The Effect of the Learning Environment of Gifted Students at Resource Rooms in Jordan

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Abstract **- The study aimed to identify the assessment of learning environment of gifted students at resource rooms in Jordan. The study used a descriptive approach to achieve its purpose. The sample of the study consisted of (92) gifted students in resource rooms in Jordan and the purposive method was chosen. The results of the study explained that the assessment of the learning environment of gifted students at the talented resource rooms in Jordan according to international standards as a whole including, the school administration, facilities in the school, and the school institution, was at a high level. The results showed that there is a statistical significance difference at the level of 0.05 in the degree of awareness of the importance of the educational environment for gifted students, and the results showed also that there is a statistical significant difference at the level of significance (α = 0.05) for the gifted students in the facilities in the school. The total of the scale attributed to the gender variable and there is no statistical significance difference at the level of 0.05 in the school institution, and the school administration for gifted students attributed to the gender.**

Keywords **– learning environment, gifted students, resource rooms, education.**

1. Introduction

Gifted and talented students are often expected to show superior success in the way they work and are often under pressure because of the exceptions on them to perform at a higher level compared to other students worldwide. Their abilities are also compared to other students and these exceptions are based on the idea which most people have in their minds about them and their high skills and abilities in general [1].

There are many—beliefs related to gifted and talented people [2]. The most common is if a gifted child is superior in one field, he/ she should also be as successful in most or even all other areas of learning because of their abilities and skills. Another belief is that gifted children can succeed by themselves without any kind of support from other people because of their high abilities. These attitudes and ideas don't reflect the truth of gifted and talented students worldwide because of the difference in their abilities and skills in general [1].

According to Heacox [3] gifted and talented students have a unique learning profile- that differs completely from average learners in general mainly due to the difference of other students in the same age group.

Researches in the field of education specializing in researching gifted students is a tedious task, which requires motivated and highly skilled individuals that are willing to devote time and search deep for the best methods to develop the skills of such students. Keeping in mind that family members, peers, and teachers play an essential role in developing the capabilities and skills of the gifted students by applying the method and techniques that are proven to support the gifted students [4].

e talented sources rooms in Excellence schools, just like King Abdullah II schools, are primarily deliberated as a programming preference for students who are academically gifted in the Hashemite Kingdom of Jordan. Zarqa is the governorate where the first school branch was built in, at the beginning of 2000/2001. The overall number of students enrolled in the first year was 553 students. Consequently, the Jordanian Ministry of Education (JMOE) built a school biennially. By 2010, there were six schools with 1935 enrolled students [5].

According to the JMOE [6] the main aims of these schools were to develop leadership and self-learning skills to be pioneering leaders in their society and to

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develop-abilities, skills, and personalities. The way of selecting students is based on three basic criteria including, their general average–marks should not decline below (95%), gain a 135 score or above in the Academic readiness, (IQ) test, and eventually pass a personal interview. While teachers are selected by the JMOE according to high levels of teaching and personal competencies to work in these schools.

Awareness of specially gifted students and the effectiveness of diversity at all levels empowers educators of specially gifted students. These teachers recognize each significant approach in order to attain the highest level of success. These strategies include; language and communication. The latest technologies are used to augment oral, written and artistic communication of special gifted learners who have different learning abilities such as language proficiency, cultural and linguistic differences [7].

2. Problem Statement

Gifted students in regular public schools in Jordan are treated by teachers just like the other students, as teachers pretend that these students are just like all other normal students. Teachers lack the important applications of effective methods to be used in the process of developing skills of gifted students in the surrounding environment. The purpose of this study is to evaluate the educational environment of talented students at the talented sources rooms in Jordan according to the international standards in regard to meeting the needs of talented and gifted students.

Study Major Questions

The two hypothesis questions below are used to identify the level of importance of the educational environment to gifted students, and would the gender play a major role.

H01: Is there a statistically significant difference at the level of 0.05 in the degree of awareness of the importance of the educational environment for gifted students?

H02: Is there a statistically significant difference at the level of 0.05 in the degree of awareness of the importance of the educational environment for gifted students attributed to the gender?

The study was aimed to investigate the assessment of the educational environment of talented students in source rooms in the country of Jordan according to International Standards. The study involved 92 students between the age of 16-18 years old in the Hashemite Kingdom of Jordan.

