GIFTED STUDENTS IN SAUDI ARABIA: A STUDY OF INTERMEDIATE AND SECONDARY CLASSES AND THEIR LEVEL OF METACOGNITIVE THINKING SKILLS

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ABSTRACT

This study examined the intermediate and secondary classes and their level of metacognitive thinking skills in Saudi Arabia. The discussion in the study is based on the theoretical framework of the Abraham Tennenbaum's Theory. This theory is appropriate for the study because it allows the reader to understand the difference between male and female gifted students level in problem-solving related to social problems. The study respondents consist of 480 gifted students from the province of Jeddah. Forty students were taken from each class; first intermediate class, second intermediate class and third intermediate class from the province of Jeddah. Similarly, forty students were taken from each class; first secondary class, second secondary class and third secondary class from the province of Jeddah. Moreover, 50% (240) of the sample consist of male gifted students and same number likewise 50% (240) of the sample consisted of female gifted students. A questionnaire was the main instruments used in collecting data from the selected gifted students which generated the quantitative and qualitative data respectively. Different statistical analyses were used in analyzing the collected data. The results demonstrated that no significant difference in the class level of metacognitive thinking skills among gifted students. Thus, class and age affect the effectiveness of student's metacognition. The suggestion and recommendations based on the study findings would benefit the gifted student's canters, educational ministry, international and non-governmental organizations in the effort to improve the study learning conditions of gifted students in Saudi Arabia.

KEYWORDS: *Gifted Student, Intermediate Class, Secondary Class, Metacognitive, Thinking Skills*

INTRODUCTION

Adolescence is one of the most important stages of human life progression, this is because of the major changes in many aspects of adolescence life such as physical, mental, cognitive and social (Esteki & Moinmehr, 2012). Changes in Cognition is considered one of the major changes of adolescence by extending their own knowledge to learn met cognitive skills continuously for solving problems (Berg, 2011)

Met cognitive thinking skills are the techniques used by students to understand the learning processes. It is a systematic process to 'think' about their 'thinking' (Eilers & Pinkley, 2006). Met cognitive strategies are used after using cognitive strategies that boost up their rate of learning, progress and academic achievement (Chan, 1996; Dignath, Buettner, & Langfeldt, 2008). Therefore, it is very important to know how gifted students utilize these strategies and what types of effects they put on them in return. In connection with the metacognitive thinking skills, every person faces many problems on the daily basis that can be resolved and dealt by making appropriate decisions by using met cognitive thinking skills.

Background to the Study

This study examined the intermediate and secondary classes and their level of metacognitive thinking skills in Saudi Arabia. Presently, in Saudi Arabia, gifted students are liable and have qualified for the provision at the highest level of educational services Alqefari, A. (2010). Right from 1999, the Saudi ministry of education has considerable show interest in developing the special program for the gifted. King Abdul Aziz and his Companion's foundation for the gifted (KACFG) was the first and the biggest gifted support program established in 1999. The KACFG foundation provides financial support to the gifted centers across the kingdom. By the year 2000, the ministry created an independent unit for the gifted education in the kingdom, formally known as the General Administration for Gifted Students (MOE, 2007).

This administrative unit applies different methods to upgrade the gifted student's programs, such as post-school term, weekends, and summer holidays for providing gifted special activities (Alqefari, 2010). By the year 2001, gifted students center was established at Najran KSA which provides services to elementary, middle school, and secondary school identified gifted students (Al-Shehri, et al, 2011). Some of the criteria set by the Ministry of Higher Education for nominating students to the gifted center include high academic achievement, good conduct, special skills, and accumulative test scores (MOE, 2011). Thereafter, gifted students care centers were established and shouldered with the responsibility of monitoring the educational, social and psychological affairs of the gifted students. Interestingly, today in Saudi Arabia gifted students' programs targeted both male and female gifted and talented students (Aljughaiman, &Grigorenko, 2013). By the year 2007, about 66,000 male and female students were identified as gifted (Al Qarni, 2010). At the moment there is 31 care center for boys and 20 for girls (Ministry of Education Saudi Arabia, 2016).

