

**MANAGEMENT OF GIFTED STUDENTS' IDENTIFICATION IN MIDDLE EASTERN
COUNTRIES: A SYSTEMATIC REVIEW ON TEACHERS' CONTRIBUTIONS**

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ABSTRACT

This systematic review article focuses on the management of gifted students' identification in middle eastern countries by reviewing the teachers' contributions. Unfortunately, there is a limited number of articles that reviewed the management of gifted students in middle eastern countries alone in the last ten years, hence this article conducted a systematic review on the management of gifted students' identification in all middle eastern countries together. Generally, the management of gifted education is a new field with many components such as acceleration of gifted students, gifted counselling, curriculum compacting and gifted students' identification, which is what this review is focusing on. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) was chosen for the review of this research which screened one of the main journal databases known as Web of Science (WoS). The search through WoS resulted a total of 11 articles that can be analysed systematically. The review formulated four main themes, namely academic achievements, lack of specific concepts for gifted students, teacher training and experience, and the effectiveness of early identification and intervention.

Keywords: Systematic review, Gifted students, Identification, Middle Eastern countries

INTRODUCTION

The management of gifted programs is defined as programs focusing on gifted students that can serve and help gifted students in their social, educational and all other fields. Identification, acceleration, curriculum compacting, and grouping are examples of the main and most used programs in nurturing gifted students all around the middle eastern countries. All countries are in high need to know the abilities, capabilities, aptitude, or skills of all their individuals, especially those who are identified as gifted individuals. In order to meet these needs, gifted individuals should be identified and the management of gifted programs should begin.

Although identification of giftedness is a high necessity of any educational system, the policies and procedures are determined at the country or district level. As no two gifted children are alike, it is important to collect information on both the child's performance and potential through a combination of objectives (quantifiably measured) and subjective (personally observed) identification instruments in order to identify gifted and talented students (National Association for Gifted Children, 2008). One of the related issues is reinforced by Callahan (2018) who stated that an identification program that addresses the need for a curriculum sufficiently responsive to student characteristics, rather than identification based on the number of places in a gifted education program.

Studies about the timing of identification which determined the earlier even moderate giftedness was identified and the greater the possibility of achievement later in life (Passow, 2004). The later giftedness is detected, the greater the possibility that entrenched patterns of predictable, average performance may exist. Studies have revealed the 'cost' to gifted students is great when identification occurs late, as gifted students learn to be less than that which they are capable, 'cruise' in their learning rather than be extended, and 49% of them even deny their talents (Acar et al., 2016).

In the absence of early identification, it was argued that gifted children can experience failure and their ability may remain unnoticed (Bildiren et al., 2020). Identification is the process of identifying gifted students with the intent to address their needs and is a critical part of any school's gifted education program. Unless teachers and principals know who the gifted students are and what abilities they possess, it will be near impossible to successfully plan for and implement an appropriate educational program for them (McClain & Pfeiffer, 2012).

The identification processes of gifted students are still highly dependent on intelligence testing. This situation creates one of the biggest dilemmas in the Turkish educational system for gifted individuals. This raises questions not only for the reliability of the identification processes but also for the efficacy of the educational programs that are offered to those students (Güçyeter et al., 2017). In shedding light on current educational practices, it is noticed that most assessment tools are directed toward intelligence testing, which represents one of the problems of giftedness identification. A few screening tools exist to consolidate intellectual ability tests in assessing multiple dimensions of giftedness (Jarosewich et al., 2002). One of the most crucial purposes of identification is to put the students in one of the most needed nurturing programs, where they could be challenged and their abilities will be raised to maximum heights (Worrell & Erwin, 2011).

School teachers play a crucial role in identifying giftedness among their students. It is well-known that teachers' nominations, reports and decisions about students' aptitudes and abilities are a valid approach in identifying gifted students. One of the most popular roles in identifying gifted students is applying and activating the teachers rating scales such as: in the field: Gifted Evaluation Scale, Second Edition (McCarney & Anderson, 2000), Gifted Rating Scales (Pfeiffer, 2015), Gifted and Talented Evaluation Scales (Gilliam et al., 1996), Scales for Identifying Gifted Students (Ryser & McConnell, 2004), and Scales for Rating the Behavioural Characteristics of Superior Students (Renzulli, 2004).

Renzulli (1968) and Sisk (1987) indicate that teachers who are specifically educated on the diagnosis of gifted students play vital roles on the formation of sufficient learning environments that support their special needs. According to VanTassel-Baska (1991), the person who will teach gifted students must have a proper background and specified skills to support those learners at the time of their accelerating progresses, make differentiation in the course syllabus where needed, have the sufficient proficiency on expertise and educational issues, as well as organize and create class activities.

