

THE EXTENT TO WHICH TEACHERS OF TALENTED AND CREATIVE STUDENT POSSES KNOWLEDGE AND SKILLS ACCORDING TO CEC-NAGC CRITERIA IN JORDAN

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Abstract

The aim of this study is to identify the extent to which teachers of talented and creative students possess knowledge and skills according to CEC- NAGC criteria in Jordan. The study was carried out on a sample of (36) teachers at king Abdullah II challenging school at Irbid and Mafrq governorates during the 2014/2015 school year in Jordan. Means, standard deviation, and MANOVA were employed in answering the research questions. Results showed that the extent to which teachers of gifted and creative students possess knowledge and skills of Foundations, Development and Characteristics of Learners, Individual Learning Differences, Instructional Strategies, learning environment and social interactions, assessment, Professional and Ethical Practice, and Collaboration was moderate. On the other hand, the extent to which these teachers possess knowledge, skills of language, communication skills, and Instructional planning was high. Results also showed no statistically significant differences in the degree to which these teachers possess knowledge and skills according to CEC- NAGC criteria. Thus, this is due to the subjects of educational qualification, teaching experience, and specialization from the educational supervisor's point of view. These differences were found in the degree to which respondents possess these knowledge and skills according to CEC- NAGC criteria due to their sex. Thus, this criteria was found from an educational supervisor's point of view. Results also showed the need for finding programs that are prepared and specialized in preparing teachers of talented and creative students. It provides them with a pre service according to CEC- NAGC criteria. In addition, it shows the need to force talented student's teachers to obtain the certificate for teaching talented students according to these criteria.

Keywords: CEC-NAGC criteria, knowledge and skills, teachers of talented and creative students

Introduction

Talented or creative students are supposed to possess rich information and data in all areas. Thus, they acquire information and data during their multiple readings and extended reviews. During this process, they acquire high ability to recall them. Also, it helped them to keep data and information, since talented students do not confine themselves with their study syllabus alone. However, they go beyond them to wider and larger domains that might sometimes exceed the level of information their teacher possess. In addition, talented student's excellence in language wealth and verbal fluency motivates teachers to multiply their efforts in learning. Therefore, this is aimed to restore the affective and emotional characteristics of these students. This is achieved by meeting them with suitable teaching methods and educational and learning styles that achieve the satisfaction and fulfillment of their various needs and demands (Kirk, Gallagher and Anstasiwo, 2000).

Consequently, it is of no doubt that gifted student's teachers are supposed to possess cognitive and performance competencies that is appropriate with the task assigned to them (Al-khawaldeh and Marei, 1991). Therefore, educator views competency concepts from two angles: its general shape and its components. Generally, competency has two forms i.e. apparent and latent form. Competency in its latent form is a concept which has the possibility to work as a result of understanding the skills, knowledge, concepts, and the attitudes that enables them to do the job effectively. On the other hand, competency in its apparent form is a process. It is the actual performance of the job, and this does not just mean the teacher's possession of skills and knowledge included in the competency. Thus, teachers must also be able to carry out these knowledge and apply them in correct ways according to the criteria agreed upon during the performance.

Recent studies showed that qualifying competencies of gifted student's teachers is important to be able to identify students who are gifted and develop them using appropriate professional and creative teaching methods. These teaching methods will enable them to develop gifted capabilities for the maximum degree possible. Therefore, they must be included in qualifying teachers of gifted students programs (Eva, Josef, and Skrabankova, 2013). Studies also showed the importance of evaluating and assessing all issues concerned with gifted students, as well as finding and developing scales for assessing creative and gifted student's teachers in all educational sectors (Mahmoud, 2013).

Among the most important competencies that teachers of gifted students must possess is the possession of skills for improving their unique capabilities in thinking that enabled them to develop problem solving strategies in creative ways, developing curriculum models for gifted students, and in developing their abilities in conducting applied researches on gifted students (cross & Dobbs, 1987; Davis, C; Rimm. S, 2004; Mills c., 2003).

Experts in the area of teaching gifted students believed it is imperative for teachers of gifted students to acquire a certificate in the teaching of gifted students (Cramer, 1991). Therefore, it is necessary to reconsider programs that prepare teachers of gifted students, qualifying and training them through pre-service and in-service. These they do by making them include some characteristics such as personal traits, affective characteristics, cognitive traits, personal educational characteristics, educational characteristics, and personal and affective characteristics. Furthermore, these characteristics are the criteria and additional cut points in the Candidacy, selection, and appointment program to which teachers desires to work in gifted and creative programs in the future (Ayasreh, 2013). Consequently, teachers of gifted students must possess a set of characteristics, skills, abilities, and competencies that distinguishes them from the class they deal with (Al- Maharma, 2009).