Problem Statement

The core academic achievement of the Saudi gifted students has been an issue of concern to the educational ministry, policy makers, and stakeholders   and. Despite various measures put in place to improve the academic performance, yet the goal has not yet been realized as posited by Alamer (2014). On daily basis, the number of identifiedgifted students keep on increasing in the Saudi Arabian kingdom, and there is strong fear that the present foundations will not take care of the increasing number of the gifted students (Bondagjy, 2000). Also, a report by the ministry of education Saudi Arabia revealed that the number of gifted students covered by the gifted centers is much less than the actual number of the gifted in the kingdom (SOME, 2007). In this case, the ability of the gifted students to develop and utilize metacognitive thinking skills towards solving social problems is obviously deprived. Esteki and Moinmehr(2012) stated that problem-solving among gifted students becomes harder with high metacognitive state without appropriate cognitive abilities, and this cause students to face unpromising social problems such as isolation.

Naturally, everyone at the certain point in time may experiences some kind of social problems especially positive problem orientation, negative problem orientation, problem defining and formulation, general alternative solutions, decision making, solution implement and verification, impulsivity/careless and avoidance style because schooling life is full of uncertainty. Prior findings also vindicate clearly that, gifted students experienced social-oriented problems more often than non-gifted students (Lamont, 2012).

Research Objectives

The purpose of this study is:

- To examine the difference between intermediate and secondary classes level of metacognitive thinking skills among gifted students in Saudi Arabia.

Research Questions

The study will be guided by the following research questions:

- Is there any significant difference between intermediate and secondary classes level of metacognitive thinking skills among gifted students in Saudi Arabia?

Research Hypothesis

Ho1. There is no difference between intermediate and secondary classes level of metacognitive thinking skills among gifted students in Saudi Arabia?

LITERATURE REVIEW

This study presents a review of relevant literature related to the current research. Relevant findings from previous studies are discussed to create the basis for the possible outcomes of the current study. The literature review aims to examine the intermediate and secondary classes and their level of metacognitive thinking skills in Saudi Arabia.

Metacognitive Thinking Skills

Modern-day psychologist is increasingly becoming more interested in the field of metacognitive and related research. Metacognitive research area helps researchers to new and advance aspect of human of human beings. It is the aspect that concerns with the ability of planning and understanding of the steps and strategies which are taken by students to solving problems and their ability to evaluate thinking efficiency (Watkins, 2000). Flavell (1979), discovered the concept of metacognitive thinking in the seventh decade of the last century. Flavell (1979) stated that metacognitive thinking is the human way of mental self-knowledge linked the process of cognition. Similarly, Liu, Magjuka, and Lee (2008) posited that cognition is the process of balancing between two separate activities mainly the cognitive knowledge and the organizational knowledge that rely on each other

Likewise Brand, Reimer, and Opwis (2003), asserted that the process of metacognition comprises several mental functions such as planning, monitoring progress, evaluating performance and decision-making. In the same vein Hofer (2004), relates metacognition to the psychological process of observing the performance of students and subsequent evaluation of their thoughts and conclusion during and after solving a given problem. Moreover, it is decision-making skills and its operation is directing and management of various public thinking in problem-solving that is a smart

performance or information processing and it can distinguish between different types of knowledge patterns (Sriraman, 2004). Jeffries (2005) also described metacognitive thinking skills as strategies used in planning, monitoring, assessing and evaluating the performance of a person in solving problems, and are considered as components of intelligent performance and information processing. Adding that, these are executing skills that direct and manage associated thinking skills used in solving problems. According Wiklund and Shepherd (2003), there are three basic types of knowledge patterns such as declarative knowledge, which relates to individuals' understanding about their skills, limits, strategies, and their own mental and emotional capabilities as a student, operational knowledge, which relates how to employ learning strategies (to answer questions), and conditional knowledge that relates to when a certain strategy should be used, or relates to causes or purposes of its usage (e.g. why is it used), and why this strategy is preferably used in certain learning situations. Pintrich (2004), elaborated three main skills of metacognitive thinking skills that are briefly stated below.