Landvogt (2001) and Delisle (2006) found that gifted students believe that the ideal teacher will possess broad knowledge in their area of expertise, a love for their chosen field, and a great enjoyment of teaching. Many researchers claim that the ideal teachers for gifted students are those who can adapt themselves and their talents to meet the

unique needs of the gifted students, have special behavioural, didactic, and intellectual skills as well as have acquired appropriate skills and tools to deal with the cognitive, social, and emotional aspects of their gifted students (Davis & Rimm, 2004; Leikin, 2011; Milgram & Hong, 2009; Vialle & Quigley, 2002). Pintrich and Schunk (2001) stated that a listening, loving, and caring teacher who is attentive and aware of their students' personal problems can get closer to the students and prevent negative behaviour.

Research conducted by Brown et al. (2005) has shown that strategies for identifying gifted students should include the following: individual expression criteria, ongoing assessment, multiple criteria for identification and consideration of contextual factors. Concomitantly, identification program conducted on gifted and talented students should take a multidimensional approach and not restricted to only academic performance (Davis et al., 2011).

As for the system of identifying gifted students, El Khoury and Al-Hroub (2018) mentioned that Renzulli proposed a six-step system, as follows:

1. Test score nominations
2. Teacher nominations
3. Alternative pathways
4. Special nominations
5. Notification and orientation of parents
6. Action information nominations

Also, Al-Hroub (2014) suggests using psychometric test results, in combination with dynamic and informal assessments, historical data, and task analysis, while also gathering information from parents, teachers, and students. This proposed model includes teacher and parent nominations and the use of school records, documentary evidence, behavioural observation, individually administered tests, perceptual skills and literacy tests, and dynamic assessment.

There had been several attempts by the Ministry of Education in Malaysia to provide educational programs that cater to highly gifted students within the national school system. It began with express class program in 1962 until 1970. Students who qualified to enrol in this program had to show excellent educational performance. This program was not so much of an acceleration program, but it was indeed grade skipping (Mohd Yassin et al., 2012). Regarding gifted students in the Gulf and Middle East, Subhi-Yamin (2009) stated that they are normally identified as having the following criteria:

1. High ability (meaning high intelligence)
2. High creativity
3. High task commitment
4. Behavioural characteristics

All the four past criteria's along with high intellectual ability is one of the main characteristics that define a gifted student in the Gulf and Middle East area (Subhi-Yamin, 2009). The identification process of gifted students in the Kingdom of Saudi Arabia received heightened interest, and the procedures of identification and encouragement of

gifted students was a widely discussed topic that occupied the minds of students, teachers, and parents (Aljughaiman & Ayoub, 2017).

The Ministry of Education in UAE adopted a national plan for nurturing gifted students supported by scholars from Ulm University in Germany. The plan consisted of seven components: (a) identification; (b) gifted programmes; (c) guiding and counselling for the gifted and their parents; (d) professional development in gifted education; (e) campaign to raise the awareness of gifted programmes in the society; (f) Hamdan centre for creativity and innovation; and (g) Hamdan incubation schools and partnership with gifted-oriented entities inside and outside the country (AlGhawi, 2017).

Alodat and Zumberg (2019) mentioned that the MOE in Jordan named as the Department of Gifted and Talented programs defines gifted student as “student who shows a high academic achievement and excellent general mental abilities in addition to special abilities in various fields based on the criteria and tests of the mental and cognitive abilities adopted by the ministry.” The Department uses the following criteria in identifying gifted students in Jordan:

- Academic achievement: Students who score at the top 10% in sixth and seventh grade on specific subjects, which are Arabic language, English language, and mathematics
- Behavioural characteristics: Completed by teachers regarding students’ motivation, leadership, thinking skills, and creativity
- An achievement test developed by the Department of Gifted and Talented Programs
- Evidence of special abilities in different fields
- Personal interview conducted by the Department of Gifted and Talented Programs committee

Finally, the importance of identifying gifted students can be summarized by Sternberg (2003) in which he said: Giftedness cannot possibly be captured by a single number. Unless we examine multiple sources of giftedness, we risk missing identification of large numbers of gifted individuals.

Although there are many adopted definitions of giftedness, this does not mean that there is a full agreement on the characteristics of the gifted. The National Association for Gifted Children (NAGC) mentioned some issues that must be considered for identification such as giftedness is dynamic not static, giftedness is represented through all racial, ethnic, income levels, and exceptionality groups, giftedness may be exhibited within a specific interest or category and even a specific interest within that category and early identification in school improves the likelihood that giftedness will be developed into talents (National Association for Gifted Children, 2008).

