

Full-time Schooling for Gifted Students in Turkey: What Teachers and Experts Say about This?

Derya Yüreğilli Göksu

Gazi University, Ankara, Turkey,

ORCID: <https://orcid.org/0000-0002-5218-0010>, e-mail: deryagoksu06@gmail.com

Seda Nur Şakar

Hacettepe University, Ankara, Turkey,

ORCID: <https://orcid.org/0000-0002-3784-4069>, e-mail: sakarsedaa@gmail.com

Mehmet Bicakci

Hacettepe University, Ankara, Turkey,

ORCID: <https://orcid.org/0000-0001-6865-9328>, e-mail: mehmetbicakci@hacettepe.edu.tr

Mustafa S. Köksal¹

Hacettepe University, Ankara, Turkey,

ORCID: <https://orcid.org/0000-0002-2185-5150>, e-mail: koksalphd@gmail.com

This study aimed at investigating suggestions provided by gifted education teachers and experts about full-time schooling for gifted students. In this study qualitative survey method was used and data was collected by an open-ended survey and semi-structured interviews. The data was analyzed by descriptive analysis including coding and categorizing. Using purposive sampling 341 teachers and 3 experts were selected for this study. The findings revealed that the experts suggested disciplinary and theme-oriented curriculum while the teachers suggested flexible and mixed-type curriculums. The experts and teachers suggested different ideas for outcome of the curriculum of the school, life skills and thinking skills component of the curriculum, features of classroom environment, physical conditions and technical equipment, and evaluation of learning in a full-time gifted school. The findings have merit to represent the general picture for starting a new full-time gifted school and contribute to the literature, authorities and families about necessity of this reform.

Keywords: Full-time schooling, gifted education, teachers of gifted students, experts of gifted education, qualitative survey method, need analysis.

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¹ Corresponding author.

Очное обучение для одаренных учеников в Турции: что об этом говорят учителя и эксперты?

Дерья Юредилли Гёксу

Университет Гази, г. Анкара, Турция,

ORCID: <https://orcid.org/0000-0002-5218-0010>, e-mail: deryagoksu06@gmail.com

Седа Нур Чакар

Университет Хаджеттепе, г. Анкара, Турция,

ORCID: <https://orcid.org/0000-0002-3784-4069>, e-mail: sakarsedaa@gmail.com

Мехмет Бичакчи

Университет Хаджеттепе, г. Анкара, Турция,

ORCID: <https://orcid.org/0000-0001-6865-9328>, e-mail: mehmetbicakci@hacettepe.edu.tr

Мустафа С. Коксал²

Университет Хаджеттепе, г. Анкара, Турция,

ORCID: <https://orcid.org/0000-0002-2185-5150>, e-mail: koksalphd@gmail.com

Цель данного исследования — изучить предложения учителей и экспертов в области сопровождения одаренных детей по очному обучению одаренных учащихся. В этом исследовании использовался метод качественного анализа, а данные собирались путем открытого опроса и полуструктурированных интервью. Данные были проанализированы с помощью описательного анализа, включая кодирование и категоризацию. Целевую выборку составили 341 учитель и три эксперта. Результаты показали, что эксперты предлагали дисциплинарные и тематические учебные программы, а учителя — гибкий и смешанный формат обучения. Эксперты и учителя предложили различные критерии оценки эффективности школьной учебной программы для одаренных детей с точки зрения освоения учащимися жизненных навыков и навыков мышления, а также критерии оценки достаточности технического и дидактического оснащения школы. Результаты этого исследования демонстрируют общую картину открытия новой школы для одаренных детей с очным форматом обучения, а также разъясняют компетентным органам и семьям необходимость изменений в содержании учебных программ для одаренных детей.

Ключевые слова: очная форма обучения, обучение одаренных детей, учителя одаренных учащихся, специалисты по обучению одаренных детей, метод качественного опроса, анализ потребностей.

² Корреспондирующий автор.

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Introduction

Gifted students are traditionally defined as individuals having high intelligence [50]. However, current definitions revealed that the definition of gifted students cannot be restricted to their high IQ scores [34; 37; 61]. Gifted students are individuals with outstanding motivation, leadership ability, self-regulation, effective cognitive processing and high intellectual ability contributing to the development of an effective solution for problems, effective participation in the solution of social and ethical problems, learning a content deeply, producing meaningful and valuable theories, ideas and products, [15; 37; 39; 45; 61]. As stated in the definition, gifted students have superior abilities and represent outstanding performances. They have higher academic achievement, higher motivation, superior problem-solving ability than their non-gifted peers [5; 16; 23; 49; 59]. They also represent different behaviors in the classroom that some of them might be summarized as “disliking routine and busy work”, “asking challenging questions”, “being critical to others”, and “being aware of being different” [33]. These characteristics of gifted students made regular classrooms an ineffective learning box. Vogl and Preckel [57] reported that gifted students in ordinary classes experienced a decline in student-teacher interactions, and their interest in school also decreased. Farkas and Duffett [11, p. 51] supported these findings by saying that 73% of their teacher sample revealed that the brightest students of the classrooms were bored in the regular lessons and saw school subjects as unchallenging. Gifted students are disadvantaged in regular schooling system due to the focus on chronological age in planning educational experiences rather than considering ability and intelligence [9].

Considering the problems mentioned in previous paragraph, the purpose of gifted education is to provide differentiated instruction and educational services to gifted students by considering several criteria for qualified educational experiences. Tomlinson [52] summarized important criteria of differentiation for gifted education as focusing on big ideas, challenging and interesting real-life content, flexibility in the teaching process, and opportunities for producing real-life products. To fulfill these criteria, various differentiation strategies, including enrichment and grouping, were recommended [38]. Especially grouping the students based on their abilities has been used for increasing learning of gifted students and it was found effective when used for enrichment and acceleration [24; 25]. Homogenous grouping based on the ability was advocated by different researchers [8; 14].

