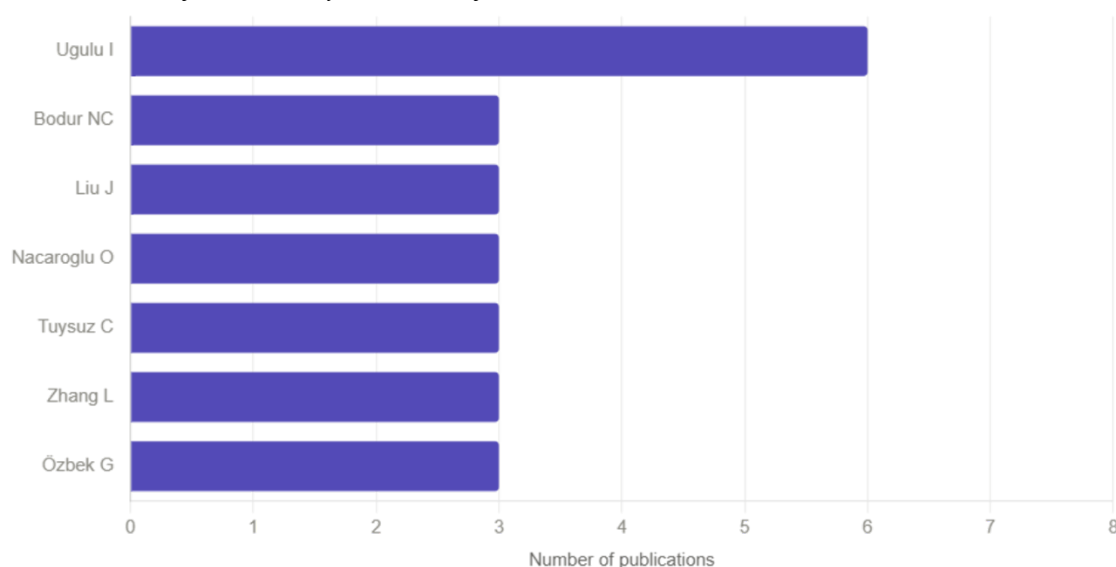
When examining the distribution of publications on the education of gifted individuals in the field of visual arts by country, it can be seen that the United States ranks first with 112 publications. It is followed by the People's Republic of China ($n = 40$), the United Kingdom ($n = 30$) and Canada ($n = 25$). Turkey, however, appears as two separate entries in the WoS system due to differences in naming conventions: "Turkiye" ($n = 48$) and "Turkey" ($n = 28$); when these two records are combined, it is seen that Turkey effectively ranks second after the United States with a total of 76 publications. In addition to these, researchers from over 70 countries, including Russia, India, Germany, Saudi Arabia, Ukraine, Poland, South Korea, the Netherlands, South Africa and Taiwan, have contributed to this field. The distribution of the top ten countries by number of publications is presented in Figure 2.

Figure 3

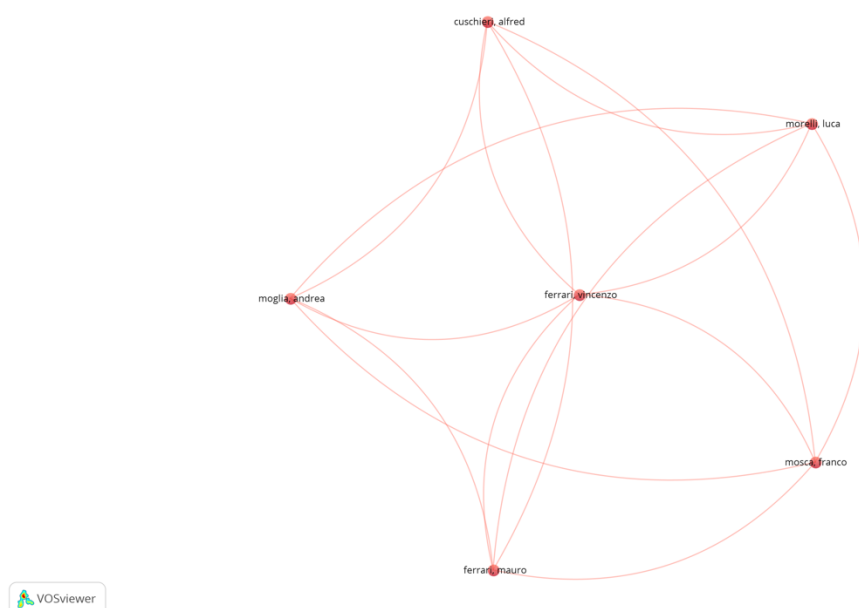
Distribution of Journals by Number of Issues