Research Gap

The review is based on the research question: What are the teachers’ contributions in managing gifted students’ identification in middle eastern countries? With an aim to fill the gap (Lack of previous studies that reviews the management of gifted students in middle eastern countries in the last ten years, and articles that reviewed the teachers’ contributions) by reviewing previous studies systemically to have more understanding

about the teachers' contributions in the management of gifted students' identification in middle eastern countries specifically in the past ten years.

Significance of the Study

The significance of this review could be expressed by its wide screening of articles that deal with the gifted students identification process in middle eastern countries that were published in one of the main databases which is Web of Science (WoS). This review will encourage and stimulate the efforts of initiating and enriching research in this crucial field of nurturing giftedness in this huge and extended region, which will strengthen the creative and innovative outcomes of gifted individuals in this main part of the world and ends in global development.

METHODOLOGY

This section of the study is divided into four sections: the review protocol (PRISMA), the formulation of research question, systematic search strategies and data abstraction and analysis.

The Review Protocol (PRISMA)

PRISMA stands for Preferred Reporting Items for Systematic Reviews and Meta-Analyses is a published standard to conduct a systematic review. PRISMA emphasises on the review report that evaluates randomised trials which can also be utilised as the fundamental in reporting systematic reviews for other types of research (Moher et al., 2009).

Sierra-Correa and Kintz (2015) claimed that PRISMA is also suitable for environment management field because it clearly defines the research questions towards the need for a systematic review even though PRISMA is often utilised within medical studies, and at the same time, able to identify the inclusion and exclusion criteria for a particular study.

Formulation of Research Question

The research question was formulated based on PICO, which is a tool that assists researchers in formulating the research questions for their systematic review, what it stands for, population, interest, and context. Based on previous concepts, this reviews' population are gifted students, while the interest is in the management of gifted identification, and the context is the middle eastern countries. Accordingly, the research question is: what are the teachers' contributions towards management of gifted students' identification in middle eastern countries?

Systematic Search Strategies

According to Mohamed Shaffril et al. (2019), there are three main processes in the systematic searching strategies process namely identification, screening, and eligibility (refer to Figure 1).

a) Identification

The process of identification is about finding or looking for any synonyms of the main keywords which are in the research question. For this process, the author developed a search string on the database Web of Science (refer to Table 1).

The research in the database named Web of Science (WoS) have resulted a total of 246 articles during this first stage of the systematic review process.

Table 1: *The search string*

Database	Search string
Web of Science	TS=((teacher*) AND (gifted identification OR gifted nomination OR gifted screening))

b) Screening

In this process, 246 articles were screened by referring to the result refining options offered by Web of Science database. Based on the refining options, articles were excluded due to it being published before 2012 so they don't fit in the timeline (10 years) for this review (2012-2021).

Journal articles were the only document types that were chosen in the screening process. Therefore, article reviews, chapters in book, book series, book chapters and conference proceedings were excluded. Moreover, only articles published in English are included and only articles published in middle eastern countries were selected, and only the articles that offers open access to researchers (refer to Table 2).

This process excluded 221 articles that did not fit the followed criteria and the remaining 25 articles were used for the eligibility process.

Table 2: *The inclusion and exclusion criteria*

Criterion	Inclusion	Exclusion
Timeline	2012-2021	<2012
Type of document	Journal article	Article reviews, chapters in book, book series, book chapters and conference proceedings.
Language	English	Non-English
Countries	Middle eastern countries	Non- middle eastern countries
Type of access	Open access	Closed/restricted access

c) Eligibility

In the eligibility process, twenty-five articles were examined by scanning the titles, abstracts, and articles' main contents. Fourteen articles were excluded because they did not focus on gifted students' identification and due to not having a full text or open access, so eleven articles (Table 3) remain for the analysis (see Figure 1).

Table 3: *Articles retrieved from WoS database*

Articles	Year
Investigation of Parents' Views Regarding the Recognition and Education of Especially Talented Individuals in Early Childhood Period	2021
The Perceptions of the Preschool Teachers Regarding Identification and Education of Gifted Children	2020
The Effects of Project Based Approach in Early Intervention Program on the Problem-Solving Ability of Gifted Children	2019
Determination of Attitudes and Opinions of Classroom Teachers about Education of Gifted Students	2019
Using a Nonverbal Cognitive Abilities Screening Test in Identifying Gifted and Talented Young Children in Jordan: A Focus Group Discussion of Teachers	2019
Giftedness in Arabic environments: Concepts, implicit theories, and the contributed factors in the enrichment programs	2017
Gifted education in the United Arab Emirates	2017
Serving gifted children in developmental and threshold countries – Turkey	2017
An Online Training Program for Gifted Children's Parents in Turkey	2016
Teachers' Conceptions of Giftedness and Special Needs of Gifted Students	2015
Investigating Pre-service Gifted Education Teachers' Self efficacy toward Science Teaching and Scientific Attitudes	2015