Significance of the Study

However, from the research problem and their field of expertise, it became clear to researchers to prepare gifted and talented student's teachers. This is achieved by providing them with competencies that enable them to perform the required role. It also shed light on the competencies required from them before entering the classroom to practice teaching. This is considered because it is not an easy task to change theory into practice and to actually practice teaching. On the contrary, teachers often encounter difficulties and faces obstacles, which is often a natural and expected matter. Therefore, empowering teachers with appropriate competencies makes them ready in facing new obstacles. It enhances their capabilities to deal with obstacles and surprises. Also, it makes them stronger, and gives them several alternatives to deal with various classroom situations. Furthermore, teachers have a clear effect in promoting student's performance by providing the appropriate classroom climate. In addition to that, recent research studies showed the existence of strong positive relationship between behavioural performance of teachers inside the classroom and their use of appropriate interactive methods and personal treatment techniques. This was apart from the use of violence, toughness, and authoritative approaches. In student's classrooms behaviour, feldhusen (1997) showed that the more there is an

increased rate of constructive treatment of teacher with students, the more their talents and capabilities develop to a higher level. Hence, teacher's qualifications and treatment techniques are two complimentary things to each other. Thus, no one can be separated from the other in terms of their effect on thinking performance and quality of the student either inside or outside the classroom.

Literature Review

Researchers listed a set of previous studies showing the importance of preparing and qualifying teachers of gifted and creative students, and its effect on gifted and creative students themselves. Thus, the study of Whitlock and Ducette (1989) aimed at identifying teachers of gifted students using a checklist consisting of 63 items. The study was conducted on a sample of 65 of such teachers. Results showed that teachers of gifted students differs in ideas about teacher enthusiasm, self-trust, teachers role in facilitating process, application of knowledge, motivation for achievement, ability to develop programs, and commitment. Subsequently, the results of the second part of the study which was conducted by interviewing teachers of gifted students, showed that the description and identification of gifted student's teachers is still confined to the use of checklists and opinions. However, the study of Maccini and Gagnon (2006) aimed at identifying teaching and assessment skills. Also, it measures the competencies of mathematics teachers at schools providing special education services to the normal school students with learning difficulties or those that are behaviourally disabled. The study was carried out on a sample of (179) mathematics teachers for the preparatory stage. Results showed that despite the possession of competencies related to content analysis of curriculum and programs, and the skills related to teaching mathematics by mathematics teachers in normal schools, these teachers do not enjoy logical methods of competencies for problem solving in mathematics. Moreover, results showed that teacher's possession of curriculum content analysis skills has a great effect in learning disabled students ability in academic achievement in mathematics.

Al-ayasreh and Ismael (2013) carried out a study aimed at specifying traits of gifted and talented students' teacher from a talented student's perspectives in Jordan. The study was conducted on a sample of 691 male and female students. Results revealed seven factors around which study variables were grouped. As a result, it is necessary to have a rethink on programs for preparing teachers of gifted and talented students' pre and in-service. Thus, this is possible by making them include a set of characteristics revealed by the study.

Donia and Micheal (2004) study was aimed at identifying the characteristics and competencies of teachers of gifted and talented students from various cultures. However, the results showed that the presence of competencies such as flexibility and multicultural knowledge, assist teachers to interact positively with students. Consequently, the result also describes the importance of gifted students' teacher.

It provides them with the necessary skills needed to direct (guide) students behaviors and abilities in an effective ways. Finally, the results emphasized the importance of providing training programs containing linguistic and cultural aspects that helps teachers in performing their job in an effective way.

Tortop (2014) study aimed at examining the efficiency of a training program for in service teachers to teach academic gifted students in Turkey. The study was conducted on a sample of 30 mathematics and kindergarten teachers at schools in various Turkish cities according to special criteria used for selecting teachers. The program was carried out by academies who conducted a study on the teaching of gifted students. Here, they designed study units on a group form according to the (EP- GBV) program for the development of gifted student's curricula by the university. Results showed the efficiency of these programs in increasing self-efficacy and the teacher's ability to guide gifted students.

