

Gifted Students' Motivation and its Impact on the Development of their Giftedness

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Abstract

The aim of the current study is to examine the intrinsic and extrinsic motivations of the gifted students from Hadhramout Gifted Center HGC in Yemen, and to investigate the impact of these intrinsic and extrinsic motivations on their giftedness development. A qualitative approach was adopted; data has been collected through an open-ended questionnaire that was prepared by the researcher and distributed among a sample of gifted students who were chosen purposively from HGC. The interpretative phenomenological method has been used to analyze the data using, Atlas ti. The results indicate that the majority of the participants consider it interesting to explore new things, and experience curiosity and desire to achieve their goals as their intrinsic motivations. Whereas, the minority consider preference to serve the community, competition preference and self-confidence as their intrinsic motivations. On the other hand, half of the participants consider rewards as their extrinsic motivation, whereas 40 % of them consider exams scores, verbal praise, parents and environment as their extrinsic motivations. Regarding the impact of intrinsic and extrinsic motivations on the development of giftedness, the majority of the participants believe that intrinsic and extrinsic motivations affect positively the development of their giftedness development. Finally, based on the findings, some recommendations were provided.

Keywords: gifted student, intrinsic motivation, extrinsic motivation.

1. Introduction

Motivation is one of the popular issues researched by academicians (Jaafar, Awaludin, & Bakar, 2014). It has been widely accepted among the key factors that affect success; and it is known as "a stimulant for achieving a specific target" (Fen, & Kiat, 2015, p. 98). Several studies have been conducted on motivation in different fields of life for instance in education (e.g., Deci & Ryan, 1982; Deci, Koestner, & Ryan, 2001; Al-Dhamit & Kreishan, 2016), or in business (e.g., Gultekin & Acar, 2014; Benabou & Tirole, 2003; Owan, & Nagaoka, 2008), or in psychological health (e.g., Froiland, Oras, Smith, & Hirchert, 2012). Specifically, in education, there is a major goal of encouraging

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motivation for the sake of making learning more interesting for learners. The term motivation is derived from the Latin word "movere" meaning "to move" and is commonly defined as: "a cluster of factors that energizes behavior and gives it direction" (Chkotua, & Tarashvili, 2016, p 46).

According to Cognitive Evaluation Theory (CET), there are two types of motivations - intrinsic and extrinsic (Ryan, & Deci, 2000). The basic distinction between intrinsic and extrinsic motivation is that intrinsic motivation refers to doing something because it is inherently interesting or enjoyable, while extrinsic motivation refers to doing something because it leads to a separable outcome (Ryan, & Deci, 2000). In this context, Covington and Muller (2001) argued that the most widely accepted contemporary distinction between intrinsic and extrinsic motivation concerns the different nature of enabling rewards. Intrinsic motivation has become an important issue for educators, a natural wellspring or undermined by teacher or parental practices; also extrinsic motivation has an equal importance as for intrinsic motivation (Ryan, & Deci, 2000). In this study, the researcher will highlight intrinsic and extrinsic motivations for a sample of gifted students from Hadhramout Gifted Center and will investigate the impact of intrinsic and extrinsic motivation on their giftedness development.

This paper presents a study to explore what the intrinsic and extrinsic motivations for the development of giftedness of a sample of gifted students in Hadhramout gifted center are and what the impact of the intrinsic and extrinsic motivations of the gifted students on the development of their giftedness in Hadhramout gifted center is. Thus, this study aimed at examining the intrinsic and extrinsic motivations for the development of giftedness of a sample of gifted students in Hadhramout Gifted Center in Yemen; also, at investigating the impact of these intrinsic and extrinsic motivations on the development of their giftedness.

