



Do Saudi Arabian Educational Policies Determine the Promotion of Creativity with Gifted Students?

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Authors' contributions

This work was carried out in collaboration among all authors. Author MS author designed, analysed, interpreted and prepared the first manuscript. Authors MC and CC provided guidelines and instructions for the study, they also edited the manuscript. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJESS/2023/v38i3826

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/95620>

Original Research Article

Received: 20/10/2022
Accepted: 29/12/2022
Published: 20/01/2023

ABSTRACT

Educational policy plays a pivotal role in influencing educational practices in schools and can help promote creativity. In Saudi Arabia, however, few studies have focused on the analysis of these educational policies or on how they promote creativity with gifted students. Given that all schools in Saudi Arabia follow the educational policies issued by the Ministry of Education (MoE) and schools do not have separate educational policies or implementation documents to promote creativity, these policies could have a greater influence than in other countries where guidance is provided to schools on implementing national education policies. This study aimed to understand how the promotion of creativity is expressed for gifted students in Saudi Arabia by analysing educational policies issued by the MoE. To inform and guide the analysing of data, a 3Ps framework (*Press, Process, and Person*) was synthesised and used in the study. The findings identified two major gaps in the Saudi educational documents regarding gifted education for secondary school students.

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The first gap was the lack of a clear definition of creativity and giftedness, the relationship between creativity and giftedness, and the contradictions in defining creativity and giftedness. The second gap in these documents was a lack of detail about implementation mechanisms that could benefit teachers in schools. This study, therefore, suggests adding another (P) to the 3Ps framework for improvement, that is, promoting creativity in the educational context needs to include *Policy*, leading to four embedded circles of (P): *Policy, Press, Process, and Person*.

Keywords: Promote creativity; giftedness; gifted students; educational policy; Saudi Arabia.

1. INTRODUCTION

Creativity, which is the ability to produce novel and beneficial outcomes [1,2], is crucial to the ongoing modernisation and development of humanity [3-6]. Encouraging creativity in students, therefore, is a primary goal for many societies that seek growth and development. For gifted students, promoting their creativity could be even more important, given that they have more creative abilities than others, so they need the education to be consistent with their abilities, and because promoting their creativity contributes to promoting their giftedness [7-9]. Gifted students are defined as either exceeding their peers or having the potential to exceed in one or more of the areas that society values such as intellectual ability, academic aptitude, creativity, or leadership ability and they need special programs beyond which that regular school programs offer [10]. Creativity for this paper is defined by the ability to provide outcomes in which the two basic pillars are achieved: novelty and usefulness, according to the standards of the social context in where the creative outcomes occurred [11,2,12].

Two main research theories explain the relationship between creativity and giftedness in children. The first theory considers excellence in the field of creativity as one of the ways to identify gifted students along with other ways such as mental or academic excellence. This means, that every creative child is considered to be gifted and not vice versa. This theory was adopted by Marland [13] who defined gifted students as those who excel or have the readiness to excel in one or more fields that society values such as creativity, mental abilities, academic, or art. This then would mean that creativity is one domain of giftedness among other domains.

On the other hand, there is another theory that considers creativity as a necessary component of giftedness. Numerous researchers have linked the interpretation of creativity with the concept of

giftedness [14]. For example, Renzulli [7,8] proposed that creativity is one ring of a three-ring conception of giftedness, with the other two rings being above-average mental ability and task commitment. This conception would mean that every gifted student has creativity as well as above-average ability in the other two components [7,8].

Despite the need to promote creativity with gifted students and making that a priority in educational reforms in many countries, the evaluation of educational policies related to gifted education is still rare [15]. Although there has been some research conducted on Saudi Arabia in gifted education [16-19], there is a dearth of exploratory research focused on exploring promoting creativity among gifted students from a policy perspective. Despite Saudi Arabia pioneering some initiatives to nurture giftedness, these efforts need to be reviewed and developed to keep pace with the latest trends to enhance giftedness and creativity and to meet the increasing needs of gifted students, their interests and motives [20].

Recent studies conducted to evaluate gifted education in Saudi Arabia have revealed a significant gap in the national educational policies for gifted students. Alamiri [18] carried out a systematic review aimed at investigating the patterns in gifted education in Saudi Arabia. The study concluded that "more in-depth qualitative data and analyses should be carried out for addressing the challenges and developments of gifted education policies and practices in the Saudi educational context" (p. 77). Alamer and Phillipson [17] also carried out a macro-systemic study aimed at investigating the status of gifted education in Saudi Arabia. The study concluded that "future evaluations of the Saudi gifted education system should begin with a clearer understanding of the policy from a variety of sources that include policy documents" (p. 38). Alfaiz et al.'s [19] study aimed at examining the current reality of gifted education in Saudi Arabia by analysing documents along

with questionnaires filled out by teachers and policymakers from the MoE in Saudi Arabia. The documents analysed, however, were annual reports issued by the Ministry of Education, paperwork outlining procedures, and data from websites, rather than the MoE's actual policy documents.

1.1 Conceptual Framework

Based on a literature review of research in the fields of creativity and gifted education, this current study adopted a 3Ps framework: (1) *Press*: focuses on exploring the learning environment that stimulates students' creativity; (2) *Process*: focuses on the process or education that leads to creativity such as the strategies or techniques; (3) *Person*: focuses on exploring the factors related to the learner that promotes creativity. These three dimensions were also suggested by Rhodes [21] in the 4Ps of creativity model. The fourth dimension suggested by Rhodes, *Product*, was not included in the framework for this study because this study focused on promoting creativity among gifted students, and because the creative product was

determined in this study by two characteristics: novelty and usefulness (see Section 1). Similar to the 4Ps model suggested by Rhodes, the Systems Model of Creativity suggested by Csikszentmihalyi [11] emphasised that understanding creativity is more than just looking at only one dimension. Csikszentmihalyi suggested that creativity is a complex interaction between three components: (1) *Field*: represents the social system; (2) *Domain*: refers to the norms and procedures that a person learns inside the social environment (field) that lead to creative endeavours; (3) *Person*: refers to a person who absorbs knowledge (domain) within the environment (field) in order to produce creative endeavours. Fig. 1 represents the 3Ps framework of this current study and highlights that the *Person* dimension is embedded in the other two dimensions (*Press* and *Process*) and is affected by them; and *Process* is embedded and affected by *Press*. The literature review regarding creativity and gifted education focussed on these three dimensions and Table 1 shows the themes and subthemes found under the *Press*, *Process*, and *Person* dimensions, with the supporting studies.

