

Research Article

Evaluation of training workshop curriculums for gifted and talented students

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Abstract

One of the critical points that can determine the future of a country is the education of the gifted and specially talented children there. Many civilizations from past to present have attached importance to this education. The aim of this study is to evaluate the educational workshop curriculums applied for gifted children according to the Context-Input-Process-Product (CIPP) model. For this purpose, a research was carried out with six teachers, a psychologist, an education coordinator and two administrators working as practitioners in the workshop training curriculums for the gifted students implemented in the 1st semester of the 2019-2020 academic year. In the study, semi-structured interviews according to CIPP steps were collected by interviewing the participants one-to-one for 8 weeks within a 16-week training curriculum. According to the findings obtained; The quality of education given to gifted children should be increased. In addition, it was seen that it was necessary to systematically examine the opinions expressed by the curriculum practitioners and to make the necessary changes to the curriculum in a planned manner. In the light of these findings, about workshop training curriculums; increasing the adequacy of the physical environment, disseminating studies on creative thinking skills, opening different trainings for all areas of development and ensuring that children can participate in the areas they want have been achieved. The strengths and weaknesses of the implemented curriculum will be revealed, allowing its practitioners to create a more efficient training system.

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Introduction

Human history contains many breaking points where great changes have taken place. These breaking points often involve various inventions. The main reason for the emergence of all these inventions is that the individual asks the question "why?" When this question is asked about a phenomenon, a difficulty, a tradition, and so on, one has to create differences. Because of this necessity, the importance of the field of education of gifted and specially talented people in the educational philosophy of our age has been revealed. In order to meet the advanced learning needs of students with gifted, it is important to establish an adequate infrastructure in general education activities and to differentiate, enrich, accelerate and develop curriculums for gifted children (Lo et al., 2019). Although special ability is seen as an advantage at first glance, various problem behaviors can be observed in these children due to the fact that individual differences are ignored or the attitudes towards it are wrong by the environment (Heiss, 1995). A good understanding of the individual

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characteristics and abilities of the gifted children is one of the prerequisites for the development of a good curriculum. In this respect, both the emotional and cognitive development of gifted children should be well known, this information should be shared with the environment and the knowledge and skills of environmental factors should be developed.

Gifted children and their education

Simply defined, a gifted person has important differences between an individual and their peers in terms of general and personal characteristics. These differences are measured by experts and implemented with the help of in a different way where curriculums are inadequate (MONET, 1991). Renzulli (1999) divided gifted abilities into two types. These are learning-based and creative-productive. Learning-based aptitude is a special group of abilities that can be easily measured in standardized aptitude tests. Individuals who demonstrate special ability on these tests are those who excel in analytical skills in traditional curriculums. Creative productive ability is the ability to easily achieve a goal in one or more of the original ideas, products, artistic expressions, and cognitive domains.

Education models for gifted

The education of gifted children has been important in the world since the earliest times. The most important discoveries that contributed to the development of human history were made by gifted individuals. Marcus Fabius Quintilian, one of the important educators and orators of the Roman period, also emphasized the importance of individuals with gifted. In ancient China, gifted children were said to be the most important element for national well-being. Confucius' ideas about individuals with gifted played an important role in the development of Chinese Civilization (Vainer, Gali, and Shakhnina, 2016). Studies on the concept of gifted and educational practices for gifted students have systematically entered academic fields at the beginning of the 20th century. With the development of industrialization in the 19th century, qualified personnel were needed and with it the educational activities grew (Lo et al., 2019). With increased educational activities, educators who better observe student achievement have begun to recognize the different learning needs of successful students (Davis et al., 2015). To meet these learning needs, studies such as schools and accelerated curriculums for students with gifted began to increase in the late 19th century (Freeman, 2002). However, the emergence of psychometric measurements is one of the factors that have led to the development of the education of the gifted students. With the development of scales such as the Stanford-Binet Intelligence Scale (Terman, 1916), the success and learning potential of gifted children in these tests have shaped educational disciplines (Jolly, 2018).

When look at recent history, the first study on the education of gifted people in the United States was started by Hollingworth in New York in 1922. In 1926, Hollingworth published *Gifted Children: Their Nature and Nutrition*. This book is considered to be the first published on gifted children (Klein, 2002). Today, there is no legal regulation in the United States to identify gifted children and to work to meet their special needs. Therefore, each state organizes and implements its own work for individuals with gifted. The National Association of the Gifted provides rules, policies, and procedures related to educational activities and aims to conduct these activities systematically (Reid, 2015). However, the study by Gubbins, Callahan and Renzulli (2014) proved that less than half of the regions meet the established standards. The training of people with gifted is carried out in their regular classrooms, and their teachers are usually not given special training in this area. Pomortseva (2014), in his study on the education of gifted children in standard classrooms in the United States, stated that the activities set for other children and the achievements of these children are very different from those of gifted children.

When look at the Netherlands in Europe, the most preferred education method for people with gifted is curriculum enrichment. Skipping classes, taking classes with upper-level classes are common practices (Reid and Boettger, 2015). In the Netherlands, special ability is accepted as a common cluster formed by the combination of genetic factors such as special and general mental abilities, creative abilities, motivational abilities and environmental factors such as family, school, peer groups, community influence in determining gifted children (Gyarmathy, 2013). In the UK, the history of education of gifted children dates back to 1944. Today, the British education system works to ensure that all children receive a good education. Therefore, gifted students are required to participate in the same educational activities as their peers (Reid and Boettger, 2015). In the Finland, it is seen that the most powerful aspect of the education system is that it allows schools to institutionalize educational activities and allows students to participate in educational activities

specific to their abilities and to realize themselves individually (Reid, 2015). In this structure, teachers at all grade levels participate in academic trainings on curriculum for differences from kindergarten to upper grades. Teachers receive their training on the gifted students during differential training (Tirri and Kuusisto, 2013). The processes for the education of people with special disabilities in Singapore are carried out by the special talented unit of the Ministry of Education of Singapore. Educational activities enrich the curriculum in areas in which students are particularly gifted, optimally preparing students for university exams in a way that allows them to take courses with higher classes and in the classroom (Heuser, Wang and Shahid, 2017).

On the identification of gifted children, defines the educational activities of the Russian Federation. These educational traditions of the past specialized in gifted children, organized trainings and identified gifted children. Today, multiple field tests or performance-based tests are carried out specifically for individuals who are considered gifted. Once diagnosed, individuals with gifted are placed in schools that are on par with other schools but carry out their activities with gifted children (Grigorenko, 2017).

