

EFFECT OF TURKISH-MATHS UNITY ON STUDENTS' SOLVING PROBLEMS IN 8TH GRADES IN PRIMARY SCHOOL

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ABSTRACT

Language is an important element of Maths. One of the common problems that we encounter especially in the process of solving operations can be based on misunderstanding the question. This situation makes us think how Turkish skills, we need to use in mathematical operations, assists our process of solving problems. The aim of this study is to examine the effects of Turkish-Maths unity in the process of solving problem on 8th grades in primary schools. While reading, writing, listening and speaking skills are examined in Turkish part, process of solving operations are examined in maths part. It is thought failure especially in the process of solving verbal operations results from that students could not understand what they read, write, express or form a diagram. Illustration of our study includes 100 8th grades students in primary school in Beylikdüzü/İstanbul. We have carried out a test to these students including 20 questions that evaluates Turkish-Maths unity. Reading, listening, writing and speaking; Turkish skills assessment forms are evaluated with the help of Turkish teachers.

Key words: Maths teaching, Turkish- Maths unity, Turkish- Maths problem test

INTRODUCTION

Mathematics is considered to be difficult to understand and so that unpopular course in our country and even in the whole world. It is crucial to address the problem of expressing which is one of the reason making Maths unliked course. Because presentation of the problem usually is thought to be repetition of the related sentence summary. However, once students understand the problem sentence, they are able to reach the solution by the meaning created in their brains. Main center of problem setting up and solving is student's brain. So that, the student should aware of the sentences or explanation made by the teacher (Albayrak ve Erkal, 2003).

According to the cognitive theorists, comprehension and understanding are important in the problem solving. Due to Barb and Quinn's (1997) studies, it is pointed out that Polya's method is used and according to this method, understanding the problem and making action considering it are vital for problem solving (Barb & Quinn, 1997).

Understanding what is asked and what is given in the problem is pre-condition in order to figure out solution of the problem. One of the major difficulties encountered in solving the problem is caused by reading improperly and misunderstanding. Students who have general reading difficulties, experience difficulties in understanding the problem. (Baykul, 2000; Polya, 1957).

Charles and Lester indicate that one of the factors affecting the problem solving process is reading skills (Karataş ve Güven, 2003).

Considering these, it is understood that mathematic course has close relation with lessons associated with reading-comprehension. Turkish and mathematics lessons, which are placed in expression and skill lessons, have supplementary features to form students' affective and cognitive abilities (Albayrak, 2001).

In terms of understanding concepts, using the concept, reading the problem, explain the problem or reaching the conclusion by students in given-asked-solution continuity, supplementary feature of Turkish and Maths lessons occurs.

We witness the use of this agent in contemporary life and especially in daily life where success is based on reading and writing and also in fields such as social, economic, scientific and political activities (Albayrak ve Erkal, 2003).

In lights of all these researches, it is a requirement that Turkish lesson, which includes reading-comprehension, writing, listening and expressing skills in problem solving process, should be in cooperation with mathematics. It will focus on how this cooperation results considering especially the second grade of primary school students.

Importance of Turkish skills success in terms of verbal problem comprehension and figuration will be shown in this research. The solutions, which include subjects such as how Turkish-Maths unity should be, in this sense what to be considered and how to implement this cooperation, will be developed.

Aim of the Research

The purpose of this research on 8th grade primary school students aims how Turkish and Maths unity affects students' problem solving skills. In particular it is thought that failure in verbal problems is caused by not able to understand what is read by students, not able to write, not able to express and so that not able to form a scheme addressing the solution. Relation of success shown in Turkish lesson will be examined together with understanding and concretization of maths problems; contribution of this unity on problem solving skills will be presented.

METHOD

In this section, information related with the research model, sampling, data collection instruments and data collection will be provided.

The Research Model

The aim of this study is to examine the effects of Turkish-Maths unity in the process of solving problem on 8 th grades in primary schools. Within this scope, quantitative research method will be used.

Quantitative research begins with theory and hypothesis. The aim is to express and measure findings by using numerical values. Quantitative researches are studies which answer questions such as "what percentage", "how many", "by whom", and so on. In accordance with this purpose, problem test and skill evaluation scales will be applied.

Research Universe and Sampling

Research universe consists of 30 8th grades students in primary school in Beylikdüzü/İstanbul. Research was carried out on 100 8th grade students at Büyükşehir Primary School and Cagdas Yasam Primary School in Beylikdüzü, Istanbul during fall semester of 2011-2012 school year.