3. Methodology

This descriptive research conducted in order to find out the assessment of the educational environment of talented students at the talented sources rooms in Jordan according to the International Standards.

A. Participants

The study involved 92 academically gifted students from the talented sources rooms. Students were selected in grade 11^{th} – 12^{th} for this study aged between 16-18 years old in the Hashemite Kingdom of Jordan.

B. Supportive Environment Scale

Researchers evolve a supportive environment scale in order to assess the perceiving supports from students' surrounding environment. The responses measured using five points Likert scale of frequency, ranging from "strongly agree" to "strongly disagree". Items were constituted as informative sentences to estimate the value's amount or strength that participants acquire toward their environment elements (family, peers, teachers, school, and resources).

C. Academically Gifted Students

There are three genres of giftedness according to Sternberg's [8] definition comprising analytic, synthetic, and practical giftedness. Evolution of Giftedness bases on students' capability observation within these three aspects. Coinciding, teachers will afford opportunities on behalf of students who are manifesting analytical, synthetical, and/or practical abilities. Sternberg [8] describes an individual with analytical giftedness as an individual who is capable to comprehend and analyze problem components, which is evaluated using conventional tests of intelligence, such as testing analogies, synonyms, and matrix problems. While synthetic giftedness describes the creativity characteristic and tends to discover and invent, which cannot be assessed using conventional tests as analytical giftedness. Practical giftedness describes the capability to invest in environment situations to exhibit a tendency of utilization and carrying out the analyzed or synthesized information. The current study measures the influence of general competencies and environmental factors on the intellectual giftedness' components as indicators of the analytical abilities.

Research projects into gifted and talented programs in Jordan are rare, but there was a study conducted by Al-Azzam [9] to evaluate the efficiency of King Abdullah II schools for excellence administration in the Hashemite Kingdom of Jordan. The results asserted that the excellence schools' administrations impact the educating process of gifted and talented students since it does not significantly differ from the administrations of regular public schools. Also, Al-Momany [10] suggested that talented programs have to be enhanced since the study evaluated the gifted and talented programs from different perspectives including staff performance, quality services, availability of resources, and the nature of the physical environment carrying such programs. The results found that there are weaknesses in the programs that comprise a misconception of giftedness, weakness of procedural process of identification for these students, and scarce of support in the surrounding. Similar to the Al-Kasi [11] study, which was conducted in Saudi Arabia with the purpose of investigating the effectiveness of such programs, emphasized that grouping gifted students is an unaccepted idea among a study sample, furthermore, Al-Kasi [11] stated that programs' administrations do not provide adequate supports. Al-Sror [12] conducted his study in Kuwait as per evaluating results of talented programs found that the programs and could induce frustration among students.

Procedures

Ninety-two students at King Abdullah Schools of Excellence in Jordan participated in this study. They were 16-18 years old. The participants comprised 58 boys and 34 girls. All parents consented to the participation of their children.

Permission was obtained from the Ministry of Education before training took place. The study took place during the (2018/2019) session. This study used the descriptive approach to the assessment of the educational environment of talented and gifted students at the talented sources rooms in Jordan according to International Standards, and this approach concerned with the assessment of attitudes, opinions, demographic information, conditions and procedures [13].

Study Population and Sample

The study population consisted of 120 gifted students (males and females) enrolled in the 11th and 12th class at the talented sources rooms. A purposive sample was chosen from the population, the researchers distributed 120 questionnaires, in which 92 were retrieved, and the researchers excluded 28 questionnaires since they were invalid to analysis. So, the valid number of responses for analysis purposes were 92, representing 77% of response rate. As shown in Table 1 of gender distribution in the study.

Table 1. Demographic characteristic of gender

Gender	Frequency	Percentage
Male	58	63
Female	34	37
Total	92	100

Table 1 showed that males were 63% and females were 37% from the sample of the study.

The study implies a systematic quantitative approach and exploits survey to collect data from the study sample.

Study Tools

Questionnaire: The questionnaire consisted of three parts as shown:

- First dimension: Facilities in the school, with 10 statements.
- Second dimension: The school institution, with 10 statements.
- Third dimension: The school administration, with 10 statements.