Al-Shabatat (2014) study aimed at identifying fears stage levels of teachers of gifted students due to the use of electronic learning at gifted schools in Jordan. The study was conducted on a sample of 22 gifted student's teachers where questionnaire of fears stage specification was firstly use. Thus, this was followed by personal interviews. Results showed that fear stage related to self-fears for (0, 1, 2) dimension was relatively high; fear stage for dimension (3) related to task and its management was low; and fear stage related to influence for (4, 5, 6) dimensions was possibly the lowest. Results also showed little interest by participants in learning compared to other activities. In addition, females have positive and high interest in electronic learning compared to their male counterparts. Furthermore, males have negative fears towards electronic learning.

Mahmoud (2013) conducted a study which aims at evaluating teachers of gifted and creative students according to occupational practices adopted by exceptional children consultation centre (CEC) in Jordan. The study was conducted on a sample of 220 teachers of gifted and creative students in both public and private schools. In general, the results showed that teachers enjoyed scale criteria. Also, the study recommended the importance of taking care of the teachers of gifted students assessment and diagnosis issues through the development of special scales designed. This is

specially employed for the diagnosis of gifted and outstanding student teacher's competencies according to other criteria.

Lewis, Hudson and Hudson (2010) conducted a study aimed at empowering gifted student's teachers to teach gifted and outstanding students. In this study, a poll of participants was analyzed after a program for teaching gifted students regarding their perceptions on how to distinguish the curriculum to fulfil the needs of 22 gifted students. Results revealed that 91% of participants agreed or strongly agreed on the item (stating that they were able to develop skills in the study curriculum planning). 96% of them agreed or strongly agreed on the item (emphasizing that activities should be designed in a good manner). Subsequently, a similar percentage agreed with the item (the importance of developing lessons preparing skills). Furthermore, 91% of them agreed with the item (enthusiastic for teaching), 96% agreed with the item (they understand school practices and policies), 46% agreed with the item (they possess knowledge on curricula description), 50% agreed with the item (they have the ability to provide students with feedback on their learning), and about two or three suggested that their teaching language came from curriculum description and the strategies for managing and guiding students. Results also showed that teachers need more guidance on how to meet variety and start building society through utilizing knowledge as a result of direct teaching of gifted students.

Hasse, Joachim, Bögeholz and Hammann (2014) carried out a study aiming at developing a tool for assessing competencies of trainee biology teachers in German universities. This is done through developing an assessment tool consisting of three dimensions: experimental biology lessons, analysis planning of applied biology lessons, and evaluating student's achievement in applied biology lessons. However, this tool represents a scientific method for conducting specific research for qualitative assessment of biology teachers. Also, it is used for assessing anticipated conditions for prospective biology teachers.

Wilma and vialle (2005) conducted a study which aims at identifying traits of gifted student's teachers from gifted student's perspectives in Australia, Austria, and the United States of America. The study was conducted on 387 Australian, 142 Austrian, and 328 American students. In teacher's traits and characteristic scale (krumboltz and Farquhar, 1957), some open ended questions were included at the end of the scale. Results showed similarity in the respondent's responses with regard to their preferences of personal characteristics and traits compared with cognitive characteristics among active teachers.

Research Objectives and Questions

This study aimed at identifying the extent to which gifted and creative student's teachers possess knowledge and skills according to CEC-NAGC criteria in Jordan. This was achieved by answering the following research questions.

1. To what extent do gifted and creative student's teachers possess knowledge and skills according to CEC-NAGE criteria as perceived by educational supervisors?
2. Are there any statistically significant difference at $\alpha \leq 0.05$ level in the degree of teachers of gifted and creative students' knowledge and skills according to CEC-NAGE criteria due to the respondent's sex, educational qualification, teaching experience, and specialization as perceived by educational supervisors?

Operational Definitions

- **Teachers of Gifted Students:** According to teacher's conditions and selection in al-Mafraq directorate of education, teachers were required to teach outstanding students at king Abdulla II challenge schools for the school year 2014- 2015.
- **CEC-NAGE Criteria:** A set of knowledge and skills set by the Council for Exceptional Children (CEC) and the National Association for Gifted Children (NAGE). This was divided into 10 dimensions that must be known and mastered by gifted student's teacher.
- **Educational Supervisors:** These are qualified and trained experts who visit teachers of gifted students at king Abdulla II challenge schools during 2014- 2015 school year. They help in guiding, supervising, and monitoring teacher's performance.

