

Review Article

**COMPARING STUDENTS' META-COGNITIVE AWARENESS AND NEGLIGENCE OF
CONDITIONAL AND UNCONDITIONAL STUDENTS (DIVIDED EDUCATION GROUPS) AT
ISLAMIC AZAD UNIVERSITY OF GORGAN**

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ABSTRACT

The purpose of this study was to compare students' metacognitive awareness and negligence of conditional and unconditional students. Research is descriptive method and causal comparison. Population included all students of Islamic Azad University of Gorgan in 2013-2014 academic year. Sample size of 408 patients (204 conditional and unconditional 204 students) that was used simple random sampling method which was selected based on Krejcie and Morgan sampling table. Data collected was conducted using a questionnaire of meta-cognitive awareness of reading strategies (MARS) of Alexander and Jatun and Talkman questionnaire. Descriptive statistics (measures of central tendency and dispersion) and inferential statistics (ANOVA manifold) have been used for data analysis. Obtained results showed that there are also significant differences between the students' metacognitive awareness scale (total score) and subscales of reading strategies, problem solving strategies and support strategies for reading, among conditional and unconditional students and also the significant difference between students and the scale for negligence of conditional and unconditional students. This seems due to the fact that general reading strategies and negligence are important among conditional and unconditional students.

Keywords: *Cognitive Awareness, Negligence, Conditional and Unconditional Students*

INTRODUCTION

Reading, in today's changing world that we face with the explosion of information, is essential. Improving the ability to learn to read, like any other human thing can be achieved through training and practice. Experience cannot be held accountable for all situations. The purpose of reading is to learn and to remember, not just spending time and being busy. The approach to treat with a book is different based on the depth, content and topic. (Mashayekh and Bazargan in 2003; quoted Taghi PoorKaran, 2004). Analyzing the status of metacognitive strategies requires that the specified object to be defined at first. During recent years, and the studies that have been conducted on the causes of the fall, an important factor of researchers and practitioners from education is the learning strategies as a framework for learning how to learn better (Tghi Poorkaran, 2004). Zimmerman (1999) believes that learners who use more metacognitive awareness strategies require less attention by teachers. They know how to apply learning strategies. They have perceptions of their abilities in their particular areas and committed themselves to blame their academic goals.

In psychology of news processing, any method that helps information process will work in learning and remembering. Measures to this end are presented by psychologists and experts in psychology of discovery and invention of making news that have been named learning and study skills or cognitive and metacognitive strategies in more technical term. In recent years, the discovery of these approaches suffers from educational psychology means the way of learning and studying (Seif, 2001).

Slavin (2006), based on research about the effectiveness of learning strategies and study said that students can be taught various strategies and helped to learn to think, act consciously and learn to deal with different tasks and issues of useful educational strategies and tactics (Seif, 2010).

One of the variables that affect student learning phenomenon is negligence.

Negligence can be studied from many perspectives and many factors may be involved including intelligence, individual and family factors, psychological factors, and negativism and evaluate the low

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individual capacity and etc. Negligence in Latin (procrastinate) means to have greedily interaction and the literal meaning to delay or delaying activities to another day (Simon, 1993). The behaviorists generally know negligence as a learned habit that is defined by the human preference for short-term rewards (McCoiny, 1986).

Negligence as a behavior is considered as a habit which is prevalent in different societies and is widely growing. This habit is coupled to the delay in accomplishing job and as a result, associated with unpleasant consequences.

Although negative consequences don't feel sensible in everyday life, the losses arising from the spread of the behavior of individuals and groups are also remarkable and this reveals the need to avoid such behavior. It seems when negligence is not normal yet and don't find unconscious aspects and may cause symptoms of mood disorders that complications are: anger, apathy, worthlessness, self-dissatisfaction, feelings of inadequacy, restlessness and useless tasks, fear of failure, lack of self-control, isolation and more importantly, the lack of confidence to start or continue working (Goldberg, 1998).