Knowledge about Cognition

Three types of knowledge such as declarative knowledge, procedural knowledge, and conditional knowledge are discussed under the knowledge of cognition.

Declarative Knowledge

Descriptive knowledge is defined as the acquaintance knowledge or knowledge about the existence of something's and it is different from know-how knowledge Pezzulo (2011). Declarative knowledge refers is merely a fixed information retained in the memory, it is a theoretical knowledge that represents an occurrence and their characteristics as they relate tom each other (Kindt, Soeter, and Vervliet (2009).

Procedural Knowledge

Procedural knowledge is process related knowledge usually assimilated while accomplishing a particular task or activities (Star, 2005). It helps in understanding the appropriate way of doing something and provides a perception of how things might be done accordingly (Baroody, Feil, & Johnson, 2007). It is the type of knowledge that necessitate the use of common sense and experience in solving problem while showing the limitation of the specific solution (Schneider, Rittle-Johnson, & Star, 2011). Unlike declarative knowledge, procedural knowledge is an also a job dependent knowledge (Hallett, Nunes, & Bryant, 2010).

Conditional Knowledge

Conditional knowledge involves strategies to use in identifying and evaluating certain procedures in order to discover the strength and weaknesses of doing something, and proposing possible solutions in some instances (Deng, Yang, & Hu 2011). It is the type of knowledge that provides idea and clue about places and time that is most suitable to apply metacognitive thinking skills in solving problems. In particular, this type of knowledge help children to identify their problems, understand how, when and why they use declarative and procedural knowledge in problem-solving. As for adults, it involved the strategies to acquire information since they have already established their skills in solving problem unlike the children (Lukasiewicz &Schellhase, 2007)

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Regulations of Cognition

Metacognitive regulation has been widely discussed by many authors as it differs from metacognitive knowledge (Flavell, 1979; Schraw & Dennison, 1994). Regulating cognition involves the necessary adjustment and control during the learning process, this includes planning, information management strategies, comprehension monitoring, debugging strategies, and evaluation. Contrary to cognitive regulations, metacognitive knowledge concerns with individual cognition of the people that comprise the way people learn, solve the problem and the anxiety about the particular learning task as well.

Planning

Planning involves organizing certain activities systematically in order to achieve desired goals. It is one of the basic elements of intelligent behavior that include a special process which is compulsory for multiple tasks. Planning essentially differs with respect to the field or area which may oblige good conceptual skills, several kinds of plans that can be applied to achieve a certain target effectively and competently. Planning is also known as a system that assists in managing space and time appropriately(Mevarech&Fridkin, 2006). According to Schooler et al. (2011), whenever applying any certain planning technique there is a need for the basic knowledge of the concept in relation to time and space. Planning skill includes the objective of the work, methodology, sequence, identification of the problem and obstacles.

Information Management

Information management relates to the organizational succession of activities, which include the gathering of information from different sources, dissemination of the information to the concern people and the ultimate disposition to deletion (Dabbagh & Kitsantas, 2012). In order to meet the obligations of the organizational functions, management should hold broad concepts which include processing arranging, forming, controlling and reporting of information actions (Angst & Agarwal, 2009).

Comprehension Monitoring

Comprehension monitoring assists learners to be attentive, concentrated, and fully focussed while reading (Boekaerts & Corno, 2005). Prior Findings indicated that early training to children help them to monitor their comprehension effectively. Good instruction of comprehension monitoring helps the learner to highlight why and what they understand and why and what they do not understand and selected the appropriate approached to resolve the problem comprehensively. (Veenman, Van Hout-Wolters & Afflerbach, 2006).