Gifted education in Türkiye

In the training of gifted individuals in Turkish history, attention should be paid to the period when the Ottoman Empire reigned. The Ottoman State, which became aware of the special talent in this period, took the children who came to the forefront in certain criteria in the regions within its borders and educated them in Enderun schools (Şahin, 2013). In Enderun schools, students are selected according to their cognitive and artistic abilities, there is a balanced curriculum to support the development of the child in all aspects, the students' own preferences are given importance in subject selections, and there is a merit system that directs education (Akarsu, 2004). This effort of the Ottomans stemmed from the concern that every gifted child would be seen as a precious stone and processed in expert hands. Because in the enderun schools process, gifted children are mostly senior managers, those who make and implement decisions in political and economic fields, those who put forward and realize the ideas of new inventions, and research and development departments (Orbay et al., 2010).

In 1995, Science and Art Centers (SAC) were established by the Ministry of National Education of Türkiye (MONET). The educational activities carried out in SACs are planned and carried out at all levels of education. In the preschool period, it is aimed to conduct developmental tests compared to intelligence tests for children and to educate families and to carry out joint studies. In the future planned to implement such studies more effectively by integrating the class skipping procedures applied in gifted children, enriching the curriculum, conducting separate training and acceleration studies on grade progression (MONET, 2019).

Curriculum evaluation and Stufflebeam's CIPP model

The evaluation of educational activities is very important in terms of increasing the effectiveness of school work and the quality of education provided. While these improvement efforts are student- and teacher-focused, they are valuable in assessing and improving the school's administrative, pedagogical, and administrative readiness (De Grauwee and Naidoo, 2004). One of the most popular curriculum evaluation models for the evaluation of curriculums is the Context-Input-Process-Product (CIPP) model developed by Stufflebeam in 1971 (Darma, 2019). Each letter in the CIPP abbreviation represents the first letters of 4 separate sections of the evaluation process. The first part means context, the second part means input, the third part means process, and the fourth part means conclusion.

Curriculum evaluation in education of gifted students

Differentiated educational designs prepared for students with gifted have been an area of problems in the decision and implementation process for many years in terms of education policies. In her study, Christo (2019) emphasizes that educational designs of gifted people are not systematically evaluated according to national curriculum evaluation criteria, and that curriculum designs should be evaluated in , method and materials. The education of the gifted students is interrupted due to various reasons such as the curriculum prepared with the determined education policies do not meet the needs of the students and the deficiencies in the application. For this reason, curriculums prepared for gifted students should be carefully examined and evaluated in terms of all sub-fields. In their study, Hunsaker and Callahan

(1993) examined various assessment models used and used in the education of gifted people, evaluated discussions, evaluation partners, reports, systems, and inter-field relationships. In the examinations, in the education of people with gifted, very little curriculum evaluation or unsatisfactory results of the evaluation were seen as the main problem. The most difficult point for gifted students to participate in general curriculum is the child's need to produce. Meeting the productivity needs of children by making some products desirable or close to desirable within the scope of their own competence strengthens their relationship with self-efficacy (Shack, 1989).

Literature Review

In their study on the failures of the gifted minority children who are below the success expected of them, Ford and Thomas (1997) have addressed the causes of the problem in 3 stages. They stated that the differentiation of students in society was due to both cognitive and ethnic origin differences. They also say that these differences affect their socio-psychological structure. The fact that the socio-economic status of the family is low compared to the society reduces the success of the children by limiting the expectations of the family about the child.

Winebrenner and Brulles (2008), in their study on the needs of gifted children, mention that the gifted participating in the general curriculum fall behind according to their own developmental standards. For this reason, with the cluster group model that can be applied in schools, it has been determined that teachers can reach their self-success in educational activities by ensuring that teachers are in the same educational environment with similar students where they can do activities according to the needs and learning speeds. Tiantong and Tongchin (2013) conducted a model development based on the process of developing and evaluating the internet-based collaborative learning approach with the theory of multiple intelligences in accordance with the structure of the CIPP model. This model has proven to be efficient in terms of having positive learning lives for students, strengthening their approach to learning and providing feedback to both successful and unsuccessful students in a healthy way. Reid and Boettger (2015), in their studies in which various countries in Europe carried out activities related to the education of the gifted students; most of them stated that the policies for the education of gifted students were aimed at ambitious and high-achieving children, and that children who did not possess these characteristics were left idle. In her study, Kim (2016) conducted a meta-analysis of 26 different enrichment curriculums for gifted students between 1985 and 2014. Among the curriculums, the summer programs have had the greatest impact both academically and in terms of social-emotional development. Weyns, Preckel and Verschueren (2020) investigated the perspectives of prospective teachers studying at the university about the personality traits of gifted students and teacher-student relations. As a result of this research, it has been revealed that the fact that the student is at the level of gifted or normal intelligence will not create a problem in terms of teacher-student relations. Thus, it was determined that teachers who had gifted students in their classes made them open to learning in terms of awareness of the personalities and communication of gifted.,

When we look at the studies in Turkey; Melekoğlu, Çakıroğlu and Malmgren (2009), in their study on the education of gifted students in Turkey, have contributed to the improvement of the quality of educational activities by revealing the structure of the studies on gifted students in the history of Turkish education and evaluating these studies together with new developments. Çelikdelen (2010), in his study, revealed that students memorized the concepts they learned in science and technology courses during the general education process and could not develop the skills to transfer the learned information and use it in real life. In his study on the diagnosis of gifted children, Şahin (2013) concluded that the diagnosis of the gifted student is adversely affected by the systems currently used. Alevli (2019), in her case study on the Turkish curriculum applied to gifted students in BILSEMs, tried to collect information about the implementation of the educational activity, to reveal the opinions of the stakeholders and to put forward suggestions for the development of the educational activity. Regarding the relationship of parents with educational activities, Akbüber et al., (2019) stated that parents do not want their children to specialize in one area according to their abilities, but to develop in an area according to their economic ambitions and expectations. Bayraktar Keleş (2020), in her study on the problem behaviors of gifted children revealed that teachers generally applied to guidance services in the face of problem behaviors and interviewed families. Although teachers preferred cooperation as a problem behavior solving technique, it was determined that they also used punishment-based practices in the findings obtained from the observations.

Problem of Research

The workshop curriculums of the Gifted and Genius Children Education Foundation of Turkey (TÜZDEV) in Turkey support general education activities for students with gifted. In the study, it is aimed to evaluate the workshop curriculums applied for gifted children in TÜZDEV according to Stufflebeam's Context-Input-Process-Product process in terms of teachers. In the education of gifted children, different educational models are used. Stufflebeam's CIPP model, which was selected at this point, is a powerful curriculum evaluation method in terms of analysis of qualitative data as a result of interviews with teachers. The evaluation model has a formative structure in the research since it is made with the aim of improving the curriculum being implemented (Kara and Akdağ, 2017). As a result of this study, the advantages and disadvantages of the workshops to be held with gifted students will be determined by looking at all these processes and suggestions are presented about what can be done to improve the curriculum according to the determined criteria. In this context, the following questions were sought to be answered in the research:

The training curriculum for students with gifted;

- What are the curriculum practitioners' assessments of the context dimension?
- What are the curriculum practitioners' assessments of input size?
- What are the curriculum practitioners' assessments of the process dimension?
- What are the curriculum practitioners' assessments of product size?

