CREATIVE EDUCATIONAL PRACTICE
FOR GIFTED CHILDREN
IN THE SCHOOL CONTEXT

KREATIVNA EDUKACIJSKA PRAKSA U RADU
S NADARENOM DJECOM
U ŠKOLSKOM KONTEKSTU

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ABSTRACT
Although the interest in gifted, talented and creative people has been present
since ancient times there is still no complete theory that interprets the
characteristics, needs and appropriate methods of intervention in this population.
However, review of literature shows that education of gifted children, due to lack
of curriculum, training and resources, is no longer a marginal topic in educational
practice and scientific researches. Their interest is directed to elaboration of
creative educational practice, conceptualisation of contemporary curriculum
and defining of educators training. Recent researches focused on enrichment
and curriculum enhancement in gifted children emphasize higher achievement
benefits, creative productivity, critical thinking, higher levels of success and life
satisfaction. For further consideration, in this article main characteristic of gifted
children in school context, as well as main determinants of creative education and
some examples of creative educational practice are discussed.

Key words: gifted children, creative education, school context, inclusion

APSTRAKT
Iako je zanimanje za nadarene, talentirane i kreativne osobe prisutno od davnih
vremena, još uvijek nema cijelovite teorije koja tumači karakteristike, potrebe i
prilazne metode intervencije u ovoj populaciji. Međutim, pregled literature po-
kazuje da obrazovanje nadarene djece, usprkos nedostatku nastavnih programa, edukacije stručnog osoblja i ostalih resursa, više nije marginalna tema u okviru obrazovne prakse i znanstvenih istraživanja. Njihov interes je usmjeren na razrađivanje kreativne obrazovne prakse, konceptualiziranje suvremenih kurikuluma i definiranje prikladne edukacije nastavnog osoblja. Rezultati dosadašnjih istraživanja koja su ispitivala načine obogaćivanja i poboljšanja kurikuluma za darovite djece ističu da je njihova primjena utjecala na bolju školsku postignuća, kreativnu produktivnost i kritičko razmišljanje, kao i na višu razinu uspješnosti i zadovoljstva životom općenito. U svrhu daljnjeg razmatranja ove teme, u članku su opisane osnovne karakteristike darovite djece u školskom kontekstu, temeljne odrednice kreativnog obrazovanja, kao i neki primjeri kreativne obrazovne prakse.

**Ključne riječi:** nadarena djeca, kreativna edukacija, školski kontekst, inkluzija

**INTRODUCTION**

The giftedness of the child is determined by the combination of three basic groups: above-average general or specific abilities, motivation and high degree of creativity. Principal areas that are also considered in the field of giftedness are: general intellectual abilities, creative and/or artistic abilities and psychomotor skills (Adžić, 2011).

According to Vranjković (2010), in observation of gifted children can be noticed that they:

- have outstanding problem-solving skills
- easily find and perceive subtle relationships, hidden principles, and generalizations
- are exceptional in the quality and quantity of vocabulary
- are interested in words and their meanings
- like to read and understand what they have read
- understand complex and abstract ideas at an early age
- learn quickly and easily remember what they have learned
- remember relevant details, concepts and principles
- understand complex arithmetic problems and complex mathematical concepts
- keep their attention for a longer time
- have ability to direct own acquisition of knowledge
- show Self-regulated principles of learning
- have exceptional abilities in some of artistic expression (music, art, dance, dramatization, etc.)
- show flexibility in thinking and solving problems from a variety of points of view.

Although the interest in gifted, talented and creative people has been present since ancient times there is still no complete theory that interprets the characteristics, needs and appropriate methods of intervention in this population. Respectively, it might be said that the problems of giftedness with their complexity defy time and human knowledge. On the other side, challenging as it is, it always encourages to be engaged in the consideration
of different areas of human existence so also in the field of school context (Vučemil, Kovačević, 2010).