Population

Study population consists of teachers of gifted and exceptional student's candidates. This was selected according to the basis adopted for selecting teachers to work and king Abdullah II challenge schools for the 2014 – 2015 school year.

Sample: A total of 36 teachers (male and female teachers), teaching at king Abdullah II challenge schools at Irbid and Mafraq governorates for the 2014 – 2015 school year, were selected. Table (1) displays the sample distribution based on sex, educational qualification, specialization, and teaching experience.

Table (1) Sample distribution by sex, educational qualification, and teaching experience

Variable	Sex		Education Qualification			Specialization			Teaching experience	
	Males	Female	Higher Diploma	Masters	PHD	Scientific	Literature	Other	5-L10	More than (10)
No	22	14	1	21	14	13	8	15	2	34

Instrument: The study instrument consists of a questionnaire of 10 dimensions. Each of them represents the criterion which consists of a set of items with a response form on a five point Likert scale (very high, high, Moderate, low, and very low with 1,2,3,4, and 5) weight respectively. The following steps were followed in its preparations:

The criteria which determine the knowledge and skills of gifted student's teachers according to CEC and NAGC criterion were reviewed and translated into Arabic language.

However, the translation was presented to a panel of experts and faculty members in special education and Arabic language teachers to establish expressive and linguistic correctness of the criteria items. Thus, this is in accordance with Arabic language grammar to facilitate the meaning of each item making its response easy.

Modification suggested by referees on items was considered, and were put in a questionnaire of 10 dimensions. Thus, each of them represents a set of items as shown in table (2).

Table (2) Study instrument dimensions and number of their item.

No	Dimension (criterion)	No of item	No	Dimension (criterion)	No of item
1	Foundations	7	6	Language and Communication	5
2	Development and Characteristics of Learners	5	7	Instructional Planning	9
3	Individual Learning Differences	5	8	Assessment	7
4	Instructional Strategies	9	9	Professional and Ethical Practice	9
5	Learning Environments and Social Interactions	7	10	Collaboration	7

Results

To answer the first research question: To what extent do teachers of gifted and creative students possess knowledge and skills according to CEC-NAGC Criteria from educational supervisors? Means and standard deviations of the respondent's responses, to determine the extent to which teachers of gifted students possess knowledge and skills according to CEC-NAGC criteria were used. Table (3-12) show the results.

Table (3) Means and standard deviations of respondent answers to the 1st criterion (Foundations).

No	Item	Mean	SD	Level
1	Historical foundations of gifted and talented education including points of view and contributions of individuals from diverse backgrounds.	3.0556	1.01262	Medium
2	Key philosophies, theories, models, and research supporting gifted and talented education.	2.9722	0.90982	Medium
3	Local, state/provincial and federal laws and policies related to gifted and talented education.	3.1111	0.97915	Medium
4	Issues in conceptions, definitions, and identification of gifts and talents, including those individuals from diverse backgrounds.	3.1111	1.00791	Medium
5	Impact of the dominant culture's role in shaping schools and the differences in values, languages, and customs between school and home.	3.0833	1.07902	Medium
6	Societal, cultural, and economic factors, including anti-intellectualism and equity vs. excellence, enhancing or inhibiting the development of gifts and talents.	3.0278	0.97060	Medium
7	Key issues and trends, including diversity and inclusion, connecting general, special, and gifted and talented education.	3.0833	0.96732	Medium
Total		3.0635	0.8979	Medium

Table (4) Means and standard deviations of respondent answers to the 2nd criterion: Development and Characteristics of Learners

No	Item	Mean	SD	Level
1	Cognitive and affective characteristics of individuals with gifts and talents, including those from diverse backgrounds in intellectual, academic, creative, leadership, and artistic domains.	3.000	0.8730	Medium
2	Characteristics and effects of culture and environment on the development of individuals with gifts and talents.	0.95950	3.2222	Medium
3	Role of families and communities in supporting the development of individuals with gifts and talents.	3.3611	0.96074	Medium
4	Advanced developmental milestones of individuals with gifts and talents from early childhood through adolescence.	3.2778	0.97427	Medium
5	Similarities and differences within the group of individuals with gifts and talents as compared to the general population	0.99642	3.2500	Medium
Total		3.2444	0.89073	Medium