2. Hadhramout Gifted Center HGC

This is a brief overview of Hadhramout Gifted Center which is a center for gifted and talented students aged between 13-17 and their grades are between 8-12. It has been established since 2008 by Mawaheb Foundation - a non-profit civil organization in the Republic of Yemen; exactly in Mukalla city, the capital of Hadhramout governorate. HGC identifies gifted students from Hadhramout governorate's basic education schools by using IQ and EQ tests and several other criteria, such as the percentage of academic achievement of the student in the three years that precede the acceptance to HGC program; the academic achievement percentage must be above 90%, respectively. Also, an identified camp is held annually to discover the potential giftedness of the students who want to study at HGC after the first screening process for the gifted students from Hadhramout schools. Furthermore, individual interviews are conducted with those students. The students who get the best scores in all these tests and pass the criteria are going to be accepted in HGC. HGC presents several programs for its students in many fields, such as leadership skills, mathematics, robotics, invention, creative thinking skills and memory skills, etc.

The teaching system is based on enrichment method as a method for teaching gifted students (Jorwan, 2008). The enrichment learning process takes place in the afternoon periods every working day; whereas the normal

learning process takes place in the best private schools in the city. The students are sponsored by HGC to study in the private primary and secondary schools. HGC tries to provide a suitable environment for its gifted students by providing information sources and learning facilities, such as invention lab, a robotics lab, a computer lab, a library, etc. In addition, it provides a hostel and meals for those students who come from a long distance.

3. Theoretical framework of the study

The theoretical framework of this study is based on Deci and Ryan's (1985) CET. As mentioned earlier CET states that there are two types of motivations intrinsic and extrinsic motivations (Deci & Ryan, 1985). The intrinsic motivations such as Achievement, responsibility and competence motivations that come from the actual performance of the task or job, the intrinsic interest of the work. Whereas, the extrinsic motivations such as reward, promotion, feedback, working conditions and payment, things that come from a person's extrinsic environment and controlled by other people. One or the other of this motivation may be a more powerful motivator for a given individual. Intrinsically motivated individuals perform for their own achievement and satisfaction. If they come to believe that they are doing some job because of the pay or the working conditions or some other extrinsic reasons, they begin to lose motivation (Deci & Ryan, 1985). It is believed that the presence of powerful extrinsic motivations can actually reduce a person's intrinsic motivation, particularly if the extrinsic motivations are perceived by the person to be controlled by people. The following figure shows the theoretical framework of the study.

4. Terminology

The following terms will be defined in brief to make it clear what they mean in this study.

4.1. Motivation

The term 'motivation' is a concept that is related to a complex series of physical and mental behaviors. It was defined operationally in different ways. Motivation was defined as an internal state that activates, guides, and maintains behavior (Green, 2002). Whereas, Kim (2000) defined motivation as inner striving conditions, such as wishes, and urges which stimulate the interest of a person in an activity. In the context of student motivation, it can be defined as "a student willingness to exert effort and their encouragement into learning engagement and persistence" (Jaafar, Awaludin, & Bakar, 2014, p129); and for the purpose of this study, the latter definition has been adopted.

4.2. Intrinsic motivations

Intrinsic motivation has been defined in different ways; Ryan and Deci (2000, 56) defined it as "the doing of an activity for its inherent satisfactions rather than for some separable consequence". Also, this definition has been adopted for the purpose of this study.

4.3. Extrinsic motivations

According to Ryan and Deci (2000, p 60), extrinsic motivation is "a construct that pertains whenever an activity is done in order to attain some separable outcome". Extrinsic motivation, thus, contrasts with intrinsic motivation, which refers to doing an activity simply for the enjoyment of the activity itself, rather than its instrumental value.

4.4. Gifted students

The term 'gifted' has been defined in several ways (Al-Hadabi, 2010); for the purpose of this study the researchers adopted the definition of the National Association for Gifted Children NAGC, because it is a comprehensive definition that defines gifted children as "children and youths who give evidence of higher performance capability in such areas as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who require services or activities not ordinarily provided by the schools in order to develop such capabilities fully" (Al-Dhamit, & Kreishan, 2016, p14).