**Characteristics of gifted children in school context**

Piske at al. (2014) in explanation of gifted children in school context cited the description of Gama (2006) that says that: “Gifted children have an excessive devotion to do things of their interest, which is not seen in children that have the same age. It is a high ability of concentration for periods of time, this ability is superior if we compare to abilities of other students in the same conditions and the same age. It is the ability to focus a lot on some activity, is a task, a lesson, the development of a project or any other work.”

One of the most detailed classification of characteristics of gifted children is shown on table 1, as is presented on web-site of Ministry of Education of New Zealand (http://gifted.tki.org.nz/For-schools-and-teachers/Idenification/Idenification-criteria/Characteristics-of-gifted-and-talented-students). Also, it is stressed that each school need to develop a set of characteristics that reflects its own definition of, and approach to, the concept of giftedness and talent. The list below, adapted from the Teacher Observation Scales for Identifying Children with Special Abilities (McAlpine, Reid, 1996) may be used as a starting point.

**Table 1: Classification of characteristics of gifted children**

<table>
<thead>
<tr>
<th>Learning characteristics</th>
<th>Self-determination characteristics</th>
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<tbody>
<tr>
<td>• displays logical and analytical thinking</td>
<td>• is sceptical of authoritarian pronouncements</td>
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<tr>
<td>• is quick to see patterns and relationships</td>
<td>• questions arbitrary decisions</td>
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<tr>
<td>• masters information quickly</td>
<td>• pushes teachers and adults for explanations</td>
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<tr>
<td>• strives for accurate and valid solutions to problems</td>
<td>• displays a precocious interest in 'adult' problems</td>
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<tr>
<td>• easily grasps underlying principles</td>
<td>• is reluctant to practice skills already mastered</td>
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<tr>
<td>• likes intellectual challenge</td>
<td>• is easily bored with routine tasks</td>
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<tr>
<td>• jumps stages in learning</td>
<td>• expresses ideas, preferences, and opinions forthrightly</td>
</tr>
<tr>
<td>• seeks to redefine problems, pose ideas, and formulate hypotheses</td>
<td>• relates well to older children and adults, and often prefers their company</td>
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<tr>
<td>• finds as well as solves problems</td>
<td>• asks searching questions</td>
</tr>
<tr>
<td>• reasons things out for her or himself</td>
<td></td>
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<tr>
<td>• formulates and supports ideas with evidence</td>
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<tr>
<td>• can recall a wide range of knowledge</td>
<td></td>
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<tr>
<td>• independently seeks to discover the why and how of things</td>
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Creative thinking characteristics                                                                 | Social leadership characteristics                                                                 |
---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
As Piske et al. (2014) state by citing The National Policy on Special Education in the Perspective of Inclusive Education of the Brazilian Ministry of Education: “Students with high ability/gifted demonstrate high potential in any of the following areas, singly or in combination: intellectual, academic, leadership, psychomotor and arts. They have also high creativity, high involvement in learning and performing activities in areas of their interest”.

Because of these characteristics these children can be predisposed to exceptional successes, but also their specific abilities can cause certain problems in functioning in the school system. First, it can be said that: “The intellectual, emotional, and physical development of gifted and talented students is often uneven. This ‘asynchronous’ development means that their experiences are measurably different from those of their peers, which may lead to feelings of not fitting in. These feelings can become particularly acute in early adolescence, and gifted and talented students may mask their abilities to gain acceptance.” (http://gifted.tki.org.nz/For-schools-and-teachers/Identification/Identification-criteria/Characteristics-of-gifted-and-talented-students).

Furthermore, because of their unusual ways of thinking and behaviour, there is the possibility that they would be mocked and/or excluded from close social groups.
Secondly, not stimulating and undemanding tasks could induce sense of boredom and overage of free time in classroom. Also, most of these children often feel unmotivated because of a monotonous and repetitive teaching (Piske et al, 2014). This lack of motivation happens primarily with gifted children who “make their discoveries by themselves and invent new ways of understanding” (Winner, 1998). For the reasons stated above, some of gifted children in certain circumstances can become hyperactive, obstruct the teaching or attract attention to themselves. That means that they want to cooperate, but in its own way. One of the possible ways to reduce the gap between their intense needs and the school curriculum is to introduce additional assignments for gifted students. The solution can also be more frequent introduction of project assignments or collaborative learning in which, in group or individual work, students could adapt their performance in accordance with their own abilities and capacities.