Method

Research Design

Qualitative research method was used in the study. Data were collected through semi-structured interviews with workshop teachers, curriculum experts and administrators in accordance with the steps of the CIPP model, which were planned every 2 weeks over a 20-week period. The most important structure of qualitative research is that people transfer their own experiences about their lives to the researcher using their own expressions. (Cropley, 2019). Since qualitative research does not tend to prepare an environment suitable for the purpose of research, data are conceptualized and structured after the research is conducted (Punch, 2005). The qualitative research method has a complex, controversial and variable structure that includes many methods and research applications. This type of research does not focus on a single direction and gathers all the concepts within the research under one roof (Punch, 2005). The research sample was prepared by the Gifted and Genius Children Education Foundation for the year 2019-2020 1. It consisted of teachers, administrators and curriculum experts who implemented workshop training for gifted children during the period.

Participants

In the study group, there are 11 gifted and genius children aged 9-10 who have received 110-150 intelligence test scores, 6 workshop teachers who conduct workshops, a psychologist responsible for the organization and functioning of these training curriculum, an education coordinator and 2 administrators.

Data Collection Tools

All stages of the targeted evaluation model were evaluated in detail with a semi-structured interview scale prepared for use in teacher interviews. The data collection tool was first presented to course teachers for the evaluation of the English language teaching curriculum. In line with the workshop curriculums for those with gifted students on the scale, word changes were made that would not disrupt the validity and reliability of the study. The qualitative data tool used in the study is the semi-structured interview scale developed by Beste Dinçer in 2013 in order to determine the opinions of teachers who are primary school 7th grade English curriculum practitioners about the curriculum. The questions used in the scale were prepared in a logical order according to the CIPP (Context-Input-Process-Product) evaluation method and asked directly to the teachers. Each question is prepared to measure one of the markers of the evaluation curriculum (Dinçer, 2013).

Data Analysis

The analysis of the data obtained as a result of one-on-one interviews with the teachers was analyzed using the content analysis method. Appropriate themes were determined for the questions and themes, categories and code lists were prepared by examining the opinions of the teachers at each question level. Teachers' opinions that are considered important at this point are shown in the analysis without comment. Upon the change of the STEM workshop teacher, the context and input sections were discussed at the end of the first day in the same interview with the new teacher. The evaluations of the process and product sections were continued with the new teacher by adhering to the process.

Data Collection Checklists

In the process of research; A checklist has been prepared in order to proceed consistently, to analyze the data collected as a result of the research and to assist in the process of interpreting these analyzes. The checklist is prepared in 2 different ways. The data checklist is given in Table 1 and the checklist prepared as the implementation schedule is given in Table 2.

Table 1. Data checklist

Participant Workshop/Stage	Number Voluntary	Context	Input	Process	Process	Process	Process	Product
1. Stone Painting	+	+	+	+	+		Workshop last	+
2. Drama	+	+	+	+	+		+	+
3. STEM	+	+	+	+	Interview		+	+
4. Robotic Coding	+	+	+	+	+		+	+
5. Fun Math	+	+	+	+	+		No Teacher	+
6. Foundation Member	+	+	+	+	Single conversation			+
7. Foundation Psychologist	+	+	+	+	Single conversation			+
8. Administrator 1	+	+	+	+	Single conversation			+
9. Administrator 2	+	+	+	+	Single conversation			+

Table 2. Collection of qualitative data implementation schedule

Application Schedule	Stone Painting	Drama	Fun Math	Robotic Coding	STEM
14 September 2019	+	+	+	+	+
28 September 2019	Trip organized				
12 October 2019	+	+	+	+	+
26 October 2019	+	+	+	+	+
2 November 2019	+	+	+	+	+
16 November 2019	Break holiday				
30 November 2019	Workshop last	+	No teachers	+	+
7 December 2019		+	+	+	+
21 December 2019	Forest Park workshops				
4 January 2020	+	+	+	+	+

Results

Rating Sizes Theme List

As a result of the content analysis of the responses to the teacher interview forms, 14 themes were formed. These themes are given in Table 3. The changes made as a result of associating the answers given by the teachers to some questions with other questions are mentioned in detail in the subheadings.

Table 3. emerging themes by assessment dimensions

Themes	
Context Evaluation	Aim of the curriculum Strengths of the curriculum Weaknesses of the curriculum Student needs
Input Evaluation	Student login features Teacher readiness level Material property and adequacy
Process Evaluation	How the implementation process works Methods and techniques used Difficulties experienced
Product Evaluation	Curriculum meeting expectations Assessment of students Adequacy of measuring tools Ideal workshop curriculum

Insights into the Context Dimension

Views on the aim of the curriculum are given in Table 4.

Table 4. Aim of the curriculum

Theme	Category	Code
Aim of the Curriculum	Unlocking talent	Development of expressive skills Creating products from different materials Developing scientific thinking skills
	Development of adaptation skills	Arrangement of characteristic features Overcoming the fear of failure Ensuring communication with peers at the Same level of intelligence
	Learning life skills	Increasing their self-confidence Strengthening communication skills Understanding life with science Understand and apply technological developments
	Increasing the enjoyment of educational activity	Game-based education A like of science. Creating an environment where they can express themselves

As the participants stated in the interviews, the aim of the curriculum is to reveal the talents. The opinions of some of the participants (2, 7, 9) who expressed their views on the emergence of talents; *"Improving their self-expression skills"* (Drama), *"To develop the abilities of children and to develop and reinforce these issues if there are deficiencies"* (Foundation Psychologist) and *"To gain a different perspective on the education of gifted children, to improve their skills and to realize their talents"* (General Manager of the Foundation).

In another opinion, the participants stated that the aim of the curriculum was to improve their adaptation skills. The opinions of some of the participants (1, 2, 3,) who expressed their views as the development of adaptation skills were: *"Among the objectives of the curriculum are art and rehabilitation"* (Stone Painting), *"To prevent children from being dominant or recessive in their environment and to ensure that they adapt to their environment in the best way"* (Drama), *"In order to reduce the feeling of failure in case the results are unexpected, it is also tried to gain the skills to cope with negative situations"* (STEM).