According to Eme, Puustinen, and Coutelet (2006), learners may likely ask quiet some question during the monitoring stage, such as in what way I am doing. Doing this is right? By what means should I proceed? What is the important information needs to memories? Would I move in a separate direction? Should I change the method because of the difficulty? If I do not understand what can I do? Dinsmore, Alexander, and Loughlin (2008) ask students to thinks of many questions during monitoring phase such as, how the graph on page 10 look like, what was the content of page 9, since I am not clear with the page, I may need to understand.

Debugging Strategies

Debugging strategies involves the systematic way of identifying why and how a particular concept doesn't work accurately. Students usually require metacognitive thinking skills to understand the right strategies of doing things (Brown, 1987). Debugging strategies are mainly the sequential process for controlling metacognitive activities for instance, understanding a problem. It is a process thataid them in controlling and managing and regulating cognitive activities and checking the subsequent outcomes of such activities (Efklides, 2008).

Evaluation

After learning session, the academic performance of the students are usually tested and the process is what is referred to as evaluation (McRae, Ochsner, Mauss, Gabrieli, and Gross 2008). While carrying out the evaluation process, the evaluator might ask several questions in relation to the field of study purposely to assessed whether or not the real objective of the learning is achieved or not. Questions such as what did you learn? Did you get the results you're expected? What could you have done differently? Can you apply this way of thinking to other problems or situations? Egloff, Schmukle, Burns, and Schwerdtfeger (2006) suggest the students ask themselves such type of questions during the phase of evaluation such as how well did I read and understand. What strategies worked well for me? What strategies did not work for me? What should I do next time? Do I need some help for next time? How will I remember what I read?

Theoretical Perspectives

The study is based on Theory of Mind (TOM) which was developed by David Premack in 1978 purposely to explain how the ability of the human to think, clarify, understand, and explain behavior based on mental being which includes sensing, understanding, thinking, wanting, believing, seeing, forecasting among others. Theory of mind is one of theoldest model used in educational research; it is a model that guides academic teachers to apprehend how students think about the state of mind (Al-Hilawani et al., 2002). Theory of mind is also applied in different research field in cognitive sciences, these include studying how mental being are assign to another person, and how mental states can be used as a yardstick to predict as well as explain their behavior and actions. In essence, mind theory is an important branch of cognitive sciences that examine mental and mind reading ability human.

Theory of mind has to do with understanding children have of their own and others' mind as well the relationship between the mind and the surrounding environment (Papaleontiou-Louca, 2008). This concept allows children or young learners to foresee, understand and possibly explain actions by ascribing mental states for instance intentions, and desires (Astington, 1991). Generally, this concept review attempts to facilitate our understanding of how young children think and also how they behave based on their thinking ability (Papaleontiou-Louca, 2008).

METHODOLOGY

The quantitative research design was adopted for this study. The study sought to examine the intermediate and secondary classes and their level of metacognitive thinking skills in Saudi Arabia. The main population of this study consisted of all 480 gifted students from the province of Jeddah. The findings in this paper are drawn from a research study on the investigating metacognitive thinking skills on problem-solving related to social problems among gifted students in Saudi Arabia. Data were collected from the gifted students from the province of Jeddah in Saudi Arabia through questionnaires. A simple random sampling technique was adopted in selecting the gifted students, based on their status that

is all gifted students in the province of Jeddah. The estimated number of the main population stands at 480 gifted students. The sample size for this study was forty students who were taken from each class; first intermediate class, second intermediate class and third intermediate class and other forty students who were taken from each class; first secondary class, second secondary class and third secondary class from the province of Jeddah.

Criteria for Selecting Gifted Students in Saudi Arabia

Alqefari (2010) analyzed the policies for gifted students in the Kingdom of Saudi Arabia (KSA) that explore the effectiveness and any possible weaknesses of gifted programs. The samples for the study consisted of gifted students studying in schools under the MOE authority. The selected students were given questionnaires, which surveyed their demographics, social life, academic achievements, and self-reflection on their giftedness. The conclusions and recommendations presented in the study were classified into four parts, namely, identification, provision, policy, and information. The predominant methods of identification were the intelligence tests and other tests associated with the overall academic achievement.