5. Literature review

When anyone feels no impetus or inspiration to act, s/he is characterized as unmotivated, whereas a person who is energized or activated toward an end is considered motivated (Ryan, & Deci, 2000). Ryan and Deci argued that motivation is hardly a unitary phenomenon; people have not only different amounts of motivation, but also different kinds of it. This means that individuals vary from each another not only by the level of motivation "i.e., how much motivation", but also, in the orientation of that motivation "i.e. what type of motivation" (Ryan, and Deci, 2000, p54). According to cognitive evaluation theory (GET) the sources of motivation can be either intrinsic or extrinsic (Deci, Koestner, & Ryan, 2001). Intrinsic motivation involves internal personal factors like needs, curiosity, interests, and enjoyment, therefore, intrinsic motivation is a primary attitude in education. On the other hand, extrinsic motivation is derived from the influence of some external incentives. It is concerned with factors in the external environment. In extrinsically motivated behaviors, actions are performed for the sake of earning rewards or avoiding a negative consequence (Gultekin & Acar, 2014).

There are several studies were carried out on both types of motivation, intrinsic and extrinsic (e.g., Ryan, & Deci, 2000; Deci, Koestner, & Ryan, 2001; Covington, & Muller, 2001; Benabou & Tirole, 2003; Gillet, Vallerand, & Lafreniere, 2012; Al-Dhamit, & Kreishan, 2016). Some of them discussed the importance of intrinsic and extrinsic motivation in education, others highlighted the effects of extrinsic motivations on intrinsic motivations, while others argued the role of either parents or teachers on improving children's intrinsic or extrinsic motivations. In sum, it is clear that the phenomena of intrinsic and extrinsic motivations attracted a lot of educators and researchers.

In addition, several studies concluded that gifted students have a high motivation. As an example, Chan (2000) found out that the behavior characteristics of a sample of Chinese gifted students relies on their parents' and teachers' perception. The findings show that motivation and leadership were recognized more than creativity

as a characteristic of gifted students. Also, the academic intrinsic motivation of the same sample was affected positively by their mothers' catalysts of intrinsic motivation. The children's motivation is affected positively by their mothers' motivational practice and that had an impact on subsequent motivation and achievement (Al-Dhamit, & Kreishan, 2016). The study of Al-Dhamit and Kreishan (2016) investigated intrinsic and extrinsic motivations for a sample of gifted school students and the role of their parents in fostering motivational achievement in Jordan. Findings showed that gifted students are highly intrinsically and extrinsically motivated. In another example, Cortright et al. (2014) hypothesized that the intellectual development of students affects their intrinsic motivation and class performance. Specifically, they hypothesized that students with low intellectual development (i.e., the naive beliefs that knowledge is simple, absolute, and certain) have low intrinsic motivation and low class performance, whereas students with high intellectual development (i.e., who think in a more sophisticated way and believe that knowledge is complex, tentative, and evolving) have a high intrinsic motivation and class performance. To test this hypothesis, the researchers administered a learning context questionnaire to measure students' intellectual development. Also, they administered the intrinsic motivation inventory to assess their students' intrinsic motivation. In addition, they performed regression analyses between intellectual development and both intrinsic motivation and class performance. The findings document a positive relationship amongst intellectual development, intrinsic motivation, and class performance for female students only. In sharp contrast, there was a negative relationship between intellectual development, intrinsic motivation, and class performance for male students.

6. Methodology

For the current study the researcher adopted a qualitative research approach in order to examine what the intrinsic and extrinsic motivations of the gifted student in HGC are and to investigate their impact on the development of giftedness. As the researchers wanted to explore the real and accurate intrinsic and extrinsic factors that motivate gifted students, they adopted the qualitative approach. As Creswell (2012, p.16) stated that "qualitative research is best suited to address a research problem in which you do not know the variables and need to explore". Data was collected from a purposively selected group of gifted students from HGC, and an open-ended questionnaire was distributed among them. Their responses to the questionnaire were read more than once in order to analyze the data.

The data were analyzed based on the Interpretative Phenomenological Approach (IPA) (Smith, 1995). The primary goal of IPA is "to investigate, how individuals make sense of their experiences" Pietkiewicz and Smith (2016, p. 362). In other words, IPA aims at identifying the primary factors of phenomena or experiences that make individuals unique or distinguishable from others. The analysis of all data focused on the intrinsic and extrinsic motivations of gifted students and their impact on the development of their giftedness in the statements that were made by the participants without using a pre-established system of categories or codes. In contrast, the categories and codes were formulated through an interactive process during which the data were compared (Charmaz, 2000).