Finally, it is another dimension emphasized by the participants about the purpose of the curriculum that the enjoyment of educational activities should be increased. Here are examples of direct statements of the participants; *"To create environments where children can feel comfortable and to teach children that there can be learning outside of school"*

by removing them from the learning environment such as school" (Fun Mathematics), "To maximize children's happiness and to ensure that they can enjoy their education" (Member of the Board of Directors).

Strengths and Weaknesses of the Curriculum

Views on strengths and weaknesses of the curriculum are given in Table 5.

Table 5. Strengths and weaknesses of the curriculum

Theme	Category	Code
Curriculum Strengths	Carrying out practical studies	Creating new products from various materials Translating the use of technology into producing technology Associating life and mathematics
	Be socially and cognitively active in workshop activities	Collaborating Children feel understood in workshops
Weaknesses of the Curriculum	Insufficiency of the physical environment	Presentation of workshop materials by the teacher Non-compliance of the workshop environment with planned activities Insufficient time given for the workshop
	Their inability to choose the workshop they want	Not being able to attend workshops appropriate to abilities Children are not exposed to challenging activities
	Areas of incompatibility	Mismatch between school curriculum and workshop curriculum Problems in participation

As the participants (2,3) stated in the interviews, one of the strengths of the curriculum is the practical work. In addition, the participants; "Using materials from nature, creating products and contributing to the product with their hand skills", "Since they have lives on the phone and computer all the time, they get excited when I tell the children that they can do it themselves".

As the participants(1,5) stated in the interviews, one of the weaknesses of the curriculum is the inadequacy of the physical environment. "Having a school class is physically challenging for me, I need a drama field", " The time given for the curriculum is insufficient. Because 1 lesson hour is not enough to produce products in this workshop", have also emerged as the weaknesses of the curriculum. Another weakness is the inability of children to choose the workshop they want and various incompatibilities. The adjustment problem was described by the participants as "There are children who have adaptation problems. An adaptation week can be arranged".

Student Needs

The code and categories related to the context evaluation section are evaluated in detail in Table 6.

Table 6. Student needs

Theme	Category	Code
Student Needs	State of interest in the workshop	The situation of students who are not interested in the workshop Having learning environments by doing, experiencing, Prejudice against the workshop curriculum Being with children with the same level of cognition
	Categorization of needs	Aiming for self-expression skills Determining the needs of children according to their skills Workshop curriculum with a dominant focus on production
	The relationship of workshop activities with daily life	The event is not limited to workshop hours only; Strengthening of social interactions Use of learned skills

As the participants stated in the interviews, the first issue related to student needs is the state of interest in the workshop. Since not every student is interested in every workshop, a standard curriculum means that not all students are participants in all workshops. For this, it is stated that student needs should be divided into categories. Another student need is that the workshop activities should be determined from the activities for use in daily life. In summary, it is stated that increasing the interest of students in workshops plays a key role in workshop training.

Opinions on Input Size

Views on student features are given in Table 7 and views on teacher readiness level is given in Table 8.

Table 7. Student features

Theme	Category	Code
Student Login Features	General readiness	Be competent to perform the targeted skills Direction of their individual goals
	Causes of student-related problems in workshops	Thinking that he has no talent about the workshop he attends Problems arising from personality traits Inability to learn
		Different age groups participating in the same workshop

As the participants stated in the interviews, the first issue related to student entry characteristics is general readiness. In this regard, the participants (2,3) are; "There is no lack of class participation, group work. They perform the desired skills. Girls are generally good at attending classes", "They are distracted, they like to play, their minds are channeled into the game".

Table 8. Teacher readiness level

Theme	Category	Code
Teacher Readiness Level	Previous trainings received about the workshop	Ensuring personal development Trainings received in the field Previous studies on the gifted students
	Situations related to workshop curriculum applications	Efficient participation of children in activities Lack of expected prerequisite skills in children

As stated by the participants in the interviews, teacher readiness level emerged as two categories. These are: previous trainings received about the workshop and situations related to the workshop curriculum applications. In addition, it was also stated in the interviews that the fact that the students kept the materials of the workshop curriculum they entered in the previous hour during the change of the workshops caused a problem of focusing on the workshop they entered.

Material Property and Adequacy

Views on material property and adequacy are given in Table 9.

Table 9. Material property and adequacy

Theme	Category	Code
Material property and adequacy	Characteristic of the material	The materials to be used in the workshop are provided by the foundation In workshops such as drama and fun mathematics workshops, activities are driven by activity rather than material
	Adequacy of the material	Sufficient for workshop application as materials are provided on request Since very complex materials are not used, the materials provided are sufficient Materials can be used for many purposes in workshops

The first issue related to material property and adequacy in the research is the property of the material. The other is the sufficiency of the material. It is stated that the workshop teachers supply the materials needed during the organization and maintenance of the workshops in the institution where the work is carried out. In this way, the progress of the workshop activities was expressed positively. It is observed that the materials used in the workshops are not complex materials and it is possible for students to provide these materials with their own means. The drama and entertaining mathematics workshop teachers stated that the work done in the workshops was carried out not only on physical materials but also on the student.

Opinions on the Process Dimension

Views on how the implementation process works are given in Table 10.

Table 10. How the implementation process works

Theme	Category	Code
How the implementation process works	Factors affecting the feasibility of workshop activities	Children do not want to participate in workshop activities Distractions in the workshop environment Difficulties of children in progressing process-oriented in the activities Negative student attitudes towards the workshop Difficulties encountered with the low number of students in the drama workshop
	Positive developments in the implementation of workshop activities	Increased level of attention and interest in the workshop Measures to be taken in the emergence of behavior problems Increasing the pleasure of the workshops

According to the opinions of the participants in the research, the functioning of the implementation process are the factors affecting the applicability of the workshop activities and the themes of positive developments in the workshop activities come to the forefront. It is stated that the distractions in the workshop environment and the fact that the number of students does not bring a standard on the basis of the workshop affect the operation of the workshop.

Methods and Techniques Used

Views on methods and techniques used are given in Table 11.

Table 11. Methods and techniques used

Theme	Category	Code
Methods and Techniques Used	Progress of methods and techniques in practice	Using peer support Selecting methods and techniques appropriate to the workshop operation
	Problems encountered with methods and techniques	Required prerequisite skills have not been previously learned
		Problems encountered due to limited time

As stated by the participants in the interviews, the progress of the methods and techniques used in practice and the problems encountered with the methods and techniques are the prominent information of the theme of the methods and techniques used. The selection of the methods and techniques used in the workshops was made considering the processing of the workshop and ensured that the practices of the workshop continued in a healthy way. At this point, supporting the students with different individual abilities to support each other among themselves was found to be successful by the stone painting workshop teacher. The participants also stated that the prerequisite skills required for the application of the methods and techniques have not been acquired beforehand, the duration of the workshop is limited to minutes and not until the product is created, and the problems experienced by the students in receiving and following the instructions in some workshops cause problems in the operation of the methods and techniques applied in the workshop.