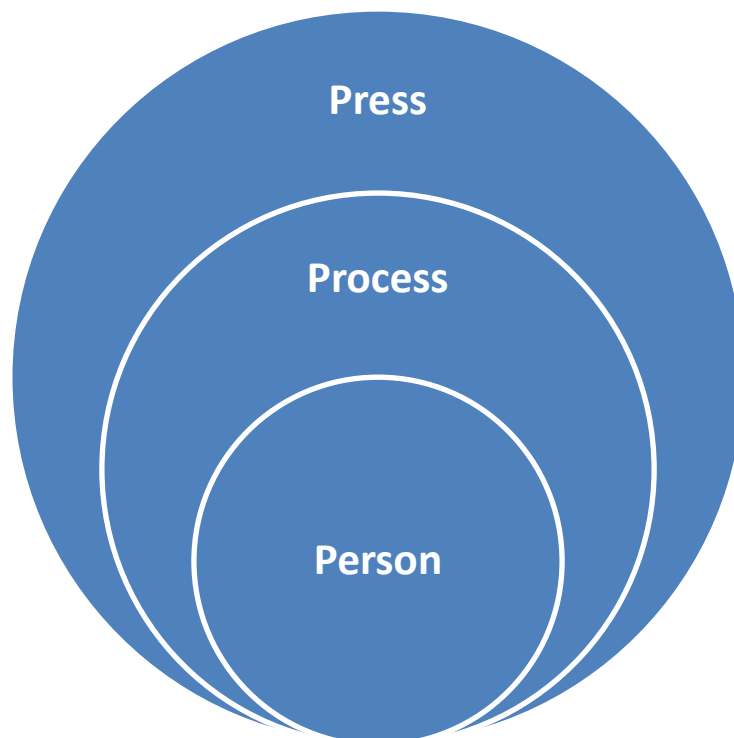


Fig. 1. The 3Ps Framework for Promoting Creativity with Gifted Students Derived from Rhodes [21] and Csikszentmihalyi [11]

Table 1. The Conceptual Framework for this Research, the 3Ps

The dimension	The themes: <i>Sub-themes or codes/Examples of supporting studies</i>
(1) Press	<p>Physical Environment: Displaying student’s creative work [22,23], a variety of tools, materials, and resources for students [24-26,23,27], the classroom ‘furniture is flexible for multi configurations [24-26,23], and a variety of workspaces for students [23].</p> <p>Learning Climate: An atmosphere of caring, and respect: [28,23,29], mistakes and differences are respectful, and novel ideas are valued or encouraged: [30,31,28,24,25,32], Students are independent learners [33,24,34,26,35,5,36]</p> <p>Teaching Methods and Behaviours: Allowing and using fun and humour [35,22], Allowing sufficient time and delaying judgment on student responses: [24,34,5,36]. The teacher is a facilitator, rather than a controller of the learning process, [25,23,29].</p>
(2) Process	<p>Play Strategy: [37-44].</p> <p>Thinking Skills Techniques: Promoting fluency and flexibility [45], SCAMPER [46-49], Cognitive Research Trust (CoRT): [50-53,47].</p> <p>Problem-Solving Techniques: Creative Problem Solving (CPS) [54-58,115], TRIZ [59-62], the Six Hats [63,64], Brainstorming: [65-67,56].</p>
(3) Person	<p>Self-efficacy: [35,68,69],.</p> <p>Intrinsic Motivation: [33,35,70,71,36].</p> <p>Learner Engagement: <i>Students are involved in tasks that are open-ended and/or involve choice [25,72,23,29].</i> Students use multiple perspectives and learn according to their own pace [23].</p> <p>Creative Habit of Mind (CHoM): Encouraging a student to be Inquisitive, Imaginative, Persistent Collaborative Disciplined: [73-75].</p>

In (*Press*), three themes were highlighted in the literature: *Physical Environment*, *Learning Climate*, and *Teaching Methods and Behaviours*. The environmental context plays a pivotal role in understanding and interpreting creative endeavours and in nurturing creativity [76,11,77]. Through a systematic review of the literature, Davies et al. [25] concluded that schools that promote creativity are paying attention to both the physical environment of the classroom (i.e., providing suitable tools and materials) and the learning climate (i.e., high attention to learners' needs and flexible use of time). Within the learning environment (*Press*), many researchers also emphasised that the teachers' methods and behaviour, including interaction style, during the lesson play a pivotal and essential role in fostering the creative abilities of students [24,34,78,26,35,22,5,36,32,57].

In the second P (*Process*) which refers to the strategies or techniques that are used to promote students' creativity, the literature highlighted three themes: *Play Strategy*, *Thinking Skills Techniques*, and *Problem-Solving Techniques*. *Play strategy* can promote creativity by promoting cognitive and emotional components related to creativity, such as curiosity, imagination, flexibility, and problem-solving

behaviour [37-39,42]. Thinking skills and creativity are also tightly intertwined [77]. Guilford [79] referred to creativity as a combination of two main types of thinking: (1) Divergent thinking: which is the ability to produce many possible responses or solutions for a specific question or problem, and (2) Convergent thinking: which is the ability to choose the best response or solution. The literature highlighted some strategies and techniques to promote thinking skills including divergent and cognitive thinking such as SCAMPER [48], and Cognitive Research Trust (CoRT) [80,51].

Problem solving techniques including Creative Problem Solving (CPS), TRIZ, DeBono's six thinking hats, and brainstorming also promote students' developing creativity [81,54,63,55,56,57,58,82]. CPS involves the combination of divergent and convergent thinking skills [58]. TRIZ is a famous theory for creative problem solving such as merging (e.g., combining similar objects) and segmentation (e.g., separating objects into independent parts). Brainstorming uses divergent thinking to generate all possible solutions to a specific problem, then uses the judgment of each idea to choose the best idea [83]. The Six Hats technique assumes six different patterns of

thinking: Red (emotional thinking); White (fact-based thinking); Yellow (positive thinking); and Blue (thinking about thinking); Black (caution thinking); Green (creative thinking) [63].

Finally, in the third P (*Person*), the literature highlighted four important themes: *Self-Efficacy*, *Intrinsic Motivation*, *Learner Engagement*, and *Creative Habits of Mind (CHoM)*. Self-efficacy can be defined as the extent to which a person believes that he/she is capable of accomplishing a certain task [84,85] and is important for promoting creativity [35,55,86,69,87]. Intrinsic Motivation refers to a deep internal interest, and it is important for achieving creative works [1,76,11,35,70,88]. Learner Engagement refers to the active participation of the students during the lesson [23]. Creative Engagement in the classroom includes students being involved in tasks that are open-ended and/or involve choice [25,72,23,5] and students learning according to their own pace [23]. Creative Habits of Mind (CHoM) are important for prompting learners' creativity [73,74,75] and the "Creative Habits of Mind" (CHoM) model comprises five habits and each habit composes three sub-habits: (1) Inquisitive: "wondering and questioning", "exploring and investigating", and "challenging assumptions"; (2) Imaginative: "playing with possibilities", "making connections", and "using intuition"; (3) Persistent: "sticking with difficulty", "daring to be different", and "tolerating uncertainty"; (4) Collaborative: "sharing the product", "giving and receiving feedback", "cooperating appropriately"; (5) Disciplined: "developing techniques", "reflecting critically", and "crafting and improving" [73, p. 281-282].

The conceptual framework of this study, the 3Ps (*Press*, *Process*, and *Person*) led the method of analysing the educational policy documents in Saudi Arabia. Table 1, with its themes and sub-themes drawn from the literature, was used as a lens for collecting data and examining how educational policy documents in the Kingdom of Saudi Arabia interpret and state the promotion of creativity among gifted students.

2. METHODS

This current research adopted a qualitative approach to explore how the promotion of creativity among gifted students is described in the educational policies in Saudi Arabia. More specifically, the study sought to answer the question: *How do the national education policies*

in Saudi Arabia interpret and state the promotion of creativity among gifted students?