Note: Adapted from Adams et al. (2021)

Data Abstraction and Analysis

The process of conducting an integrative systematic review (which is the followed technique in this review) should be approached with the same intensity and scientific rigor used when conducting primary research. Cooper (1998) conceptualizes the integrative systematic review as occurring in 5 stages:

1. Problem formulation
2. Data collection or literature search
3. Evaluation of data
4. Data analysis
5. Interpretation and presentation of results

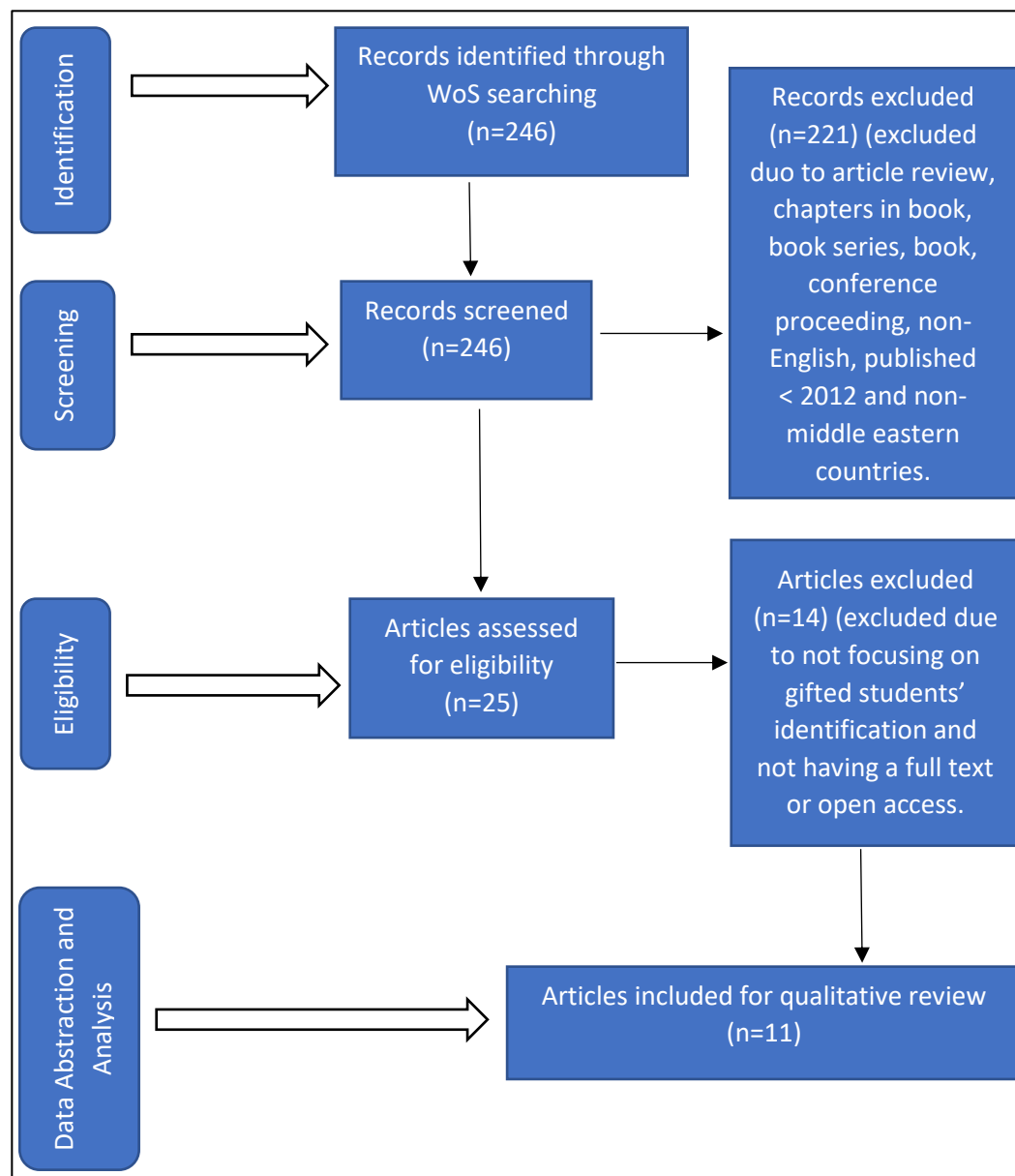


Figure 1: Flow diagram of the study (Source: Moher et al., 2009)

Integrative systematic review is one of the review techniques that analyses and synthesises diverse research designs together (qualitative, quantitative, and mixed methods) and this can be settled by transforming one type into the other (Whittemore & Knafl, 2005).