Table (5) Means and standard deviation of respondents answers to the third criterion
Individual Learning Differences

No	Item	Mean	SD	Level
1	Influences of diversity factors on individuals with exceptional learning needs.	3.3889	0.90326	Medium
2	Academic and affective characteristics and learning needs of individuals with gifts, talents, and disabilities.	3.2778	1.00317	Medium
3	Idiosyncratic learning patterns of individuals with gifts and talents, including those from diverse backgrounds.	3.3056	0.8864	Medium
4	Influences of different beliefs, traditions, and values across and within diverse groups on relationships among individuals with gifts and talents, their families, schools, and communities.	3.2500	Medium	Medium
5	Integrate the perspectives of diverse groups into planning instruction for individuals with gifts and talents.	3.1111	1.00791	Medium
Total		3.2667	0.8671	Medium

Table (6) Means and standard deviations of respondent's answers to the fourth criterions:
Instructional Strategies.

No	Item	Mean	SD	Level
1	School and community resources, including content specialists, which support differentiation.	3.3333	0.86189	Medium
2	Curricular, instructional, and management strategies effective for individuals with exceptional learning needs.	3.1667	0.84515	Medium
3	Apply pedagogical content knowledge to instructing learners with gifts and talents.	3.1667	1.0000	Medium
4	Apply higher-level thinking and metacognitive models to content areas to meet the needs of individuals with gifts and talents.	3.0000	1.06904	Medium
5	Provide opportunities for individuals with gifts and talents to explore, develop, or research their areas of interest or talent.	3.0556	1.09400	Medium
6	Pre-assess the learning needs of individuals with gifts and talents in various domains and adjust instruction based on continual assessment.	3.1389	1.09942	Medium
7	Pace delivery of curriculum and instruction consistent with the needs of individuals with gifts and talents	3.0833	1.05221	Medium
8		3.000	1.12122	Medium
9		3.0556	1.11981	Medium
Total		3.1111	0.91509	Medium

Table (7) Means and standard deviation of respondent's answers to the fifth criterion:
Learning Environments and Social Interactions

No	Item	Mean	SD	Level
1	Ways in which groups are stereotyped and experience historical and current discrimination and implications for gifted and talented education.	3.3889	0.99363	Medium
2	Influence of social and emotional development on interpersonal relationships and learning of individuals with gifts and talents.	3.3333	1.04198	Medium
3	Design learning opportunities for individuals with gifts and talents that promote self-awareness, positive peer relationships, intercultural experiences, and leadership.	3.3333	0.98561	Medium
4	Create learning environments for individuals with gifts and talents that promote self-awareness, self-efficacy, leadership, and lifelong learning.	3.1667	1.10841	Medium
5	Create safe learning environments for individuals with gifts and talents that encourage active participation in individual and group activities to enhance independence, interdependence, and positive peer relationships.	3.2222	0.98883	Medium
6	Create learning environments and intercultural experiences that allow individuals with gifts and talents to appreciate their own and other language and cultural heritage.	3.1111	1.03586	Medium
7	Develop social interaction and coping skills in individuals with gifts and talents to address personal and social issues, including discrimination and stereotyping.	1.02779	3.0278	Medium
Total		3.2262	0.92606	Medium

Table (8) Means and standard deviation of respondents answers to the sixth criterions:
Language and communication

No	Item	Mean	SD	Level
1	Forms and methods of communication essential to the education of individuals with gifts and talents, including those from diverse backgrounds.	3.5278	0.87786	High
2	Impact of diversity on communication.	3.4444	.87650	High
3	Implications of culture, behavior, and language on the development of individuals with gifts and talents.	3.5000	0.87831	High
4	Access resources and develop strategies to enhance communication skills for individuals with gifts and talents including those with advanced communication and/or English language learners.	3.3056	1.03701	Medium
5	Use advanced oral and written communication tools, including assistive technologies to enhance the learning experiences of individuals with exceptional learning needs.	3.5000	0.91026	High
Total		3.4556	0.85070	High

Table (9) Means and standard deviation of respondents answers to the seventh criterion:
Instructional Planning