Difficulties

Views on difficulties experienced are given in Table 12.

Table 12. Difficulties experienced

Theme	Category	Code
Difficulties	Supporting workshop	Having trained personnel to support workshop activities Precautions brought about by the fact that the workshop area does not belong to the foundation Content-related issues
	Student-related problems	Children's difficulties with the instructions given Having distractions Problems they have among themselves
	Changes observed in the workshop process	The necessity of joint work with parents Being prepared for the unexpected The advantages of knowing children's personalities Different methods attract the attention of children

As it is understood from the table, the first issue related to the difficulties experienced is to support the workshop process. The other is student-related problems. Apart from these, participant number 5 (Fun Math) 1. In the interview, he mentioned that gifted students are extremely important.

In summary, the difficulties experienced in the organization of workshop curriculums are that it is necessary to have trained personnel about the workshop contents. In addition, in order to support the workshop process, it is also desired that the workshop areas are specific to the workshop applied. Since the content applied in the workshop is for the time that needs to be planned, the workshop teacher mentions that he has problems with his planning. Students' instructional and distraction problems are another important problem encountered in the workshop process.

Curriculum Meets Expectations

Views on curriculum meeting expectations are given in Table 13.

Table 13. Curriculum meeting expectations

Theme	Category	Code
Curriculum Meets Expectations	Meeting the expectations and needs of the teacher	Strengthening curiosity and interest
		Increased experience of gifted students
	Meeting student expectations and needs	Children want to actively participate in the workshops Enjoy workshop activities

As can be seen in Table 13, the first category related to the curriculum meeting expectations is the teacher's meeting expectations and needs. The second is to meet the expectations and needs of the student. Considering that the 40-minute workshop time was not enough, the participant number 4 stated that this time was insufficient for the products to be as desired. Regarding the expectations of the students, the participants stated that their sense of curiosity developed with the children's willingness to participate in the workshops. It is seen that the workshop curriculums mentioned earlier for the children to evaluate their free time at the weekend are supported by the indication of the children's enjoyment.

Assessment of Students

Views on assessment of students are given in Table 14.

Table 14. Assessment of students

Theme	Category	Code
Assessment of Students	Structure of the assessment	Students' interest in the products made in the workshop activities
		Creating a self-evaluation structure of the workshop
		The necessity of making a work done in the virtual environment tangible
		Avoiding test anxiety
	Effectiveness of measurement type and tools	Process-based assessment Continuity of the workshop activity outside the workshop Creation of a portfolio book

As the participants stated in the interviews, the first issue related to the curriculum's meeting the expectations is the structure of the evaluation, and the second issue is the effectiveness of the measurement type and tools. Teachers focused on two views on evaluations in the conduct of the workshop curriculums. The structure of the assessments and the type of measurement and the effectiveness of the tools are these opinions. With the increase in the students' interest in the activities carried out in the workshops, it was stated that these evaluation activities were carried out in accordance with process-based evaluations.

Ideal Workshop Curriculum

Views on assessment of students are given in Table 15.

Table 15. Ideal workshop training curriculum

Theme	Category	Code
Ideal Workshop Training Curriculum	Recommendations on the preparation and implementation process of the curriculum	Extending the workshop duration from 40 minutes to 60 minutes
		Opening workshops for different age groups
	Recommendations on physical facilities	Orderly storage of workshop materials Creation of physical areas of workshops
	Recommendations on methods and techniques	New methods and techniques to add Integrating art and sports activities into workshops Making plans to control problem behaviors

In the research, recommendations about the ideal workshop curriculum emerged in three categories. The first category is the process of preparing the curriculum, the second category is the recommendations about physical environments, and the third category is the recommendations about methods and techniques. It is reported in the recommendations that the effectiveness should be improved by using different methods and techniques, that art and

sports activities should be included in the curriculum, and that plans should be made in the control of problem behaviors.

Conclusion and Discussion

In this study, it is aimed to evaluate the training workshop curriculums applied for gifted students according to the Context-input-process-product (CIPP) model in the context of Stufflebeam. In the workshop training activities, the students and the teachers who conduct their lessons have stated various goals for their own workshops. The gifted students curriculum examined in the research was found to be sufficient in terms of the purpose of the curriculum. Because teachers have acted according to the Stufflebeam approach when planning their workshops. The ideas of administrators and curriculum experts that the social skills of gifted students should be supported due to their individual differences coincide with the ideas of teachers. It is important to prepare curriculum that include approaches that will strengthen children's social communication and interactions.

In the research process, the teachers' opinions about the workshop curriculum show that the aims to improve the social skills of the children such as trying to strengthen the weak features of the children, bringing the healing effect of art to the forefront, and trying to gain the skills to cope with negative situations are also included in the curriculum. Çubukçu and Gültekin (2006) state that the social skills that need to be gained are the skills of working with the group, the skills of making plans and solving problems, the ability to respect the rights of others and the ability to express their feelings. The responses of the teachers in the research support this view. In determining the objectives of the curriculums to be prepared for gifted students, it is necessary to set goals for the individual characteristics of children, critical thinking, creativity, and the development of advanced thinking techniques. The ideas of the administrators and the ideas of the teachers that the social skills of the gifted students should be supported due to their individual differences coincide. It is important to prepare curriculum that include approaches that will strengthen children's social communication and interactions. (Callahan, 1986). Participants stated that a learning environment should be created that children can enjoy and game-based educational activities should be organized. Gökalp (2017) supports this view and said that game-based activities can make learning enjoyable so that non-participating children can participate and thus knowledge can be reinforced. Pivec, Dziabenko, and Schinnerl (2003) say that game-based activities increase learners' courage to make decisions at critical points, interact with other friends, generate ideas about the game, take action, and generate ideas to improve the game, and improve other social skills.

The fact that the curriculum is practice-oriented is a feature that strengthens the activity according to the opinions of the teachers. Slavin (1980) states that the use of practice-oriented studies in lessons attracts the attention of students more than traditional models. Johnson, Johnson, and Taylor (1993) state that problems experienced by gifted students in their social acceptance have an impact on their level of achievement. The fact that gifted students often have low levels of achievement is a result of their self-esteem and peer rejection. These views coincide with the view that managers' social development is supported by coming together with peers with similar interests. Organization and intensity of the teaching environment, class size, fitness for purpose of the environment required for study; It affects the student's success, motivation, social communication and sense of responsibility (Şensoy and Sağsöz, 2015). According to the opinions of the teachers, the fact that the physical features in the environment to be applied are not suitable for the workshop curriculum is one of the aspects that weaken the application. The principles of continuity and teamwork, which are among the principles of curriculum development, state that curriculum development continues continuously during implementation and that the partners of the curriculum are included in the group in the whole process. Therefore, changes in curriculum partners should not affect a systematically progressive curriculum development process (Gültekin, 2017). This opinion of the curriculum specialist does not coincide with these principles of curriculum development.