Hendricks [19] compared the effectiveness of homogeneous and heterogeneous ability groupings of gifted students in terms of academic achievement and attitudes towards math. Her finding showed that homogeneous ability grouping had a positive effect on achievement and attitude towards math. Feldhusen and Saylor [12] evaluated special classes as a special kind of grouping for gifted students based on the survey. They found that appropriate enrichment experiences were provided in these classes and were effective in meeting the

learning needs of gifted students. As another grouping option, cluster grouping was also investigated, and Brulles, et. al [4] found cluster grouping as very effective in achievement growth. A more comprehensive study on full-time homogenous grouping of gifted students was provided by Zeidner and Schleyer [60]. Their study involved 1020 Israeli gifted students and measured the attitudes towards and satisfaction with the school. Their findings revealed that full-time homogenous grouping contributed to favorable attitudes towards the school and satisfaction with the school. However, some studies claim unfavorable effects of homogeneous grouping of gifted students on academic gains and learning [31; 43; 41]. Oakes [31] advocated that homogeneous ability grouping declines academic expectancy and instructional quality for other groups and increases inequity of teachers' support in the classroom. Moreover, Slavin [42] and Webb [58] advocated that gifted students' achievement can increase in heterogenous groups. Opponents of homogenous grouping involve old studies However, their current claims are for providing qualified education to gifted students in the regular classrooms. Equity problem is not the case for just non-gifted students; gifted students should also have appropriate instructions and educational support during their schooling years, teachers' support and academic expectancy should also be adjusted for their needs. However, the current schooling system does not permit the effective instructional applications such as homogenous grouping and special educational support programs due to elitism belief and financial reasons [2; 13]. Hence, doing required instructional and educational planning and implementing enrichment and acceleration without administrative press and financial restrictions leads us to full-time schooling based on homogenous grouping in classrooms.

This study aimed to investigate the ideas of gifted education teachers and experts about full-time schooling for gifted students in Turkey. This way we plan to evaluate possible advantages and disadvantages of full-time schooling for gifted students and make suggestions on establishing such a school.

Related Literature

As an educational problem, full-time schooling for gifted students is a new issue for Turkey despite previous formal attempts without an evidence-based approach. However, we can see different examples in the USA. Van Tassel-Baska [56] revealed that the USA opened different specialized schools for the gifted since the 1930s. Cross and Miller [10] mentioned early entrance to college and full-time residential academies in specific fields as schooling examples. Subotnik, et. al [46] added specialized schools to the list of schooling examples for gifted students focusing on STEM fields. Van Tassel-Baska [56] mentioned Roeper School for the Gifted, Hunter, Bronx, Brooklyn Tech and Speyer School in NYC as specialized gifted schools. Sloan [44] expanded the list of New York City specialized schools for gifted students. She reported that those schools accepted their students based on the entrance exam and provided a challenging curriculum and effective learning environment to gifted students. For example, the Bronx High School of Science provides enrichment programs, AP and post-AP courses, 3-year independent project study [51].

Up to now, various studies have reported the benefits of full-time schools for gifted students. One of them, Pfeiffer, et. al [35] reported that residential academies in Science, Technology, Engineering, and Mathematics (STEM) provided the advantage of access to labs and facilities not seen in regular schools. Moreover, Subotnik et al. [46] stated that gifted

students met highly motivated classmates and teachers in specialized schools and experienced challenging curriculums. Actually, it can be claimed that gifted children need intensive learning experience, and specialized full-time schools have the opportunity to provide such kind of experience. Olszewski-Kubilius [32] expanded the benefits of full-time specialized schools where the students might be involved in unique research and mentoring processes. Moreover, the author also compared typical high schools and specialized schools in terms of opportunities for gifted students. She claimed that most typical schools were not able to provide the opportunity of having contact with experts, working in research labs, and taking effective mentorship, while specialized schools had more opportunities than typical schools for gifted students. For instance, specialized schools might have denser curriculum than typical schools and also they might have intensive content about specific areas of science or social sciences.

None of the schooling examples perfectly correspond to the expected full-time schooling for gifted education in Turkey. In the Turkish educational system, full-time schooling is desired and planned for gifted students and one of such schools has already been opened. It differs from the examples in the literature, because the school is not a specialized school and buildings of the school are located as separate houses. Moreover, the selection of teachers and students is based on a comprehensive selection process. Although this school is not enough to provide services to various subgroups of gifted students such as highly gifted, moderately gifted, etc., establishing different full-time schools with different curriculums remains on the agenda of stakeholders of gifted education. However, there is a need for an evidence-based approach to evaluate different aspects of such kind of schooling.

Hence, we need to establish the basis for further decisions for the stakeholders based on the opinions of teachers and experts. At the same time, by this study, we add information to relevant the literature about the suggestions of two important groups in gifted education.

Method

In this research, the qualitative survey method was applied since it is an appropriate research method if working on the diversity of ideas of subjects [22, p. 2]. Frequencies of the participants are not at the focus of the method; rather the variation in the suggestions is. During the study, an open-ended survey and semi-structured interviews were used for data collection. Table 1 represents the open-ended questions of the survey and semi-structured interview questions.

The data were analyzed by descriptive analysis by coding and categorizing the ideas of the participants. The findings will be represented as figures of the categories taken from the transcripts. For increasing the trustworthiness of the findings, two different experts coded all the data independently. The agreement rate between them reached 97%. Moreover, the data from two different sources (the survey and interview) were also compared; it was found that they supported each other. This result was also an indicator of the trustworthiness of the data. For ethical reasons, the informed-consent form was delivered to the participants and the data collected after the signing procedure. Moreover, the real names of the participants were converted into pseudo-names for providing data security in data set. For the purpose of the study, 341 gifted education teachers and 3 experts participated in it. Detailed information about the participants is represented in Table 2.

Table 1

Questions of the Survey and Semi-Structured Interview

Question	
1.	What are your suggestions on the curriculum to be implemented in a school where gifted students will receive full-time education? Which kind of curriculum should it be: disciplinary, theme-oriented or skill-oriented? Please explain giving your reasons.
2.	What is your opinion about the outcomes that can be gained to students in a school where gifted students will receive full-time education? Please explain your opinion with your observations.
3.	Which kind of life skills should be involved in the curriculum to be implemented in a school where gifted students will receive full-time education?
4.	Which kind of thinking skills should be involved in the curriculum to be implemented in a school where gifted students will receive full-time education?
5.	What kind of the classroom environment, physical conditions and technical equipment should be in a school where gifted students will receive full-time education? What are your thoughts and observations on these factors? If you have suggestions, please specify them.
6.	What would you suggest evaluating gifted students in a school where gifted students will receive full-time education (tests, rubric, portfolio, etc.)? Please explain giving reasons.
Semi-structured Interview Questions	
<i>Note: Survey questions were also used in the interview, but additional questions were also added to the process.</i>	
1. What is your ideal model for the gifted education in general?	
2. Do you want to change your ideas or opinions you expressed? or add anything?	