No	Item	Mean	SD	Level
1	Theories and research models that form the basis of curriculum development and instructional practice for individuals with gifts and talents.	3.4722	0.97060	High
2	Features that distinguish differentiated curriculum from general curricula for individuals with exceptional learning needs.	3.4167	0.90633	High
3	Curriculum emphases for individuals with gifts and talents within cognitive, affective, aesthetic, social, and linguistic domains.	3.4444	0.96937	High
4	Align differentiated instructional plans with local, state/provincial, and national curricular standards.	3.4444	0.84327	High
5	Design differentiated learning plans for individuals with gifts and talents, including individuals from diverse backgrounds.	3.3889	1.07644	High
6	Develop scope and sequence plans for individuals with gifts and talents.	3.4167	0.99642	High
7	Select curriculum resources, strategies, and product options that respond to cultural, linguistic, and intellectual differences among individuals with gifts and talents.	3.3056	0.95077	Medium
8	Select and adapt a variety of differentiated curricula that incorporate advanced, conceptually challenging, in-depth, distinctive, and complex content.	3.2778	0.94449	Medium
9	Integrate academic and career guidance experiences into the learning plan for individuals with gifts and talents.	3.3056	1.00909	Medium
Total		3.3858	0.86209	High

Table (10) Means and standard deviations of respondent's answers to the eighth criterion:
Assessment

No	Item	Mean	SD	Level
1	Processes and procedures for the identification of individuals with gifts and talents.	3.0833	1.10518	Medium
2	Uses, limitations, and interpretation of multiple assessments in different domains for identifying individuals with exceptional learning needs, including those from diverse backgrounds.	2.8611	1.07312	Medium
3	Uses and limitations of assessments, documenting academic growth of individuals with gifts and talents.	2.9722	1.10805	Medium
4	Use non-biased and equitable approaches for identifying individuals with gifts and talents, including those from diverse backgrounds.	3.0278	1.15847	Medium
5	Use technically adequate qualitative and quantitative assessments for identifying and placing individuals with gifts and talents.	2.9167	1.15573	Medium
6	Develop differentiated curriculum-based assessments for use in instructional planning and delivery for individuals with gifts and talents.	2.8611	1.17480	Medium
7	Use alternative assessments and technologies to evaluate learning of individuals with gifts and talents	2.9365	1.04558	Medium
Total		2.9365	1.04558	Medium

Table (11) Means and standard deviations of respondents answers to the ninth criterion:
Professional and Ethical Practice

No	Item	Mean	SD	Level
1	Personal and cultural frames of reference that affect one's teaching of individuals with gifts and talents, including biases about individuals from diverse backgrounds.	3.5278	1.02779	High
2	Organizations and publications relevant to the field of gifted and talented education.	3.4167	1.13074	High
3	Assess personal skills and limitations in teaching individuals with exceptional learning needs.	3.5278	1.08196	High
4	Maintain confidential communication about individuals with gifts and talents.	3.5000	1.10841	High
5	Encourage and model respect for the full range of diversity among individuals with gifts and talents.	3.6389	1.12511	High
6	Conduct activities in gifted and talented education in compliance with laws, policies, and standards of ethical practice.	3.5833	1.10518	High
7	Improve practice through continuous research-supported professional development in gifted education and related fields.	3.4722	1.27584	High
8	Participate in the activities of professional organizations related to gifted and talented education.	3.3333	1.30931	Medium
9	Reflect on personal practice to improve teaching and guide professional growth in gifted and talented education	3.4722	1.20679	High
Total		3.4969	1.07742	High

Table (12) Means and standard deviations of respondents answers to the tenth criterion:
Collaboration

No	Item	Mean	SD	Level
1	Culturally responsive behaviors that promote effective communication and collaboration with individuals with gifts and talents, their families, school personnel, and community members.	3.4722	1.02779	High
2	Respond to concerns of families of individuals with gifts and talents.	3.3056	1.16667	Medium
3	Collaborate with stakeholders outside the school setting who serve individuals with exceptional learning needs and their families.	3.1111	1.10698	High
4	Advocate for the benefit of individuals with gifts and talents and their families.	3.4167	1.27335	High
5	Collaborate with individuals with gifts and talents, their families, general and special educators, and other school staff to articulate a comprehensive preschool through secondary educational program.	3.2778	1.03126	Medium
6	Collaborate with families, community members, and professionals in assessment of individuals with gifts and talents.	3.2778	1.13669	Medium
7	Communicate and consult with school personnel about the characteristics and needs of individuals with gifts and talents, including individuals from diverse backgrounds	3.3056	0.98036	Medium
Total		3.3571	1.01849	Medium

NOTE: The level is calculated as follows: (number of Likert point scale – 1)/ 3 = (5-1)/3=1.33. Thus, this means 1 to 2.33 indicates “weak”, 2.34 to 3.66 indicates “medium”, while 3.67 to 5 indicates “high”.