Brown *et al.*, (1998) quotes from Lotf Abadi (1994) that cognitive ability show off at ages 5-7 years and then expands. So, in the preschool years, the metacognitive strategies can be taught. One of the reasons that researchers are currently studying meta-cognition is the applications that cognitive ability is very important to emphasize the role of meta-cognition in education learning processes and in a transition to an inclusive and giving an active role in learning. Awareness of mental processes is not only a comprehensive guide to the effective use of learning strategies, but also to evaluate their knowledge and enables cognitive task analysis (Berlayneh, 1999).

Anxiety is one of the factors affecting the fear of failure in the future and in addition, is also considered as one of the major reasons for the lack of tolerance or low stamina. In such circumstances, an anxious person feels powerless to begin their work and with fear of failure. This type of anxiety is an anxiety-like concept that Rogers will provide reasons for its emergence (Shafi Abadi, 1999).

Since the awareness of metacognitive strategies and skills will allow the individual to deal with the issues and stay in better educational situation and negligence and incompetence incentives will reduce. This study aimed to compare conditional and unconditional students' metacognitive awareness and negligence at Islamic Azad University, because with enough information, we can design appropriate training programs and provide the background to enhance the performance of different groups of students.

The Main Hypothesis

There is a difference between metacognition and negligence in conditional and non-conditional students.

Sub-Hypothesis

1. There is a difference in metacognition between the conditional and unconditional students.
2. There is a difference in negligence between conditional and unconditional students.

Application of Cognitive Processes

Now we can provide some suggestions in order improvement of to improve data processing and the efficiency of storage according to the features of the memory and metacognition system:

1. Write the studied material in your own language, if studying once was not enough, review again and to ensure your progress in learning, raise some questions and answer them.
2. Raise the reminding practice in your activities and answer.
3. Remove all factors that can disturb your full attention to the subject, and particularly avoid continuous study of the similar contents.
4. To prevent processing interference of various information, students should not be forced to study the courses in a day.
5. After studying a topic, consider a time to relax and start again the next topic.
6. Anxiety is one of the major factors for the reduction of concentration and the provision of correct processing. The night before the exam is not a good time to learn new materials and only the outlines and notes should be reviewed.

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The exam should not become a matter of life and death. To create motivation in students and the ability to function effectively in cognitive processes, value their efforts rather than scoring and reinforce them (Erie, 1383).

Metacognitive Strategies of Teaching and Assessment

Metacognition is essentially the aspect of human reasoning process that are essential for solving the problem. Knowledge of the processes and controlling them are in the area practice metacognition (Aghazadeh, 1998).

For metacognitive training, content selection is not easy. Selecting the appropriate content through investigating metacognitive differences between student groups is possible. For this reason it is necessary to specify in advance the metacognitive performance of the learners. The second source for the provision of teaching metacognitive content of the existing information in the theoretical and empirical literature suggests three strategies and skills: Sometimes appropriate discipline seeking processes, acquiring discipline seeking skills and unavailability and benefiting processing skills of these skills and strategies is a basis for planning teaching metacognitive skills.

Who is benefiting from cognitive training?

Teaching skills and strategies to learners who have previously learned most of the skills and strategies is not effective, also metacognitive trainings for those who lack basic cognitive skills and do not have enough emotional readiness is not beneficial. For example, students who lack basic skills in reading, it is not expected that they become successful in educational programs aimed at improving study skills and self-discipline seeking skills in studying.

Also learners who believe the effectiveness of strategies and study skills do not benefit from cognitive training programs. Therefore, those students who lack metacognitive skills and strategies are appropriate for metacognitive trainings. As a result, is the identification or diagnosis of emotional knowledge stamina of the learners necessary to succeed in metacognitive trainings?

What are the basic principles of cognitive training?

Several principles can be derived from researches on teaching and learning metacognition. From among the many principles extracted, the following principles are important:

A- Learning activities and processes should be emphasized more than the learning outcomes (the origin of process).

B- Learning is "inter-achievable" and the students are helped to be aware of learning strategies, self-discipline seeking skills and the relations between strategies and skills in order to achieve learning goals (the reflection).

C- The interaction between cognitive, metacognitive and emotional factors of learning are at the center (emotional).

D- The students should be aware of the use and function of knowledge and skills (the function).

E- Training should be designed in such a way that a good balance exist between quality and quantity of learning (the activity).