Table 2

Descriptive Information about the Participants

Participants	Descriptive Information	Categories	f	%
	Regions	Southern Anatolia	59	17,35
		Northern Anatolia	39	11,47
		Central Anatolia	89	26,18
		Western Anatolia	54	15,88
		Marmara	59	17,35
		Eastern Anatolia	23	6,76
		South-eastern Anatolia	17	5
Teachers	Gender	Female	166	48,68
		Male	175	51,32
Working at Science and Art Centers	Degree of Education	Undergraduate	146	42,82
		Master	158	46,33
		Doctorate	37	10,85
	Number of Participation in In-Service Training for Gifted Students	0–5	282	83,93
		6–10	40	11,9
		11–15	9	2,68
		16 and above	5	1,49
	Working Experience with Gifted Students	0–5 years	259	76,85
		6–10 years	45	13,35
		11–15 years	26	7,72
		16–20 years	7	2,08

Teachers Working at Science and Art Centers	Field of Teaching		
		Information Technologies	16 4,69
		Biology	3 0,88
		Geography	7 2,05
		Literature	23 6,74
		Philosophy	15 4,4
		Science	9 2,64
		Physics	7 2,05
		Visual Arts	28 8,21
		English	23 6,74
		Chemistry	12 3,52
		Math	51 14,69
		Music	27 7,92
		Pre-school	3 0,88
		Psychological Counseling and Guidance	44 12,9
		Classroom Teacher	26 7,62
		Social Studies	6 1,76
		History	8 2,35
		Technology Design	20 5,87
		Turkish	13 3,81

Three experts in the study have studied different aspects of gifted education. They have PhD in gifted education and experience in both teaching and research about gifted education in Turkey. Descriptive information about them can be seen in Table 3.

Table 3

Descriptive Information about the Gifted Education Experts

	Participant Experts		
	K1	K2	K3
Age	36	37	36
Gender	Male	Female	Female
Field of Study in PhD	Creativity	/Creativity	Differentiation
Experience in Gifted Education (in years)	18	14	12
Area of Specialization	Gifted Education / Creativity	Gifted Education / Creativity / Differentiation / Science Teaching	Gifted Education / Creativity / Differentiation / Science Teaching
Experience in Full-time Schooling (in years)	12	2	0,3

Results

In this research two different sets of data (for the experts and teachers) will be represented as categories. The categories summarize the ideas provided by experts and teachers in detail. For locating the data, the categories will be taken into account question by question. First, the findings of the experts' ideas and then the findings of the teachers' ideas will be represented.

Findings regarding Ideas of the Experts on Full-time Schooling

First, we asked about the suggestions on the curriculum type to be implemented in a full-time gifted school. Then we added a prompt question to the interview when it progressed: “Which kind of curriculum should it be: disciplinary, theme-oriented or skill-oriented?”. The experts suggested that the curriculum should be based on student needs and context of necessity rather than using a fixed curriculum. Moreover, they preferred disciplinary and theme-oriented curriculum for such kinds of schools. For the second question (What is your opinion about the outcomes that can be gained to students in a school where gifted students will receive full-time education?), the expert participants mentioned four different outcomes to be targeted in the full-time gifted school. On the one hand, the experts suggested determining the outcomes expected to develop in the full-time gifted school by asking the students’ learning needs and interests. On the other hand, they emphasized “autonomous learning skills”, “higher-order thinking skills”, and “social skills” for teaching in the full-time gifted school. Finally, we asked the experts about life skills which should be involved in the curriculum of full-time gifted school.

In Figure 1, three experts suggested 14 different life skills for the curriculum content of the full-time gifted school. Some of the suggested skills are included in higher-order thinking skills (e.g., critical thinking and problem solving). They also suggested emotional and social skills as life skills. Empathy, leadership, communication and self-expression are the most important and complicated skills, but they are not frequently involved in gifted education curriculums and not frequently taught in gifted education classrooms. Moreover, some of the suggestions for life skills are ambiguous, for example living autonomously and ethical manners are not clearly defined skills. For another question, “What are your ideas about thinking skills which should be included in the curriculum of full-time gifted school”, the expert participants summarized seven different thinking skills.

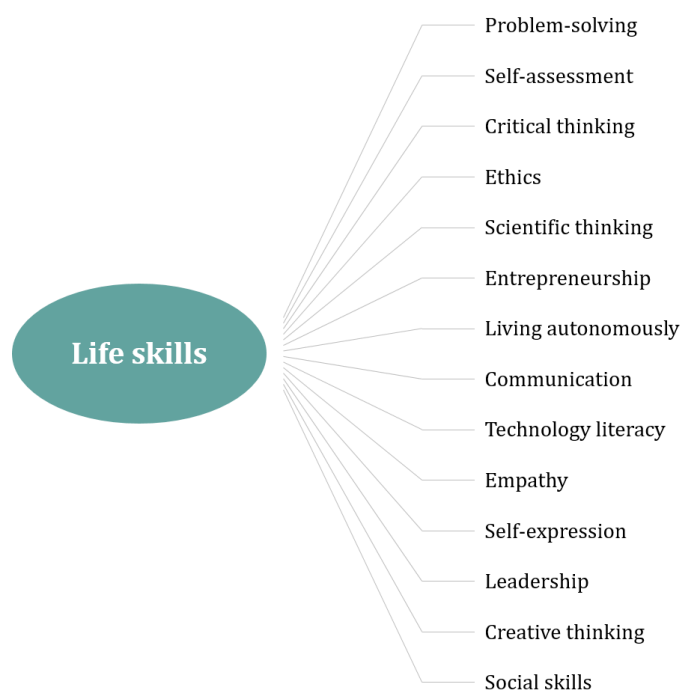


Fig. 1. Experts’ Suggestions Regarding Life Skills to be Involved in the Full-time Gifted School

The experts' ideas about thinking skills that should be involved in the curriculum of full-time gifted schools are the following: problem-solving, creative thinking, critical thinking, evaluative thinking, analysis, synthesis, creating. The suggested skills are also higher-order thinking skills, just as the skills suggested for life skills. However, creative thinking, creating, and synthesis have a clear emphasis on the content of the curriculum. In Figure 2 we see the experts' suggestions on classroom environment, physical conditions and technical equipment of the full-time gifted school.

