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The Degree of Using Critical Thinking Skills among a Sample of Gifted Students in the Tabuk Region

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Abstract

The purpose of this study was to determine how much a sample of gifted kids in the Tabuk area used critical thinking skills (CTs). The study sample consisted of (320) students from the gifted classes in Tabuk schools, comprising (161) students in the intermediate stage and (159) students in the secondary stage. The study employed a descriptive analytical technique. The CTS Level (X) Cornell exam was performed to gather information. According to the study, there are substantial statistical variations in the degree of CT use among the sample of gifted kids that are assigned to the class, and the level of CTs among gifted students is above average. The study suggested that bright students at all academic levels engage in activities that encourage critical thinking.

Keywords: Critical thinking Skills, Gifted students, Tabuk, Clinical Psychology, Cognitive.

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Introduction:

Gifted people are considered human wealth, and countries depend on them to rise among nations and achieve progress in all fields, because of their high mental capabilities, which they can use in solving problems facing their society, for that it was necessary to take care of them, and develop their skills, and provide all capabilities Which improve their mental abilities, and help them to employ higher thinking skills and different thinking patterns, especially critical thinking in different situations.

Terman was one of the first scientists who try to define giftedness in 1926, he defined it as “the top 1% of students in mental abilities, as calculated by the Stanford-Binet Intelligence Scale or any other intelligence measure approved by those interested in gifted care (Saada, 2010) Gifted students can be defined as students who excel academically, have a great ability to think, be creative, have abilities in various arts and leadership, learn faster than their colleagues, can understand abstract concepts, and tend to act independently (Ulger & Cepni, 2021).). Al-Batayneh and others (2009) defined the gifted student as “the child who can show behavior in the mental and cognitive fields that exceed many of his peers.” Al-Qamish (2012) defines the gifted student as “the student who has an extraordinary ability or an extraordinary innate readiness in various fields.

The researcher defines gifted students as students who have an intelligence level of more than 120 and have special abilities in which they excel over their peers, whether in general or in a specific field.

The gifted are distinguished by a set of characteristics, including (Al-Otaibi, 2022):

1) Cognitive and mental characteristics, including a passion for reading and reading since childhood, and they can infer, generalize, abstract, understand meanings, logical thinking, and understand relationships, and they can accomplish mental work with great proficiency, and they have high achievement in reading, arithmetic, literature, and the arts, And they are distinguished by focus and perseverance, and the power of attention and observation, and they tend to love curiosity and this is shown by their many questions, they organize their ideas well, ask clear questions, look at problems in a variety of ways, and find innovative solutions for them, express their original ideas easily and accurately, they have skills Creative thinking, and have diverse interests and hobbies. They have well-developed language abilities.

2) Emotional and behavioral characteristics: excessive emotional sensitivity, strong feelings about what is going on around them, early feelings of fear, early self-concept, great confidence in their talents, and sensitivity to criticism.

3) Social characteristics, including exerting effort to help others, strongly accepting social activities, having the ability to win friends, having a love of control and independence, self-evaluation and accepting others' suggestions, having responsibility, and preferring complex games that require thinking.

Critical Thinking

Critical thinking skills are basic and necessary skills in the twenty-first century, which are necessary for the educational process, and which should be carefully integrated into the educational system. So that learning becomes lifelong, and for the student to be able to solve the problems he faces in life, help manage himself and work in a team, and judge the information he receives in terms of its reliability, validity, and whether they are facts or not, and employing them in reaching correct decisions in various areas of life, and improving students' achievement and standard of living (Hidayah et al., 2020).

Critical thinking is the ability to think rationally and reflectively to focus on deciding what to believe and what to do (Ennis, 2011:1).

It also defines critical thinking as "an organized process that allows a person to evaluate the evidence, assumptions, and reasoning behind his/her opinions of others, to develop a deep understanding that can influence life in the future (Facione, 2015).

As defined by Watson and Glaser (2008), critical thinking is thinking that includes defining the problem, analyzing it, searching for evidence, reaching conclusions, and drawing conclusions. Based on this concept, he identified five skills, which are reasoning, recognizing assumptions, reasoning, interpretation, and evaluating arguments.

Many classifications deal with critical thinking skills. Watson & Glaser (2008) classified them into five skills:

First: Inference: It means the ability to reach conclusions through a set of observed or hypothetical facts, and to realize whether they are true or false depending on the facts given.