The Ministry of Education Saudi Arabia (2015), recently released the number of male and female students for two levels of education such as intermediate and secondary school as shown in Table 1.

Table 1 Students' enrolment in Saudi Arabia

Level of School	School/students	Male	Female	Total
Intermediate	Number of Schools	3682	3204	6886
	Number of students	564747	504507	1069254
Secondary	Number of Schools	2027	2013	4040
	Number of students	445769	424859	870628
Total	**Number of Schools**	**12200**	**11748**	**23948**
	Number of students	**2250225**	**2521559**	**4771784**

The gifted students in Saudi Arabia are the targeted population of this study are the gifted students in the kingdom of Saudi Arabia. Although the research focused mainly in the Jeddah province in selecting the study sample. According to the Department of Education in the province of Jeddah, the number of male and female gifted students in the academic year 2013-2014 was 5210. The detail of the students enrolled in first, second and third intermediate and secondary classes based on their class level and gender in Jeddah province is stated in Table 2.

Table 2: Detail about Gifted Students in the Province of Jeddah

Class	Level	Males	Females	Total
Intermediate	1	648	411	1059
	2	510	359	869
	3	474	373	847
Secondary	1	443	409	852
	2	487	341	828
	3	423	332	755
Total		**2985**	**2225**	**5210**

Table 3: Detail about the Sample for the Questionnaire

Class	Level	Males	Females	Total
Intermediate	1	40	40	80
	2	40	40	80
	3	40	40	80
Secondary	1	40	40	80
	2	40	40	80
	3	40	40	80
Total		**240**	**240**	**480**

FINDINGS

The study used the quantitative methods of analysis. The quantitative study shows the level of metacognitive thinking skills of intermediate and secondary classes in Saudi Arabia. This section contains the analysis of the quantitative data. It also contains the reporting of the findings made from gifted students in Jeddah province in Saudi Arabia.

Research Question 1: Is there any significant difference between intermediate and secondary classes level of metacognitive thinking skills among gifted students in Saudi Arabia?

Ho1. There is no difference between intermediate and secondary classes level of metacognitive thinking skills among gifted students in Saudi Arabia?

To see how male and female gifted students differ in their level of problem-solving related to social problems among gifted students in Saudi Arabia, Mann-Whitney statistical test was used. This statistical technique is deemed appropriate to test to find out the difference in non-parametric scores. The outcomes significantly showed the higher mean rank of males than females in comprehension monitoring, debugging strategies, Regulation of cognition, and metacognitive thinking skills as shown in Table 4.

Based on the results obtained from the findings, the hypothesis testing of this study is summarized as in Table 4. The below results have answered the research question number 1 and displays the finding for the hypothesis testing for all variables. The results indicate that other hypotheses were supported while other hypotheses were rejected.

Table 4: Differences in Metacognitive Thinking Skills Based on Level of Study

Metacognitive Thinking Skills	Level of Study	Mean Rank	Mann-Whitney U	Z value	*p* value
Declarative knowledge	Intermediate	235.86	27686	-0.737	0.461
	Secondary	245.14			
Procedural knowledge	Intermediate	250.68	26358	-1.621	0.105
	Secondary	230.33			
Conditional knowledge	Intermediate	229.18	26082	-1.801	0.072
	Secondary	251.83			
Planning	Intermediate	237.99	28196.5	-0.399	0.690
	Secondary	243.01			
Information management	Intermediate	250.00	26520	-1.506	0.132
	Secondary	231.00			
Comprehension monitoring	Intermediate	235.81	27673.5	-0.745	0.456
	Secondary	245.19			
Debugging strategies	Intermediate	245.90	27504	-0.859	0.390
	Secondary	235.10			
Evaluation	Intermediate	241.10	28656	-0.095	0.924
	Secondary	239.90			