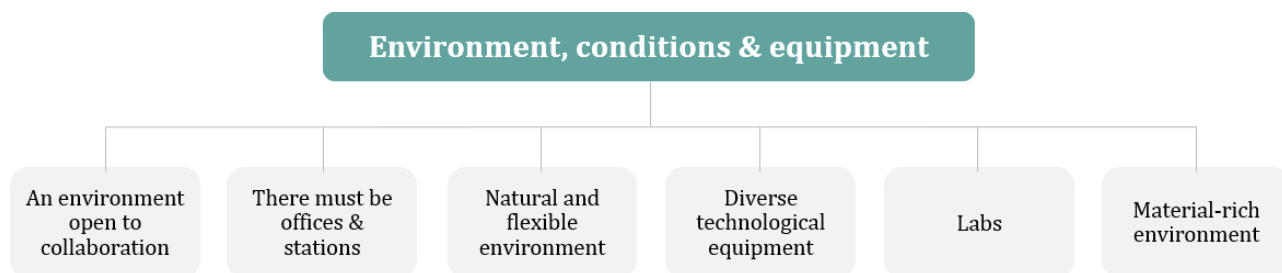


Fig. 2. Experts' Suggestions on Classroom Environment, Physical Conditions and Technical Equipment in the Full-Time Gifted School

As seen in Figure 2, the experts provided the limited number of suggestions on classroom environment, physical conditions and technical equipment. They suggested separated learning areas such as labs, offices and stations involving diverse materials, and technological equipment. They also mentioned the need to provide open, natural and flexible learning environment to collaborate and study. When we looked at another important side of education in a full-time gifted school, we saw that the evaluation component of the education should also be planned well to reach the expected outcomes of the school. The next passage summarizes the experts' suggestions on the evaluation component of the full-time gifted school.

The experts' suggestions on the Evaluation Component of the Full-Time Gifted School are individual assessment, process assessment, rubric, portfolio/e-Portfolio, diary, product/outcome evaluation. This picture partly differs from the traditional test-oriented evaluation, in which the experts suggested that gifted students in such a school should be evaluated by alternative evaluations by using rubrics, portfolios, diaries and outcome evaluation. After we asked the core questions, we expanded the data by asking the experts about the ideal educational model. The following sentences summarize the findings on the ideal models. The experts suggested full-time schooling as an important option for gifted education. However, they also recommend grouping gifted students and providing individual education. Their ideal education models are categorized into four groups: (a) full-time schooling, (b) individualized education, (c) heterogeneous grouping in early ages (d) part-time grouping.

Findings of the Teachers' Ideas on the Full-time Schooling

The teachers were asked similar questions in the interview as the survey questions. First, we asked about the teachers' suggestions on the type of curriculum to be implemented in a full-time gifted school. Figure 3 summarizes their suggestions.

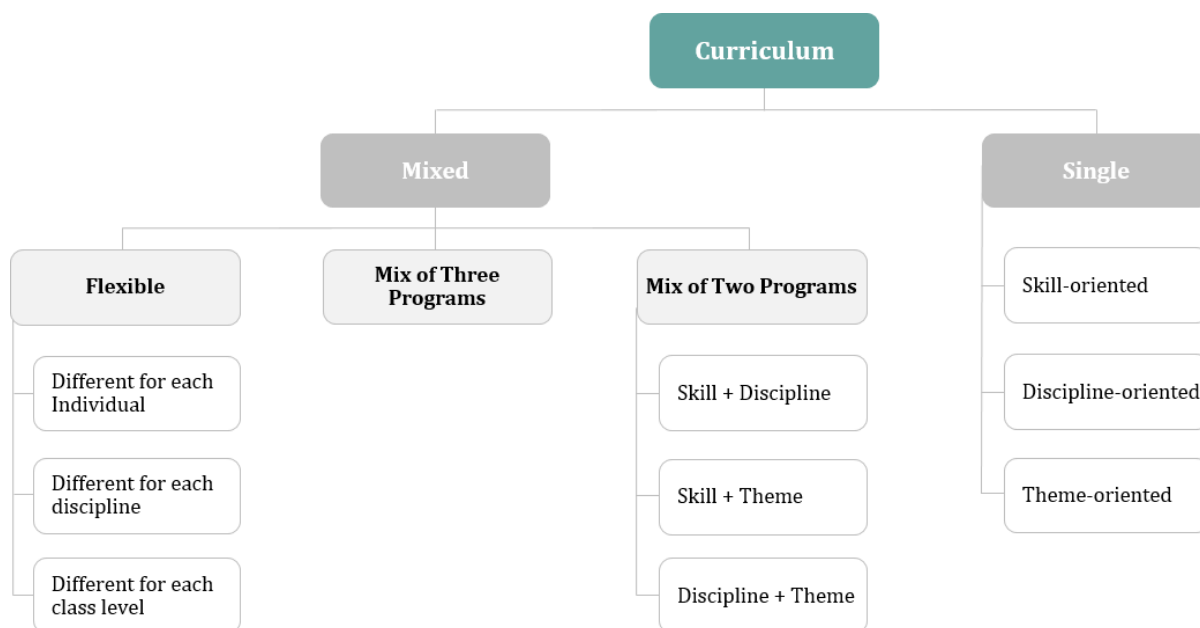


Fig. 3. The Teachers' Suggestions on the Type of Curriculum to be Implemented in a Full-Time Gifted School

The teachers' suggestions about the curriculum types to be implemented in the school of gifted students represented a complicated situation due to the mixed type of curriculum. As seen in Figure 3, the teachers suggested combinations of skill-oriented, discipline-oriented, and theme-oriented curriculums in addition to their suggestions involving one curriculum type. Moreover, they also suggested flexible curriculum types which are adaptable to individual, discipline, and class levels. For the second question (What is your opinion about the outcomes that can be gained to students in a school where gifted students will receive full-time education?), the teachers suggested different outcomes to be targeted in the full-time gifted school. Figure 4 summarizes the suggestions. As seen in Figure 4, the teachers suggested three core outcomes to integrate into the curriculum of full-time gifted schools. They included affective skills, using the scientific approach, and world citizenship. However, they did not give examples for affective skills while they mentioned research knowledge, cross-cultural communications, and responsibility for using the scientific approach and world citizenship outcomes. After we determined suggestions on the outcomes, we asked the teachers about the life skills which should be included in the curriculum of a full-time gifted school. The findings are represented in Figure 5. The life skills suggested by the teachers contained five core skills: self-care skills, social skills, social adaptation skills, daily life skills, and psycho-social skills. However, they made more emphasis on psycho-social skills than self-care, social skills, social adaptation skills and daily life skills. Following the question regarding life skills, we asked the teachers about thinking skills that should be included in the curriculum of a full-time gifted school. The findings are represented in Appendix A.

Figure 5 represents the teachers' suggestions about thinking skills that should be included in the curriculum of a full-time gifted school. The suggested thinking skills contained higher-order thinking skills. Problem solving, critical and creative thinking, reflective thinking, divergent-convergent thinking, analytical thinking, meta-cognitive thinking, logical thinking and synthesis are higher-order thinking skills suggested by the

teachers for the content of the curriculum. Moreover, the other two higher-order thinking skills; evaluation and decision making are also decision-based strategic thinking skills. After determining the teachers' suggestions on different thinking skills, we asked them about the ideal classroom environment, physical conditions, and technical equipment of the full-time gifted school. Their suggestions are summarized in Appendix B.

