



## Performance Comparison of the mathematical skills of Computer and Electronics students in the Chamran college technical rasht

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### Abstract

The aim of this research paper is to study about chamran college technical Rasht student's skills in math lesson according to Bloom's recognition compasses. Statistical samples were 72 students (males) from computer and Electronics branches of technical major who answered math questions from whatever they had learned before entering the university. The Exam included 50 multiple choice questions which were designed and classified due to Benjamin Bloom's recognition compasses, Results show that:

a) Students had the best performance in science, application, comprehension and knowledge, but they had the least performance in evaluation and judgment, analysis and combination.

**Keywords:** Computer; Electronics; comparison; math skill; Chamran technical; Bloom; Performance.

### 1. Introduction

Skill in mathematics and concentration on concepts are those which the instructors don't care and emphasize seriously. In George Poolia's (1964) opinion skill in mathematics means the ability to solve the problem the ability to prove and reason and the ability to critical analysis of solution or proof. Skill in mathematics is more important than a pure knowledge and bare and solid in formation. Because of this concept math teachers design a functional test questions and don't cure to the skills and concepts. While using cognitive scopes, can help greatly in measuring the level of learning and skills.

By the view point of Benjamin Bloom, classification of educational goals in different scopes of learning are divided to three scopes of cognitive, Emotional and psychological. Usually these three scopes are like a united network. In the other words leaning and educational goals in the psychological scope is mixed with learning in emotional and cognitive scope and it's not separable. Some behaviors have more cognitive aspect and some of them have exciting aspect more.

The other group that specify by functional skills are in the psychological scope. For example each deserving teacher tries to interest students (emotional goal) to learn the subject of the lessons. Another time teacher tries to change the trend (emotional goal) with knowledge and information(cognitive goal). But psychological skills and doing them need the corporation of never and muscles. Like sewing driving, functional skills in the technical and vocational fields physical education ,art ,laboratory works and like these. Because of extent of skills domain, according to the Dave's opinion ,there is harmony between the psychological functions which is done by organs of body .

Classification of Dave(1969) respectively is started with a simple activity ,observation and imitation and slowly is finished by the higher level of performance without help , accuracy and harmony of movement. Totally There is no agreement about the level of learning.

Guilford(1969),kibler,Miles (1970)and harrow (1972)have said their opinions about this field. In this paper cognitive scope goals with psychological scope emphasize on the reminding of something that learning of that is necessary. goals are regulated from the simplest to most complex level and inherent and to and goals of learning in cognitive scope according to the classification of Benjamin Bloom are knowledge-understanding-using-analysis-combination and evaluation that is used in this study to determination of the rate of students skills and their performance.

The main goal of the research study the performance of math lessons of student, in the technical higher education center of Chamran with the Bloom cognitive scopes.

## 2. Method

Method descriptive and in a type of finding the field.

Statistical sample consists (32 people computer and 39 people electronics) in 2classes of technical Chamran college of Rasht Guilan province were the research samples .

Research tools, Questionnaires of researcher consists 10question about specification of respondent and 50 math questions .for evaluation and test 10 questions and for other scopes 8 questions were designed. Questions were designed from three year of high school math books.

In some question the correct answer is more than one choice to evaluate and test the ability to answered and solve the problems. It helps to reduce the accidental answer. The questions wanted them to answer why they choose these choices but Just 2%of all students answered in this was. Method of sampling and collecting data method of sampling like cluster was done accidental and in some steps, but this way of collecting by the presence of researcher and manager in the classes was done and completing these questionnaires were finished and time of answering was the same.

Statistical ways for analysis of data, Researcher used statistical ways like average, percentage graphs, variance analysis, standard deviation and test of t and f.

## 3. Finding

3) Students in this research just answered41%of questions correctly.(Computer39%&Electronic43%)

4) Students answered wrong to 25% of questions.( Computer28%&Electronic22%)

more details is table number (1).

**Table (1) shows Percent) for wrong answers and correct and average**

The average of wrongs answers (percent)	The average of corrects answers (percent)	Non answer (Total) (Percent)	Wrong answers (Total) (percent)	Correct answers (Tot al) (percent)	Sample group
26.12	36.38	33	28	39	Computer
22	41.6	35	22	43	Electronics
23.84	39.28	34	25	41	Total

Status of math scores in different cognitive scopes:

#### A. correct answers

According to the project findings, students in different scopes like application, comprehension and knowledge , get the most points .In the other words,61% question about application,44%about understanding and 39% was about it knowledge the answered correct .In cognitive scopes has the least performance. In analyzing 33%answered and 32% answered to combination scope and 38% answered to judgment the correct answer. Electronics Students has a better performance than students computer in the knowledge, application combination and appraisal but in the other Electronics are better. you can see call in the following table(2).

**Table (2) shows the expansion of correct answers**

Cognitive domain	Computer (percent)	Electronics (percent)	total (percent)
knowledge	34	43	39
comprehension	47	44	44
application	59	63	61
Analyzing	34	32	33
combination	28	36	32
Appraisal	35	40	38
Total	39	43	41

#### B. wrong answers

According to the findings, students in Chamran collage technical answered wrong to25% of questions. most of wrong answers are in the comprehension scope by 32% and the least wrong answers are about appraisal scope by 19%. The following table(3) shows the wrong answers in different cognitive scopes with sex if respondent by its percentage.