The researcher used Atlas ti for analyzing the data. During the analysis processes, four major themes were identified from the gifted students' perspective. These four themes are: intrinsic motivations, extrinsic motivations, the impacts of intrinsic motivations and the impacts of extrinsic motivations. The responses of the participants for all intrinsic and extrinsic motivation were gathered and those items which occurred more than once were counted in order to see how many times these items were repeated by the participants. Whereas, for the impacts of intrinsic and extrinsic motivation the responses of participants were reported. In the following section, the results will be shown and discussed.

6.1. Instrumentation

The researchers constructed an open-ended questionnaire which was distributed among a group of gifted students of HGC. The questionnaire consists of two sections; the first is about the demographic information of the participants and contains four questions (e.g. grade, the field of giftedness, awards the student have received). And the second section contains seven open-ended questions, for example: 'What are your intrinsic motivations which improved your giftedness?', 'What are the extrinsic motivations which improved your giftedness?', 'What is the impact of your intrinsic motivations on your giftedness development?', and 'What is the impact of the extrinsic motivations on your giftedness development?', to explore their intrinsic and extrinsic motivations from students' perspective, also to explore the impact of these motivations on the development of their giftedness. A clear definition of the two concepts - intrinsic and extrinsic motivation - is provided with examples in the questionnaire. For the content validity, the questionnaire was shown to two Doctors of Education.

6.2. The participants

A sample of (10) gifted students out of (34) was chosen purposively from Hadhramout Gifted Center to participate in this study (n=10) with a representative percentage (29%) from the whole community. All the participants were from secondary school level from grades 10-12 in the academic year of 2015/2016. The students were chosen based on the variety of their giftedness. A brief description of the participants is shown in the following table.

Table1: A Brief Overview of the Participants

participant	Sex	Age	Grade	Fields of giftedness
1	Male	16	10 th	Robotics programming, diction, and academic excellence.
2	Male	17	11 th	Poetry, robotics programming, computer programming and academic excellence.
3	Male	18	12 th	Mathematics and robotics programming
4	Male	18	12 th	Leadership, diction and academic excellence.
5	Male	18	12 th	Academic excellence

6	Male	18	12 th	Invention, poetry, short stories, and academic excellence.
7	Male	18	12 th	Academic excellence and robotics programming.
8	Male	18	12 th	Academic excellence and robotics programming.
9	Male	18	12 th	Photographer, short stories
10	Male	19	12 th	Invention, poetry, diction and academic excellence.
Total		10 students		

6.3. Limitations of the study

This study was conducted in HGC located in the Republic of Yemen, in Mukalla city - the capital of Hadhramout governorate in the academic year 2015/2016. As this study deals with the gifted students of HGC, so the results of the study are limited to their perspectives towards the study's questions.

6.4. Results and Discussion

6.4.1 The intrinsic motivations for the development of giftedness of gifted students of HGC

This study has shown that gifted students from HGC have different types of intrinsic motivation that develop their giftedness. Also, the study has found that some of the explored intrinsic motivations were shared among the majority of the participants. The following table shows the intrinsic motivations for the development of giftedness that were stated by the participants.

Table 2: Intrinsic Motivations for the Development of Giftedness of Gifted Students from HGC

No.	Intrinsic motivations	out of 10	Percentage
1	Interesting to explore new things	7	70%
2	Curiosity	6	60%
3	Desire to achieve their goals	5	50%
4	Adventure preference	3	30%
5	Preference to serve the community	2	20%
6	Competition preference	2	20%
7	Self-confidence	2	20%

It is clear from the table 2 that 7 out of 10 gifted students in HGC stated that it was interesting for them to explore new things as an intrinsic motivator with a percentage of 70% i.e. the majority of the participants considered this factor as an intrinsic motivator. Whereas, curiosity came in the second order by 6 out of 10 gifted students with a percentage of 60%. This result is in line with what Deci and Ryan (1982) found out - that exploration and curiosity are intrinsic motivations. The third motivator that was stated by 5 out of 10 gifted students was achieving their goals with a percentage of 50%. The final three motivations were stated equally by 2 out of 10 students who

consider them as intrinsic motivations with a percentage of 20%. The following graph illustrates the frequencies of gifted students who consider those motivations as their intrinsic motivations.