Applying the integrative systematic review stages resulted four main themes which are:

- Academic achievements
- Lack of specific concepts for gifted students
- Teachers training and experience
- The effectiveness of early identification and intervention

RESULTS

Background of the Chosen Articles

This review, in terms of the year of publication, one article was published in 2021 (Aşık & Zelyurt, 2021), one article was published in 2020 (Bildiren et al., 2020), three articles were published in 2019 (Alodat & Zumberg, 2019; Bildiren & Kargin, 2019; Kaya, 2019) three articles were published in 2017 (Güçyeter et al., 2017; AlGhawi, 2017; Aljughaiman & Ayoub, 2017), one article was published in 2016 (Leana-Tascilar et al., 2016), and the last two articles were published in 2015 (Kaya, 2015; Camci-Erdogan, 2015) (See Figure 2).

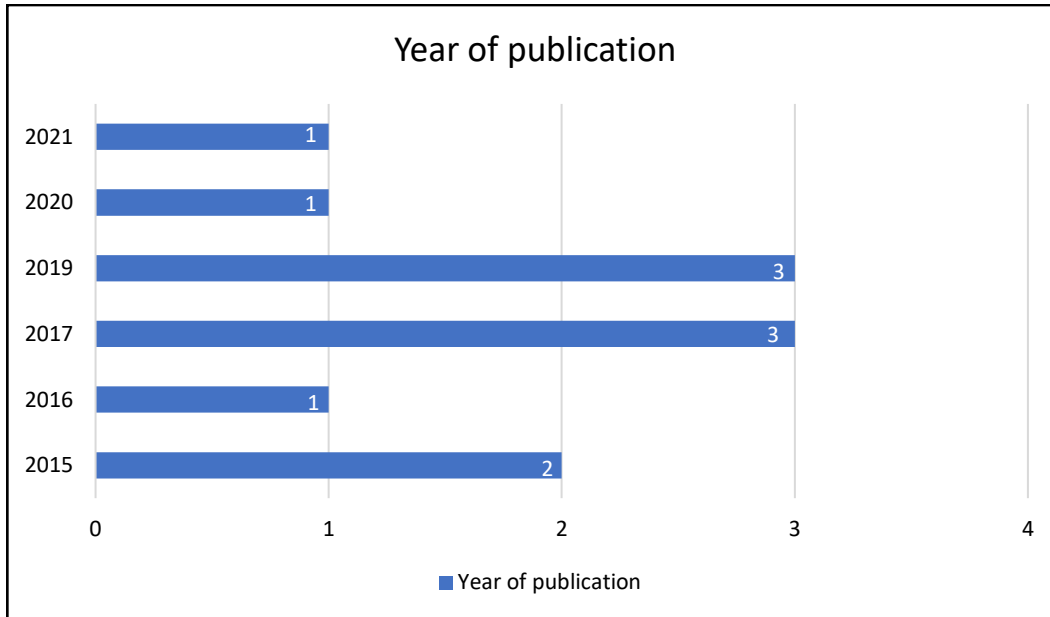


Figure 2: Year of publication

Regarding the countries where the studies were conducted, seven articles were from turkey (Aşık & Zelyurt, 2021; Bildiren et al., 2020; Bildiren & Kargin, 2019; Kaya, 2019; Güçyeter et al., 2017; Leana-Tascilar et al., 2016; Kaya, 2015; Camci-Erdogan, 2015), one was from Bahrain (Aljughaiman & Ayoub, 2017), one was from Saudi Arabia (Aljughaiman & Ayoub, 2017), one was from Jordan (Alodat & Zumberg, 2019). The last article was from United Arab Emirates (AlGhawi, 2017) (See Figure 3).

Main Findings

In this section, four main themes are discussed: academic achievements, lack of specific concepts for gifted students, teacher training and experience, and the effectiveness of early identification and intervention (Table 4).