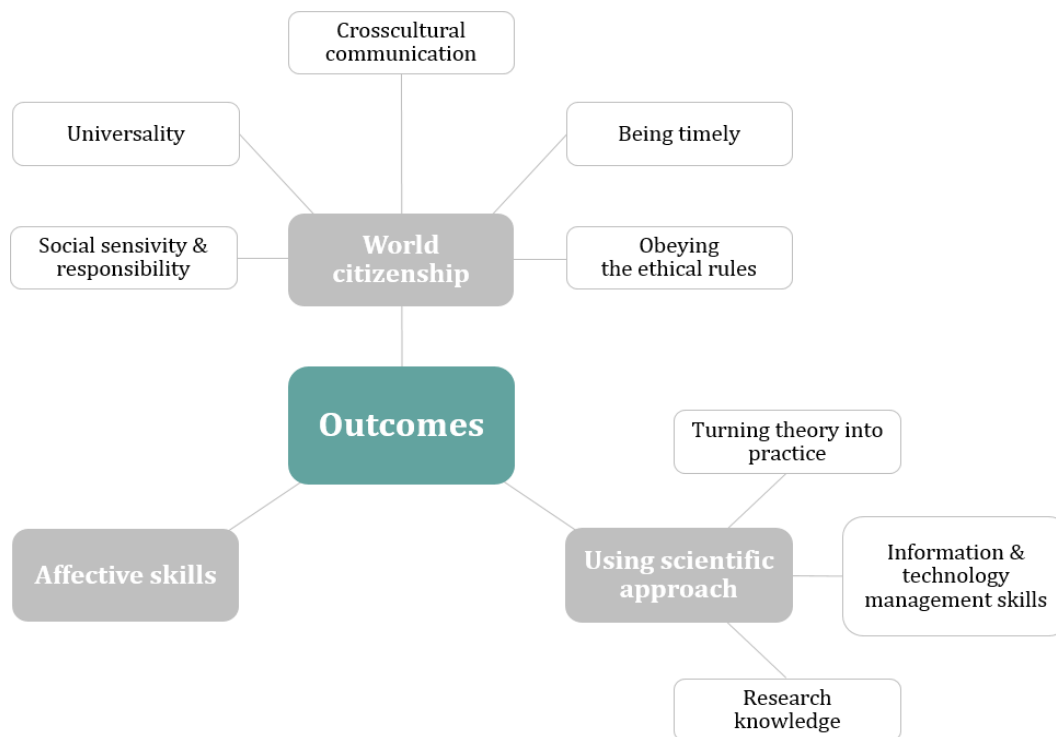


Fig. 4. The Teachers' Suggestions on the Outcomes to be Targeted in a Full-Time Gifted School Curriculum

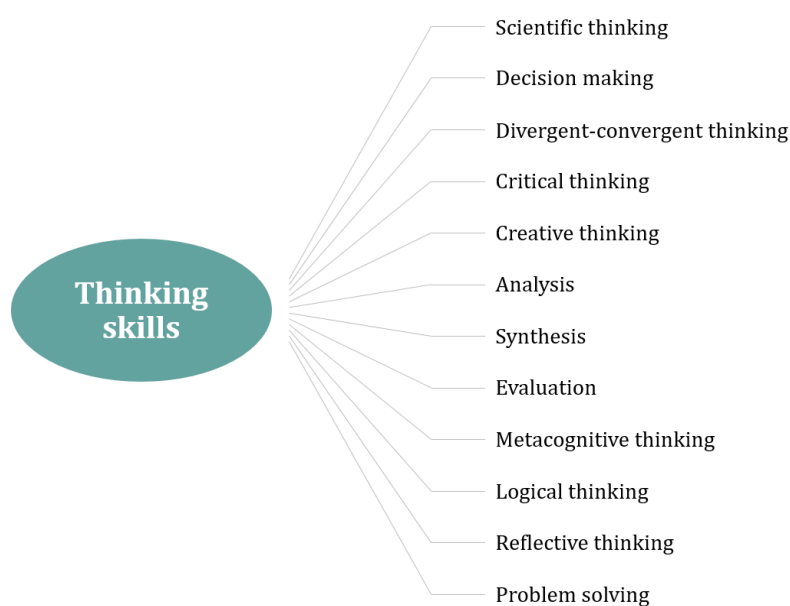


Fig. 5. The Teachers' Suggestions on the Thinking Skills to be Involved in a Full-Time Gifted School Curriculum

As seen in Appendix B, the teachers suggested two different core conditions for the schools: physical and technical. Moreover, they suggested three different core conditions for classrooms in the schools: technical, physical conditions, functionality. They suggested more on physical conditions of the schools and classrooms. Finally, we asked the teachers about the implementing evaluation in the full-time gifted schools. The suggestions are represented in Figure 6.