Second: (Recognition of Assumptions): The student can discriminate the truthfulness of the information from its inaccuracy, knowing the purpose of the information, and distinguishing the opinion from the truth.

Third: Deduction: Reaching results through introductions or previous information.

Fourth: Interpretation: It includes defining the problem, identifying logical explanations, and judging whether the results and generalizations reached can be accepted or not.

Fifth: Evaluation of Arguments: It signifies the student's ability to pass judgment on ideas, distinguish between primary and secondary sources, judge the strength of evidence and arguments, and judge the adequacy of available information.

While Facione classified critical thinking skills into six skills according to the Delphi Committee's definition of critical thinking (Facione, 2015):

1- The skill of interpretation: it means understanding and expressing the significance of things, experiences, data, rules, and procedures, and it includes the skill of classification and clarification.

2- Analytical skill: It is represented in analyzing the relationships, both inductive and deductive, between concepts, adjectives, and questions. It also includes the skill of examining opinions and revealing arguments.

3- The skill of reasoning: which is identifying the information necessary to reach acceptable results, and this skill includes the skill of investigating evidence and proposing alternatives.

4- Evaluation skill: It is the ability to evaluate the validity of data, and includes the skills of evaluating allegations and arguments, and the strength of inferential relationships between statements.

5- Explanation skill: presenting and justifying the results of thinking according to evidence and arguments, and this requires the skill of presenting, justifying, and logically presenting arguments.

6- The skill of self-regulation: It contains the skill of self-examination and self-modification, and it requires questioning and ensuring the credibility of ideas and results.

Critical thinking may be improved for students by creating a rich educational environment with stimuli, employing effective teaching strategies that take into account their mental characteristics, focusing on flexible learning, using formative assessment during learning, focusing on constructive active learning where the student gets learning through activity and interaction, and employing multiple learning media (Zhang & Kim, 2018). Critical thinking can also be improved by using the guided inquiry model, the employment of a supportive learning environment for the student, and developing self-monitoring and evaluation of the student for himself (Jainal & Louise, 2019). Metacognitive thinking is a successful method for developing critical thinking. It includes metacognitive thinking from two sides, criteria for critical thinking, and problem-solving processes (Gotoh, 2016).

The study Problem

Schools for gifted students aim to develop the various thinking skills of gifted students, and among these skills are critical thinking skills, as the researcher noticed through his dealings with gifted students that some of them show good employment of critical thinking skills, while others do not. Demonstrate these skills clearly when they interact with them. With different problems and situations, does this indicate that some gifted people have these skills and others do not?

Critical thinking skills have great importance to students, and critical thinking skills are the most important skills that employers search for, as they are necessary for success at work, keeping pace with changing work requirements and producing good outputs (NACE, 2017), and for this, it is necessary to enhance critical thinking skills for learners (Gashan, 2017), the existence of great challenges in this age requires students to possess the knowledge and diverse ways of thinking to enable them to make sound decisions based on arguments and evidence (Sarigoz, 2012).

Saudi Ministry of Education lately reviewed theeducation quality that students receive in Saudi Arabia, to develop it and improve its outputs. In 2020, the Saudi Ministry of Education prepared critical thinking courses initially, then later in the school curricula for the academic year 2021-2022. These courses have graduated in enabling students to enhance critical thinking skills, starting from increasing learners' knowledge in the elementary stage of the concept of thinking in general, and then focusing on understanding critical thinking in particular. In the intermediate stage, students are trained on the most important methods used for critical thinking, such as asking questions, and These two phases focused on critical thinking from the theoretical side, then the course moved to train on practical aspects and enabled learners to practice critical thinking skills in practice so that they would reach through these practical procedures the significance of employing critical thinking. Training on critical thinking skills includes critical reading skills, analyzing images and criticizing information received from the media, judging its authenticity and reliability, and then moving on to employing the skills of reasoning, extrapolation, deduction, evaluation of evidence, issuance of judgments, and detection and avoidance of logical fallacies (Al-Harbi, 2022). And since gifted students are the human capital of the state, their possession of these skills was more important than the rest of the students, and therefore it is necessary to know the extent of their possession of these skills and whether they develop as they progress through the academic stages.