When examining the journals in which publications on the education of gifted individuals in the field of visual arts are concentrated, it is evident that 439 publications are spread across more than 300 different journals, and that the number of publications in any single journal remains relatively limited. The journal with the highest number of publications was PLOS ONE, with 8. This was followed by *Gifted Child Quarterly* and *Roeper Review: A Journal on Gifted Education*, each with 6 publications. Tied for fourth place, with 5 publications each, were the *Journal of Special Education* published by the Faculty of Educational Sciences at Ankara University and *Thinking Skills and Creativity*. There are four publications each in *Education Sciences*, *Frontiers in Psychology*, *Journal of Advanced Academics*, *Pegem Journal of Education and Teaching* and *Visual Inquiry: Learning & Teaching Art*. The fact that leading journals in the field of giftedness, such as *Gifted Child Quarterly* and *Roeper Review*, feature in the top ranks indicates that research in this field is also concentrated in relevant specialist journals. The relevant distribution is presented in Figure 3.

Figure 4*Distribution of Authors by Number of Publications*

When examining the distribution of publications on the education of gifted individuals in the field of visual arts by author, it is seen that the most prolific author is Ugulu I, with six publications. This is followed by Bodur NC, Liu J, Nacaroglu O, Tuysuz C, Zhang L and Özbek G, each with three publications. Among the most prolific authors are M. Csikszentmihalyi and E. Winner-two established figures in the field of giftedness and creativity-each with two publications. Looking at the overall picture, it is evident that research in this field is spread across a broad range of authors. The distribution of the most prolific authors is presented in Figure 4.

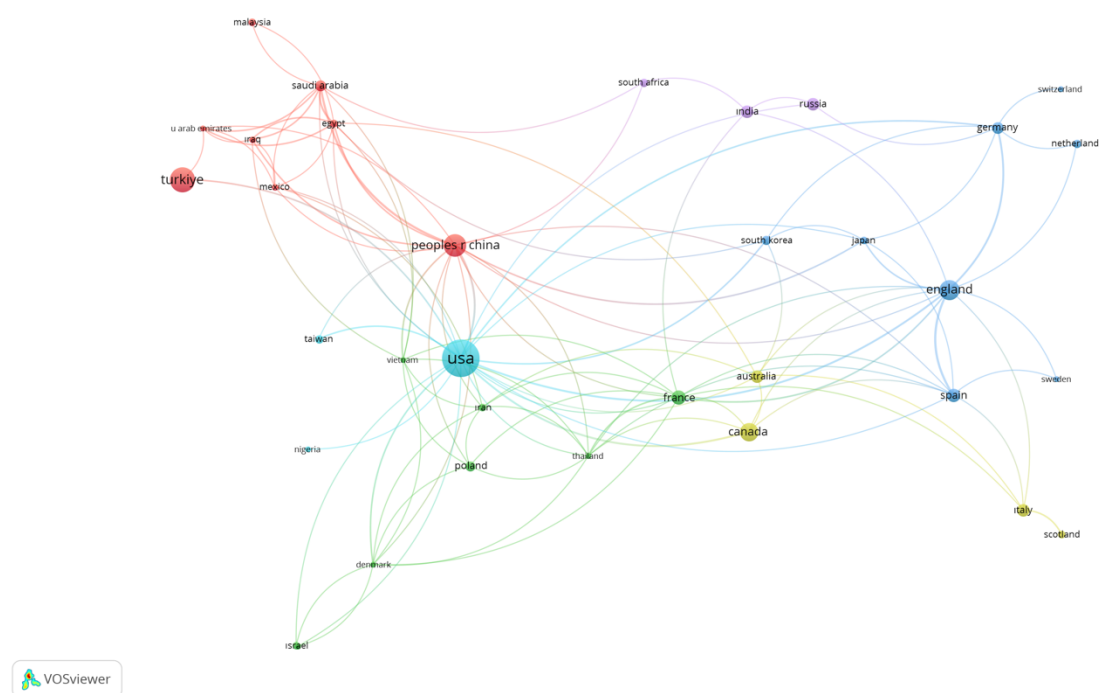
Figure 5*Authors' Collaboration Network*