The researchers distributed (25) questionnaires for academic viewing in Jordanian universities to test the content validity, after receiving the academic reviews, suggestions, and modifications; the researchers made the necessary changes for the questionnaire, to achieve the balance and validity of the questionnaire. To validate stability feature of the instrument, the researcher used Cronbach's alpha test as indicator of instruments' internal consistency shown in Table 2, coefficients show higher scores generally above 0.60 representing acceptable scores, since the coefficient ranged from 0.699 to 0.775 reflecting reliable indicators.

Data Analysis Techniques

Table 2. Cronbach's Alpha for the study fields

Dimension	Statements	*Cronbach's Alpha*
The school administration	10	0.775
Facilities in the School	10	0.699
The school Institution	10	0.772

To answer the study questions and hypotheses, which were formulated, SPSS software was used for data analysis to validate the study hypothesis. A set of statistical tests were used for specific purposes as following:

1. Cronbach's Alpha reliability (a) examines association strength among the questionnaire items and ensuring the coherence in order to validate the consistency characteristic that reflect the concept and illustrating the fit of goodness.
2. Demographical variables that illustrated using frequencies and percentages.
3. Statistical Techniques (Descriptive). Variations of means and standard. Demonstrating respondents to the study fields.
4. One Sample T-test was used to test the hypotheses and the researcher used (t value = 3).
5. T-test, independent sample was used.

Table 3 shows the research type scale Likert, this research included five significant values allocated to:

Category Interval = Maximum Category – Minimum Category =

Relative frequency evaluated due to:

Category Interval = (Max. Category – Min. category)/ Number of Level.

= 5-1/3 =1.33

- The Low importance level from 1.00- 2.33
- The Medium importance level from 2.34 – 3.67
- The High importance level from 3.68 – 5.00

Analysis and Results

Following illustrates the statistical results per research questions and hypotheses, utilizing a descriptive of the central tendency (m) and dispersion (SD) for each item. One Sample T-test was used.

Table 3. Arithmetic mean, SD, Item importance and Importance degree of the assessment of Educational environment of talented and Gifted students according to International Standards as whole

No	Dimension	M	SD	Rank	Importance Level
3	The school administration	3.97	0.48	1	High
1	Facilities in the School	3.81	0.53	2	High
2	The school Institution	3.71	0.46	3	High
	Total	3.83	0.26		High

It is clear from *Table 3* that 92 participants from gifted and talented confirms that mean values of the assessment of the educational environment of talented and gifted students at King Abdullah Schools of Excellence in Jordan according to International Standards as a whole, ranged between 3.97– 3.71, where the total of the dimensions scored mean of 3.83, which is a high level. The school administration ranked first place, its scored mean of 3.97, with a standard deviation of 0.98, which is a high level. Facilities in the school ranked second, they have scored a mean of 3.81 and a standard deviation of 0.53 which is a high level and the last was the school institution which scored a mean of 3.71 with a standard deviation of 0.46 and it is a high level.

The above results illustrate that the assessment of the educational environment of talented and gifted students at King Abdullah Schools of Excellence in Jordan according to International Standards as a whole was at high level.

Facilities in the School

The researchers adopted the central tendency (m) and dispersion (SD) for each item, item rank is based on importance, and the level of importance to identify facilities' extent in the school as shown in Table 4. The mean of this dimension (Facilities in the school), ranged between 4.05 – 3.62, where the overall score of dimensions is 3.81, indicating a high level. Paragraph 1 (Classrooms are spacious and suitable for students), scored the highest mean of 4.05, with a standard deviation of 0.83, which is at high level. Paragraph 2 (the location of the school is convenient and easy to be reached), ranked second. It scored a mean of 3.99, with a standard deviation of 0.73, which is at high level. On the other hand, paragraph 5 (The school has advanced scientific laboratories), ranked the last. It scored a mean of 3.62, with a standard deviation of 1.08, which is a medium level. Where paragraph 6 ranked before the last with a mean of 3.70 and a standard deviation of 1.10 scoring a high level, which stated that "the school has a library with a lot of references and modern new books".

The School Institution

The researchers adopted the central tendency (m) and dispersion (SD) for each item, item rank-based importance, and the level of importance in order to identify the school institution importance extent as shown in Table 5.