A qualitative study is an appropriate approach when a problem or issue of research needs to be explored [89] and document analysis is one of the qualitative methods used [90]. Because there is no single document in Saudi Arabia concerned with promoting creativity among gifted students, four different documents were analysed to achieve the study's objective including: (1) *The Educational Policy of Saudi Arabia (TEPSA)* [91], (2) *The Regulatory Rules for Gifted Education in Saudi Arabia (TRRGESA)*, [92], (3) *The Arabic Strategy for Giftedness and Creativity (TASGC)* [93], and (4) *Guide for Gifted Programs in Schools (GGPS)* [94]. These educational policy documents were written in Arabic, so the researcher translated the excerpts from the documents. In order to ensure the appropriateness of the translation, a specialist in translation between Arabic and English did the back translation. Back translation involved retranslating the excerpts back to the original language and helped to ensure the reliability of the translation.

2.1 Data Analysis

This current study adopted a thematic analysis suggested by Braun and Clarke [95]. Thematic analysis is "a method for identifying, analysing, and interpreting patterns of meaning (themes) within qualitative data" [96, p. 297]. Therefore, it was helpful to identify patterns, create codes, and develop themes from the educational policies in Saudi Arabia. Identifying patterns or themes within the thematic analysis can be deductive or inductive [95]. This study adopted both deductive and methods. During the analysis of data, themes, categories, and codes from the 3Ps framework were considered (Table 1) through the deductive approach. An inductive method was also adopted where new themes or codes were developed from the collected data [97]. Adopting the hybrid approach, which is an integration of inductive and deductive coding can provide a balanced and comprehensive view of the data rather than purely relying on codes that may be separated from their context [98].

3. RESULTS AND DISCUSSION

Thematic analysis of the educational policies in Saudi Arabia yielded three major themes: (1) The significance of promoting creativity, (2) Ambiguity and contradiction in the interpretation of

giftedness and creativity, and (3) Lack of detail regarding the methods of promoting creativity. The following sections present the results and the discussion of these three themes.

3.1 The Significance of Promoting Creativity

It was found in examining the policy documents for promoting creativity among gifted students in Saudi Arabia that the documents emphasised the rights of gifted students, the economic benefits of promoting creativity, and the influence of globalisation. Below is a discussion of these sub-themes.

3.1.1 The rights of gifted students

The national educational documents in Saudi Arabia asserted the imperative of promoting giftedness and creativity among gifted students, as one of the gifted students' rights. For example, article 192 in TEPSA [91] emphasised that "gifted students must be educated with special care in order to develop their gifts" (p. 35). "Promoting creativity among gifted students in Saudi Arabia stems from the principle of the right of these students to obtain educational programmes that are consistent with their abilities and meet their needs" [94, p. 32]. This assertion is similar to previous assertions by some researchers that gifted students have special educational needs; therefore, education should be provided that is compatible with their needs and with their abilities [99-101]. In the same context, Gallagher [102] emphasised that one of the values that must be entrenched in the national educational policy of any country is "vertical justice", which means providing unequal treatment for unequal students in order to achieve equity for all. This means emphasising the importance of providing fair treatment for all groups of students, which is commensurate with the needs of each group of students. Hence, the emphasis in any national educational policy should be on providing justice, not equality for all students [102].

The findings of the current research showed that the Saudi educational policies did emphasise the importance of providing education that matches the needs of gifted students, including the promotion of creativity in a way that is suitable for them, as one of their rights. Consequently, the national educational policies in Saudi Arabia were shown to emphasise the principle of equity, not equality. This is in line with education

globally. Due to the pace of the current era and the world characterised by economic competitiveness, the move from an education policy based on equality to a more selective one has become more acceptable, including providing an appropriate education for gifted students commensurate with their unique needs [103]. For example, Denmark, which is considered an advocate of egalitarian traditions, is now implementing an educational policy directed at the category of gifted students and aiming to implement special programs and strategies for their educational system to meet the needs of this group of students [104].

3.1.2 The economic benefits

Another justification for promoting creativity among gifted students found in the educational policies in Saudi Arabia was creativity's vital value and benefit to contribute to the comprehensive development of society and its ability to address economic challenges. For example, it was stated that "gifted students are the leaders of the radical transformation of economic development" [93, p.18]. In fact, "the development of giftedness and creativity would contribute to economic growth and support the gross domestic product" [93, p. 41]. This expectation is in line with the national educational policies in many other countries. Pillana [105] examined six different countries (US, India, China, Mexico, Chile, and Singapore), which have different economic development and demands and differences in approaching and implementing creativity in educational reforms. The national educational policies in these countries all gave important weight to promoting creativity in modern education as an essential step towards accelerating the pace of reform and economic growth of society. In fact, the emphasis on promoting creativity stated in the national educational policy of any country often stems from motives to achieve national economic prosperity and the enlightenment visions of the nation, such as in Europe, the national education policy documents reveal that promoting creativity is a vital goal of education [106]. Policymakers in Australia and other countries have also emphasised creativity in their national education policies as there is increasing recognition of its value and its societal and economic contributions to society [107]. Indeed, it is some authors' opinions that countries with successful and influential economies cannot continue such momentum unless they have an educational policy that is concerned with providing

differentiated education for their gifted and highly capable students that promote their creativity [104].

3.1.3 The Influence of Globalisation

Another reason for promoting giftedness and creativity in Saudi Arabia, according to the national educational documents, is the globalisation and competition between nations. In the national educational documents, promoting giftedness and creativity was seen as significantly contributing to addressing the negative effects of globalisation, as well as contributing to the Kingdom of Saudi Arabia to become a competitive country in cultural, economic and development fields. The argument regarding addressing globalisation and competition also exists in the national educational policies of other countries. For example, in a study aimed at investigating educational policies in gifted education in Denmark compared with those in Australia and Britain, Rasmussen and Lingard [104] concluded that the educational policies of these three countries emphasised the significance of having a national vision for giftedness development for global competition and economic promotion. In fact, when there is talk of globalisation in these three countries, the momentum of support for gifted students in their educational policies escalates [104]. Gallagher [102] contended that the United States was also engaged in economic, cultural, and political competition, so it seeks educational reform and the promotion of creativity and innovation to exploit students' creative potential in order to compete efficiently on a global basis.

Creativity is also the fuel of the global competition between countries [108], and in the midst of the changing world and the context of globalisation and massive digital transformation, the promotion of creativity becomes more important in contemporary societies and nations [109]. In fact, creativity is considered to be one of the fundamental factors for promoting human civilization [110], and the creative achievements of individuals constitute an essential factor contributing to building the human civilization of countries and societies [111]. In general, convincing logical arguments for developing special education policies for the gifted (including enhancing their creative abilities) are based on achieving the global competitiveness of countries and societies [104]. That Saudi Arabia is to be a global competitor country is one of the

fundamental goals of the Saudi Vision 2030, which is the vision for the whole nation until 2030 [112].

In the national educational policies, however, it is not enough to state that creativity is essential and needs to be promoted in schools, rather the national educational policy should provide a clear and uniform discourse on the definition of creativity [107]. There were, however, gaps identified in the educational policies in Saudi Arabia including ambiguities and contradictions in the discourse around giftedness and creativity and a lack of details for implementation in schools. The next sections discuss these gaps, including the first gap found in the Saudi national educational policies related to the ambiguities and contradictions in the definitions of creativity and giftedness.