Data Collection Tools

In addition to the information for research theoretical basis by the creation of domestic and foreign resources to be achieved as a result of scanning information, subject experts' opinions were encouraged to be taken.

In order to evaluate turkish skills in the study, evaluation forms will be used.for reading, writing, speaking and listening skills in 8th class teacher guide books, These forms to assess ability will be filled in by the applied students' Turkish teachers.

Research from different sources for the data collection of past questions and questions derived from scanning the problem solving achievement test was created by the researcher. Before applying the test, information about the content of the problem test and duration will be given to the students.

Data Analysis Techniques

The data obtained in this study using a Finesse program is solved.

RESULTS AND COMMENTS

The following results were obtained from the data statistically.

Table 1: Results Related to Mathematic Test

N	100
AVERAGE NET	9.859
PERCENTAGES OF SUCCESS	49.293
STANDART DEVIATION	3.854
Kr-20 RELIABILITY	0.705
STANDART ERROR	2.094

Table 1, It reflects the results related to the problem test that we applied 100 people in a group of students. 9.859 was a net average of the test .It shows that a high level of success is not displayed for a test exam consist of 20 questions in general. Within this sample, 30 students were selected through random sampling. The result from Turkish skill assessment forms of 30 students' is shown in Table 2.

Table 2: The Results Related to Turkish Skill Assessment Forms

Students	Listening Skill	Speaking Skill	Reading Skill	Writing Skill
1	3	3	3	3
2	1.6	1.8	1.2	1.6
3	3	3	2.8	2.8
4	3	3	2.8	2.8
5	1.4	2	1.4	2
6	2	2	2	2
7	2	2.2	2	2
8	1.6	2	1.2	1.8
9	2	2	1.6	2
10	3	3	2.4	2.4
11	2	2	2.2	1.8
12	2.4	2.4	2.4	2.4
13	2	2.4	2.2	2
14	3	3	3	3
15	2.8	3	2.8	2.6
16	3	3	2.8	2.8
17	1.6	2	1.8	1.8
18	1.6	2	2	2
19	3	3	2.4	2.6

20	2	2	1.6	1.8
21	1.6	1.8	1.8	1.6
22	2	2	2	2
23	2.4	2.8	2.8	2.6
24	2.6	2.8	2.8	2.6
25	3	2	2	3
26	1	1.4	1.2	1.2
27	2.4	2.4	2.4	2.2
28	3	3	2	2
29	1.8	2	2	1.6
30	2.4	2	2.2	2

Table 2, Within the selected sample, which is filled by 30 students' Turkish teacher, Turkish skills evaluation forms show the average scores. In the forms given place four Turkish skills, items related to the students' abilities performed or not performed enables us to have knowledge about the occurrence of these skills.

Table 3: Results Related to Correct Numbers and Percentages of Success in Students' Mathematics Problem Tests

Students	Average Net	Percentages of Problem Test
1	14	70
2	8	40
3	13	65
4	13	65
5	7	35
6	11	55
7	11	55
8	7	35
9	8	40
10	13	65
11	5	25
12	17	85
13	5	25
14	16	80
15	11	55
16	11	55
17	7	35
18	10	50
19	14	70
20	9	45
21	9	45
22	7	35
23	14	70
24	10	50
25	13	65
26	9	45
27	6	30
28	13	65
29	7	35
30	11	55

CONCLUSION AND RECOMMENDATIONS

In our problem test there are some words that affects the resolution process in a bad way due to it is not understood. These types of words can be classified as nouns, adjectives, adverbs, conjunctions and prepositions . Nouns such as multiple, more, from the beginning, equal, from the end, on the whole; each of the adjectives such as second, three, previous, next, the twins, the first, how many times, the most, the least, each; adverbs such as more, early, at the same time, at

the same speed, else, missing, in turn, then; prepositions like with, alone, by, after then; conjunctions such as and or etc.

These are the words which we often encounter in problems. Addressing and meaning these types of words in turkish lessons will be beneficial when faced with problem situations. Types of nouns, prepositions, conjunctions, adjectives and interjections which are processes in 6th class, types of verbs and adverbs in 7th class, 8th grade gerundial topics covered in the classroom, not only to the specified grade levels but also to each step should be required again can be said. Because in the frame work of the results obtained in the 6th class in which classes these types of words should especially be repeated and if it is not located in the program, the need of its matters will be made inferences. During this process, it is beneficial to present the mathematical texts to students.

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