When reviewing previous studies, the researcher found that the results of studies differed regarding the degree of critical thinking skills in gifted learners. Where the level of these skills was moderate as in the studies of (Hamadneh & Asi, 2015; Al-Hajry, 2017) and it was high, as in the study of each (Muhammad, 2016; Aslan, 2022; Boran & Karakus, 2022), while other studies showed that it was low, as in the study of each of (Al-

Hajhjeh & Abu Awwad, 2017). These studies were implemented in different countries and cultures, and the researcher did not find a recent study dealing with the degree of critical thinking in gifted students in Saudi Arabia, and since determining the level of critical thinking skills in gifted learners helps those in charge of their care in providing opportunities for their development and development among the group that does not possess these skills. Or have them, but they cannot employ them. The researcher found that it is necessary to stand on the level of gifted students in Saudi Arabia possessing these skills, and this is what generated the following question: What is the degree of critical thinking skills of a sample of gifted learners in theTabuk region?

This question generated the following questions:

- What is the degree of using critical thinking skills in a sample of gifted students in theTabuk region?

- Are there statistically significant differences at the significance level ($\alpha = 0.05$) in the level of using critical thinking skills in a sample of gifted learners in theTabuk region dating back to the school stage?

Objectives of the study:

The study aimed to the following:

- Detecting the level of using critical thinking skills in a sample of gifted learners in theTabuk region.

- Examining the impact of the academic stage on the level of gifted learners' use of critical thinking skills.

Significance of The Study:

The importance of this study lies in the following:

- Theoretical Significance: This study presents a theoretical framework about gifted students and critical thinking skills, as well as previous studies that can benefit researchers. gifted.

- Practical Significance: Teachers of gifted learners may benefit from the scale used in this study to reveal the degree of critical thinking in gifted learners. The results of this study can also help educational institutions interested in gifted students to build programs and activities that work on improving critical thinking skills in gifted learners. The results of this study can direct curriculum designers to build curricula that include activities that enhance thecritical thinking skills of gifted learners.

Terminological and procedural definitions:

Gifted students: They are learners who possess special skills that are more than the skills of ordinary students (Morawska & Sanders, 2009). The gifted student is defined in this study as the student who studies among the gifted in the Tabuk region and has a level of intelligence that exceeds that of ordinary students and has special abilities.

Critical thinking skills: “The mental processes used by the individual and his cognitive methods that improve the possibility of reaching the desired results. It is based on drawing conclusions and making decisions (Abu Jado & Nofal, 2011). Critical thinking skills in this study are defined as a self-mental effort, based on Through it, the gifted student in the ranks of the gifted in the Tabuk region treats sensory stimuli logically and reflexively that is characterized by deliberation through proofs and evidence to have a solution for problems or to make a wise decision.

Study limitations:

Human Limits: This study was carried out on (320) gifted learners in the intermediate and secondary stages.

Spatial limitations: This study was carried out on gifted learners in theTabuk region.

Temporal limitations: The procedures of this study were implemented in the second semester of the academic year 2021/2022.

Objective limitations: This study relied on the Cornell Critical Thinking Test (X) to collect its data. So, the results of this study can be generalized based on the validity and reliability of the test.

Method and procedures

The method will address the procedures of the study population and sample, and describe the study instrument and procedures.

Study Approach:

This study used the descriptive analytical method, using the Cornell Critical Thinking Test Level (X) to collect data to discover the level of using critical thinking skills in a sample of gifted learners in the Tabuk region.

Population and Sample:

Population:

The population of this study consisted of all gifted students in the ranks of the gifted in the Tabuk region who are studying during the academic year 2021/2022. The number of gifted learners in the intermediate stage is (234) students. while the number of gifted learners in the second stage reached (189) students.

The study sample

The sample of the study includes (320) gifted learners in the ranks of the gifted in the Tabuk region, and they were selected using a comprehensive survey method, and (423) electronic copies of the critical thinking test were distributed to them, and (320) questionnaires valid for analysis were retrieved, as the number of gifted learners in The intermediate stage reached (161) students, and the number of gifted learners in the second stage reached (159) students.