3.2 Ambiguity and Contradiction in the Interpretation of Giftedness and Creativity

The Saudi educational documents revealed ambiguity, confusion and sometimes contradiction in reporting the relationship between the term of giftedness and creativity. The analysis of the policy documents found that the interpretation of giftedness and creativity followed four themes:

- Theme 1: Creativity under the umbrella of giftedness, meaning giftedness involves excelling in important fields including the creativity field.
- Theme 2: Creativity as a component of giftedness, meaning that the existence of giftedness necessitates the existence of creative ability, given that creativity is an essential and inseparable part of giftedness.
- Theme 3: Creativity equals giftedness, meaning creativity and giftedness are the same.
- Theme 4: Nurturing giftedness leads to creativity, meaning that the ultimate outcome of nurturing giftedness is to provide creative outcomes.

Theme 1 was evident in the documents which provided a definition of giftedness that included creative abilities: "Giftedness is an innate ability or an inherited aptitude in one or more areas of mental, creative, leadership, artistic, kinaesthetic, and other special talents, giftedness needs a

suitable environment in order to grow, develop and provide creative achievements" [93, p. 25]. Likewise, a gifted student is defined in the Saudi documents as "anyone who possesses exceptional ability or capabilities, or high performance compared to his/her peers of the same age in the mental, academic, creative, leadership, technical or kinetic fields, as evidenced by his/her performance in tests or measures" [93, p. 24]. These two definitions of giftedness and gifted students are consistent with Marland's [13] definition of giftedness, who defined gifted as those who are "capable of high performance include those with demonstrated achievement and/or potential ability in any of the following areas, singly or in combination: general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts, and psychomotor ability" (p. 2). Marland's [13] definition also included the creative thinking ability under the umbrella of giftedness.

While theme 1 considered giftedness as the ability to excel in important areas, including creative areas, theme 2 considered the existence of giftedness necessitates the existence of creative ability. The educational documents regarded creative ability not as a separate ability from giftedness, "creativity is an important component of giftedness" [93, p. 24]. Creativity also, according to the documents, is one of the characteristics of gifted students, "characteristics of gifted students include that they learn at a faster rate than their peers, are able to be flexible in thinking and creativity, are well-informed, maintain their focus for a long time, and have high perseverance and commitment" [93, p. 25]. Renzulli's [7,8] three-ring conception of giftedness is consistent with theme 2. Renzulli proposed that creativity is one ring of the three-ring conception of giftedness, and the other two rings are task commitment and above-average mental ability.

Theme 3 which postulates that giftedness and creativity are the same was found in the Saudi educational documents, as in many places in the documents when the word "giftedness" was mentioned it was followed by the word "creativity". Furthermore, in many places in the documents, "gifted and creative students" was mentioned in the same context. For example, TASGC stated, "attention must be paid to the school environment to promote giftedness and creativity, including the training of teachers specialised in nurturing giftedness and creativity"

[93, p. 57]. Mentioning "giftedness" and followed it with "creativity" as well as mentioning "gifted and creative students" in the same context may give the reader the understanding that giftedness equals creativity.

Finally, in theme 4, that nurturing giftedness is the same as nurturing creativity was evident in the Saudi documents, as creativity or innovation was regarded in the documents to be a result of or a final goal of nurturing giftedness. This was stated several times in TASGC. For example, it was stated that "the document affirms that it was formulated according to a framework that takes into account the importance of nurturing giftedness in supporting the national innovation system" [93, p. 34].

This ambiguity and contradiction in the interpretation of giftedness and creativity, revealed by the four themes, could lead to a negative impact on promoting creativity among gifted students in schools in Saudi Arabia. While individuals can have various and broad conceptions of creativity, it is essential that educational policy provide clear and consistent definitions of creativity that give stakeholders a common perspective and discourse to promote creativity in schools [109,107]. Educational leaders and teachers in schools need a clear and inclusive discourse to explain giftedness and creativity. The results from analysing the national education policies of Saudi Arabia have some similarities with prior studies in education policies globally regarding this confusion.

Despite the importance of providing a clear definition of creativity in educational policy documents, which is considered a cornerstone and starting point for promoting creativity in schools, some studies have revealed obvious shortcomings in providing clear definitions of creativity in other national educational policy documents. For example, in a study aimed at investigating promoting creativity from policy to practice in Queensland, Australia, Lassig [107] found that the educational policy lacked a clear and uniform definition of creativity. This study concluded by calling for a shared discourse for creativity in education policies that are used by stakeholders in schools. Similarly, after investigating the creativity in the national curricula of 27 member countries of the EU (EU 27) along with UK, Wyse and Ferrari [106] concluded their study by calling for "rigorous definitions of creativity" to be included in curricula (p. 45). Henriksen et al. [109] investigated the

emergence of creativity in educational policy in six countries namely, Bulgaria, Slovakia, the United States, Australia, and the Czech Republic. They concluded that despite the variation in how creativity was understood, all national policies in these six nations lacked a clear definition of creativity. Mammadov [113] found the definition of giftedness in the educational policies in Turkey was also inconsistent and sometimes conflicting.

It was found therefore that a basic gap in the Saudi documents related to interpreting the meaning of creativity and giftedness and the relationship between them. These ambiguities must be clarified before being implemented as a uniform educational policy [114]. In fact, without interpreting the complexity and definitional challenges of the concept of creativity in educational policies, schools cannot understand the discourse of these policies in meaningful ways, and thus it is difficult for teachers to adopt and apply meaningful methods in order to enhance creativity with students [109]. The next theme discusses the lack of details regarding the methods and practices of promoting creativity with gifted students as another gap identified in the Saudi documents.

3.3 Lack of Detail Regarding the Methods of Promoting Creativity

The current study found the discourse in the educational policies in Saudi regarding promoting creativity and giftedness was lacking in information about the methods and practices to promote creativity in schools. More specifically, within each theme found under the 3Ps framework, brevity was the salient feature. In education policies, it is vital to create a common discourse about promoting creativity and translate this into effective methods for promoting creativity in schools [107]. This current study found that there was a lack of information in the policy documents, including a lack of information about effective practices that could be translated by schools. Even the GGPS [94], which is meant to serve as a guide for teachers to apply creativity-promoting techniques for gifted students, was lacking in detail.

The finding that Saudi educational documents lack detail regarding the methods of promoting creativity is in line with other research studies. For example, Mammadov [113] found the educational policy in Turkey regarding gifted education lacked details, guidance, or any

practice and implementation plans for educational leaders or teachers in schools. The study concluded that the national policy efforts to educate gifted students in Turkey are failing due to the absence of implementation steps. Another study that aimed to investigate the place of creativity in the national curricula of EU member states and the United Kingdom found that there were not enough details for teachers to implement effective practices for promoting creativity [106]. The researchers argued that if there were details for teachers and a coherent representation of creativity in these national policies, this would reflect positively on promoting creativity in schools [106]. Lassig [107] also concluded that one of the solutions to promote creativity in schools was to provide teachers with the necessary strategies and mechanisms through an informed educational policy. It is important for any educational policy to be a practical framework for teachers, providing a vision, goals, and specific actions, thus helping teachers by informing implementation [109]. This current study highlighted the need for educational policies in Saudi Arabia to include further details regarding promoting creativity with gifted students so that they help teachers with informed implementation in schools.