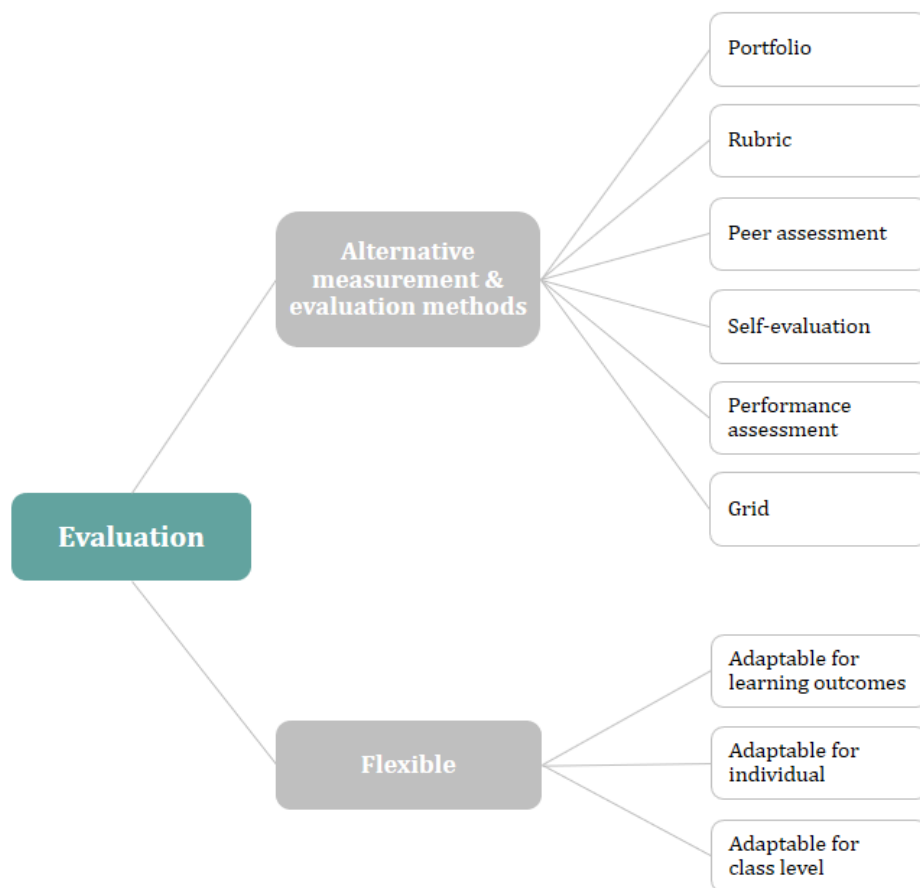


Fig. 6. The Teachers' Suggestions on the Evaluation to be Implemented in the Full-Time Gifted Schools

Figure 6 represents that the teachers suggested flexible and alternative ways of evaluation for the full-time gifted schools. When we looked at the figure in detail, we also see adaptation of evaluation for objective, individual and class level. Moreover, they suggested portfolio, rubric, peer evolution, self-evaluation, grid matrix and performance evaluation for a more prosperous way of evaluating learning in the full-time gifted schools.

Summary of the Results

For the first question about the type of the curriculum to be implemented in a full-time gifted school, the experts suggested *disciplinary and theme-oriented curriculums* while the teachers suggested *all kinds of curriculums*. Nevertheless, the teachers suggested *mixing several kinds of the curriculum for adaptation to individual, discipline and class levels*. For the outcomes to be included in the curriculum of a full-time gifted school, the experts emphasized *autonomous learning skills, higher-order thinking skills, and social skills*.

However, the teachers mentioned other skills: *world citizenship* (obeying the rules, social sensitivity and responsibility, cross-cultural communication, being universal, etc.), *affective skills* and *using a scientific approach* (research knowledge, technology management skills and making practice of theories). As another aspect of the full-time schools, the experts suggested the life skills — *higher-order thinking skills* (problem solving, critical thinking, scientific thinking, creative thinking, scientific thinking), *psycho-social skills* (empathy, self-assessment, ethics, self-expression, social skills, leadership), *communication skills*, *entrepreneurship*, *living autonomously*, *technological literacy* — shall be implemented in the curriculum. However, the teachers mentioned *self-care skills*, *social adaptation skills*, *daily life skills*, and *psycho-social skills and social skills*. For thinking skills, similar suggestions were made by the teachers and experts.

Both the experts and the teachers suggested problem solving, creative thinking, critical thinking, analysis, synthesis, evaluative thinking and creating. When we look at the suggestions about classroom environment, physical conditions and technical equipment in the full-time gifted school, the difference in suggestions of the experts and teachers are seen clearly. The experts suggested an open, natural and flexible environment for collaboration, involvement of labs, offices, stations, and technology-supported environment. In contrast, the teachers suggested technical and physical improvement in school environment (safety and health stuff, activity areas such as library, museum etc., appropriate color, aesthetic and visual design, source rooms, course-specific classes, workshop areas) and technical, physical improvement in classroom environment, and functionality (rich material supply, security, hygienic, flexible classes). For the evaluation aspect of full-time schooling, the experts suggested using alternative evaluation ways (rubrics, portfolios, diaries, outcome evaluation, process-oriented evaluation, product evaluation, individual evaluation). The teachers suggested similar ways of alternative evaluation (self-evaluation, grids, performance assessment, peer assessment, rubric, portfolio) and also recommended flexible evaluation adaptable for individual, learning outcomes and class levels. In addition to these aspects, we also asked the experts about their ideal education model for gifted education in Turkey. They suggested full-time schooling, individualized education, heterogeneous grouping, and part-time grouping.

Discussion

This study aimed to determine suggestions of gifted education teachers and experts about different aspects of full-time schooling for gifted students in Turkey. In detail, we focused on their suggestions about curriculum type, life skills and thinking skills, ideal classroom environment, physical conditions and technical equipment, and the outcomes to be included in the curriculum in the full-time gifted school and evaluation to be implemented. The suggestions of the experts and teachers are corroborated in general. However, the teachers provided detailed suggestions on all the aspects of full-time schooling for gifted students.

For the first aspect, the experts' and teachers' suggestions to implement disciplinary, theme-oriented and skill-oriented curriculums and mix them for individuals, disciplines and class level are in line with the nature of teaching gifted students. Housand [21], Hockett and Brighton [20] stated that high-quality curriculum for gifted students was based on core disciplinary concepts and flexible for advanced learning. In the curriculum for gifted

students, flexibility in choosing different types of curriculums and its adaptability to class level, individual learning processes and disciplinary content are very important for telescoping, compacting and integrating advanced content. These three characteristics are needed to modify the curriculum for individuals and classes [18; 36; 54].

For another aspect, outcomes of the curriculum, autonomous learning skills, higher-order thinking skills, social skills, affective skills, using scientific approach and being world citizenship are emphasized by both the teachers and experts. Especially social and world citizenship outcomes of a gifted education curriculum are also in focus of new curriculum design approaches in gifted education [45; 54]. Van Tassel-Baska and Stambaugh [54] extended the list by adding higher-order thinking skills such as critical thinking, creative thinking, problem solving, and affective skills to the curriculum content appropriate to gifted students. The authors saw the curriculum as whole, and recommended considering social, developmental, affective and cognitive factors to make the curriculum available for the gifted students. Taber [47] pointed out that learning science in detail and using scientific approach were especially important for gifted students in science, since gifted science learners were a subgroup of gifted students. We have to consider subgroups of gifted students when designing a curriculum for a gifted school. At the same time, gifted students in science have already learnt the content of science and they generally need to learn and use the scientific approach and nature of science because their deep interest in science [47] drives them to learn further about it.