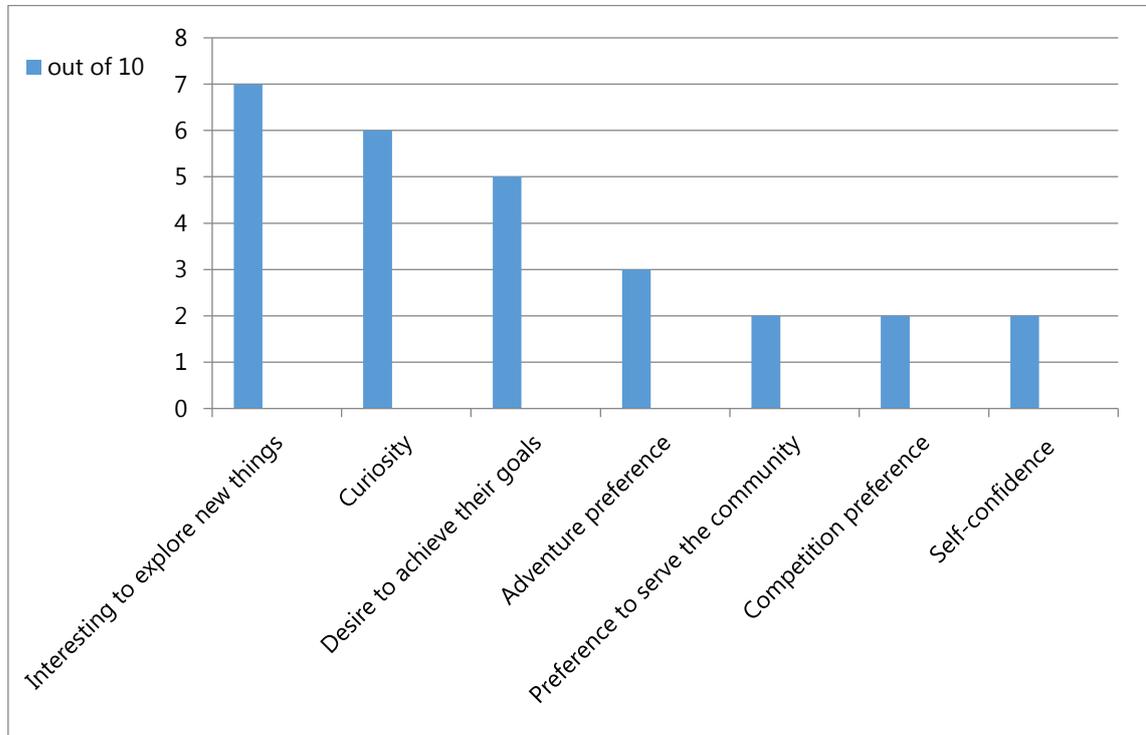


Figure 1. Intrinsic Motivations for the Development of Giftedness gifted students from HGC

6.4.2 The extrinsic motivations for giftedness development of gifted students from HGC

Table 3: Extrinsic Motivations for the Development of Giftedness of gifted students from HGC

No.	Extrinsic motivation	out of 10 students	Percentage
1	Rewards	5	50%
2	Parents	4	40%
3	Exam scores	4	4%
4	Verbal praise	4	40%
5	Environment	4	40%
6	Fame in the community	4	40%
7	Teachers	3	30%
8	Community's needs	2	20%
9	Peers	2	20%
10	Meeting successful people	1	10%
11	Championship and exhibition	1	10%

Half of the sample of gifted students of HGC stated rewards as an extrinsic motivation, whereas 40% of them considered parents as an extrinsic motivation. In line with this, Olzewski-Kubilius and Thomson (2015) believe that gifted students' motivations to achieve are affected by their parent's attitudes, behavior and patterns of important role in nurturing creativity and intellectual risk taking. Besides, Freeman (2000) emphasized that good parenting can enhance children's emotional freedom and develop their potential. Also, the same percentage of gifted students considered the following motivations as their extrinsic motivations: exams scores, verbal praise, environment and fame in the community. These four motivations have been shared among the members of the sample by 40%. Regarding the environment as an extrinsic motivation, we can see that 4 out of 10 students consider it an extrinsic motivation with a percentage of 40%; almost the same percentage was recorded in the study of Yahya et al. (2010) which found that 43.4% of the students agreed that environment is an extrinsic motivational factor. This idea also was approved by Deci and Ryan (1982).