The analysis was carried out in VOSviewer by setting a minimum threshold of two publications as part of the co-authorship analysis. It was observed that all six authors meeting

this criterion formed a single interconnected cluster. This cluster comprises Cuschieri A, Ferrari M, Ferrari V, Moglia A, Morelli L and Mosca F. Upon examination of the network map, it is notable that all authors are directly connected to one another and exhibit a closed group structure rather than a broad collaboration network. It was found that these authors, who met the threshold of at least two publications, did not form a meaningful collaboration network directly related to the field. This finding suggests that collaboration between authors in research on the education of highly gifted individuals in the field of visual arts is still in its early stages. The relevant network map is presented in Figure 5.

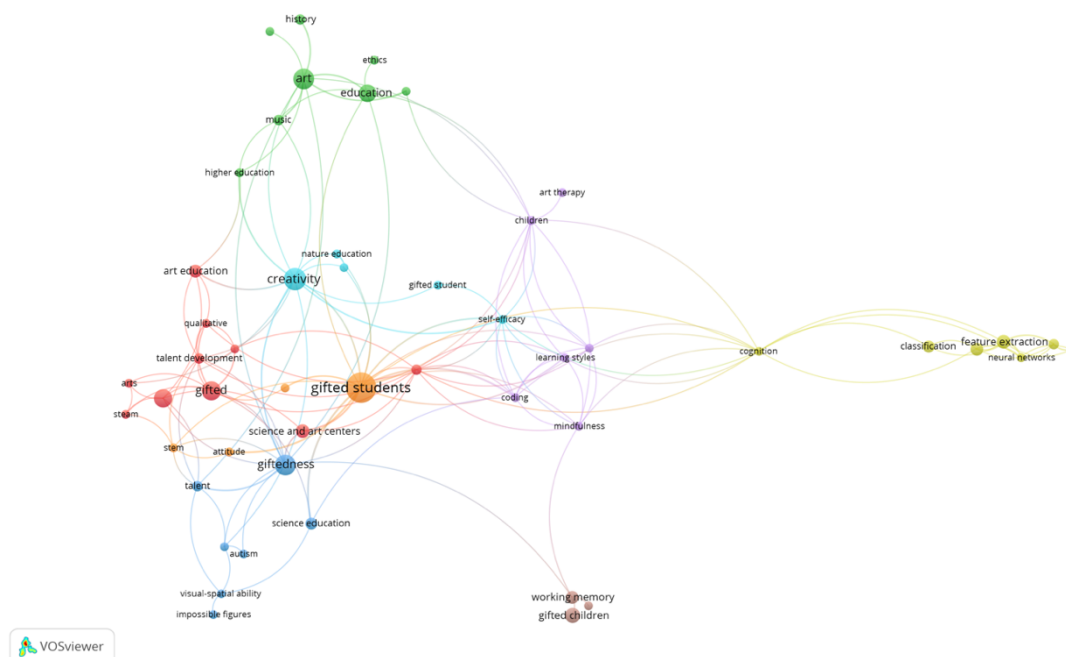
Figure 6

Network of Co-authors by Country



As part of the co-author analysis by country, a minimum criterion of three publications was applied, and it was found that the 37 countries meeting this criterion formed six distinct clusters. An examination of Figure 6 reveals that the United States ($n = 108$) is situated at the centre of the network as the largest node and is the country with the highest level of international collaboration. The People's Republic of China ($n = 40$), meanwhile, forms the red cluster alongside Turkey, Egypt, Saudi Arabia, Malaysia, Iraq and the United Arab Emirates. The United Kingdom ($n = 30$) is situated in the blue cluster alongside Germany, Spain, South Korea, Japan, the Netherlands and Switzerland, forming the focal point of the Europe-centred collaboration network. France, Poland, Denmark, Thailand, Vietnam, Iran and Israel form the green cluster; Australia, Canada and Italy form the yellow cluster; Russia, India and South Africa form the purple cluster; whilst the USA, Nigeria and Taiwan form the turquoise cluster. The relevant network map is presented in Figure 6.