Identification of gifted children in school context

Selecting instruments to identify gifted students is difficult and problematic, especially when it comes to young, gifted children as they are growing fast physically and cognitively, making identification even more challenging (Yang, 2009).

Precisely because of the diversity of areas where giftedness may appear, for identification may be used many sources of information. There is no universal identification method because there are different types and categories of giftedness, so identification procedures should be applied accordingly type of giftedness. The best identification strategies are those that rely on multiple criteria, confirms Coleman (2003) as this gives a more complete picture of the student. Correct methods of identifications provide multiple information about the student, not just his cognitive skills, but also school success, productivity in various areas, interests, creativity, motivation and behavioural qualities. The literature points out various identification methods that can be combined, such as: nomination by parents, peers, teachers or self-nomination, scores on different competitions, age-related testing or level of talent, creativity tests, intelligence tests, diverse ability scale estimates, interviews, school grades, etc. (Škoda, 2015)

CREATIVE EDUCATIONAL PRACTICE FOR APPROPRIATE INCLUSION OF GIFTED CHILDREN

Although we have witnessed an increased number of gifted children in the school system, the results of different researches point out a greater number of problems in this area related to: lack of curriculum and instructional practice, elaboration of creative education model, conceptualisation of contemporary curriculum and provided education for teachers tailored to gifted children, deficit of continuous and standardized teachers’ education, complexity of evaluation, etc. In that way, Callahan et al. (2015) state that: “Challenges to documenting effectiveness of curricular and/or instructional modification for teaching this group of students include
(a) difficulty with establishing effective outcome measures, (b) complexities in determining the extent to which these models are responsible for observable and measurable outcomes using experimental paradigms, and (c) lack of data on fidelity of implementation”.

So, one of the main challenge is how we can prepare and evaluate educational system in order to ensure full inclusion of gifted children. In that way, Piske et al. (2014) suggest that: “... it is necessary not just attend their cognitive needs, education professionals need to be well prepared to attend also their emotional and social needs.”

Also, it is very important that during elementary and high education creative thinking is stimulated and supported. Respectively, according to Piske et al. (2014) the way of thinking of gifted children “...often differs from the way that other students think, because generally gifted present in their thinking many details that are present in a single idea, their answers are uncommon and they present different forms of answers when they are questioned.”. Creativity, also stressed Renzulliin his “Three-ring” conception of giftedness (picture 1) as one of the equal determinants in that triad (Renzulli, Reis, 1997).

![Three-ring Conception of Giftedness](image)

**Picture 1: Renzulli’s Three-ring Conception of Giftedness**

Authors Bahia and Trindade (2013) pointed out some important topics for the development of creativity at school, and among them Piske et al. (2014) have distinguished the following:

- implementation of a global climate that incite the construction of ideas, autonomy and openness to difference rather than conformity and uniformity that so often invades the school;
- use of different media to express and evaluate ideas, production ideas that reveal variety of possibilities or ways of thinking involves the ability to perspective under multiple possibilities;
• originality and innovation, because creativity is original and origin-ator of alternative and unique possibilities, such as the infrequency of proposals and non-use of stereotyped images should be considered in school, this dimension involves the production of unique or unusual ideas, relevant ideas but not obvious, from the collection and synthesis of information in innovative ways;
• elaboration and expressiveness, therefore the elaboration refers to details that clarify an idea, concept, theme, or solution, enhancing its understanding and impact, the richness of communication of ideas and the presence of emotional dimension are essential strategies for a creative school.

In any case, creative education becomes necessary because modern technologies and rapid growth of knowledge make culture-consuming (appropriating) education inadequate and useless. So, in facilitating creative education some assumptions need to be met, like e.g. elaboration of creative education model, conceptualisation of contemporary curriculum and provided education for teachers and other staff members. For example, in considering the model of creative education Lee (2013) suggested 5 stages of teaching in creative education. According to this idea facilitating of every of these stages, named idea-discovery-digging-manifestation-development, serve to encourage learner’s freedom and willingness with teacher’s love and guide. As Lee (2013) explained: "The five-stage of teaching can present the educational course as creative ability cultivation as well as the teaching for realization of educational self."