Study tool:

The Cornell Test for Critical Thinking Level (X) was used to collect data from the study individuals, and it was written by Robert Ennis & Jason Millman (Robert Ennis & Jason Millman), and it was published in 1985, and is one of the modern tests and is widely accepted in the United States of America, and it is The test is culturally neutral and can be applied in different settings; The test is used to measure the progress of learners' abilities in critical thinking, and it can be used as one of the selection criteria when developing special programs for the gifted, and to compare and diagnose students' level of critical thinking ability with other different groups.

The Cornell Critical Thinking Test (Level X) targets the critical thinking ability of students in grades four through fourteen. The Cornell Critical Thinking Test (Level X) consists of 76 items distributed over four dimensions, which are as follows:

The first dimension (induction): It consists of (25) paragraphs, for each paragraph, there are three suggested conclusions. This part measures the ability to draw a suggested conclusion from some of the given facts.

The second dimension (credibility): It consists of (25) paragraphs, for each paragraph, there are three answers, and the examinee must determine which of the answers is the most credible.

The third dimension (deduction): It consists of (15) paragraphs, for each paragraph, there are three conclusions, and the student must reach the correct conclusion based on hypotheses or objective premises.

The fourth dimension (assumptions): It consists of (11) paragraphs, for each paragraph, there are three facts or postulates, and the examinee must choose the correct truth or postulate that is included in the paragraph.

Among the most important skills measured by the Cornell Critical Thinking Test (Level X): are induction, credibility, elicitation, and recognition of assumptions. The test is applied collectively some time of time between 50-60 minutes.

As for correcting the test, there are three possible answers for each question, only one of which is correct, and each correct answer has one score, noting that the score of question No. (1, 2, 26, 51, 66) is ignored. Because they are illustrative examples that help understanding and their answers exist; Therefore, the total score for the test is (71).

Validity of the Cornell Critical Thinking Test Level (X)

Ennis and Melman believe that this test is in great agreement among researchers in critical thinking, in addition to the validity of the content is based on the concept of procedural and practical critical thinking as seen by the authors, and this test is limited to the following meaning: “Critical thinking is a reasonable determination of what we should believe and he did it."

Ennis & Millman (1985) calculated the stability coefficient for all dimensions of the original test, and the reliability coefficients ranged between (0.67) and (0.90), and they also studied correlations between the Cornell Critical Thinking Test (Level X), with some other tests. Like Watson and Glaser's thinking ability test, the correlation score was (0.5).

There is an Arabized version of the Cornell test, its Arabic Al-Zahrani (2017), and its validity and reliability were verified in the Saudi environment. Both Taibah and Al-Falaj (2019) measured its validity by calculating the correlation coefficient of the scale items with their domains, and it ranged between (0.455-0.923), and the two researchers also did this by calculating the correlation coefficient of each domain of critical thinking with the total score of the Arabized scale and it ranged between (0.698-0.889), its stability coefficient by the half-half method was (0.878), and its stability coefficient by Cronbach's alpha method was (0.940).

Study procedures:

To reach the objectives of the study, the researcher took the following steps:

1- Obtaining the necessary approval to conduct this study from the General Administration of Education in the Tabuk Region.

2- Providing the Cornell Critical Thinking Test, Level (X), and converting it into an electronic form.

3- Determine the study population using the comprehensive survey method.

4- Applying the Cornell Critical Thinking Test Level (X) electronically to get data from the study subjects to reveal the degree of using their critical thinking skills.

5- Entering data into the computer for statistical processing according to the study questions.

6- Extract the results and make recommendations.

Statistical Techniques Used in the Present Study:

To answer the questions of the study, arithmetic means and standard deviations were calculated, and a T-test was used to detect the effect of the academic stage on the study sample's estimates of the degree of using critical thinking skills among gifted students.

Review of Related Studies:

The researcher reviewed some previous studies that dealt with the variables of this study, as follows:

The purpose of Kettler's (2014) study was to identify upper elementary school kids' critical thinking abilities. To compare talented and average pupils, the researcher used two critical thinking assessments, including the Cornell test as one of them. According to the findings, there were statistically significant differences between the two groups' scores in favor of gifted students on both scales, but no such differences were found when the variables of gender, race, or socioeconomic status were taken into account.