4. CONCLUSION

The current research has presented a picture of how creativity is expressed in gifted education in educational policies in Saudi Arabia. The findings of this study can benefit policymakers, teachers, and educational leaders in Saudi Arabia. Presenting the Saudi context is also useful for other educational systems in the world, by taking advantage of the positives and avoiding or addressing the obstacles and gaps. Findings emphasised the significance of promoting creativity among gifted students, as one of their educational rights, as well as the benefits for the cognitive, economic, and cultural aspects of Saudi society. The findings from this current study reported two major gaps in these educational documents. The first gap was the lack of a clear definition and sometimes contradiction regarding the concepts of giftedness and creativity and the relationship between them. The second gap was the brief methods and practices for prompting creativity among students which were lacking in detail for implementation. In other words, when the documents mentioned some of the educational methods that promote creativity, this did not provide details of the implementation

mechanisms that could benefit teachers to apply in schools.

Therefore, after discussing the results of the current research, it has been evident that one of the most important factors affecting the inadequacy of the role of schools in Saudi Arabia to promote creativity is the lack of an appropriate policy. This is also the case in many countries as discussed above. Lassig [108] also concluded that creativity, in general, is included in the educational policies of all countries but the issue is the lack of clear definitions and coherent discourse about promoting creativity among students in schools. The lack of an education policy for promoting creativity among students is a research gap needs to be addressed. This current study concludes that the key and the first step toward promoting creativity with gifted students in schools is the existence of a policy that is able to be implemented. Thus, in order to support schools in terms of promoting students' creativity in Saudi Arabia, or in any similar educational contexts, this study suggests adding another (P) which is Policy to the 3P framework (Fig. 2). That is, promoting creativity in the educational context needs 4Ps: *Policy*, *Press*, *Process*, and *Person*. This Policy dimension needs to embed the other 3Ps and highlight themes and sub-themes identified under each

dimension of the 3P framework used in this study.

The revised model shown in Fig. 2 shows the proposed relationships between the four dimensions for promoting creativity among gifted students in school. The first and smallest circle is *Person* which focuses on personal characteristics among learners that lead to creativity. These personal characteristics can be promoted through a larger circle (*Process*), which relates to strategies and techniques for promoting creativity. These strategies and techniques are carried out with a bigger circle which is the learning environment (*Press*). Finally, *Policy* is the biggest circle that affects all the other previous 3Ps.

This study therefore recommends policymakers in Saudi Arabia (and in countries with similar contexts) establish a policy for promoting creativity among gifted students which includes (1) A clear definition of the concept of giftedness and the concept of creativity along with explaining clearly the relation between these two concepts; (2) Paying attention to the themes under the other 3Ps (*Press*, *Process*, and *Person*), and (3) Including details and instructions that guide teachers in implementing creativity with gifted students in the classroom.

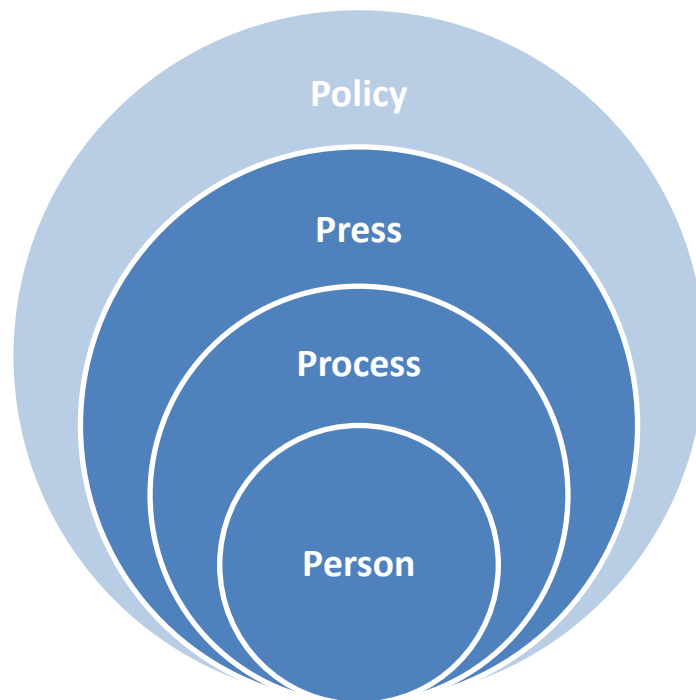


Fig. 2. The relationship between the four dimensions of ps for promoting creativity in schools

ACKNOWLEDGEMENT

Authors declared that this study has received no financial funding.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Amabile TM. Componential theory of creativity. Harvard Business School; 2011.
DOI:<https://doi.org/10.4135/9781452276090.n42>
2. Plucker JA, Beghetto RA, Dow GT. Why isn't creativity more important to educational psychologists? Potentials, pitfalls, and future directions in creativity research. *Educational Psychologist*. 2004;39(2):83–96.
DOI:https://doi.org/10.1207/s15326985ep3902_1
3. Renzulli JS. Developing creativity across all areas of the curriculum. In R. A. Beghetto & J. C. Kaufman (Eds.): *Nurturing creativity in the classroom*. Cambridge University Press. (2017). (Vol. 2, pp. 23–44).
DOI:<https://doi.org/10.5539/elt.v9n4p11>
4. Runco MA. Creativity. *Annual Review of Psychology*. 2004;55:657–687. article.
DOI:<https://doi.org/10.1146/annurev.psych.55.090902.141502>
5. Sawyer, K. (2015b). How to transform schools to foster creativity. *Teachers College Record*, 118(4):1–23.
Available:<http://keithsawyer.com/PDFs/TCR.pdf>
6. Sternberg RJ, Karami S. An 8P theoretical framework for understanding creativity and theories of creativity. *The Journal of Creative Behavior*. 2022;56(1):55–78.
DOI:<https://doi.org/10.1002/jocb.516>
7. Renzulli JS. What makes giftedness? Reexamining a definition. *Phi Delta Kappan*. 1978;60(3):180–184.
DOI:<https://doi.org/10.1177%2F00317217109200821>
8. Renzulli JS. The three-ring conception of giftedness: A developmental model for promoting creative productivity. In S. M. Reis (Ed.): *Reflections on gifted education*. Prufrock Press. 2016;55–90.
Available:<https://psycnet.apa.org/record/2016-00316-003>
9. Treffinger DJ, Reis SM. *Creativity and giftedness*. Corwin Press; 2004.
10. King Abdulaziz and His companions' foundation for giftedness and creativity (Mawhiba). *Mawhiba Programs*; 2022.
Available:<https://www.mawhiba.org/En/Pages/default.aspx>
11. Csikszentmihalyi M. *The systems model of creativity: The collected works of Mihaly Csikszentmihalyi*. Springer; 2015.
DOI:<https://doi.org/10.1007/978-94-017-9085-7>
12. Treffinger DJ, Schoonover PF, Selby EC. *Educating for creativity and innovation*. Prufrock Press; 2012.
13. Marland Jr SP. *Education of the gifted and talented*. Report to the congress of the United States by the U.S. commissioner of education. U.S. Government Printing Office; 1972.
Available:<https://eric.ed.gov/?id=ED056243>
14. Luria SR, O'Brien RL, Kaufman JC. Creativity in gifted identification: Increasing accuracy and diversity. *Annals of the New York Academy of Sciences*. 2016;1377(1):44–52.
DOI:<https://doi.org/10.1111/nyas.13136>
15. VanTassel-Baska J. The world of cross-cultural research. *Journal for the Education of the Gifted*. 2013;36(1):6–18.
DOI:<https://doi.org/10.1177/0162353212471451>
16. Al-Hroub A. Gifted education in Lebanon: Re-examining the role of educational and learning capitals. *Cogent Education*. 2022;9(1):1–19.
DOI:<https://doi.org/10.1080/2331186X.2022.2073644>
17. Alamer S, Phillipson SN. Current status and future prospects of Saudi gifted education: A macro-systemic perspective. *High Ability Studies*. 2022;33(1):21–44.
DOI:<https://doi.org/10.1080/13598139.2020.1840966>
18. Alamiri FY. Gifted education in Saudi Arabian educational context: A systematic review. *Journal of Arts and Humanities*. 2020;9(4):68–79.