Similar to the suggestions on the outcomes, both the teachers and experts suggested higher-order thinking, psycho-social skills, communication skills, entrepreneurship, living autonomously, technological literacy, self-care skills, social adaptation skills and daily life skills. Actually, these skills are expected from gifted students, since different studies on psycho-socio-emotional characteristics of gifted students have emphasized higher-order thinking, communication skills, entrepreneurship and social adaptation skills as important for being gifted. Moreover, some teachers and experts considered these characteristics as a criterion for diagnosing gifted students [7; 29; 40; 45; 54]. In addition to these skills, self-care skills, living autonomously and daily life skills are also important for everybody, but especially for gifted students as they are under the pressure of high expectations and social isolation in their life [6; 17]. In spite of clear importance of these skills, the literature does not have studies focusing on daily life skills and self-care skills of gifted students. However, there are some groups of gifted students (e.g., twice exceptional) who need additional support for learning daily life skills and self-care skills.

In this study, we think that the teachers and experts are aware of such subgroups of gifted students and they see these skills as a curriculum. For thinking skills, the experts and teachers suggested problem solving, creative thinking, critical thinking, analysis, synthesis, evaluative thinking and creating, scientific thinking, decision making, divergent-convergent thinking, critical thinking, creative thinking, analysis, synthesis, evaluation, metacognitive thinking, logical thinking, reflective thinking and problem solving respectively. Miedijensky [27] also asked the teachers of gifted students about the content of the curriculum for teaching gifted students, and she found that the teachers suggested higher-order thinking skills in curriculum design for gifted students. These skills are the targeted higher-order thinking skills in teaching to gifted students [26; 47]. Because they include abstractness, naturally challenging thinking processes and deep learning processes as the expected experiences in gifted education [53]. For providing such learning experiences, school and

classroom environments, the participants of this study suggested these environments for a full-time gifted school. They suggested an open, natural and flexible environment for collaboration, involvement of labs, offices, stations, technology-supported environment, technical and physical improvement in school environment and technical, physical improvement, and functionality in classroom environment. Actually, learning environment of gifted students affects their learning motivation and discovery experiences [28]. Van-Tassel-Baska and Hubbard [55] also emphasized the importance of establishing appropriate learning environment for effective delivery of instruction in school.

Similar to our study, Miedijensky [27] also asked the teachers of gifted students about the appropriate learning environment of gifted students. She found that the teachers have seen advanced labs, well-stocked libraries, computers as the essential for gifted learning environment. Also, the researcher reported that the teachers indicated the need of providing flexible, safe, supportive, open-minded and small-size classroom environment in teaching gifted students. For the evaluation aspect of the full-time schooling, the experts and teachers suggested using alternative evaluation ways (diaries, self-evaluation, grids, performance assessment, peer assessment, rubric, portfolio, process-oriented evaluation, product evaluation, individual evaluation), flexible evaluation adaptable for individual, learning outcomes and class level. The suggestions can be accepted as reasonable when the suggested skills to be implemented in the school are considered. Because higher-order thinking skills are measured appropriately by alternative evaluation techniques such as portfolios, observation, performance-based assessment techniques, rubrics, reflections and best work analysis [1; 48]. Hence, it can be claimed that proposed alternative evaluation ways are in line with the suggested skills for the curriculum of full-time gifted school.

Conclusion and Suggestion

In this study, we reported the experts' and the teachers' suggestions about the different aspects of a full-time gifted schools. We obtained important suggestions for such schools, but we have also limitations. First, our sample is limited to 341 teachers of gifted students and 3 experts in gifted education. Based on this limitation, we can recommend increasing sample size in future studies. Second, we used six survey questions and two additional interview questions, since we are not able to reflect all the aspects of a full-time gifted school. For example, next studies may focus on family participation aspect of such a school. Third, our methodology is based on qualitative survey. Further research on teachers' experience in existing schools for gifted children using quantitative methods is needed. Fourth, our findings are limited to a descriptive side of the phenomenon, but the action side remains unknown. Further studies are needed to understand the whole picture.