A study was done by Hamdna and Assi in 2015 to assess the level of critical thinking among Jordan's brilliant students. A sample of (173) male and female students from Irbid's King Abdullah II Schools for the Gifted served as the study's subjects. On the Jordanian setting, researchers employed the California Critical Thinking Test. (Al-Rabee, 2004). The study's findings showed that the study sample's level of critical thinking was moderate and below the necessary threshold. And it showed that there were statistically significant differences in both critical thinking as a whole and in the critical thinking skills (analysis, inference, and conclusion). due to sex, which favors women.

The purpose of Muhammad's (2016) research was to determine the level of critical thinking abilities among gifted secondary school students in Khartoum state. (gender - the educational level of the father - the educational degree of the mother). One of the findings of this study was that the level of critical thinking skills among the gifted in Khartoum State was high. The researcher utilized the descriptive correlative approach to collect and analyze data, and the sample consisted of (140) talented children in Khartoum State/Sudan. And that neither the variable of gender nor the level of education of the father or mother results in statistically significant differences in the critical thinking of the bright in Khartoum State.

The objective of the study by Al-Hajry (2017) was to determine the level of critical thinking abilities in students participating in gifted education programs in the State of Kuwait. The study sample consisted of (116) male and female students. The critic is level (X), and one finding of the study is that the study sample's level of critical thinking is average overall. The dimensions of induction, credibility, and deduction reached a moderate level, but after distinguishing assumptions, it reached a low level. The findings also revealed that there are no statistically significant variations in critical thinking abilities between grades or fields of study.

Likewise, Al-Hajhjeh and Abu Awwad (2017) conducted a study at the King Abdullah II School for Excellence in Zarqa, Jordan, to determine the level of critical thinking abilities and how they relate to academic accomplishment in a sample of (79) gifted children in the tenth and eleventh grades. The California Test of Critical Thinking was employed in the study. The findings showed that there were statistically significant differences in critical thinking abilities due to gender and in favor of females in the study sample. The level of students' critical thinking abilities overall was low, as it was low in all sub-skills (analysis, induction, inference, inference, and evaluation).

The objective of the study (Gilmanshina, Smirnov, Ibatova & Berechikidze, 2020) was to find the most thorough and trustworthy methods for determining the level of critical thinking in gifted children and selecting the right methods for studying it. The study sample consisted of (186) kids from 3 gifted schools in Moscow who were between the ages of six and eight. (Russian Federation), A group with a low level of critical thinking and a control group with a higher level of critical thinking were created from the sample. There were two tests used. The findings showed a connection between a person's level of giftedness and their level of cognitive growth. As a result, it is appropriate to select acceptable techniques that enable critical thinking to be evaluated as one of the criteria for a child's giftedness in dynamics.

Additionally, in the study (Aslan, 2022) that evaluated how well gifted students used critical thinking skills in primary schools, students' levels, gender, the number of siblings they had, the educational attainment of their parents, their ability to express their ideas in the home, and their propensities for critical thought were taken into account. The study sample included (187) regular students from the third and fourth grades in Tokat Province, Turkey, and (55) gifted students. The findings showed that talented students were practicing critical thinking abilities at a good level. The use of critical thinking abilities by talented students did not differ statistically from the sub-dimensions of the scale, grade levels, gender, the number of siblings, or parental educational status. The practice of critical thinking skills for gifted learners who always express their thoughts in the family was much higher than the attitudes of gifted learners who sometimes express their thoughts.

One of the goals of the study (Boran & Karakus, 2022) was to determine the extent to which gifted kids were using critical thinking abilities. Turkish scientific and art centers in Adana, Kayseri, and Mersin registered 502 gifted students as part of the study sample. abilities to think critically.

Commenting on previous studies:

The researcher looked at a group of previous studies that dealt with the critical thinking skills of gifted students, which he was able to access, and arranged them from oldest to newest, and the researcher did not find any study compatible with the current study in terms of the place of implementation of the study "Saudi Arabia". Some of the previous studies have a descriptive approach, and some are descriptive and relational. One of the objectives of the previous studies was to determine the level of critical thinking skills of gifted students. The levels of critical thinking varied in these studies, some of which were of a high level, such as the study of each (Muhammad, 2016; Aslan, 2022; Boran & Karakus, 2022), some of which were moderate, such as the study of (Hamdana & Assi, 2015; Al-Hajry, 2017); and some of them were weak, such as the study (Al-Hajhjeh & Abu Awwad, 2017). Some studies also showed that there are differences in critical thinking among the gifted due to gender in favor of females as a study. (Hamdna & Asi, 2015; Al-Hajhjeh & Abu Awwad, 2017), while the rest of the studies did not show these differences, and the studies showed that there were no differences attributable to the academic level, such as the study (Al-Hajry, 2017; Aslan, 2022). Various scales for measuring thinking skills, such as the Watson-Gliser scale, the California scale, and the Cornell scale. Studies also showed the relationship between critical thinking with some variables such as achievement, problem-solving, and metacognitive awareness. This study was distinguished by its specificity. The researcher benefited from previous studies in preparing the theoretical framework and in Procedures for applying statistical studies and treatments.

Data Analysis and Interpretation:

The first question: **What is the degree of using critical thinking skills among a sample of gifted students in the Tabuk region?** The critical thinking test was corrected, and the arithmetic means and standard deviations were calculated for the responses of gifted students in the Tabuk region on critical thinking skills. The results were as shown in Table (1).

Table (1) The arithmetic means and standard deviations of the study's responses to critical thinking skills

Critical thinking skills	Mean	standard deviations
Induction	15.97	4.25
Credibility	16.93	4.26
Elicitation	10.18	2.91
Assumptions	7.08	2.17
Critical thinking skills	50.17	12.28

It appears from Table (1) that the arithmetic mean of critical thinking skills in gifted learners in the Tabuk region has reached (50.17) with a standard deviation of (12.28), which is a degree above average. and assumptions) of gifted learners in the ranks of students in the Tabuk region were all above the average, with arithmetic means of (15.97, 16.93, 10.18, 7.08), respectively, and standard deviations of (4.25, 4.26, 2.91, 2.17), respectively.

This degree is attributed to the fact that gifted students have exceptional mental performance or a higher learning ability compared to their peers, because they are faster at processing information than their peers with average ability in complex tasks, and the stimuli provided to them in the ranks of the gifted focus largely on developing higher-order thinking skills, including Creative thinking and critical thinking.

This result may also be attributed to the fact that gifted students use their knowledge and previous experience in interpreting texts, can apply high-level thinking skills to interpret what they read and learn, and can communicate this information to others (Persson, 2014), so they achieve advanced scores in exams. critical thinking skills.

This result is also attributed to the fact that gifted students in the ranks of gifted students in the Tabuk region meet their needs in the field of high-level thinking through programs, educational situations, and activities that develop critical thinking skills. These classes also seek to develop different aspects of their personality.

Gifted students have a set of characteristics compared to their normal peers, such as activity and initiative in several areas, such as the early development of their linguistic abilities, their ability to acquire a large vocabulary at an early age, their ability to think abstractly, generate original ideas, and they possess advanced skills in solving problems. Unusual problems, perfectionism, creativity, and imagination. and broad openness to new ideas and high academic success (Levent, 2013). Critical thinking requires a variety of mental skills, as it is complex thinking. Therefore, gifted students who possess diverse thinking skills and are ahead of their peers achieved an above-average score on the critical thinking skills test.

This result is similar to the results of the study (Muhammad, 2016; Aslan, 2022; Boran & Karakus, 2022). While this result differed from the results of the study (Hamdna and Assi, 2015; Al-Hajry, 2017), which revealed that the level of critical thinking skills of gifted students was average, and the study (Al-Hajhjeh & Abu Awwad, 2017), which showed that the level of critical thinking skills was low.

The second question: **Are there statistically significant differences at the level of significance (α = 0.05) in the degree of using critical thinking skills among a sample of gifted students in the Tabuk region due to the school stage?**

To answer this question, the arithmetic means and standard deviations were calculated for the responses of gifted students in the intermediate and secondary schools to test critical thinking skills, as shown in Table (2).