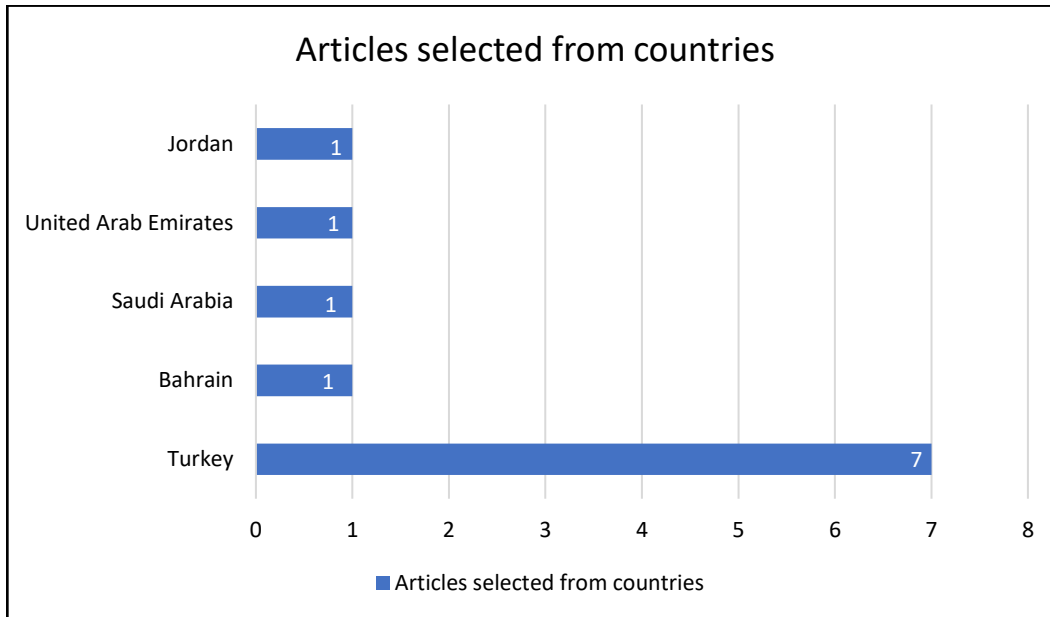


Figure 3: Selected countries from where the studies were conducted

1. Academic Achievements

Most of the gifted students' identification has been done through performance in scholastic tests and most programs of gifted students have been in areas of Science and Mathematics. Very few institutions exist in where teachers identify gifted students by referring to the areas of arts, music, and/or sports. The identification processes in the management of gifted programs are still highly dependent on intelligence testing (Güçyeter et al., 2017).

In the Turkish education system, most families expect their kids to be academically high achievers and most of the teachers nominate those kids for identification processes or for gifted programs (Güçyeter et al., 2017).

The education system in Jordan, as in many other countries, still identifies gifted students by their teachers based on their achievement performance (Alodat & Zumberg, 2019).

2. Lack of Specific Concepts for Gifted Students

To begin with, the understanding of the concept of giftedness by teachers is important for the process of identifying gifted students. Since the field of gifted education is growing, it is very important to inform teachers and parents about the gifted student's needs (Leana-Tascilar et al., 2016).

Kaya (2015) found that some participants explained giftedness from different aspects of development, such as social, physical, and psychological, in addition to genetic component. Furthermore, some participants mentioned that a child might be gifted just because God created the child as gifted. This statement should be noted to understand how giftedness is attributed to either creation or environmental factors by the participants.

In the findings of their study Bildiren et al. (2020) stated that conceptions of giftedness among teachers are rather limited. Therefore, there is a need to have a precise concept to be adopted by teachers in the identification process of gifted students.

There were different practices and legislations before the first official definition of giftedness was made in 1974 by the Turkish Ministry of National Education (MEB). In this definition, intelligence was seen as a general ability, and anyone who scored more than 130 in an intelligence test when compared to his peers was identified as gifted and anyone who scored more than 120 was identified as talented (Güçyeter et al., 2017).

The most common problems related to the process of teachers' nominations lies in the lack of a specific concept for gifted students. Regarding the importance of teachers' nominations in the procedures of the identification of gifted students, it was important to study to what extent these nominations were affected by beliefs and concepts that teachers previously held on giftedness, creativity, intelligence, and personality (Aljughaiman & Ayoub, 2017). Studies into the Turkish people have shown that misconceptions, dogmas, and popular views about giftedness are quite prevalent (Leana-Tascilar et al., 2016).

The review of documents and an interview with the decision-maker confirmed that an official definition of giftedness has been adopted by the MoE of the United Arab Emirates, documented in the ministries guideline for services and provision of gifted education, as follows: "gifted students are those who have an outstanding ability in one or more areas of intelligence, or creativity, or academic achievements or special talents such as poetry, drawing, handcrafts, sports, drama, or leadership" (AlGhawi, 2017).

AlGhawi (2017) presented some evidence obtained in her study, which indicates that although there is an official definition of giftedness adopted by the MoE of the United Arab Emirates and published for schools in Dubai, the teachers and parents continue to define giftedness partially and differently.