F- Higher cognitive learning objectives which require deeper cognitive processing should be emphasized (the target).

G- Training should be appropriate with the students' current ability to understand (the principle of learning cognition).

H- How much time should be devoted to cognitive learning?

In most training programs we generally consider little time for metacognitive trainings. This is not because the short-term training programs are effective, a study has indicated that teaching an hour for the adults were involved in learning a foreign language, remarkable results were obtained. We know that short-term training programs are not generally effective in learning for young children, low strength students and disabled students. Long-term training programs are more effective than short-term training programs. However, a serious study is conducted in the field of training programs' time.

What should we do for learning metacognition?

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Training materials that are used for cognitive training, should be ecologically compatible. That is, we should enter materials in the training fields that the students are frequently faced with in and out of school. It is desirable to use the same materials for the metacognitive learning programs that the students are seeking to learn for their academic courses. Training programs that do not have the features mentioned above would be inappropriate for the students.

Where should we start metacognitive instruction?

As the learning assignments for metacognitive instruction should be ecologically compatible, the best place to start working, is the school curriculum. Arranging cognitive learning in the university curriculum is not devoid of problems and difficulties. This act sometimes confuses the students. Therefore, eliminating difficulties instead of focusing on studying and solving problems, the students should be asked to arrange the processes involved in studying and problem-solving (Aqazadeh, 1998).

Meta-theory-based teaching method

Metacognition is the awareness of one's own cognitive system, controlling and directing. In literature, in psychology, cognition is usually synonymous with thinking. Therefore, metacognition can be defined as the awareness of current thinking, controlling and directing it. Metacognition in the psychological theory of human cognition is known as receiving, processing, storing and transmitting information. Metacognition is an activity that involves actions related to the four mentioned elements and monitor them. Teachers and professors in schools and universities should invite students to correctly receive, process, store and transfer the information, and then encourage them to do the mental activities and review them (Ghiasi, 2002).

Metacognition and learning:

1. Metacognition: is the awareness of the cognitive mechanisms of the self and its functions or knowledge processes that we have of our own cognition and learning.
2. Metacognition which is the executive and manipulative controlling and arranging the cognitive processes (from the previous reasoning comprehension, learning etc.) is different from an individual to the other.
3. Metacognitive knowledge is divided into three types: knowledge news, practical knowledge, conditional knowledge. The use of these news, operational and conditional processes constitute a person's metacognition.
4. Knowledge news is related to the nature of learning and self-memory and skills and strategies and its sources. Practical knowledge is related to the causes and timing of learning actions and strategies.
5. Metacognitive skills (planning, monitoring and evaluating) are learnable and although many people employ some degree of it are not aware of that information. The students should be taught to learn these three skills and perform in their duties as well.
6. Planning skills, includes decisions about the performance time of the duties, appropriate strategies to accomplish the task, how to start and continue the work and order assignment, necessary resources to work, and consuming the amount of time and energy in each case.
7. Metacognitive skills indicate care and continuous control of the task from the beginning to the end of implementing the task.

Contemporary theories that have influenced educational system learning can be classified into two major categories (Hashemi Moghaddam, 2001; quoted from Pour Karan 2003).

Metacognition and academic performance

One reason that many researchers are currently engaged in the study of metacognition is that metacognitive ability has important applications in education and achievement. Studies indicate that people who have trouble reading, have metacognitive defects in their many aspects of are reading (Baker, 1982; cited in Erie 2004).

Such people reflect less on difficult texts in contrast to skilled readers or do not review texts that they have not learned and in summary they do not match the activities related to reading with the needs and goals that have been specified in reading assignment. They match their efforts in a manner consistent with the duties and considering the time designated for academic learning, but the school's curriculum may be

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modified so that they can be trained in these skills. These programs also include awareness training. In this type of guidance not only the children are taught some of the strategies to use but also how these strategies can be used to improve their learning is described. Understanding the ferrites of these strategies increase the use of these strategies by the students when they are not encouraged to do so and this improved the reading, studying and scientific problem solving skills in them and therefore is followed with academic achievement and improved school performance (Htrnygtvn and park translator Thvryan, 137; quoted in Erie, 2004). In any case, the school or the university should include training metacognitive skills in the curriculum at simple and complex levels (Kadivar, 2000).