It is important to emphasize that in the creative education importance of educators is unquestionable because creative thinking is power, so inattentive and irresponsible “playing” with ideas and products can be dangerous and devastating. In that way, a significant part of creative education is to learn about correct decisions and to exercise the man’s capacity to judgement (Nosari, 2012).

Finally, the aim of creative education is not only to teach students how to create new ideas and products, but also, as Ageyev (2012) very nice conclude, to support man’s ability to make himself, his abilities and his psychic action necessary for process of creation.

**Some Examples of Creative Educational Practice**

An overview of the various education systems in the world shows that some efforts have been made in adapting to gifted students. Having in mind the appropriate school inclusion Piske et al. (2014) point out that: "... it is important to prepare teachers to attend the special needs of gifted, involving the teaching method, teaching resources, interesting forms of learning for students with special needs, their school progress, evaluation issues among other aspects."

Furthermore, curriculum development and instructional modifications are also needed. In that sense, Callahan at al. (2015) described Depth and Complexity Model (Kaplan, 2005) which employs standards-based curriculum as the foundation to promote academic rigor and develops
understanding by integrating elements of depth (details, patterns, rules, big ideas, unanswered questions, and ethical issues in the discipline) and complexity (multiple perspectives, interdisciplinary connections, and changes over time). Also, the CLEAR model can be mentioned which consists of five elements: Continual Formative Assessment, Clear Learning Goals, Data-Driven Learning Experiences, Authentic Products, and Rich Curriculum (Callahan at al., 2015). And, as widely adopted and extensively documented is Schoolwide Enrichment Model (SEM) which include (a) exposure to extensions of traditional content within the context of its use by real-world professionals, (b) process skills that are applied to solving real problems, and (c) investigations and/or creation of products that reflect in-depth investigations into solving real problems in areas of student interest and ability (Vantassel-Baska, Brown, 2007).

One of the most detailed program adapted for gifted children is Pre-K to Grade 12 Gifted Programming Standards developed by National Association for Gifted Children (NAGC), an association in the USA for gifted and talented children, and their parents. (https://www.nagc.org/). These standards provide a basis for policies, rules, and procedures that are essential for providing systematic programs and services. The standards increase the focus on diversity and collaboration – two powerful principles that guide high quality programs and services. The standards use student outcomes for goals, rather than teacher practices, keeping them in line with the thinking in education standards generally. Because these standards are grounded in theory, research, and practice paradigms, they provide an important base for all efforts on behalf of gifted learners at all stages of development (https://www.nagc.org/resources-publications/resources/national-standards-gifted-and-talented-education/pre-k-grade-12). This model consists of 6 standards as is shown in table 2.