Teachers have stated that the fact that they want students to attend the workshop for a specified period of time instead of ensuring that they participate in the workshop they want is another weakness of the curriculum. Similar to the teachers' comments, the comments of the administrators and curriculum experts stated that one of the weaknesses

of the curriculum was that the students did not participate in the workshop trainings in their own way. The fact that children do not participate in workshops for their abilities and are not allowed to choose the workshop they want to participate in causes their interest to decrease and classroom management to become difficult. The necessity of problem-based education, content customization, learning the importance of the curriculum with the aim of increasing interest supports the work of Harackiewicz, Smith, and Priniski (2016).

The study showed that it is necessary to ensure that students can participate in workshop activities in the areas they need. Although teachers make some small changes to the curriculum, this is slow compared to the learning speed of the students. While preparing the curriculum to be applied for gifted students, the development of the curriculum contents for the individual abilities of the children and the differentiation of the speed and difficulty according to their levels will increase their interest (Rotigel and Fello, 2004). The need for gifted students to actively participate in challenging activities and to create products in which they can manifest themselves in these activities enables them to move away from situations such as the slow progress of the subjects encountered in standard educational activities and the re-teaching of what they already know and to carry out studies towards their needs (Gallagher, Harradine and Coleman, 1997). Kennedy's (2002) ideas about the need for students to strengthen their social interactions, which he mentioned in his study, coincide with the views of curriculum experts.

The findings show that the students participating in the workshop curriculums do not exhibit behaviors in accordance with the workshop objectives. There are various problems during the activities due to the lack of interest in the workshop activities, their distraction, the lack of pre-requisite skills and the development of prejudices against general education activities. It is necessary to explain the learning objectives to the students and to make curriculum plans at the appropriate speed and variety. These views of teachers emphasize the importance of determining the level of readiness of students. The administrator and curriculum experts mentioned that the students' readiness levels were sufficient. At this point, the opinions of teachers and administrators and curriculum experts contradict each other. Objective and subjective activities such as performance-determining scales, questionnaires identifying areas of need, independent project results, student observations should be carried out to determine the readiness of students. (Callahan, 1986)

Teachers' responses about their professional development show that they care about their own professional development. Teachers involved in the education of students with gifted should have features such as creative thinking, carrying out studies for the student's abilities and skills, and encouraging advanced thinking skills by using appropriate strategies. The fact that teachers develop and research various materials for their workshops, follow their professional development by doing various readings, participate in educational activities and their mastery and self-confidence in the workshop subjects show that the teacher characteristics are sufficient for the implementation of the curriculum. Accessibility of materials and resources is one of the requirements of creative learning environments. Selecting appropriate materials, tools, and other resources leads to increased creative thinking activities (Davies et al., 2013). The views of teachers, administrators and curriculum experts coincide with research on the selection and provision of materials to be used in the workshops (Eker, 2020).

As the workshop activities continued during the working process, positive changes took place regarding the problems. It can be said that these changes are realized thanks to the adaptation of the students to the curriculums, the teachers to know the students better, the strengthening of the teacher-student relations and the better recognition of the workshop objectives by the students. Gifted students; they have difficulty setting goals, communicating effectively interpersonally, and meeting the high expectations of adults (Hennessey, 2004). Factors such as active participation in the activities, the decrease in the warnings of the teachers, the development of the project in the workshop outside the workshop, the increase in attention spans and interest in the workshop activity show that there are positive developments. In the planning for gifted children it is necessary to determine the goals that will be appropriate for the personal characteristics of the children. With the determination of these goals, the formation of a positive classroom environment is supported (Girgin, 2020). The fact that the plans made by the curriculum experts about the course work and processing related to the implementation of the workshop activities are also functional coincides with these views.

In Stufflebeam's CIPP model, evaluations of product size are not only based on product size, but also on all positive and negative aspects of the curriculum and evaluating its effectiveness; the resulting products are addressed to the level of achievement of the targeted objectives at the end of the curriculum and all of the changes that occur in children (Arap, 2016). The main characteristic difference between gifted children and children with normal development is independence (Çalikoğlu, 2017). The features provided by the workshop trainings, such as making individual products, taking personal roles and acquiring responsibilities, support these characteristic features of children. The opinions of curriculum experts and administrators differ from each other on this point. In the opinions of the curriculum experts, it is stated that the students should participate in all the workshops in order to ensure their development in all areas, and in the opinions of the administrators, it is stated that the child's own choice of the workshop he wants to participate in will ensure that their interests are high.

In this research, the behavioral changes that the studies carried out in the workshop activities in accordance with the objectives of each workshop in children are evaluated and the objectives are achieved. In order to reveal the potential achievements of gifted students, the fact that the evaluation studies are based on the process and product in the workshop activities eliminates the low achievement problem seen in the gifted students. The evaluation model determined in terms of the out-of-school nature of the workshops and the fact that the goal they are based on is more practical instead of teaching theoretical knowledge fits the curriculum. According to the context of Stufflebeam's product evaluation, the evaluation studies are appropriate for the nature of the curriculum and the evaluation system applied in the workshop curriculums coincide with each other. As stated by the curriculum experts, the satisfaction of the parents with the curriculum and their opinions about the success of the curriculum as a result of the examination of the teacher feedback they received support that the evaluation system was done correctly (Hoover-Schultz, 2005).

Recommendations

In the light of the findings obtained, the following recommendations are made to educators and curriculum development experts;

- It is important that the environment arrangements for the workshops to be held are appropriate to the structure of the workshop in terms of the teacher's classroom management and increasing the attention of the students. In this regard, studies should be developed.
- By arranging an area where children can put their finished workshops, the confusion created by these materials can be prevented in the next workshops they will attend.
- Goals should be chosen carefully and should not be raised above the level of ability that children are capable of. Although they have gifted, it is possible to set realistic goals so that the difference between the expected level of success and their actual success does not increase.
- The objectives of the workshop activities can be explained by informing the children before starting the workshop curriculums
- Curriculum evaluations can be made using different evaluation models related to the work of other institutions that provide education about gifted.
- It can be implemented by conducting curriculum development work under the guidance of the evaluation specialist from the curriculum development process to the final evaluation process.
- By planning the recommendations presented in the research, the effectiveness of the planning can be investigated by experimental methods.
- In the workshop curriculum applications, evaluation studies related to the student size can be carried out.