Table 1: Mean and Standard Deviation of Conditional and Unconditional Students' Metacognitive Awareness Scores

	Conditional students				Unconditional students			
	Mean	SD	Min	Max	Mean	SD	Min	Max
Overall Reading Strategies	22.936	5.4023	11.00	55.00	47.833	4.94518	17.00	55.00
Problem-Solving Strategies	17.004	4.6008	8.00	40.00	34.730	3.42130	13.00	40.00
Strategies for Supporting Reading	19.462	4.3080	10.00	45.00	38.946	3.98174	14.00	45.00
Metacognitive Awareness (Total)	59.367	26.9123	34.00	140.00	59.367	26.91232	34.00	14.00

Table 2: Box Test to Investigate the Homogeneity Assumption of Variance-Covariance Matrices

	Box's M	F	Df ₁	Df ₂	Sig.
Hypothesis 1	10.811	1.591	6	5680.302	0.145

Discussion and Conclusions

In the present study to achieve the objectives of the study 2 hypothesis were raised that each of them can be discussed separately for further explanation of the research findings.

Hypothesis 1. There is a significant difference between the meta-cognitive awareness of conditional and non-conditional college students.

To test this hypothesis, scores of metacognitive awareness component (overall reading strategies, problem solving strategies, and strategies to support reading) in both conditional and non-conditional students were compared using multivariate analysis of variance (MANOVA). Initial investigation showed that there are significant differences in the scores of metacognitive awareness between conditional and non-conditional students. Following these differences indicates that there is a significant difference between the conditional and non-conditional students in terms of the three components of metacognitive awareness of reading strategies (F= 953/186, p = 0/000), problem solving strategies (F=748/073, p =0/000) and strategies for supporting reading (F=915/747, p =0/ 000). Overall reading strategies, problem solving strategies, strategies for supporting reading in non-conditional students are more than conditional students. Given the size of the effect, it can be said that most of the differences between conditional and non-conditional students are in terms of reading strategies. The minimal difference is in terms of problem solving strategies.

The findings are consistent with most of the previous studies abroad, these studies including Esgel, (2005); Penitrich and Digorth (1990); Kay *et al.*, (1989); Roman Waylla (1994). Studies of Salari Far and Bakras (2009), Javadi (2010), Haidari (2001) and Afshar (2001) are also consistent with the present

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findings. However, the findings obtained can be inconsistent with Studies of Server (2009), Kanala and Presley (1990), Musolodis (2005) and Filippo (2004).

The studies generally indicate that there is a significant relationship among the metacognition, and academic abilities and success. This is why conditional students have gained lower metacognitive scores. This result is quite consistent with a lot of metacognitive theories like metacognitive theory of Flavel (1979) theory of metacognitive knowledge of Cleves (1982) theory of metacognitive knowledge of Brown (1982). In view of Flavel (1979) metacognitive is knowing as how to learn, How to use the information for achieving the purpose, the ability to judge about the cognitive processes in assignments, knowing the strategies used in line with the aim and evaluating progress during the performance and after finishing the performance. This view indicates that when the person is performing a task he can achieve whatever he needs through metacognitive knowledge. In fact, in view of Flavel (1979) metacognitive awareness is such that it requires better performance, resulting in higher academic ability. So, the type of Flavil's description (1979) of metacognitive doesn't show a slightest doubt on the reader about the effect of metacognition on academic ability and reducing the likelihood of failing.