Figure 7
Shared Keyword Network

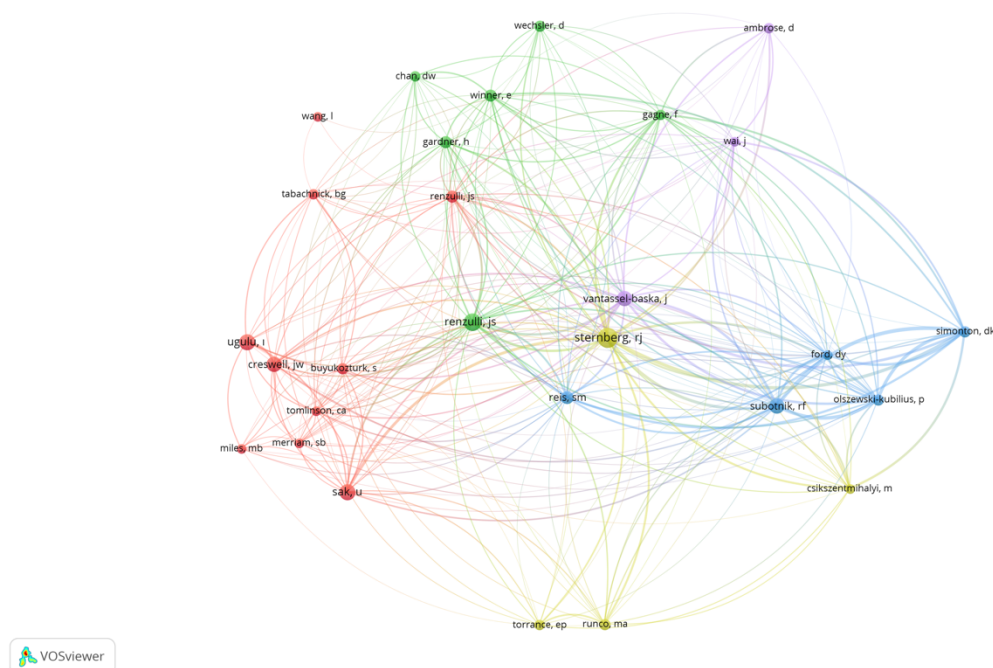


As part of the co-occurrence analysis based on author keywords, a minimum of three repetitions was set as the criterion, and it was observed that the 50 keywords meeting this criterion formed eight distinct clusters. Upon examining Figure 7, it is notable that the term “gifted students” is situated at the centre of the network with the highest frequency of occurrence ($n = 33$) and is connected to almost all clusters. This clearly demonstrates that gifted students form the focal point of research in this field.

In the red cluster, the concepts of “gifted”, “gifted education”, “art education”, “talent development”, “STEAM” and “qualitative” are found together. This cluster represents research centred on educational programmes for gifted individuals and art education. In the blue cluster, the terms “giftedness”, “talent”, “autism”, “science education”, “visual-spatial ability” and “impossible figures” are grouped together; it is evident that this cluster focuses on the identification of giftedness and visual-spatial skills. The green cluster comprises the concepts of “art”, “education”, “music”, “history” and “ethics”, reflecting studies centred on art history and cultural contexts. In the orange cluster, the terms “creativity”, “nature education” and “creative thinking” stand out, indicating that this cluster encompasses research on creativity and nature-based education. The purple cluster contains the concepts “art therapy”, “children” and “coding”, whilst the pink cluster includes the terms “self-efficacy”, “learning styles” and “mindfulness”; it is noteworthy that these clusters are shaped around art therapy and individual learning characteristics, respectively.