Table 5 shows that the mean of this dimension (the school institution), scored between 3.50 and 4.04, while the overall score of dimensions is 3.71 representing high level of importance. Item number, 5 "they associated the students with all activities inside and outside the class "scored the highest mean of 4.04, with a standard deviation of 0.86, which is at high level. Paragraph (They try to develop the students' abilities in all aspects), ranked the second. It scored a mean of 3.82, with a standard deviation of 0.82, which is high level. Paragraph 6 (they use instructional method and strategies that stimulate students thinking) ,ranked the last. It scored a mean of 3.50, with a standard deviation of 1.00, which is medium level. Where Paragraph 3 ranked before the last with a mean of 3.54 and a standard deviation of 0.94 scoring a medium level, which stated that "they have the enthusiasm to work with students".

Table 4. Arithmetic Mean, SD, Item Importance and Importance level for the facilities at King Abdullah II Schools of Excellence in descending order

No	Statements	Mean	SD	Item Importance	Importance Level
1	Classrooms are spacious and suitable for students.	4.05	0.83	1	High
2	The location of the school is convenient and easy to be reached.	3.99	0.73	2	High
10	The conveniences are available at classes.	3.86	1.00	3	High
9	Lighting is suitable inside classes.	3.82	0.91	4	High
3	School facilities are available and suitable according to the number of students.	3.80	0.93	5	High
4	The school has an internet network.	3.77	0.85	6	High
7	The school has audio and visual aids.	3.77	0.97	6	High
8	The timetable is organized and takes into consideration the needs and trends of the students.	3.73	0.81	8	High
6	The school has a library with a lot of references and modern new books.	3.70	1.10	9	High
5	The school has advanced scientific laboratories.	3.62	1.08	10	Medium
	Total	3.81	0.53		High

Table 5. The Central Tendency (M) and Dispersion (SD) for each item, Item Rank based Importance, and the level of importance for the school institution in descending order

No	Statements	Mean	SD	Item Importance	Importance Level
5	They associated the students with all activities inside and outside the class.	4.04	0.86	1	High
4	They try to develop the students' abilities in all aspects.	3.82	0.82	2	High
1	They have the skills which qualify them to teach at school.	3.80	0.97	3	High
7	They offer individual and group counseling programs.	3.79	0.98	4	High
8	They accompany students by a variety of visits.	3.77	0.89	5	High
9	Students evaluate teachers at the end of each semester.	3.65	0.80	6	Medium
2	They have appropriate personality trails.	3.61	0.96	7	Medium
10	They have a good relationship with students and their parents.	3.57	0.93	8	Medium
3	They have the enthusiasm to work with students.	3.54	0.94	9	Medium
6	They use instructional method and strategies that stimulate students thinking.	3.50	1.00	10	Medium
	Total	3.71	0.46		High

The School Administration

The researchers adopted the central tendency (m) and dispersion (SD) for each item, item rank is based on importance, and the level of importance in order to identify the school administration importance extent as illustrated in Table below.

Table 6 shows that the mean of this dimension (the school administration), registered scores between 3.72 and 4.11, while the overall score of dimensions reached 3.97, representing high importance level. Item no.2 (expect the students to exceed the high level), scored the highest mean of 4.11, with a standard deviation of 0.64, which is at high level. Paragraph 1 (work to upgrade the abilities and skills of students), ranked the second. It scored a mean of 4.10, with a standard deviation of 0.59, which is a high level.

Paragraph 5 (encourages students to practice democracy in classes), was ranked the last. It scored a mean of 3.72, with a standard deviation of 0.89, which is at high level. Where paragraph 3 ranked before last with a mean of 3.76 and a standard deviation of 0.80 scoring a high level, which stated that "take into consideration students' opinions in the activities".

Table 6. The Central Tendency (M) and Dispersion (SD) for each item, Item Rank based Importance, and the Level of Importance of the school administration in descending order

No	*Statements*	*Mean*	*SD*	*Item Importance*	*Importance Level*
2	Expect the students to exceed the high level.	4.11	0.64	1	High
1	Work to upgrade the abilities and skills of students.	4.10	0.59	2	High
7	Invite parents to periodic meetings.	4.09	0.86	3	High
6	Provide materials and devices that allow the students to practice their activities and projects.	4.08	0.92	4	High
4	Try to create positive relationship with students.	4.07	0.87	5	High
8	Invite specialized people to participate in school activities.	4.04	0.89	6	High
10	Provide different kinds of incentives to students.	3.92	1.05	7	High
9	Respond to problems faced by students and try to solve them.	3.84	0.84	8	High
3	Take into consideration the students opinions in the activities.	3.76	0.80	9	High
5	Encourage students to practice democracy in classes.	3.72	0.89	10	High
	Total	3.97	0.48		High

Hypotheses Test

H01: Is there a statistically significant difference- at the level of 0.05 in the degree of awareness of the importance of the educational environment for gifted students?