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References

- Akarsu, F. (2004). Enderun: Üstün Yetenekliler İçin Saray Okulu. Üstün Yetenekli Çocuklar Seçilmiş Makaleler Kitabı (s. 97-101). içinde İstanbul: Çocuk Vakfı Yayınları.
- Akbüber, B. A., Erdik, E., Güney, H., Çimşitoğlu, G. G., & Akbüber, C. (2019). Bilim ve Sanat Merkezlerinde Özel Yetenekli Öğrencilerin Sorunlarının Değerlendirilmesinde Bir Yöntem Önerisi "Özel Yetenekli Öğrenci Çalıştayı". *Üstün Zekâlılar Eğitimi ve Yaratıcılık Dergisi*, 6(1), 22-39.
- Arap, B. (2016). An investigation into the implementation of English preparatory programs at tertiary level in Turkey [Unpublished doctoral dissertation]. Cukurova University
- Bayraktar Keleş, A. (2020). Özel yetenekli öğrencilerin davranış problemlerinin ve öğretmenlerin bu davranışlarla baş etme yöntemlerinin belirlenmesi. [Unpublished master thesis]. Ankara University
- Callahan, C. M. (1986). The central issue in evaluating programs for the gifted and talented. *Gifted Child Quarterly*, 30(1), 38-42. <https://doi.org/10.1177/001698628603000108>
- Christo, J. (2019). Evaluation of the EXCEL and IMPACT! Programs for Gifted Students. [Doctoral dissertation, Minneapolis/USA: Walden University].
- Cropley, A. (2019). Introduction to qualitative research methods: A practice-oriented introduction for students of psychology and education. . Riga, Latvia: (Open access - doi: 10.13140/RG.2.1.3095.6888).
- Çalıkoglu, B. S. (2017). Özel yetenekli öğrencilerin eğitiminde ürün geliştirme (Product development in the education of students with special abilities). Özel yeteneklilerin eğitiminde program tasarımı (s. 203-228). içinde Ankara: PEGEM Academy.
- Çelikdelen, H. (2010). Bilim Sanat Merkezlerinde Bilim Birimlerinden Destek Alan Üstün Yetenekli Öğrencilerin Kendi Okullarında Fen ve Teknoloji Dersinde Karşılaştıkları Güçlüklerin Değerlendirilmesi. Konya: Ulusal Tez Merkezi.
- Çubukçu, Z., & Gültekin, M. (2006). Social skills that should be acquired by students in primary education. *Bilig*, 34, 155-174. <https://dergipark.org.tr/en/pub/bilig/issue/25369/267789>
- Darma, I. K. (2019). The effectiveness of teaching program of CIPP evaluation model. *International Research Journal of Engineering, IT & Scientific Research*, 5(3), 1-13. <https://doi.org/10.21744/irjeis.v5n3.619>
- Davies, D., Jindal-Snape, D., Collier, C., Digby, R., Hay, P., & Howe, A. (2013). Creative learning environments in education—A systematic literature review. *Thinking Skills and Creativity*, 8, 80-91. <https://doi.org/10.1016/j.tsc.2012.07.004>
- Davis, B., Sumara, D., & Rebecca, L.-K. (2015). *Engaging Minds: Cultures of Education and Practices of Teaching*. New York: Routledge.
- De Grauwe, A., & Naidoo, J. P. (2004). School evaluation for quality improvement. Meeting of the Asian network of training and research institutions in educational planning (ANTRIEP)(Kuala Lumpur, Malaysia, July 2-4, 2002). International Institute for Educational Planning (IIEP) UNESCO. 7-9 rue Eugene-Delacroix, 75116 Paris, France.
- Dinçer, B. (2013). Evaluation of 7.th grade English language curriculum according to Stufflebeam's CIPP model [Unpublished doctoral dissertation]. Adnan Menderes University
- Eker, A. (2020). Özel yetenekli öğrencilerin öğretmenlerinin mesleki yeterliklerini artırmaya yönelik geliştirilen öğretmen eğitimi programının etkililiği. [Unpublished doctoral dissertation]. Selcuk University
- Ford, D. Y. & Thomas, A. (1997). Underachievement among Gifted Minority Students: Problems and Promises. ERIC Digest E544, 2(13) <https://files.eric.ed.gov/fulltext/ED409660.pdf>
- Freeman, J. (2002). Out-of-school Educational Provision for the Gifted and Talented Around the World. London: Department of Education and Skills U.K. Government.
- Gallagher, J., Harradine, C. C., & Coleman, M. R. (1997). Challenge or boredom? Gifted students' views on their schooling. *Roeper Review*, 19(3), 132-136. <https://doi.org/10.1080/02783199709553808>
- Girgin, D. (2020). Competencies required for supporting gifted students: Classroom teacher' views. *Electronic Journal of Social Sciences*, 19(74), 895-915.