In the yellow cluster, terms such as “cognition”, “classification”, “feature extraction”, “neural networks”, “deep learning”, “optimization” and “training” are grouped together; it is understood that this cluster represents studies focusing on artificial intelligence and deep learning applications. Finally, in the light pink cluster, the concepts of “gifted children”, “working memory” and “visuospatial ability” appear together, and it is evident that this cluster reflects research examining the relationship between cognitive abilities and giftedness. The relevant network map is presented in Figure 7.

Figure 8
Co Citation Network



As part of the co-citation analysis, a minimum citation threshold of 15 was applied, and it was observed that the 27 authors meeting this criterion formed five distinct clusters. An examination of Figure 8 reveals that Sternberg RJ, with the highest number of citations ($n = 66$), is situated at the centre of the network and is connected to all clusters. Sternberg RJ's central position indicates that his work on theories of intelligence and creativity is used as a fundamental reference by numerous studies in the field.

The red cluster includes Sak U ($n = 43$), Renzulli JS ($n = 25$), Büyüköztürk S, Creswell JW, Merriam SB, Miles MB, Tabachnick BG, Ugulu I and Wang L. The fact that this cluster consists predominantly of Turkish researchers and qualitative researchers indicates that studies originating from Turkey are clustered around a specific methodological framework within the literature. The green cluster comprises Gardner H, Winner E, Chan DW, Wechsler D and Gagne F; this cluster appears to focus on the topics of multiple intelligences, visual abilities and the assessment of giftedness. The blue cluster comprises Subotnik RF ($n = 37$), Reis SM ($n = 26$), Olszewski-Kubilius P, Ford DY and Simonton DK; it is understood that this cluster consists of researchers working on the development of gifted individuals and educational programmes. The fact that the blue cluster is situated close to the centre of the network indicates that these researchers have established broad connections across different fields of study. The yellow cluster comprises Csikszentmihalyi M, Runco MA and Torrance EP, and it is evident that this cluster is shaped around theories of creativity. Finally, the purple cluster comprises VanTassel-Baska J, Wai J and Ambrose D, and it is evident that this cluster is centred on curriculum development for gifted individuals and subject-specific talent research. The relevant network map is presented in Figure 8.

Discussion

The findings obtained from the bibliometric analysis of 439 publications on the education of gifted individuals in the field of visual arts reveal significant insights regarding the historical

development, geographical distribution, intellectual structure and thematic patterns of the field.

It can be seen that the publications span the period from 1981 to 2026, although they remained fairly limited until 2008, with approximately two-thirds of the total publications having been produced in the last decade. This finding indicates that research interest in the field of visual ability has increased significantly in recent years. This increase runs parallel to growing awareness of the importance of visual-spatial ability in STEM fields and its neglect in the education of gifted pupils (Andersen, 2014; Budakova et al., 2021). Indeed, Andersen (2014) emphasises that visual-spatial ability has been overlooked in identification processes for decades and that the research gap in this area has only begun to be addressed in recent years. Kamal (2026) also demonstrates in his study that the general bibliometric pattern in the field of gifted education has shown a similar acceleration, reaching a record number of publications in 2021 due to the post-pandemic effect, before returning to a stable level of output. The fact that 2025 saw the highest number of publications to date indicates that interest in the field remains current and continues to grow.

The fact that the US ranks first with 112 publications can be attributed to its long-standing research tradition and institutional infrastructure in the field of gifted education. Indeed, it is thought that the fact that key theorists in the field of giftedness, such as Renzulli (2011), are of US origin has contributed to this theoretical body of work and systematic research tradition. This finding is consistent with the general bibliometrics of gifted education reported by Kamal (2026) and Cristina et al. (2025). This indicates that the US's leadership is not specific to the field of visual arts but represents a pattern that extends across the field as a whole. It is a notable finding that, when the entries "Turkiye" (n = 48) and "Turkey" (n = 28) are combined, Turkey effectively ranks second with 76 publications. This can be explained by the fact that institutional structures in Turkey, such as BİLSEM, encourage research into the education of gifted individuals in the visual arts (Daşdemir, 2025).