3. Teachers Training and Experience

To recognize the gifted child in the early period, it is necessary to give importance towards the education of parents and preschool teachers, to direct them to intelligence tests and to develop a diagnostic program for these children (Aşık & Zelyurt, 2021).

Even though preschool teachers have enough knowledge related to definition and characteristics of giftedness, they require more precise knowledge related to identification and education process of gifted students during preschool period. To ensure that gifted children receive developmentally appropriate and responsive education for developing their special talents, preschool teachers are advised to receive in-service training for the education of gifted children. In addition, it can also be recommended that teacher training programs should include at least one compulsory course related to identification and education of gifted children (Bildiren et al., 2020).

The problems associated with giftedness and gifted students can be grouped into three different areas: teachers have difficulties in dealing with gifted students, assessment of giftedness and obstacles for gifted students to fulfil their full potential (Kaya, 2015).

In the problem statement of his study, Camci-Erdogan (2015) mentioned that gifted students have different learning needs apart from their peers. So, teachers of gifted students should understand characteristics of gifted students and their learning needs. Gifted students have intrinsic interest and motivation toward science and these students need their teachers to guide them effectively. So, their teachers should have positive viewpoint and attitudes about science.

Different studies have concluded that teacher training and professional development are critical elements for identification practices, which have significant influence on teachers' nominations and the provisions chosen to address their student's needs (Aljughaiman & Ayoub, 2017).

In 2008, the Ministry of Education in UAE created an initiative that includes training 200 teachers per year on identification and various gifted programs (ALGhawi, 2017). ALGhawi (2017) found that teachers rely too heavily on their own identifications to determine if a student is gifted, based on their own teaching experiences.

Teacher training as a part of gifted education planning is an issue that needs to be considered. There were gifted teacher training bachelor programs until 2016 in Turkey. Since then, all special education programs have been covered by the Special Education Teacher Training Program. This is not promising in terms of expert training (Güçyeter et al., 2017). The results of the study by Kaya (2019) showed that classroom teachers have a lack of knowledge about the education of the gifted and need in-service training in this context.

Aljughaiman and Ayoub (2017) stated in their study results that teacher experienced more than 5 years were more likely to nominate gifted students, creative students, and academically gifted students in math and linguistically gifted students. While their nominations to gifted students in art, psychomotor, leadership, and underachieving gifted students were equally low. The highest nominations of teachers experienced less than 5 years were in favour of creative students, followed by mentally gifted students, academically gifted students in math, as well as linguistically gifted students. Gifted students in art, and then psychomotor gifted students, leadership students, and finally gifted students in underachievement came at the end of their nominations.

4. The Effectiveness of Early Identification and Intervention

Identifying the giftedness in pre-school period was considered important in terms of academic and talent development of children. According to research findings by Bildiren et al. (2020), 70% of teachers supported identification of giftedness during pre-school time. Consequently, many studies suggest that the identification process should be started as early as the preschool stage (Alodat & Zumberg, 2019).

Bildiren and Kargin (2019) stated that the performances of potentially gifted children during the school period may be maximized via early intervention and that early intervention programs applied on potentially gifted children not only improves their

certain skills but may also decrease the impact of negative factors such as growing up in an inadequate environment.

Many of the identification tools are appropriate for middle school students' level, but we need to develop new versions of these national talent tests to apply them to elementary and high school level students. Many of the national identification tools mostly consider talent in math and science. Therefore, researchers should focus on developing national identification tools for such areas as social science, music, art, sports, leadership, etc. (Güçyeter et al., 2017).

In the results section, Kaya (2015) mentioned that all participants had consensus on the inadequacy of the gifted identification process because they asserted that it may exclude some students, "who are gifted in reality", to be identified as gifted. The most frequently specified issue is students' verbal skills. As most of the students of the participants are Hispanic and bilingual, students may have lack of verbal or language skills despite their at least average nonverbal skills. If assessment of giftedness relies on verbal skills, students may fail to be identified as gifted.

In the qualitative part of the research, Kaya (2019) stated that attempts were made to determine the views of classroom teachers about the identification and education of gifted individuals. Most teachers have stated that there are problems in both education and identification of gifted students.

DISCUSSION

The thematic analyses resulted in four themes. Academic achievement is the first analysed theme. The process of identifying gifted students according to their academic achievements is one of the earliest ways of identifying gifted students. According to Aljughaiman and Ayoub (2017), the identification of gifted students in Saudi Arabia mainly focuses on academic achievement. Thus, gifted students in other fields had fewer opportunities of joining a giftedness program and this is a crucial weakness point about relying only on academic achievement for gifted students' identification.