With respect to teachers, 3 out of 10 students said that their teachers are extrinsic motivations. The role of teachers is investigated widely by researchers and they found that teachers are an important factor to highly motivate their students. For instance, the study of Yahya et al. (2010) found that 57.9% of students agreed that the teacher was a motivational factor for them in learning mathematics; in addition, they found family, peer-group, and environment to be extrinsic motivational factors among students in learning mathematics. For peer-grouping Yahya et al. (2010) found that 64.6% of students said that peer-group was a factor in motivating them towards learning mathematics, whereas, in the current study only 20% stated that peers were extrinsic motivations towards the development of their giftedness. From this discussion, it is clear that some of the extrinsic motivations which were mentioned by the sample in this study are mentioned also in other similar studies and this makes us certain that the students can certainly identify their extrinsic motivations factors.

At the end of the table 3 both extrinsic motivations - meeting successful people and championship & exhibition - were stated as extrinsic motivations by 1 out of 10 gifted students for each one; these are the least shared motivations among the gifted students with percentage of 10%. In sum, it can be concluded that several extrinsic motivations are shared by the gifted students in HGC. The following graph illustrates the frequencies of the gifted students who considered those motivations as their extrinsic motivations.

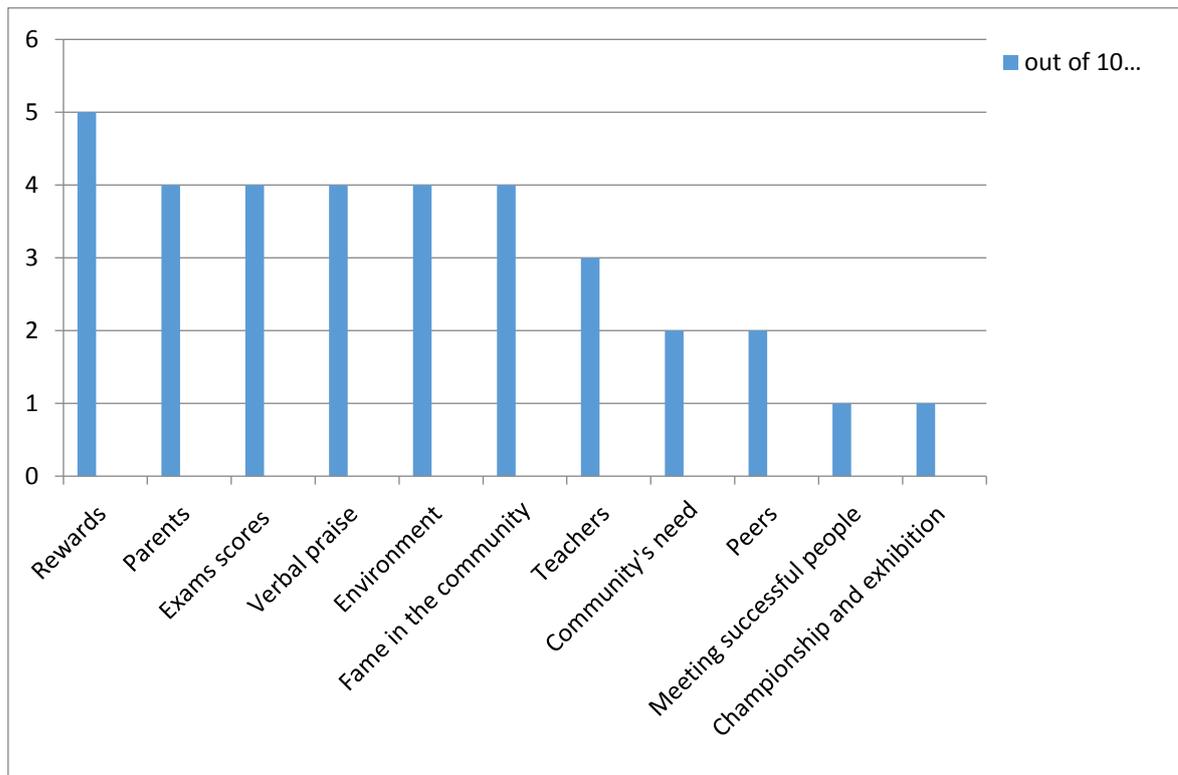


Figure: 2 extrinsic motivations for giftedness development of gifted students from HGC