**Table (3) shows the expansion of wrong answers**

Cognitive domain	computer (percent)	Electronics (percent)	total (percent)
knowledge	35	25	30
comprehension	36	28	32
application	26	17	21
analyzing	29	29	29
combination	22	19	21
appraisal	21	17	19
total	28	22	25

According to the findings, students in Chamran college technical answered 66% of questions In the other students didn't answer (No answer) 34% questions. They answered 83% of questions about application and answered 53% of questions about combination . Table (4) shows the correct or wrong answers.

**Table( 4) shows answers (correct or incorrect or No answer)**

Cognitive domain	Correct answers (percent)	Wrong answers (percent)	No answer (percent)
knowledge	39	30	31
comprehension	44	32	24
application	61	21	18
analyzing	33	29	38
combination	32	21	47
appraisal	38	19	43
total	41	25	34

The table(4) shows that students answered the lower scopes such as analyzing ,knowledge and understanding more than others, and its exactly the test which they usually answer them and evaluate their ability by this. but they answered the worst in three scopes such as application , appraisal and combination . These scopes usually are not used in the test and they don't have good skill in these scopes.

Sanjesh organization report cards show that 5% of students who entered college answered less than 50% of the questions of entrance exam. (computer 3/3% and Electronic 6%).  
7/7% of the students claim that average mathematics score in high school or arts – and – crafts school was between 17 and 20 and 43/1% claim that their average score was between 14 and 17 and 35/4% say that it was between 12 and 14. Table (5) shows more information.

**Table(5) shows report question for enter to college**

Parameter Sample	Frequency and present	10-12	12-14	14-17	17-20	total
computer	%	10/3	55/3	31	3/4	100
Electronic	%	16/7	19/4	52/8	11/1	100
Total	%	13/8	35/4	43/1	7/7	100

#### 4. Discussion

Results of this research, confirms the findings of Alamalhodai(2002) and Alamalhodai, hedayatpanh(2011) about types of learning and extend of that. It confirms results of him jafari (2006)too. Results of this research mean questions of final exam of math is better to designed by the performance of students in cognitive scopes.

#### References

- [1] Alamalhodaei , hedayatpanah(2011)” Students’ Field-dependency and Their Mathematical Performance based on Bloom’s Cognitive Levels”ksme(journal of the jorean society of mathematical education,vol(15 (4),373-386
- [2] Allahyari, (2001) “study of math teaching in the high school of Bijar town”
- [3] Alamalhodaei,jafari(2001)” collection of papers of fourth conference of math teaching”

- [4] Alamalhodaiei, H(2002) "Student's cognitive style and Mathematical world Problem Solving "Journal of the Korea Society of Italic Mathematical Education.
- [5] Beyer, B, (1998 p:45) Developing a thinking skills Program Boston AllynBacon.
- [6] Case R, and Globe sont(1974), Field independence central computing space child development.
- [7] EKbia. And Alamlhodaiei, H (2002) "A study of the effectiveness of Working memory and cognitive styles on Mathematics Performance of (13 years – old) Schoolboys unpublished MA Desertation Theran university of teacher training."
- [8] George poolia(1968)" math innovation" translated by parviz shahriari fatemi: publication
- [9] Hasannejad, afsane(2001)" study of problems in learning and understanding of math in 1st grade of high school, mashhad university "
- [10] Hedayat panah \_Alamalhodaiei (2008)" study of problem is learning of students with different cognitive types in math in the technical education of Guilan"
- [11] Hedayat panah Ahmad, (2008)" The study of chamran colleges students in math lesson in different recognition compasses Journal of the poznan,Poland Tjmcs 2(2),319-328"
- [12] John galaver (1998)" cognitive psychology for teachers ",translated by Alinaghi kharrazi
- [13] Keramani mohammad reza (2003),"study of learning effect on social growth and improvement of students in math "
- [14] Luis kohen and michel holiday (2002),"static in the physical education translated by Ali delavar,Allameh tabatabai publication "
- [15] Michel isenak(2000),"descriptive culture of cognitive psychology" translated by Alinaghi kharrazi
- [16] Negaresh Nejad,Abdolmajid(2002)" primary ways of statics in the education.

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Number : 24 Research

The Individual Study Time of the Teachers in Guilan Province

(1) The individual Study Time of the Sama Technical Vocational College Rasht

(2) The structural strategies of islamic management principles in the schools (34) "Study and investigation of the problems and learning disorders of students by various cognitive styles in mathematics course at Guilan higher education center" (5 Number: 14 Books written.)

(1) General Mathematics 1: ISBN:978-964-9592-82-4 Publisher : Daryayedaneh General Mathematics

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- (14) The Best Researchers at University of superior technical and professional 2012
- (15) The Best Researchers at University of superior technical and professional 2013
- (16) The Best researcher Iranian(Guilan) 2008
- (17) The Best researcher Iranian(Guilan) 2010
- (18) The Best researcher Iranian(Guilan) 2014
- (19) The Sample Teacher Iranian 2003 6)
- (20) The Sample Teacher Iranian 2006
- (21) The Sample Teacher Iranian 2012
- (22) The Best Author Iranian 200 9)
- (23) The Best Author Iranian 2004
- (24) Article: number:99

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