Continuously, focusing only on academic achievement and lack of interest in cultural factors might lead to a loss of several gifted students and the nomination of some non-gifted students (Güçyeter et al., 2017). There are reasons for misidentifying gifted students by relying only on academic achievements. Some gifted students have major behavioural problems, so are often overlooked (Al-Hroub, 2014). Many gifted students are also under achievers (Ziegler & Heller, 2000); other students fail to be noticed if they are from economically challenged groups, because they may underperform compared to the dominant group (Hymer, 2009).

Lack of specific concepts for gifted students (the second theme) is considered one of the major themes surrounding the identification of gifted students. Aljughaiman and Ayoub (2017) stated that several questions arose about the concept of "gifted," how teachers can identify gifted students procedurally regarding the patterns of the implicit theories for giftedness. The huge number of gifted and gifted students' definitions made it hard to adopt a national concepts and definitions, as evidence to what was stated previously,

teachers in the UAE failed to adopt an official national definition of giftedness because of the existence of many concepts (AlGhawi, 2017).

From reviewing this theme, a crucial conclusion was obtained in which concepts of giftedness and identification of gifted students both affect the process of providing appropriate services which is what the identification process intends to do. The third developed theme is teacher training and experience which is one of the most important themes regarding gifted students' identification. There are many issues regarding teacher training about gifted education such as what was stated by Kronborg and Cornejo-Araya (2018), in which it is not required for teachers to undertake specialized training in gifted education, as it is for special needs education. This previous issue is in many middle eastern countries.

The lack of experience and knowledge of working with gifted students could be a result of the shortage of training and courses that they receive from schools about this topic (Al-Hroub & Whitebread, 2008). The fourth and last theme is the effectiveness of early identification and intervention. According to AlGhawi (2017) early identification of gifted students is important and essential in providing an environment that enhances gifted students' learning. A high IQ in the early years is a good predictor of later accomplishments in the classroom (Subotnik, 2003).

Early identification is considered important because it identifies the abilities in the youngest instead of relying on achievements or IQ tests. VanTassel-Baska (2018) stated that even when those early identified as gifted do not shine in school, they do shine on ability measures.

CONCLUSION

The recent systematic review on the management of gifted students' identification in middle eastern countries reflects the teachers' contributions in the process. Furthermore, four main themes were presented on the management of gifted students' identification. The first theme refers to the academic achievements. The second theme refers to the lack of specific concept for gifted students. Next, the third theme is teacher training, while the final theme is the effectiveness of early identification.

RECOMMENDATIONS

In deep look, this review results highlights many important issues cohered with gifted students' identification. To support the future research in this crucial educational field, the following recommendations could be generated; the achievement should not be considered as the only parameter in teachers' identifying of gifted students, but other characteristics and skills should be considered such as hands-on, research, social, arts, designing, as well as leadership skills. Further longitudinal studies should be implemented to explore to what extent these skills are bond with giftedness and future career innovations, creativeness, and successes.

Table 4: *The main themes*

Authors	Academic achievements	Lack of specific concepts for gifted students	Teacher training and experience	The effectiveness of early identification and intervention
Aşık and Zelyurt (2021) (Turkey)			✓	
Bildiren et al. (2020) (Turkey)		✓	✓	✓
Alodat and Zumberg (2019) (Jordan)	✓			✓
Bildiren and Kargin (2019) (Turkey)				✓
Kaya (2019) (Turkey)			✓	✓
Güçyeter et al. (2017) (Turkey)	✓	✓	✓	✓
AlGhawi (2017) (United Arab Emirates)		✓	✓	
Aljughaiman and Ayoub (2017) (Bahrain & Saudi Arabia)		✓	✓	
Leana-Tascilar et al. (2016) (Turkey)		✓		
Kaya (2015) (Turkey)		✓	✓	✓
Camci-Erdogan (2015) (Turkey)			✓	

Awareness programs by different social institutes and departments around giftedness concept should be put in action with follow-up studies to investigate their effects in bridging the gap about the lack of a specific concept for gifted students and giftedness. Training programs in all educational fields should demonstrate and include some guidelines and practices about gifted students' identification and a survey study should be done to explore the effectiveness of training practices in improving teachers' identification of gifted students. Investigating the efficiency of trained teachers' skills in identification and nominations should be tested by follow-up observations of nominated gifted students' characteristics.

Early identification should be included as a main component in teaching and learning process since early childhood stages with an obligatory report about competencies, skills, scientific attitudes, and other abilities of each child/student by the end of each semester or scholastic year claim for more investigations towards identifying giftedness to be done as early as possible.

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