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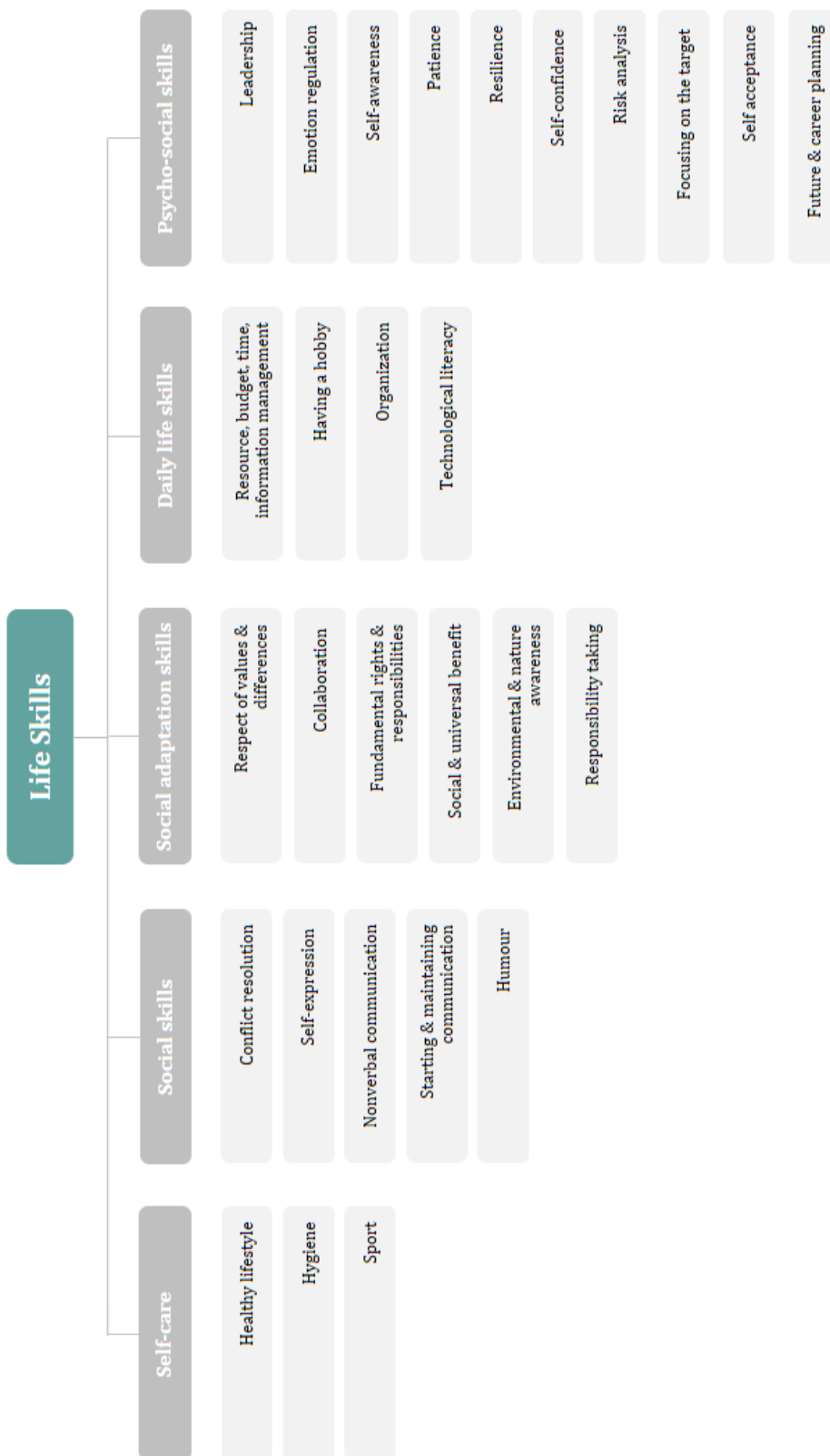
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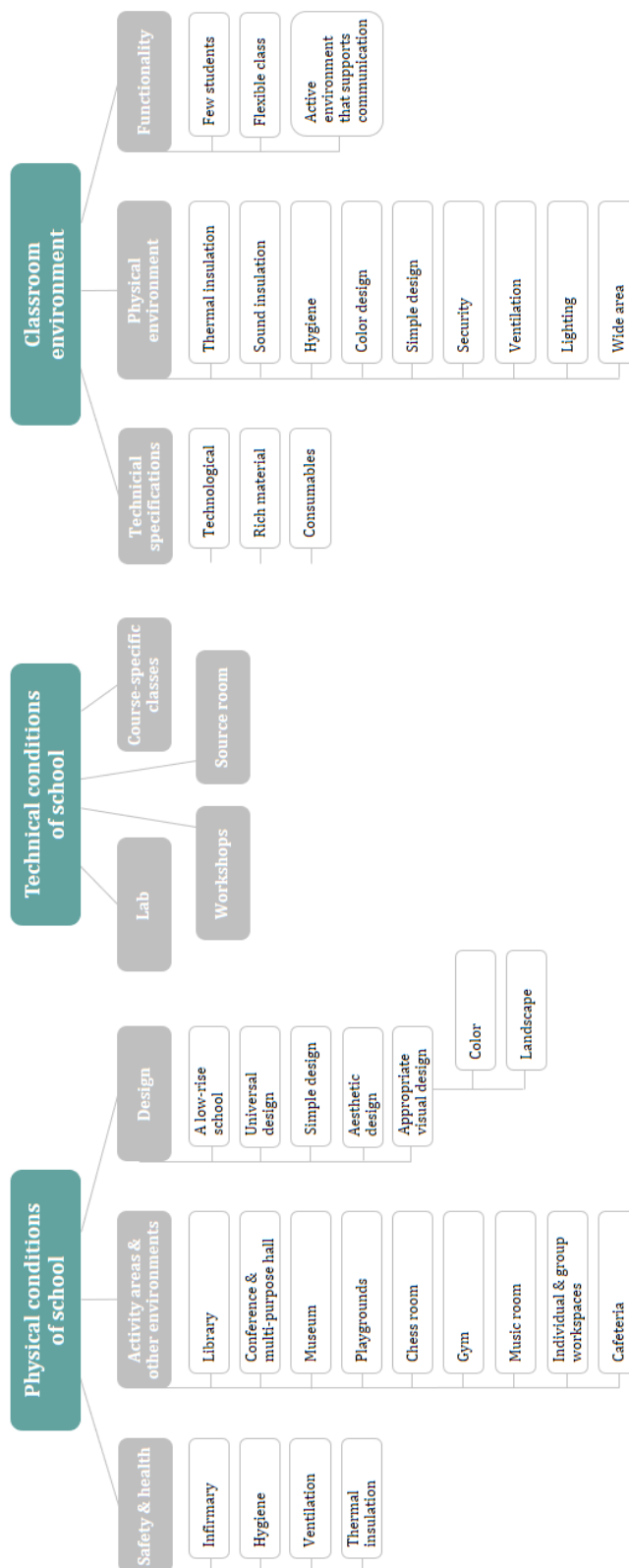
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The Teachers' Suggestions on the Life Skills to be Involved in a Full-Time Gifted School Curriculum



Appendix B

The Teachers Suggestions on Classroom Environment, Physical Conditions and Technical Equipment of the Full-Time Gifted School



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Information about the authors

Derya Yüreğilli Göksu, PhD, Institute of Educational Sciences, Curriculum and Instruction, Gazi University, Ankara, Turkey, ORCID: <https://orcid.org/0000-0002-5218-0010>, e-mail: deryagoksu06@gmail.com

Seda Nur Şakar, Research Assistant, Department of Special Education, School of Education, Hacettepe University, Ankara, Turkey, ORCID: <https://orcid.org/0000-0002-3784-4069>, e-mail: sakarsedaa@gmail.com

Mehmet Bıçakçı, PhD Student, Research Assistant, Department of Gifted Education, Research and Application for Gifted Individuals, Hacettepe University, Ankara, Turkey, ORCID: <https://orcid.org/0000-0001-6865-9328>, e-mail: mehmetbicakci@hacettepe.edu.tr

Mustafa S. Köksal, PhD, Professor, School of Education, Hacettepe University, Ankara, Turkey, ORCID: <https://orcid.org/0000-0002-2185-5150>, e-mail: koksalphd@gmail.com

Информация об авторах

Дерья Юредилли Гёксу, кандидат психологических наук, Институт педагогических наук, учебных программ и инструкций, Университет Гази, г. Анкара, Турция, ORCID: <https://orcid.org/0000-0002-5218-0010>, e-mail: deryagoksu06@gmail.com

Седда Нур Чакар, стажер-исследователь, департамент специального образования, Школа образования, Университет Хаджеттепе, г. Анкара, Турция, ORCID: <https://orcid.org/0000-0002-3784-4069>, e-mail: sakarsedaa@gmail.com

Мехмет Бичакчи, аспирант, младший научный сотрудник, Департамент образования, исследований и разработок для одаренных людей, Университет Хаджеттепе, г. Анкара, Турция, ORCID: <https://orcid.org/0000-0001-6865-9328>, e-mail: mehmetbicakci@hacettepe.edu.tr

Мустафа С. Кёксал, кандидат психологических наук, Школа образования, Университет Хаджеттепе, Анкара, Турция, ORCID: <https://orcid.org/0000-0002-2185-5150>, e-mail: koksalphd@gmail.com

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