Table 4: Contd.,					
Metacognitive Thinking Skills	**Level of Study**	**Mean Rank**	**Mann-Whitney U**	**Z value**	***p* value**
Knowledge about cognition	Intermediate	236.75	27901	-0.593	0.553
	Secondary	244.25			
Regulation of cognition	Intermediate	245.00	27720.5	-0.711	0.477
	Secondary	236.00			
Metacognitive thinking skills	Intermediate	241.68	28517.5	-0.186	0.852
	Secondary	239.32			

* Mann-Whitney test

Difference between Intermediate and Secondary Classes Level of Metacognitive Thinking Skills

This section provides the answer for the research question 7 "Is there any significance difference between intermediate and secondary classes level of metacognitive thinking skills among gifted students in Saudi Arabia?" was answered using Mann-Whitney statistical test as the appropriate statistical test to find out the difference in non-parametric scores. No significant difference found between intermediate and secondary school students, as shown in Table 4

Discussion of the Findings

In line with the objectives of the study and research questions to examine the difference between intermediate and secondary classes level of metacognitive thinking skills among gifted students in Saudi Arabia, the responses from questionnaires analysed, the discussion will attempt to highlight on how intermediate and secondary classes gifted students differ in their level of metacognitive thinking skills in Saudi Arabia.

Based on the research question, the findings revealed a significant difference between male and female gifted students concerning their level of metacognitive thinking skills. The results indicated that male's students do not differ in their level of problem-solving related to social problems among gifted students in Saudi Arabia.

Difference between Intermediate and Secondary Classes' Level of Metacognitive Thinking Skills among Gifted Students in Saudi Arabia

The findings revealed a no significant difference in the class level of metacognitive thinking skills among gifted students. Thus, class and age affect the effectiveness of student's metacognition.

At different levels of study, developing metacognitive thinking skills among the gifted students is widely believed to be a determinant factor for realizing educational goals. Metacognitive thinking skills among gifted students at different study levels i.e. at both intermediate and second school level are the formal strategies that help assess and evaluate the intellectual ability of the gifted students. This resulted in ranking skills of metacognition as the most needed skills for students in the 21st century as suggested by Walser (2008).

Knowing the level of metacognitive thinking skills among students at different study levels is of immense benefit in the educational field and teaching profession where students have the opportunity to learn. That increases the confidence in their ability and gets the opportunity to use the skills for improving their experience and learning to transfer to others. Students change their position at work and improve their ability to adapt accordingly. They regulate their behavior and acquire awareness which is related to the growth of the strategy through the conducive environment in which they live (Ku &Ho, 2010).

Accordingly, metacognitive thinking skills are equally considered determinant factors to improve programs for the gifted and talented students (Struck & Little, 2011). In Saudi Arabia, gifted students learning centers are structured in different educational levels; intermediate and secondary levels for both males and females. Therefore, knowing the differences in the level of metacognitive thinking skills among gifted students at the different level of education (intermediate and secondary schools) as revealed by the current study will support the continuous effort of the Saudi Arabian educational ministry to overcome the challenges facing the gifted centers.

This finding is consistent with Khezrlou (2012) which also demonstrated a preference for metacognition across different classes. Similarly, Al-Asmari (2014) examined the levels of metacognitive thinking skills as a whole among gifted students in secondary schools and explored the differences in metacognitive thinking skills in relation to students' grade/class and gender. Al-Asmary used the Watson test on a sample of 106 gifted students. The results revealed gifted students' abilities in the use of metacognitive thinking skills did not reach the acceptable standard which is 60%. Furthermore, the study revealed that female students showed some statistically significant differences in the skills of reasoning and deduction. However, male students outperformed female students in the interpretation and evaluation of arguments. Regarding gender, it was reported that there were no statistically significant differences in metacognitive thinking skills. Furthermore, no statistically significant differences were reported in respect to class.