Table (2) The arithmetic means and standard deviations of the responses of gifted students, according to the academic stage, to the critical thinking skills test

The skill	Academic stage	Number	Means	Standard deviations
Induction	Intermediate	161	15.13	4.86
	Secondary	159	16.81	3.40
Sum		320	15.97	4.25
Credibility	Intermediate	161	15.98	5.02
	Secondary	159	17.90	3.16
Sum		320	16.93	4.26
Elicitation	Intermediate	161	9.57	3.37
	Secondary	159	10.81	2.23
Sum		320	10.18	2.91
Assumptions	Intermediate	161	6.70	2.51
	Secondary	159	7.48	1.71
Sum		320	7.08	2.17
thinking skills	Intermediate	161	47.38	14.63
	Secondary	159	52.99	8.80
Sum		320	50.17	12.28

It appears from Table (2) that there are differences in the arithmetic averages between the gifted students in the intermediate and secondary schools on the critical thinking skills test. When the arithmetic mean of the gifted students in the intermediate stage on the critical thinking test was (47.38) with a standard deviation of (14.63), there are also differences in the arithmetic means between the gifted students in the intermediate and secondary schools in the critical thinking skills included in the critical thinking skills test.

To reveal the statistical significance of the differences in the arithmetic means between gifted students in the intermediate and secondary schools on the critical thinking skills test; A T-test was performed for the independent samples as shown in Table (3).

Table (3) T-test for independent samples to reveal the effect of the school stage on the differences in the arithmetic mean scores of gifted students in the critical thinking skills test

The skill	T	Df	Sig
Induction	-3.579	318	0.000
Credibility	-4.085	318	0.000
elicitation	-3.855	318	0.000
Assumptions	-3.253	318	0.001
Critical thinking skills	-4.154	318	0.000

It is clear from Table (3) that the value (t) for the level of critical thinking has reached (-4.154) with a significance level of (0.000), which is a statistically significant value, which means that there are statistically significant differences in the arithmetic means of the study individuals' responses to the critical thinking skills test due to the academic stage, as well as for all critical thinking skills. Referring to Table (2), these differences are in favor of the secondary stage.

The researcher attributes this result to the fact that critical thinking is characterized by a set of characteristics that distinguish it from other forms of thinking. Al-Qahtani (2018) indicated that critical thinking enhances the student's dialogue skills to reach specific conclusions and standards supported by evidence and to take note of all aspects of the problem to understand it well and reach its solution in the right way. These skills are provided by secondary school curricula more than middle school curricula, in addition to the fact that learning skills are cumulative, so secondary education adds new skills to what they learned in the middle stage and strengthens them as a result of the training they are exposed to in the secondary stage, which made them have more ability to discuss, present arguments and evidence, and accept Proposals made by others.

This result may return to the fact that critical thinking requires depth and research, which are skills possessed by high school students more than middle school students, as a result of the improvement and diversity of their curricula and their orientation towards research in various sources of knowledge, which made them able to search in a variety of sources of knowledge, as the Many of the activities and duties require them to research, expand and delve into the topics studied, and Al-Hallaq (2010) considers expansion and research among the criteria for ensuring the effectiveness of critical thinking. Critical thinking skills are first acquired in the closest social environment of the individual, and it is expected to develop with the school period. Instructors argue that critical thinking skills are important skills that should be acquired by students (Alharbi, 2022).

Thinking skills are developmental and cumulative, as they form links between concepts and facts, make the student infer relationships between concepts, and activate the decision-making mechanism. Thus, new neural connections are formed between neurons which leads to the development of flexibility in the brain. As a result of these connections learning becomes active and permanent. Based on these assumptions, critical thinking skill not only improves the individual's ability to make decisions but also increases his ability to learn (Aslan, 2022).

The researcher also attributes this result to the fact that high school students are more open to cultures, as a result of the complexity of their relationships, and their exposure to new knowledge that was not available to them in the intermediate stage. Al-Ghadouni (2020) believes that critical thinking is one of the most important types of thinking that helps the student to access and criticize correct information, overcome the problem of knowledge explosion, and practice advanced search on websites for honest, useful, and valuable information.

This result differs from the study (Al-Hajry, 2017; Aslan, 2022), which showed that there were no differences in critical thinking skills due to the impact of the academic stage, and the researcher did not find studies consistent with his study on this result.

Recommendations:

The researcher made some recommendations based on the results of this study, namely:

- The use of activities that stimulate critical thinking in gifted learners in the Tabuk region at all levels of study.

Building educational institutions interested in gifted students, programs, and activities that improve critical thinking skills in gifted learners.

- Building curricula that include activities that enhance and develop the critical thinking skills of gifted learners.

- Researching the impact of e-learning on critical thinking skills.

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