- DOI:<https://doi.org/10.18533/journal.v9i4.1895>
19. Alfaiz FS, Alfaid AA, Aljughaiman AM. Current status of gifted education in Saudi Arabia. *Cogent Education*. 2022;9(1):1–31.
DOI:<https://doi.org/10.1080/2331186X.2022.2064585>
 20. Ismail SAA, Alghawi MA, AlSuwaidi KA, Ziegler A. Gifted education in Arab countries: Analyses from a learning-resource perspective. *Cogent Education*. 2022;9(1):1–7.
DOI:<https://doi.org/10.1080/2331186X.2022.2115620>
 21. Rhodes M. An analysis of creativity. *Phi Delta Kappa International*. 1961;42(7):305–310.
Available:<https://www.jstor.org/stable/20342603%0A>
 22. Piirto J. *Creativity for 21st century skills: How to embed creativity into the curriculum*. Sense Publishers; 2011.
DOI:https://doi.org/10.1007/978-94-6091-463-8_1
 23. Richardson C, Mishra P. Learning environments that support student creativity: Developing the SCALE. *Thinking Skills and Creativity*. 2018;27:45–54, article.
DOI:<https://doi.org/10.1016/j.tsc.2017.11.004>
 24. Craft A. *Creativity across the primary curriculum: Framing and developing practice*. Routledge; 2000.
 25. Davies D, Jindal-Snape D, Collier C, Digby R, Hay P, Howe A. Creative learning environments in education—A systematic literature review. *Thinking Skills and Creativity*. 2013;8:80–91.
DOI:<https://doi.org/10.1016/j.tsc.2012.07.004>
 26. Harris A. *Creativity, education and the arts*. Palgrave Macmillan; 2016.
DOI:<https://doi.org/10.1007/978-3-319-63661-0>
 27. Warner SA, Myers KL. The creative classroom: The role of space and place toward facilitating creativity. *Technology and Teacher*. 2009;69(4):28–34.
Available:<https://gateway.library.qut.edu.au/login?url=https://www.proquest.com/scholarly-journals/creative-classroom-role-space-place-toward/docview/235272068/se-2?accountid=13380>
 28. Chan S, Yuen M. Personal and environmental factors affecting teachers' creativity-fostering practices in Hong Kong. *Thinking Skills and Creativity*. 2014;12:69–77, article.
DOI:<https://doi.org/10.1016/j.tsc.2014.02.003>
 29. Sawyer K. A call to action: The challenges of creative teaching and learning. *Teachers College Record*. 2015a;117(10):1–34.
DOI:<https://doi.org/10.1177%2F016146811511701001>
 30. Aljughaiman AM, Mowrer-Reynolds E. Teachers' conceptions of creativity and creative students. *The Journal of Creative Behavior*. 2005;39(1):17–34.
DOI:<https://doi.org/10.1002/j.2162-6057.2005.tb01247.x>
 31. Beghetto, Ronald A. Does creativity have a place in classroom discussions? Prospective teachers' response preferences. *Thinking Skills and Creativity*. 2007;2(1):1–9.
DOI:<https://doi.org/10.1016/j.tsc.2006.09.002>
 32. Sternberg RJ, Williams WM. How to develop student creativity. *Association for Supervision and Curriculum Development (ASCD)*; 1996.
 33. Beghetto, Ronald A, Kaufman JC. Classroom contexts for creativity. *High Ability Studies*. 2014;25(1):53–69.
DOI:<https://doi.org/10.1080/13598139.2014.905247>
 34. Cropley AJ. Fostering creativity in the classroom: General principles. In M. A. Runco (Ed.):*The Creativity Research Handbook*. 1997;1:84–114. Ablex.
 35. Hennessey BA, Amabile TM. *Creativity and learning: What research says to the teacher*. National Education Association; 1987.
Available:<https://files.eric.ed.gov/fulltext/ED312835.pdf>
 36. Soh K. Creativity fostering teacher behaviour around the world: Annotations of studies using the CFTIndex. *Cogent Education*. 2015;2(1):1–18.
DOI:<https://doi.org/10.1080/2331186X.2015.1034494>

37. Bowers MT, Green BC, Hemme F, Chalip L. Assessing the relationship between youth sport participation settings and creativity in adulthood. *Creativity Research Journal*. 2014;26(3):314–327.
DOI:<https://doi.org/10.1080/10400419.2014.929420>
38. Garaigordobil M, Berruero L. Effects of a play program on creative thinking of preschool children. *The Spanish Journal of Psychology*. 2011;14(2):608–618.
DOI:https://doi.org/10.5209/rev_SJOP.2011.v14.n2.9
39. Glăveanu VP, Ness IJ, Wasson B, Lubart T. Sociocultural perspectives on creativity, learning, and technology. In C. A. Mullen (Ed.): *Creativity under duress in education?*. Springer. 2019;3:63–82.
DOI:<https://doi.org/10.1007/978-3-319-90272-2>
40. Jamali B, Kazemi R, Shahbazi M. Effects of sport activities on increasing preschool children's creativity. *Management Science Letters*. 2012;2(6):1975–1980.
DOI:<https://doi.org/10.5267/j.msl.2012.06.024>
41. Marsh J, Plowman L, Yamada-rice D, Bishop J, Lahmar J, Scott F. Play and creativity in young children's use of apps. *British Journal of Educational Technology*. 2018;49(5):870–883.
DOI:<https://doi.org/10.1111/bjet.12622>
42. Vygotsky LS. Play and its role in the mental development of the child. *International Research in Early Childhood Education*. 2016;7(2):3–25.
Available:<https://eric.ed.gov/?id=EJ1138861>
43. Yeh CSH. Exploring the effects of videogame play on creativity performance and emotional responses. *Computers in Human Behavior*. 2015;53:396–407, article.
DOI:<https://doi.org/10.1016/j.chb.2015.07.024>
44. Zachopoulou E, Trevlas E, Konstadinidou E, Group APR. The design and implementation of a physical education program to promote children's creativity in the early years. *International Journal of Early Years Education*. 2006;14(3):279–294.
DOI:<https://doi.org/10.1080/09669760600880043>
45. Torrance ER. The Torrance tests of creative thinking norms—technical manual figural (streamlined) forms A & B. Scholastic Testing Service, Inc.; 1990.
46. Eberle RF. Developing imagination through scamper. *Journal of Creative Behavior*. 1972; 6(3):199–203.
Available:<https://eric.ed.gov/?id=EJ067371>
47. Khawaldeh HMA. The effectiveness of SCAMPER and CoRT programs on creativity among gifted and talented students [Doctoral dissertation, Universiti Utara Malaysia]; 2018.
Available:http://etd.uum.edu.my/7420/2/s95521_01.pdf
48. Poon JCY, Au ACY, Tong TMY, Lau S. The feasibility of enhancement of knowledge and self-confidence in creativity: A pilot study of a three-hour SCAMPER workshop on secondary students. *Thinking Skills and Creativity*. 2014;14:32–40, article.
DOI:<https://doi.org/10.1016/j.tsc.2014.06.006>
49. Wu TT, Wu YT. Applying project-based learning and SCAMPER teaching strategies in engineering education to explore the influence of creativity on cognition, personal motivation, and personality traits. *Thinking Skills and Creativity*. 2020;35:1–9, article.
DOI:<https://doi.org/10.1016/j.tsc.2020.100631>
50. Daher W, Tabaja-Kidan A, Gierdien F. Educating Grade 6 students for higher-order thinking and its influence on creativity. *Pythagoras*. 2017;38(1):1–12.
DOI:<https://doi.org/10.4102/pythagoras.v38i1.350>
51. De Bono E. The CoRT thinking program. In A. L. Costa (Ed.): *Developing minds: A resource book for teaching thinking*. Association for Supervision and Curriculum. 1985;203–211.
Available:<https://files.eric.ed.gov/fulltext/ED262968.pdf#page=205>
52. Hmeadat SRA. The effect of the cognitive research trust program for development of thinking skills on the achievement of the Jordanian English language learners. *The Arab Journal of Sciences and Research Publishing*. 2016;2(1):442–450.
Available:<https://platform.almanhal.com/Files/2/85357>