Also in the view of Cleves (1982) the nature of metacognition as a factor associated with the development and performance is explicitly addressed. He knows metacognition as executive processes, including decisions to identify tasks that someone is working on it, recent progress in the implementation, evaluation of progress and predicting whatever that its outcome is progress. In fact, this notion of metacognition shows that to what extent metacognition is involved in the academic issues. Mainly academic abilities require that a person to be aware of progress dimensions. This means that he identifies aspects of progress in lessons and assignments, evaluates the extent of his abilities and progress, and knows that what he can achieve as a result of the progress. This is the process of Supervision of the Executive that Clio (1982) considers it as the aspects of metacognitive awareness. Clio (1982) also raised another term as Executive adjustment processes that are responsible for regulating the flow of thought. Clio (1982) describes this aspect of metacognition with features that would have convinced us that the findings of this study affirm his theory. He says the executive adjustment processes, help the individual to devote the necessary resources to his current assignment, determine the steps to complete an assignment, and determine the intensity and speed in doing the task. This clearly shows that, in facing with an assignment for doing it well, we require metacognition. However, academic ability and not failing which need successful completion of the assignments are entirely based on metacognition according to this theory. In view of Brown (1982) metacognition is related with performance, flexible memory and purposeful and deliberate learning. Brown (1982) illustrates another aspect of metacognition for us. That is monitoring of learning and how to learn. Montague (1992) based on the same theory believes that the relationship of metacognitive awareness with the ways of learning shows that acquiring this knowledge that is awareness of regulations, Strategies and goals of the issue make the individuals to be able to be more efficient and more flexible to adapt their cognitive abilities with new task topic. Hoffman and Aspartario (2008) also emphasized the close relationship between metacognition and learning and know the relationship as the justification on better academic performance of the individuals with higher metacognition. The conclusion of Aspatario and Hoffman (2008), based on the theory of Brown (1982) is quite logical, because for a better academic performance, which means overcoming assignments and tests that the university holds, the main element is learning. If someone really learns his lesson very well, he could be better in exams. However, according to Brown (1982) who somehow knows metacognition as a help to how to learn, it is quite reasonable to expect that we associate being conditional with metacognition.

Regardless of the consistency of the present study's findings with the mentioned theories, most of the explanations have been told to justify metacognition's relation with performance, progress, and academic capability need the concept of learning according to the Brown theory 1982. The problem arises because the impact and the importance place of the components and metacognitive skills in learning have clearly been shown in numerous studies. For example, Bekman (2002) has shown in his studies that cognitive and Metacognitive strategies increase learning process of the learners. Also Anderson (2002) in his study

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titled the role of metacognition in teaching and learning has achieved this result that the application of training Metacognitive skills in second language teaching and learning has an effective and valuable role. Pinitrich and Digrot (2003) on the basis of the research that conducted on the seventh grade students in science and English language courses have this conclusion that there is a positive correlation between metacognition and learning performance. Bransurd, Sternberg and Zimmerman (2002) researches suggest that there is a positive relationship among the self-awareness cognition, problem solving and learning, and self-awareness cognition and problem solving are essential to learning (quoting; Eskitika, 2002). Hall (1999), investigated the fifth and sixth grade students' abilities to solve the problem after doing three assignments. In his study he determined that providing the controlled groups with Metacognitive strategies and special training (monitoring and controlling), make them superior in the field of solving more complex issues compared with the control group. Many learners know their learning difficulties arising from their failure to understand, but their actual problem is the use of learning strategies. Self-regulation in learning is an important factor in academic achievement and self-regulated learners by setting goals, are planning and evaluating for achieving them. Those who use self-regulation strategies have more progress in their education. Self-regulation makes students to be active in managing their thinking and learning in a cognitive, motivational and behavioral way and take control of learning (Paris & Winograd, 1990).

About the Metacognitive awareness to be more in unconditional students that naturally have higher academic performance Sklipher and Dall (2009) believe that metacognitive awareness with an impact on the emotions and experiences resulting in guiding a person's thoughts and thinking in learning and problem solving situations, leads to better performance of memory. According to the researchers because of this reason metacognitive awareness predicts performance and academic achievement. Bradford and Steve (2008) point to metacognitive ability in transferring information from the concrete level to the abstract. They believe that self-controlling through careful control of cognitive components involved in doing homework and supervising all aspects of speed, focused attention on the issue will have a profound impact on academic performance. About the impact of problem solving on academic ability we can also refer to the explanations of Larkin (2009). The result is that it increases the accuracy of metacognitive skills. In this way, it is obvious that he knows the impact of cognitive strategies on academic performance. He noted that the problem solving strategy is necessary for comprehensive attention to the nature of the assignment and choosing the most efficient strategies while the person is using his metacognitive skills. In fact, he knows problem solving strategy as a way to control the Metacognitive strategies and considers a mechanism for it that the result of it is the increase in accuracy of the metacognitive skills. In this way, the impact of cognitive strategies on academic performance can be demonstrated.