Tables (3-12) showed that teachers of gifted and creative students possess basic skills: Learners growth and traits, individual differences in teaching, teaching strategies, learning environments and social interactions, Assessment, moral and professional practice, and cooperation to a medium level. However, their possession of language, communication, and planning for teaching skills was high.

To answer the second research question: Are there any statistically significant differences at $\alpha \leq 0.05$ level in teachers of gifted and creative students possession of knowledge and skills according to CEC-NAGC criteria, due to their sex, educational qualifications, teaching experiences, and specialization as perceived by educational supervisors? Means, standard deviations, and MANOVA analysis were utilized using SPSS. Thus, Tables (13,14) displays the results.

Table (13) Means and standard deviations of teachers of gifted and talented degree of possession of knowledge and skills according to their sex.

Variable	Sex			
	Males		Female	
Dimension	Mean	Standard deviation	Mean	Standard deviation
Foundations	3.2987	0.85817	2.6939	0.86054
Development and Characteristics of Learners	3.4091	0.88043	2.9857	0.87518
Individual Learning Differences	3.4091	0.76961	3.0429	0.98973
Instructional Strategies	3.2576	0.90487	2.8810	0.91569
Learning Environments and Social Interactions	3.2208	0.83733	3.2347	1.08451
Language and Communication	3.5273	0.73432	3.3429	1.02711
Instructional Planning	3.6818	0.87240	2.9206	0.62464
Assessment	3.3896	0.98006	2.2245	0.70592
Professional and Ethical Practice	3.5202	0.91713	3.4603	1.32824
Collaboration	3.5455	0.96552	3.0612	1.06421
Criteria as a whole	3.4260	0.69751	2.9848	0.69440

Table (14) Results of MANOV analysis of differences between mean scores of teachers of gifted and talented student's degree of possessing knowledge and skills according to CEC-NAGC criteria by study variables, as seen by educational supervisors.

Source	Dependent variable	Set squares	DF	Mean square	F	Sig
Sex	Foundations	2.061	1	2.061	2.648	0.114
	Development and Characteristics of Learners	0.731	1	0.731	0.927	0.344
	Individual Learning Differences	1.712	1	1.712	2.132	0.135
	Instructional Strategies	1.522	1	1.522	1.676	0.206
	Learning Environments and Social Interactions	0.200	1	0.200	0.208	0.652
	Language and Communication	1.686	1	1.686	2.449	0.128
	Instructional Planning	7.773	1	7.773	13.846	0.001
	Assessment	73513	1	7.513	9.137	0.005
	Professional and Ethical	2.093	1	2.093	1.958	0.172

	Practice					
	Collaboration	5.536	1	5.536	5.931	0.021
	Criteria as a whole	2.530	1	2.530	4.982	0.034
Experience	Foundations	1.013	1	1.013	1.301	0.263
	Development and Characteristics of Learners	2.116	1	2.116	2.682	0.112
	Individual Learning Differences	0.383	1	0.383	0.477	0.495
	Instructional Strategies	0.095	1	0.095	0.105	0.749
	Learning Environments and Social Interactions	0.119	1	0.119	0.124	0.27
	Language and Communication	2.764	1	2.764	4.016	0.055
	Instructional Planning	0.268	1	0.268	0.477	0.495
	Assessment	1.473	1	1.473	1.802	0.190
	Professional and Ethical Practice	4.350	1	4.350	4.070	0.053
	Collaboration	1.900	1	1.900	2.036	0.164
	Criteria as a whole	0.069	1	0.069	0.136	0.715
Educational qualification	Foundations	0.685	2	0.343	0.440	0.648
	Development and Characteristics of Learners	1.077	2	0.539	0.683	0.513
	Individual Learning Differences	0.751	2	0.376	0.468	0.631
	Instructional Strategies	1.196	2	0.598	0.658	0.525
	Learning Environments and Social Interactions	1.602	2	0.801	0.832	0.445
	Language and Communication	1.342	2	0.671	0.975	0.389
	Instructional Planning	4.283	2	2.142	3.815	0.034
	Assessment	0.330	2	0.165	0.202	0.818
	Professional and Ethical Practice	4.856	2	2.428	2.272	0.121
	Collaboration	3.961	2	1.980	2.122	0.138
	Criteria as a whole	1.488	2	0.744	1.465	0.248
Specialization	Foundations	1.132	2	0.566	0.728	0.492
	Development and Characteristics of Learners	0.300	2	0.150	0.190	0.828
	Individual Learning Differences	1.182	2	0.591	0.736	0.488
	Instructional Strategies	0.742	2	0.371	0.408	0.669
	Learning Environments and Social Interactions	0.620	2	0.310	0.322	0.727
	Language and Communication	1.066	2	0.533	0.775	0.470
	Instructional Planning	0.515	2	0.257	0.58	0.637
	Assessment	1.057	2	0.528	0.646	0.531
	Professional and Ethical Practice	0.424	2	0.212	0.199	0.21
	Collaboration	0.902	2	0.451	0.483	0.622
	Criteria as a whole	0.546	2	0.27	0.538	0.890
Error	Foundations	22.566	29	0.778		
	Development and Characteristics of Learners	22.875	29	0.789		
	Individual Learning Differences	23.291	29	0.803		
	Instructional Strategies	26.345	29	0.908		
	Learning Environments and Social Interactions	27.913	29	0.963		
	Language and Communication	19.964	29	0.688		
	Instructional Planning	16.280	290.561	0.268		
	Assessment	23.714	29	0.818		
Professional and Ethical Practice	30.99029	1.069	4.350			