Table 2: Pre-K-Grade 12 Gifted Programming Standards

<table>
<thead>
<tr>
<th>Standard 1: Learning and Development</th>
<th>For teachers and other educators to be effective in working with learners with gifts and talents. They must understand the characteristics and needs of the population for whom they are planning curriculum, instruction, assessment, programs and services. While cognitive growth is important in such programs, affective development is also necessary. Many of the characteristics addressed in this standard emphasize affective development linked to self-understanding and social awareness.</th>
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<tbody>
<tr>
<td>Standard 2: Assessment</td>
<td>Knowledge about all forms of assessment is essential for educators of students with gifts and talents. It is integral to identification, assessing each student's learning progress, and evaluation of programming. Educators need to establish a challenging environment and collect multiple types of assessment information so that all students are able to demonstrate their gifts and talents.</td>
</tr>
<tr>
<td>Standard 3: Curriculum Planning and Instruction</td>
<td>The information obtained from multiple types of assessments informs decisions about curriculum content, instructional strategies, and resources that will support the growth of gifted students. Educators develop and use a comprehensive and sequenced core curriculum that is aligned with local, state, and national standards, then differentiate and expand it.</td>
</tr>
<tr>
<td>Standard 4: Learning Environments</td>
<td>Knowledge of the impact of giftedness and diversity on social-emotional development enables to design environments that encourage independence, motivation, and self-efficacy of individuals from all backgrounds. They use relevant strategies and technologies to enhance oral, written, and artistic communication of learners whose needs vary based on exceptionality, language proficiency, and cultural and linguistic differences.</td>
</tr>
<tr>
<td>Standard 5: Programming</td>
<td>Educators develop policies and procedures to guide and sustain all components of comprehensive and aligned programming. It can be used a variety of programming options such as acceleration and enrichment in varied grouping arrangements (cluster grouping, resource rooms, special classes, special schools) and within individualized learning options (independent study, mentorships, online courses, internships).</td>
</tr>
<tr>
<td>Standard 6: Professional Development</td>
<td>Professional development may take many forms ranging from district-sponsored workshops and courses, university courses, professional conferences, independent studies, and presentations by external consultants and should be based on systematic needs assessments and professional reflection.</td>
</tr>
</tbody>
</table>

As further model of creative education adopted to gifted children is the Cherry Creek School in USA that include preschool, elementary and high schools and summer school. It supports research-based strategies that provide opportunities for optimal learning to ensure that gifted and talented students will perform at levels commensurate with their abilities. Gifted and talented students are provided a dynamic, challenging educational program at every level throughout their school career (http://cherrycreekschools.org). The following are examples of such service options:

- Flexible cluster grouping based on learning needs, readiness, and ability
- Curriculum compacting (allows student to advance to next learning level when appropriate)
- Acceleration (by grade or subject when appropriate)
- Differentiation (adjustment of content, process and product) based on student's academic need and ability
- Pull-out classes with instructional specialists during the school day but outside the regular classroom
• Rigorous enrichment programs and projects (additional opportunities for developing intellectual potential)
• Affective support (addressing social and emotional needs either for individuals or in groups)
• Advanced placement for special classes in content areas or elective courses, some for college credit
• Independent study projects
• Honours and high achievement diploma programs

Review of literature shows that education of gifted children, due to lack of curriculum, training and resources, is no longer a marginal topic in educational practice and scientific researches. Different educational programs and strategies have been found to be effective at serving gifted children in a variety of school contexts. For example, some studies demonstrate that educational programmes for gifted produce effective results, including higher levels of advanced degrees (Lubinski, et al. 2001), high levels of success and life satisfaction, and consistent patterns of interest and creative expression over time (Hébert 1993, Park, et al. 2007, Reis and Renzulli 2010). Similarly, recent researches focused on applying of enrichment and curriculum enhancement emphasized higher achievement benefits as well as other benefits such as opportunities for creative productivity and critical thinking (Plucker, Callahan, 2007; Reis, S. M., Renzulli, 2010).

Finally, we may say that current knowledge in this field emphasizes the need for more research which would provide better insight into the design of appropriate approaches, challenging curriculum and instructional differentiation (Renzulli et al. 2009, Gentry, Oven, 1999). It can be a contribution which may enable gifted children to make progress in different areas of their activity.

CONCLUSION

It can be summarized that creative educational practice for gifted children should promote: a) identification, b) curriculum compacting to children's needs, c) grouping gifted children together that allows for more appropriate, rapid, and advanced instruction, which matches the rapidly developing skills and capabilities of gifted students, c) specialized programs and d) teacher training.

Furthermore, all exceptional children, whether with developmental disorders or gifted, are reminders that the personal motivation, interests, psychophysical and cognitive abilities of students in the school context should be respected. So, in the work with gifted children, more different contents should be introduced, as well as more demanding tasks, project and collaborative learning, and a greater number of extracurricular activities. Creative thinking and creative expression should also be encouraged to induce their fluency, originality, elaboration and flexibility. However, in such approach, a special attention must be taken to ensure that the environment, school and family, are not exaggerated in their demands. Namely, although gifted children have increased capacity, they also need time for rest and leisure time.
REFERENCES


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