To test the first hypotheses One Sample T-test was used to show the statistical significance difference at the level of 0.05 regarding the degree of awareness and the importance of the educational environment for gifted students, as shown in Table 7.

Table 7. One Sample T-test to show the statistically significance differences at level of (0.05) in the degree of awareness of the importance of the educational environment for gifted students

Dimension	Mean	St. Deviation	T-Tabulated	T-calculated	df	sig
Facilities in the school	3.81	0.53	1.96	14.559	91	0.00*
The school institution	3.71	0.46	1.96	14.775	91	0.00*
The school administration	3.97	0.48	1.96	19.253	91	0.00*
Total	3.83	0.26	1.96	30.693	91	0.00*

(t) Tabulated = 1.96, (t) value = 3.00 * Significant at level of (0.05)

From Table 7 the results showed that the total mean of facilities in the school, the school institution, and the school administration were 3.81, 3.71, 3.97, with total mean of 3.83, and the standard deviation values scored of 0.53, 0.46, 0.48, and 0.26 respectively. As observed (t) calculated values were 14.559, 17.775, 19.253, and 30.693, which are higher than the value of (t) tabulated 1.96.

The results showed that there is a statistically significant difference- between the mean of the scale and the default mean 3.00, (t) calculated values are more than (t) tabulated =1.96, that assure gifted students have awareness of the importance of the educational environment.

H02: Is there a statistically significant difference at the level of 0.05 in the degree of awareness of the importance of the educational environment for gifted students attributed to the gender? To test the second hypothesis, the study used an Independent Sample T-test, as shown in Table 8.

Table 8. Independent sample T-test to show the statistically significance differences at level of (0.05) in the degree of awareness of the importance of the educational environment for gifted students attributed to the gender

Source	gender	N	Mean	Std. Deviation	t	df	Sig.
Facilities in the school	male	58	3.90	0.47	2.087	90	.040*
	Female	34	3.66	0.61			
The school institution	male	58	3.74	0.50	.905	90	.368
	Female	34	3.65	0.38	.		
The school administration	male	58	4.00	0.47	.774	90	.441
	Female	34	3.92	0.51			
Total	male	58	3.88	0.26	2.493	90	.015*
	Female	34	3.75	0.24			

*: significant at level of (0.05).

There is a statistical difference at the significance level of $\alpha = 0.05$ for the gifted students in the facilities in the school as obvious in Table 8, and the total of the scale attributed to the gender variable (t) calculated values were 2.087, 2.493, in which the variance is significant in favor of male.

The statistical values of the school institution emphasized no significance of the statistical difference at the level of 0.05, and the school administration for gifted students attributed to the gender (t) calculated values were 0.905, 0.774 respectively, which are not significant at the level of 0.05.

4. Conclusion

In conclusion, the assessment of the Educational Environment of Talented and Gifted Students at the talented sources rooms in Jordan according to International Standards seems to be one of the first and the most important thing as a whole, including: The school administration, Facilities in the school, the school institution and all departments that may have an access to these schools which treat talented students, especially the infrastructure) and which was at the high level. Because the students are different in their abilities, they also differ in their needs. In addition, educators at different levels should pay more attention to the environment of gifted students because of the effectiveness of these factors on the whole process in general. It is vital to enhance and develop the environment of specially gifted students in all learning institutions in the Hashemite Kingdom of Jordan and other Middle Eastern countries in order to help them to increase or develop all these countries in different areas in the life. Moreover, meeting the gifted students' needs is one of their rights according to all international human rights standards. The environment should include everything related to these institutions, such as classes, libraries, laboratories, and other essential criteria for these gifted students in order to meet their needs. Take into consideration that all these developments will meet their needs leading to a well-rounded student.

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