6.5. The Effects of Intrinsic Motivations on the Development of Giftedness

Regarding the effects of intrinsic motivations on the development of giftedness, all the participants in this study agree that the intrinsic motivations have significant effects on the development of their giftedness. These are some effects that were mentioned by the participants: the intrinsic motivations increase the interest of practicing the giftedness, encourage the progress, assist in continuing, lead a person to do more training, help to explore the giftedness and improve it and work as strong stimuli to develop the giftedness. In this context, the researcher cited some evidence from the participants' speech that shows their agreement on the impact of intrinsic motivations on their giftedness development. For instance, the participant E. B. stated that "intrinsic motivations are the real engine for me to improve myself, especially when there are no any extrinsic motivations". Also, the participant A.J. said that "the intrinsic motivations affect positively on my giftedness development because it improves my skills and giftedness and helps me to achieve my goals". And A.M. thinks that "intrinsic motivations help me to continue improving my giftedness, therefore, intrinsic motivations affect my giftedness positively". In addition, M.M. stated that "intrinsic motivations have a positive impact on the development of my giftedness". Also, in line with what was mentioned earlier, the participant W.N. thinks that "intrinsic motivations affect my giftedness positively".

6.6. The Effects of Extrinsic Motivation on the Development of Giftedness

This study also shows that there are some important effects of extrinsic motivations on the development of giftedness. These are some effects that have been stated by the participants from their perspectives: "the extrinsic

motivations give a continuous increase to my giftedness, encourages me to share my giftedness with the others, makes me focus on my giftedness, pushes me forward to progress, makes me plan for improving my giftedness and increasing confidence". In line with this context, these are some citations of the participants about how the extrinsic motivations affect their giftedness development. For instance, the participant A.T. stated that "certainly it has a positive effect; because it pushes me to progress and helps me to overcome the challenges", whereas M.A. said that "in my opinion, extrinsic motivation is just kind of encouraging factors; if it is available to me, it will help, but if it is not available, no negative effect will occur to me". One of the participants, M.M., agrees that extrinsic motivations have a significant impact on his giftedness development, but still less than intrinsic motivations: "extrinsic motivation has its positive effects on my gifted improvement, but it still less than the effects of the intrinsic motivation". The participant A.M. said that "extrinsic motivation affected positively my giftedness improvement". Also the participant M.A. sees that "it has a positive impact if it is a valuable extrinsic motivation".

7. Conclusion

This study found out that the sample of the gifted students who participated in it has different types of intrinsic and extrinsic motivations which develop their giftedness. For instance, an important intrinsic motivation for the participants is exploring new things, developing curiosity and desire to achieve their goals, whereas the extrinsic motivations are: rewards, parents, exams scores, verbal praise, environment, and fame in the community. These are the most frequent motivations among the participants. Besides, the study came up with that those types of motivation affect the giftedness development positively; because, as mentioned in the analysed literature, both types of motivation, intrinsic or extrinsic, have a positive influence on people. Also, the results of this study confirm the cognitive evaluation theory.

8. Recommendations

More awareness of intrinsic and extrinsic motivation of gifted children is expected from teachers, principals, counsellors and parents. Also, creating a motivated environment for children at schools and homes is needed as well. In addition, motivation, in general, should be given priority in developing students' giftedness. Furthermore, developing a system for extrinsic motivations is needed in the schools of gifted and in usual schools as well. Finally, research is needed to compare the types of motivations of gifted students with types of motivations of ordinary students in order to encourage the motivations of ordinary students to be similar to the motivations of gifted students as much as possible in order to achieve their maximum.

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