	Collaboration	27.068	29	0.933		
	Criteria as a whole	14.729	29	0.508		
Total	Foundations	366.082	36			
	Development and Characteristics of Learners	406.720	36			
	Individual Learning Differences	410.480	36			
	Instructional Strategies	377.753	36			
	Learning Environments and Social Interactions	404.714	36			
	Language and Communication	455.200	36			
	Instructional Planning	438.704	36			
	Assessment	348.694	36			
	Professional and Ethical Practice	480.852	36			
	Collaboration	442.041	36			
Criteria as a whole	399.427	36				

Table (14) showed no statistically significant differences at $\alpha \leq 0.05$ level in the degree to which teachers of gifted students possess knowledge and skills according to CEC-NAGC criterion due to their qualifications, teaching experience, and specialization as seen by educational supervisors. In addition, these differences due to teacher's sex and as seen by educational supervisors were found.

Table (13) shows that males mean scores are higher than that of females for all criteria. However, table (14) shows that the differences were significant at $\alpha \leq 0.05$ level in favour of males. This was because Instructional Strategies, Language and communication, Collaboration, as well as the criteria as a whole were in favour of males.

Discussion and Conclusion

Given the absence of official and accredited programs at Ministries of education and higher education to prepare and qualify teachers of gifted and creative students pre-service and in service, results of the first research question showed that the degree to which teacher of gifted students possess knowledge and skills of basic knowledge, learners characteristics, individual differences in teaching, teaching strategies, learning environment, social interactions, Assessment, Moral and professional practice, and cooperation criteria was medium. However, the degree of possession of language, communication, and planning for teaching was high. This matter can be explained by long teaching experience as well as by follow-up and supervision process by part of the supervisors and school principals. Therefore, it emphasizes the need for teachers to master language and communication and appropriate planning for their teaching skills. Results of the second research questions showed no statistically significant differences in the degree to which teachers of gifted students possess knowledge and skills according to CEC – NAGC criteria, due to sex variable, educational qualification, teaching experience, and specialization as seen by educational

supervisors. Consequently, this can be explained by the fact that teachers in their planning for teaching assessments and cooperation do not concentrate on typical literalism in their dealing with gifted and creative students compared with the female counterparts. This is because most male and female teachers of gifted students are presumably prepared and qualified to work with normal students. However, because of their long experience and higher education qualifications, they were able to become teachers of gifted and creative students. So, female teachers are more typical and literal in assessment, planning, and cooperation methods compared to their male counterparts. This contrasts sharply with gifted and creative student's characteristics, as they do not like typicality and restrictism. Therefore, this contributes to finding the differences between the male and female teachers in this dimension. Meanwhile, these differences were not found due to teacher's experiences, qualifications, and specialization. This support and approve the need for finding programs prepared and specialized for preparing teachers of gifted and creative students both in-service and pre service, according to internationally adopted criteria from CEC-NAGC, and the need to force teachers of gifted students to get a degree in teaching talented and creative students according to these criteria.

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