Hypothesis 2 there is a significant difference between conditional and non-conditional negligence students.

In order to test this hypothesis and to compare the two groups of conditional and unconditional negligence students, t-test of independent groups was used. According to the findings in table 16-4 and confirming the Levine test the amounts were considered as $df = 406$, $t = 25/184$, $p = 0.000$, that based on these results, there was a significant difference in terms of negligence scores between the average number of the conditional and non-conditional groups. Based on the mean score of the conditional students ($\bar{X}=47.8480$) and non- conditional students ($\bar{X}=31.186$) negligence in conditional students was more than

non- conditional students. The results are consistent with the studies of Tamadoni and colleagues (2011), Kosari (2011), Namdari and Ahmadi Tahur (2011), Kamali (2012), Steel (2008), Hussein and Soltan (2010).

In explaining these results, we can say that negligent people show less motivation for education and usually their postpone work. They ignored their homework and do them in time. In fact, as the characteristics of these people can show negligence decreases performance. Negligence is associated with variables that are followed by reduction of the performance and results in lower grades in exams and

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being conditional. Negligence is associated with anxiety, perfectionism, difficulty in making decisions, independence and seeking help, hating the job and little tolerance for frustration, low self-esteem, lack of courage, fear of success, poor time management, Mutiny against the inhibition and laziness (Tamadoni *et al.*, 2011). The mentioned Factors typically affect the academic performance of the individual. The evidence shows that Negligence will lead to dropout (steel, 2008), stress and worry (Williams *et al.*, 2008), little progress (Ferrari and Bichil, 2008) that all lead to the lower scores and reduce academic performance of the students. In addition, inability to concentrate (Howell and Watson, 2007), lack of energy (Lee, 1995) and weakness of these people in time management (Alexander and Angbuzee, 2007) makes the person unable to function properly during the semester and exam deadlines, resulting in lower grades and being conditional.

Conclusion

The overall results of this study suggest that negligence and metacognition in conditional students are different with non-conditional students. In fact conditional students are more negligence and have less metacognitive awareness. This is very important and should be considered with regard to education and training of students. The problem in today's education system that seeks to prepare students to meet the large and small challenges of the future world, is very important. Because teachers and trainers of the system know that their traditional role as the ones who explain textbooks and ask about the courseware, come to an end and the next generation expects the editors of life skills be something like creative thinking, have problem solving power, critical thinking, and increase sociability, and so on, and lead the students to creative and productive work so that they would be able to find their way through ups and downs of the future. It is in these conditions that the whole attention on the lessons as a template and an emphasis on cognitive intelligence in order to learn the lessons and ignore the issues such as negligence and metacognition that is the attributes that are extremely important in the learning of the individuals is a vast oversimplification. Because the two aforementioned components are considered as the determining and effective factors on academic abilities. Therefore, schools should focus their activities on education and metacognition. It should be considered that concepts such as metacognition and negligence are both in a certain way and to achieve their goals with academic issues. These concepts go hand in hand and the integration between the related efforts to foster individual and metacognition characteristics seem sensible with educational activities. It is only enough to put away beliefs and ideas that form the basis of academic courses in the form of mental impasses and be open to accept these ideas that learning metacognitive skills in the form of specific courses guarantees our abilities to acquire the required academic success.

Recommendations

- It is recommended to investigate the effectiveness of some psychological treatment approaches on conditional students' metacognition and negligence in further studies.
- It is recommended to homogenize the sample groups in terms of interventional variables such as age and level of education in future studies.
- It is recommended to investigate the studied variables (metacognition and negligence) in relation to academic performance in different subjects in future studies.
- One of the new issues in the field of academic negligence is the active negligence. It is recommended to conduct studies in this field on conditional students.
- It is recommended to focus on other aspects of metacognition such as knowledge attention in future studies.

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