53. Ritchie SM, Edwards J. Creative thinking instruction for aboriginal children. *Learning and Instruction*. 1996;6(1):59–75.
DOI:[https://doi.org/10.1016/S0959-4752\(96\)80004-1](https://doi.org/10.1016/S0959-4752(96)80004-1)
54. De Bono E. *How to have creative ideas: 62 exercises to develop the mind*. Vermilion; 2007.
55. Kim KH. *The creativity challenge: How we can recapture American innovation*. Amherst, NJ: Prometheus Books; 2016.
56. Torrance EP. Can we teach children to think creatively? *The Journal of Creative Behavior*. 1972;6(2):114–143.
Available:<https://eric.ed.gov/?id=ED061544>
57. Treffinger DJ. *Encouraging creative learning for the gifted and talented: A handbook of methods and techniques*. Ventura County Schools/LTI; 1980.
58. Treffinger DJ. Creative problem solving: Overview and educational implications. *Educational Psychology Review*. 1995; 7(3):301–312.
DOI:<https://doi.org/10.1007/BF02213375>
59. Berdonosov VD, Redkolis EV. TRIZ evolutionary approach: Didactics. *ScienceDirect*. 2015;131:1105–1112, article.
DOI:<https://doi.org/10.1016/j.proeng.2015.12.428>
60. Chang YS, Chien YH, Yu KC, Chu YH, Chen MYC. Effect of TRIZ on the creativity of engineering students. *Thinking Skills and Creativity*. 2016;19:112–122.
DOI:<https://doi.org/10.1016/j.tsc.2015.10.003>
61. Domb E, Miller J, Czerepinski R. Improve TRIZ teaching and learning by getting out of the classroom. *Proceedings of the 10th ETRIA World Conference*; 2010.
Available:<http://www.aitriz.org/documents/TRIZCON/Proceedings/Domb-Miller-and-Czerepinski-Improve-TRIZ-Teaching-and-Learning-by-Getting-Out-of-the-Classroom.pdf>
62. Fan J. Application idea for TRIZ theory in innovation education. 2010 5th International Conference on Computer Science & Education. 2010;1535–1540.
DOI:<https://doi.org/10.1109/ICCSE.2010.5593787>
63. De Bono E. *Six thinking hats*. Penguin; 2017.
64. Ziadat AH, Al Ziyadat MT. The effectiveness of training program based on the six hats model in developing creative thinking skills and academic achievements in the Arabic language course for gifted and talented Jordanian students. *International Education Studies*. 2016;9(6): 150–157.
DOI:<https://doi.org/10.5539/ies.v9n6p150>
65. Aiomy M, Haghani F. The effect of synectics & brainstorming on 3 rd grade students' development of creative thinking on science. *Procedia-Social and Behavioral Sciences*. 2012;47:610–613, article.
DOI:<https://doi.org/10.1016/j.sbspro.2012.06.704>
66. Al Qararah A. The effect of using brain storming in teaching science in developing creative thinking skills for basic seventh grade students of tafila schools–south of Jordan. *An-Najah University Journal for Research - Humanitie*. 2014;28(4):668–706.
Available:<https://repository.najah.edu/handle/20.500.11888/2456>
67. Michinov N, Primois C. Improving productivity and creativity in online groups through social comparison process: New evidence for asynchronous electronic brainstorming. *Computers in Human Behavior*. 2005;21(1):11–28.
DOI:<https://doi.org/10.1016/j.chb.2004.02.004>
68. Kim M. A meta-analysis of the effects of enrichment programs on gifted students. *Gifted Child Quarterly*. 2016;60(2):102–116.
DOI:<https://doi.org/10.1177%2F0016986216630607>
69. Sternberg RJ. Creativity as a habit. In A.-G. Tan (Ed.): *Creativity: A handbook for teachers*. 2007;3–25. World Scientific.
citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.148.5028&rep=rep1&type=pdf
70. Kaufman JC, Beghetto RA. Beyond big and little: The four c model of creativity. *Review of General Psychology*. 2009;13(1):1–12.
DOI:<https://doi.org/10.1037%2Fa0013688>
71. Runco MA. Education for creative potential. *Scandinavian Journal of*

- Educational Research. 2003;47(3):317–324.
DOI:<https://doi.org/10.1080/00313830308598>
72. Fasko D. Education and creativity. *Creativity Research Journal*. 2001;13(3–4):317–327.
DOI:https://doi.org/10.1207/S15326934CRJ1334_09
73. Lucas B. A five-dimensional model of creativity and its assessment in schools. *Applied Measurement in Education*. 2016;29(4):278–290.
DOI:<https://doi.org/10.1080/08957347.2016.1209206>
74. Lucas B, Claxton G, Spencer E. Progression in student creativity in school: First steps towards new forms of formative assessments. OECD Publishing; 2013.
DOI:<https://doi.org/10.1787/5k4dp59msdwk-en>
75. Pantaleo S. Creativity and elementary students' multimodal narrative representations. *Australian Journal of Language and Literacy*. 2019;42(1):17–27.
Available:<https://search.informit.com.au/fullText;dn=123654102086002;res=IELIND>
76. Amabile TM. *Creativity in context: Update to the social psychology of creativity*. Routledge; 2018.
77. Sternberg RJ. The nature of creativity. *Creativity Research Journal*. 2006;18(1):87–98.
DOI:https://doi.org/10.1207/s15326934crj1801_10
78. Esquivel GB. Teacher behaviors that foster creativity. *Educational Psychology Review*. 1995; 7(2):185–202.
DOI:<https://doi.org/10.1007/BF02212493>
79. Guilford JP. Creativity: Yesterday, today and tomorrow. *The Journal of Creative Behavior*. 1967;1(1):3–14.
DOI:<https://doi.org/10.1002/j.2162-6057.1967.tb00002.x>
80. De Bono E. The cognitive research trust (CoRT) thinking program. In W. Maxwel (Ed.): *Thinking: The expanding frontier*. The Franklin Institute. 1983;115–127.
81. Alhusaini AA. Using the TASC model to develop gifted students' creativity: Analytical review. *Journal for the Education of Gifted Young Scientists*. 2018;6(3):11–29.
DOI:<https://doi.org/10.17478/JEGYS.2018.78>
82. Tseng KH, Chang CC, Lou SJ, Hsu PS. Using creative problem solving to promote students' performance of concept mapping. *International Journal of Technology and Design Education*. 2013;23(4):1093–1109.
DOI:<https://doi.org/10.1007/s10798-012-9230-8>
83. Furnham A. The brainstorming myth. *Business Strategy Review*. 2000;11(4):21–28.
DOI:<https://doi.org/10.1111/1467-8616.00154>
84. Bandura A. Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*. 1977;84(2):191–215.
DOI:<https://doi.org/10.1037/0033-295X.84.2.191>
85. Bandura A. *Self-efficacy: The exercise of control*. Freeman and Company; 1997.
86. Kim KH, Chae N. Recapturing American innovation through education: The creativity challenge for schools. In C. A. Mullen (Ed.): *Creativity under duress in education?* Springer. 2019;215–233.
DOI:https://doi.org/10.1007/978-3-319-90272-2_12
87. Sternberg RJ. Creative giftedness is not just what creativity tests test: Implications of a triangular theory of creativity for understanding creative giftedness. *Roeper Review*. 2018; 40(3):158–165.
DOI:<https://doi.org/10.1080/02783193.2018.1467248>
88. Sternberg RJ, Lubart TI. An investment theory of creativity and its development. *Human Development*. 1991;34(1):1–31.
Available:<https://www.jstor.org/stable/26767348%0A>
89. Creswell JW, Poth CN. *Qualitative inquiry and research design: Choosing among five approaches*. Sage; 2016.
90. Merriam SB. *Case study research in education: A qualitative approach*. Jossey-Bass; 1998.
91. *The educational policy of Saudi Arabia (TEPSA) (4th ed.)*. Ministry of education in Saudi Arabia (MoE); 1995.
Available:<https://www.moe.gov.sa/ar/about-us/nationaltransformation/RPRLibrary/سياسةالتعليمبالمملكة.pdf>