The fact that 439 publications are spread across more than 300 different journals clearly reflects the interdisciplinary nature of the field. The fact that PLOS ONE (n = 8) was the journal with the highest number of publications indicates that research in the field of visual ability is moving towards an interdisciplinary and open-access-oriented structure. The presence of leading journals in the field of giftedness, such as **Gifted Child Quarterly** and **Roeper Review**, among the top rankings demonstrates that this research is also finding a place in relevant specialist journals. Kamal (2026) also found that **Gifted Child Quarterly** is the most cited journal in the general literature on gifted education, a finding that confirms the journal's pivotal position in the field. Hernández-Torrano and Kuzhabekova (2020), in their study examining four key journals on giftedness (*Gifted Child Quarterly*, *Roeper Review*, *High Ability Studies*, *Journal for the Education of the Gifted*) between 1957 and 2017, determined that **Gifted Child Quarterly** and **Roeper Review** accounted for approximately 80 per cent of total publications. This finding demonstrates that the central position of these journals in the field has been established over many years.

It can be seen that the author with the most publications is Ugulu I, with six, but that, overall, the number of publications by any single author remains quite limited and that research in the field is spread across a broad group of authors. This finding suggests the existence of a polyphonic and dispersed structure rather than the dominance of a specific group of researchers in the field. The inclusion on the list of established figures in the field of

creativity and artistic talent, such as Csikszentmihalyi M and Winner E, can be interpreted as an indication that their foundational theoretical contributions continue to shape the field.

An analysis of co-authorship among authors revealed that the six authors who met the minimum threshold of two publications did not form a meaningful collaboration network directly related to the field. This finding suggests that collaboration among authors in research on the education of gifted individuals in the field of visual arts is still in its early stages. This pattern is consistent with the general trend in the field of gifted education: Kamal (2026) demonstrated that the vast majority of studies in this field are carried out by individual teams and that the proportion of international co-authors remains quite limited. Similarly, Hernández-Torrano and Kuzhabekova (2020) found that researchers in the field largely work in geographical isolation and that US researchers collaborate almost exclusively with colleagues within their own country.

An analysis of co-authorship by country reveals that 37 countries form six distinct clusters, with the US at the centre of the network. This finding highlights the US's dominant position in the field, not only in terms of the number of publications but also in terms of international research collaboration. Jolly et al. (2024) have shown that collaborative links between certain countries in the field of gifted education are structured through doctoral training processes and long-term academic relationships; this suggests that these collaborative networks are not random but are rooted in historical and institutional foundations. The fact that the People's Republic of China is grouped alongside countries such as Turkey, Egypt and Saudi Arabia suggests that the geographical and cultural affinities between these nations facilitate cooperation. The fact that the United Kingdom forms the focal point of a Europe-centred cooperation network, meanwhile, suggests that research collaboration in Europe has a relatively mature structure.

The fact that the term “gifted students” occupies the centre of the network with the highest frequency of occurrence indicates that gifted students form the focal point of research in this field. The fact that terms such as “visual-spatial ability” and “visuospatial ability” appear together in the blue cluster suggests that research into the identification and assessment of visual-spatial ability constitutes a distinct thematic focus within the field. The emphasis placed by Andersen (2014) and Budakova et al. (2021) on the need for visual-spatial ability to be systematically measured in diagnostic processes supports this interpretation. In their bibliometric analysis of STEM/STEAM education for gifted pupils, Kaymakçı and Can (2023) identified spatial ability, creativity, specialised schools, enrichment and gender differences as among the most frequently addressed concepts in the field. This finding confirms that visual-spatial ability constitutes a central theme in research on the education of gifted individuals within the STEM context. The presence of the yellow cluster, which focuses on artificial intelligence and deep learning applications, indicates that research in this field is increasingly intersecting with technological developments.