Metacognitive thinking skills in Ubel in Jordan. The sample was 94 eleventh grade students. Surprisingly, the study revealed a low achievement of students in metacognitive thinking skills as a whole and each skill separately. In addition to this finding, the study showed that there were no statistically significant differences between the mean scores concerning the variables of gender and students grade/class. To examine the effectiveness of de Bone in the development of some among gifted students in secondary schools, Abdulhameed (2015) used CORT3 metacognitive thinking skills that were proposed by Edward de Bone. The sample of the study included two groups of students (control and experimental) who were homogeneous in age, intelligence, and metacognitive thinking. Each group consisted of 25 gifted students whose ages were between 16 and 17. The instrument used in the study was adopted from Watson's questionnaire for metacognitive thinking skills. The study revealed a clear improvement in students' metacognitive thinking skills. In respect of the variable of students' grade/class, the study reported that there were no statistically significant differences in the levels of metacognitive thinking among students.

Implication for Further Research

Studies about investigating the difference between male and female gifted students level of metacognitive thinking skills among gifted students in Saudi Arabia is among the recent investigations conducted in Saudi Arabia, so these findings are considered basic and there is still a need for further research and discussion in this area. The findings of this study which have highlighted on investigating the difference between male and female gifted students level of metacognitive thinking skills among gifted students in Saudi Arabia is among the recent investigations conducted in Saudi Arabia particularly in the province of Jeddah, suggested that more studies should be done on the difference between male and female gifted students level of metacognitive thinking skills among other categories of students to make the research more general in nature. Since the present study was conducted in Saudi Arabia and in only the province of Jeddah, using gender difference on the level of metacognitive thinking skills, there is a need to make a deeper investigation of metacognitive thinking skills using many schools. Since the findings of this study showed that the outcomes significantly showed the higher mean rank of males than females in comprehension monitoring, debugging strategies, Regulation of

cognition, and metacognitive thinking skills, research can also be done on strategies that could be used to improve the metacognitive thinking skills in Saudi Arabia. More research on metacognitive thinking skills using purely qualitative research methodology needs to be done to make deeper investigation about the phenomena.

SUMMARY AND CONCLUSIONS

This study attempted to shed light on investigating the difference between male and female gifted students level of metacognitive thinking skills among gifted students in Saudi Arabia. The findings of this study explore the difference between male and female gifted students level of metacognitive thinking skills among gifted students in Saudi Arabia; which is a meaningful change in the Saudi education system in general. The result of the Mann-Whitney statistical test shows that other hypotheses were supported while other hypotheses were rejected. The outcomes significantly showed the higher mean rank of males than females in comprehension monitoring, debugging strategies, Regulation of cognition, and metacognitive thinking skills.

RECOMMENDATIONS

There is a need to develop and establish a philosophy of the level of metacognitive thinking skills through Saudi Arabia Ministry of Education. Difference between male and female gifted students level of metacognitive thinking skills among gifted students in Saudi Arabia has many known benefits for Saudi Arabian Education system, as well as for teachers, students and Ministry of Education in general; Ministry of Education should therefore, enhance and facilitate programmes that encourage public as well as private school's involvement in the issue of metacognitive thinking skills among gifted students. The issue of metacognitive thinking skills, knowledge about cognition, declarative knowledge, procedural knowledge, conditional knowledge, regulations of cognition, planning, information management, comprehension monitoring, debugging strategies and evaluation should be inculcated in the mind of the gifted student in particular and all students of Saudi Arabia in general. Ministry of Education should improve metacognitive thinking skills among gifted students by teaching the teachers metacognitive thinking skills among gifted students, incorporating metacognitive thinking skills into the curricula. Useful policies to the gifted students should also be created by encouraging gifted students to develop their metacognitive thinking skills. Saudi Arabian government through its public schools should improve the quality of life of the gifted and non- gifted students contribute towards addressing their metacognitive thinking skills.

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