92. The regulatory rules for gifted education in Saudi Arabia (TRRGESA). Ministry of education in Saudi Arabia (MoE); 2001.
Available:[https://www.moe.gov.sa/ar/about-us/nationaltransformation/RPRLibrary/القواعد التنظيمية لرعاية الموهوبين.pdf](https://www.moe.gov.sa/ar/about-us/nationaltransformation/RPRLibrary/القواعد%20التنظيمية%20لرعاية%20الموهوبين.pdf)
93. The Arabic strategy for giftedness and creativity (TASGC). Mawhiba; 2008.
Available:<https://www.mawhiba.org/Ar/About/who/Documents/arab-strat.pdf>
94. Guide for gifted programs in schools (GGPS). Ministry of education in Saudi Arabia (MoE); 2009.
Available:<https://edu.moe.gov.sa/Quriat/DocumentCentre/Docs/الأدلة/الموهوبين/دليل برنامج الأداة/الموهوبين/دليل برنامج رعاية الموهوبين في المدارس لعام 1428 هـ.pdf>
95. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology*. 2006;3(2):77–101.
DOI:<https://doi.org/10.1191/1478088706qp0630a>
96. Clarke V, Braun V, Hayfield N. Thematic analysis. *The Journal of Positive Psychology*. 2015;12(3):297–298.
DOI:<https://doi.org/10.1080/17439760.2016.1262613>
97. Braun V, Clarke V. One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*. 2021;18(3):328–352.
DOI:<https://doi.org/10.1080/14780887.2020.1769238>
98. Xu W, Zammit K. Applying thematic analysis to education: A hybrid approach to interpreting data in practitioner research. *International Journal of Qualitative Methods*. 2020;19:1–19, article.
DOI:<https://doi.org/10.1177/1609406920918810>
99. Hines ME, Catalana SM, Anderson BN. When learning sinks in: Using the incubation model of teaching to guide students through the creative thinking process. *Gifted Child Today*. 2019;42(1):36–45.
DOI:<https://doi.org/10.1177/1076217518804858>
100. Reis, Sally M, Renzulli JS. Is there still a need for gifted education? An examination of current research. *Learning and Individual Differences*. 2010;20(4):308–317.
DOI:<https://doi.org/10.1016/j.lindif.2009.10.012>
101. Renzulli JS. Reflections on gifted education. Routledge; 2021.
DOI:<https://doi.org/10.4324/9781003237693>
102. Gallagher JJ. Political issues in gifted education. *Journal for the Education of the Gifted*. 2015; 38(1):77–89.
DOI:<https://doi.org/10.1177/0162353214565546>
103. Tomlinson S. Gifted, talented and high ability: Selection for education in a one-dimensional world. *Oxford Review of Education*. 2008;34(1):59–74.
DOI:<https://doi.org/10.1080/03054980701542096>
104. Rasmussen A, Lingard B. Excellence in education policies: Catering to the needs of gifted and talented or those of self-interest? *European Educational Research Journal*. 2018;17(6):877–897.
DOI:<https://doi.org/10.1177/1474904118771466>
105. Pllana D. Creativity in modern education. *World Journal of Education*. 2019;9(2):136–140.
DOI:<https://doi.org/10.5430/wje.v9n2p136>
106. Wyse D, Ferrari A. Creativity and education: Comparing the national curricula of the states of the European Union and the United Kingdom. *British Educational Research Journal*. 2015;41(1):30–47.
DOI:<https://doi.org/10.1002/berj.3135>
107. Lassig CJ. Promoting creativity in education- From policy to practice: An Australian perspective. *Proceedings of the Seventh ACM Conference on Creativity and Cognition*. 2009;229–238.
DOI:<https://doi.org/10.1145/1640233.1640269>
108. Lassig CJ. Creativity talent development: Fostering creativity in schools. In S. R. Smith (Ed.):*Handbook of giftedness and talent development in the Asia-Pacific*. Springer. 2021;1045–1069.
DOI:https://doi.org/10.1007/978-981-13-3021-6_49-1
109. Henriksen D, Henderson M, Creely E, Ceretkova S, Černochová M, Sendova E, Sointu ET, Tienken CH. Creativity and technology in education: An international perspective. *Technology, Knowledge and Learning*. 2018;23(3):409–424.

- DOI:<https://doi.org/10.1007/s10758-018-9380-1>
110. Hennessey BA, Amabile TM. Creativity. Annual Review of Psychology. 2010;61(1): 569–598.
DOI:<https://doi.org/10.1146/annurev.psych.093008.100416>
111. Sak U. About creativity, giftedness, and teaching the creatively gifted in the classroom. Roeper Review. 2004;26(4): 216–222.
DOI:<https://doi.org/10.1080/02783190409554272>
112. Saudi Vision 2030. National transformation program; 2022.
Available:<https://vision2030.gov.sa/en>
113. Mammadov S. Current policies and policy efforts for the education of gifted children in Turkey. Roeper Review. 2015;37(3):139–149.
DOI:<https://doi.org/10.1080/02783193.2015.1047548>
114. McBee MT, Makel MC. The quantitative implications of definitions of giftedness. AERA Open. 2019;5(1):1–13.
DOI:<https://doi.org/10.1177/2332858419831007>
115. Kim MK, Roh IS, Cho MK. Creativity of gifted students in an integrated math-science instruction. Thinking Skills and Creativity. 2016;19:38–48, article.
DOI:<https://doi.org/10.1016/j.tsc.2015.07.004>

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