The fact that Sternberg RJ occupies the centre of the network with the highest number of citations ($n = 66$) indicates that his work on theories of intelligence and creativity is used as a key reference by much of the research in the field. The fact that leading figures in the field of gifted education, such as Renzulli JS, Subotnik RF and Reis SM, are situated in different clusters indicates that the field is based on a multi-layered theoretical foundation. This pattern is consistent with the co-citation analysis conducted by Kamal (2026) in the general literature on gifted education. In the study in question, Sternberg, Gardner and Renzulli were also identified as central nodes linking multiple research communities simultaneously. The

clustering of Turkish researchers and qualitative research methodologists within the same cluster suggests that studies originating from Turkey are shaped around a specific methodological framework.

When the findings are assessed as a whole, it is evident that research into the education of gifted individuals in the field of visual arts has gained momentum over the past decade, spanning a wide geographical area, yet has not yet reached maturity in terms of international collaboration. The interdisciplinary nature of the field is clearly evident in the thematic clusters that have emerged at the intersection of various disciplines, such as art education, cognitive psychology, educational sciences and technology. Tay and Zhang (2026) demonstrated that this interdisciplinary structure takes different forms in different national contexts; they showed that approaches focused on technical mastery predominate in China, whilst those centred on creative expression and conceptual thinking prevail in the US, and highlighted that neither system is able to provide equal opportunities for gifted art students due to socio-economic inequalities and differences in cultural capital. Baccassino and Pinnelli (2023) emphasise that research in the field of gifted education is predominantly conducted by researchers from the discipline of psychology, and that the field's "citation culture" prioritises English-language publications and US-based studies, thereby limiting the visibility of contributions from other regions and disciplines. This suggests that the geographical and institutional concentration observed in the present study may reflect a broader structural trend that is not specific to this field. It is considered that visual-spatial ability requires systematic support in both its identification and development processes (Andersen, 2014; Budakova et al., 2021), and that educational programmes in this field must be approached in an integrated manner, incorporating support from the family, school and peers (Aldhorman, 2025; Daşdemir, 2025). Consequently, this research serves as a guiding resource for future research and educational programmes by providing a comprehensive overview of the current body of knowledge in this field.

Conclusion

In this study, 439 publications relating to the education of gifted individuals in the field of visual arts were analysed using bibliometric methods; the historical development, geographical distribution, intellectual structure and thematic patterns of the field were systematically identified. When the findings are evaluated as a whole, it is evident that research output in the field of visual arts has accelerated significantly since 2008, although it remains concentrated geographically and institutionally around specific countries and groups of researchers. It is evident that the USA holds a dominant position in the field, both in terms of the number of publications and international collaboration networks. The publication pattern, spanning over 300 different journals, clearly reflects the field's interdisciplinary nature; thematic clusters emerging at the intersection of diverse fields such as art education, cognitive psychology, educational sciences and technology make this multidimensional structure visible. In the joint citation analysis, the central position of Sternberg RJ, alongside the inclusion of Gardner H and Winner E in the same cluster, reveals that the field possesses a multi-layered theoretical framework grounded in theories of visual ability and multiple intelligences. The fact that collaboration networks between authors have not yet matured, however, points to a significant need for the development of research capacity within the field.

In light of the research findings, the following recommendations have been developed:

- Given that international collaboration networks in this field are not sufficiently

developed, initiatives by researchers to bridge this gap through multi-country joint projects and comparative studies could be supported. Furthermore, given the interdisciplinary nature of the field of visual arts, integrated research models involving researchers from different disciplines working together could be developed.

- With regard to future research, it is evident that limiting this study solely to the Web of Science database and excluding publications in languages other than English-particularly those in Turkish-constitutes a significant limitation. Future studies that include additional databases such as Scopus and ERIC will provide a more comprehensive picture of the literature.
- Furthermore, given the quantitative nature of the bibliometric analysis conducted in this study, systematic review studies that examine the qualitative dimensions of research patterns in the field in depth could be carried out.

Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

The author declares that DeepL, an AI-assisted language tool, was used during the preparation of this manuscript for translation and language refinement purposes. The use of DeepL was limited to improving linguistic accuracy, readability, and clarity. All ideas, analyses, interpretations, and conclusions presented in this manuscript are the author's own.

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