- Gökalp, M. (2017). Öğretim İlke ve Yöntemleri. Ankara: PEGEM Akademi.
- Grigorenko, E. L. (2017). Gifted education in Russia: Developing, threshold, or developed. *Cogent Education*, 4(1), 1364898. <https://doi.org/10.1080/2331186X.2017.1364898>
- Gubbins, E. J., Callahan, C. M., & Renzulli, J. S. (2014). Gifted Contributions to the impact of the Javits Act by The National Research Center on the and Talented. *Journal of Advanced Academics*, 25(4), 422-444. <https://doi.org/10.1177/1932202X14549355>
- Gültekin, M. (2017). Program Geliştirme ile İlgili Temel Kavramlar (Basic Concepts of Program Development). Eğitimde Program Geliştirme ve Değerlendirme (s. 2-37). içinde Ankara: PEGEM Akademi.
- Gyarmathy, E. (2013, Mart 1). The Gifted and Gifted Education in Hungary. *Journal for the Education of the Gifted*, 31(1), 19-43.
- Harackiewicz, J. M., Smith, J. L., & Priniski, S. J. (2016). Interest matters: The importance of promoting interest in education. *Policy Insights From the Behavioral and Brain Sciences*, 3(2), 220-227. <https://doi.org/10.1177/2372732216655542>
- Heiss, R. H. (1995). Personality and interests of gifted adolescents: differences by gender and domain. Iowa State University, Retrospective Theses and Dissertations. Iowa: Digital Repository.
- Hennessey, B. A. (2004). Developing creativity in gifted children: The central importance of motivation and classroom climate. Massachusetts: National Research Center on the Gifted and Talented. <https://files.eric.ed.gov/fulltext/ED505478.pdf>
- Heuser, B. L., Wang, K. ve Shahid, S. (2017). Global Dimensions of Gifted and Talented Education: The Influence of National Perceptions on Policies and Practices. *Global Education Review*, 4(1), 4-21.
- Hoover-Schultz, B. (2005). Gifted underachievement: Oxymoron or educational enigma? *Gifted Child Today*, 28(2), 46-49. <https://doi.org/10.4219/gct-2005-171>
- Hunsaker, S. ve Callahan, C. M. (1993). Evaluation of gifted programs: Current practices. *Journal for the Education of the Gifted*, 16(2), 190-200.
- Johnson, D. W., Johnson, R. T., & Taylor, B. (1993). Impact of cooperative and individualistic learning on high-ability students' achievement, self-esteem, and social acceptance. *The Journal of Social Psychology*, 133(6), 839-844.
- Jolly, J. L. (2018). A history of American gifted education. New York: Routledge.
- Kara, A. ve Akdağ, M. (2017). Program Değerlendirme Modelleri-I. Eğitimde Program Geliştirme ve Değerlendirme (p. 469-508). Ankara: Pegem Akademi.
- Kennedy, D. M. (2002). Glimpses of a highly gifted child in a heterogeneous classroom. *Roeper Review*, 24(3), 120-124. <https://doi.org/10.1080/02783190209554148>
- Kim, M. (2016). A meta-analysis of the effects of enrichment programs on gifted students. *Gifted Child Quarterly*, 60(2), 102-116. <https://doi.org/10.1177/0016986216630607>
- Klein, A. G. (2002). A Forgotten Voice: A Biography of Leta Stetter Hollingworth. Scottsdale AZ: Great Potential Press.
- Lo, C. O., Porath, M., Yu, H.-P., Chen, C.-M., Tsai, K.-F. ve We, I.-C. (2019). Giftedness in the making: A transactional. *Gifted Child Quarterly*, 63(3), 172-184. <https://doi.org/10.1177/0016986218812474>
- Melekoğlu, M. A., Çakiroğlu, O., & Malmgren, K. W. (2009). Special education in Turkey. *International Journal of Inclusive Education*, 13(3), 287-298. <https://doi.org/10.1080/13603110701747769>
- MEB. (1991). 1. Special Education Council (Reports, Interviews, Decisions). Ankara: Milli Eğitim Bakanlığı Yayınları.
- MEB. (2019). 2023 Eğitim Vizyonu. Milli Eğitim Bakanlığı: <http://2023vizyonu.meb.gov.tr/>
- Orbay, M., Gokdere, M., Tereci, H., & Aydın, M. (2010). Attitudes of gifted students towards science depending on some variables: A Turkish sample. *Scientific Research and Essays*, 5(7), 693-699. <http://www.academicjournals.org/SRE>
- Pivec, M., Dziabenko, O., & Schinnerl, I. (2003). Aspects of game-based learning. 3rd International Conference on Knowledge Management, 216-225.
- Pomortseva, N. P. (2014). Teaching gifted children in regular classroom in the USA. *Procedia-Social and Behavioral Sciences*, (143), 147-151.
- Punch, K. F. (2005). Sosyal Araştırmalara Giriş (Introduction to Social Research). (S. E. Türközü, Dü.) Ankara: Siyasal Kitabevi.
- Putranta, H., & Jumadi, J. (2019). Physics Teacher Efforts of Islamic High School in Yogyakarta to Minimize Students' Anxiety When Facing the Assessment of Physics Learning Outcomes. *Journal for the Education of Gifted Young Scientists*, 7(2), 119-136. <https://doi.org/10.17478/jegys.552091>
- Reid, E., & Boettger, H. (2015). Gifted education in various countries of Europe. *Slavonic pedagogical studies journal*, 4, 158-171.
- Renzulli, J. (1999). What is this thing called giftedness, and how do we develop it? A twenty-five year perspective. *Journal for the Education of the Gifted*, 23(1), 3-54. <https://doi.org/10.1177/016235329902300102>
- Révész, G., & Szabó, J. (2018). Eternal Questions of Gifted Education from the Aspect of University Teachers. *Journal for the Education of Gifted Young Scientists*, 6(1), 43-67. <https://doi.org/10.17478/jegys.2018.72>
- Rotigel, J. V. & Fello, S. (2004). Mathematically gifted students: How can we meet their needs? *Gifted Child Today*, 27(4), 46-51. <https://doi.org/10.4219/gct-2004-150>
- Shack, G. D. (1989). Self-efficacy as a mediator in the creative productivity of gifted children. *Journal for the Education of the Gifted*, 12(1), 231-249. <https://doi.org/10.1177/016235328901200306>
- Slavin, R. E. (1980). Cooperative learning. *Review of Educational Research*, 50(2), 315-342.

<https://doi.org/10.3102/00346543050002315>

- Stufflebeam, D. L. (1982). A Review of Progress in Educational Evaluation. *Evaluation News*, 3(2), 15-27. <https://eric.ed.gov/?id=ED216031>
- Şahin, F. (2013). Issues of Identification of Giftedness in Turkey. *Gifted and Talented International*, 1-2(28), 207-218.
- Şensoy, S. A. & Sağsöz, A. (2015). Relation between pupils academic achievement and pyhsical conditions of classrooms. *Abi Evran University Journal of Kırşehir Faculty of Education (KEFAD)*, 16(3), 87-114. <https://dergipark.org.tr/en/download/article-file/1489212>
- Tiantong, M., & Tongchin, P. (2013). A Multiple Intelligences Supported Web-based Collaborative Learning Model Using Stufflebeam's CIPP Evaluation Model. *International Journal of Humanities and Social Science*, 3(7), 157-165. <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=53b57f1754e33708a5a7714cca7de13cf42f9e62>
- Terman, M. L. (1916). *The measurement of intelligence: An explanation of and a complete guide for the use of the Stanford revision and extension of the Binet-Simon intelligence scale*. Boston: Houghton Mifflin.
- Tirri, K., & Kuusisto, E. (2013). How Finland Serves Gifted and Talented Pupils. *Journal for the Education of the Gifted*, 36(1), 84-96.
- Weyns, T., Preckel, F. ve Verschueren, K. (2020). Teachers-in-training perceptions of gifted children's characteristics and teacher-child interactions: An experimental study. *Teaching and Teacher Education*, 97, 103215. <https://doi.org/10.1016/j.tate.2020.103215>
- Winebrenner, S. & Brulles, D. (2008). What do gifted students need? <http://www.maine gateways.org/wp-content/uploads/2013/11/%E2%80%9CSusan-Winebrenner-What-d...fted-students-need-.pdf%E2%80%9D.pdf>
- Vainer, E. S., Gali, G. F., & Shakhnina, I. Z. (2016). Historic overview of gifted education in foreign countries. *International Journal of Humanities and Cultural Studies*, 1(1), 588-594. <http://www.ijhcs.com/index.php/ijhcs/index>.