Foreign Research
Чуждестранни изследвания

ANXIETY OF STUDENTS PREPARING FOR THE UNIVERSITY ENTRANCE EXAM TOWARDS MATH LESSONS

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Abstract. It is known that one of the crucial factors affecting the students' success at math lessons negatively is math anxiety. In most general meaning, math anxiety may be defined as an anxiety and fear emerging in relation to certain math situations.

The aim of this study is to find out the reasons of math anxiety observed among students attending privet courses. To collect the needed data of the study an anxiety scale was administered to 450 students attending different private courses in the city of Kırklareli, Turkey. The obtained data was processed by data processing software. After the required data interpretation steps were concluded, students' math anxiety reasons were determined and in relation some solutions were suggested.

Keywords: math anxiety; university entrance exam; private courses

Introduction

Prospective graduates of high school who attend the university entrance exam go through difficult times, especially times full of worries which are triggered by various sources. The anxiety is not only common during the preparation period but also during the university exam itself. The level of the anxiety and the difficulty of the task to be completed can affect the final success positively or negatively. Actually, anxiety is a phenomenon experienced inevitably by many human beings almost anywhere and anytime. The state of anxiety may lead to failure and low performance. Thus, to understand the reasons triggering anxiety and learn how to control it is closely related to the rate of success (Cücelioğlu, 1998).

Anxiety is such a widespread and universal phenomenon that it is experienced by any individual disregarding culture, religion, race, gender, and age. Arı (1989) defines anxiety as a state which emerges in relation to physical, emotional, and mental changes in a given individual as a result of subjective threat. Spielberg (1970), and Aiken (1976), proposed that anxiety is a state of fear and worry experienced in threatening situations. Anxiety emerges from conflict and the feeling of self-protection.

Mathematical anxiety, firstly defined as a mental syndrome, appeared as a reaction towards fields of mathematics, and arithmetic (Drager and Aiken, 1957). The first observations on the math anxiety were conducted in 1950s by mathematics teachers. Moreover, mathematic anxiety did not get essential attention until 1970s. However, mathematics was connected to many fields of science so student issues concerning mathematics started to be dealt with in a wider prospective. Math anxiety was determined to be one of the most common problems that students encountered with.

Math anxiety is also defined as a kind of natural reaction to each situation in which any number processing is involved. In the mentioned situations a threat towards the individual's self confidence is detected when working with numbers even when performing daily routines or simple educational practices (Deniz and Üldaş, 2008). The increase in the conducted researches and the methodology applied to elicit the necessary data supported the above mentioned definitions. Other scholars (Tobias and Weissbrod, 1980) define math anxiety as a state of desperation and chaos of the brain.

Math anxiety can be classified in two groups, as having long term and short term effects. Students' low success rate at mathematics courses and insufficient subject comprehension are the main short term effects of math anxiety (Alexander and Cobb, 1984). The long term effects are pointed to be problems in self confidence, desperateness, avoiding attendance to mathematic courses, and compulsive behaviors. Some of the cognitive effects are miscomprehension, desperateness, and changes in cognitive actions (Gowrgey, 1985). Sovchik ad others, (1981) stated that math anxiety causes deficiency in self confidence. Ling (1982) and Tobias (1978) stated that math anxiety led to unhappiness, fear and forgetfulness.

Problem

Math anxiety that emerges at primary school years and develops during high school years is a factor to be taken into consideration. The mentioned anxiety grows bigger as the university examination date gets closer.

Aim

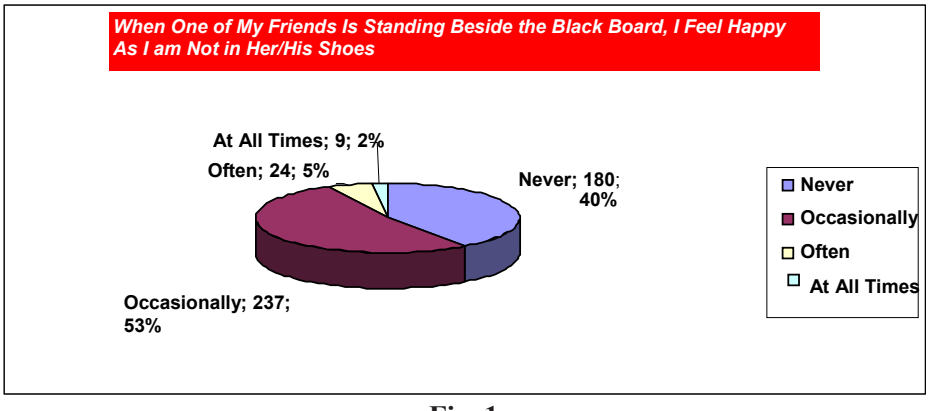
It is generally discussed that mathematics a rather abstract subject and students often experience failure. Moreover this problem is an issue of discussion in the educational system. High school students go through serious exam anxiety during the preparation period before the exam is taken. The study aims to detect the anxiety rate of high school students attending the private courses and reach conclusions that will enable the practices to increase the success rate and decrease the math anxiety level of students.

Setting and Participants

The scale was administered on 450 students attending private courses (private tuition focused on specific preparation for the university entrance exam) in the city of Kırklareli in 2008-2009 academic year.

The scale aiming to elicit the math anxiety level of students was developed by the school psychologists of Kırklareli Zafer Dershanesi.

Findings



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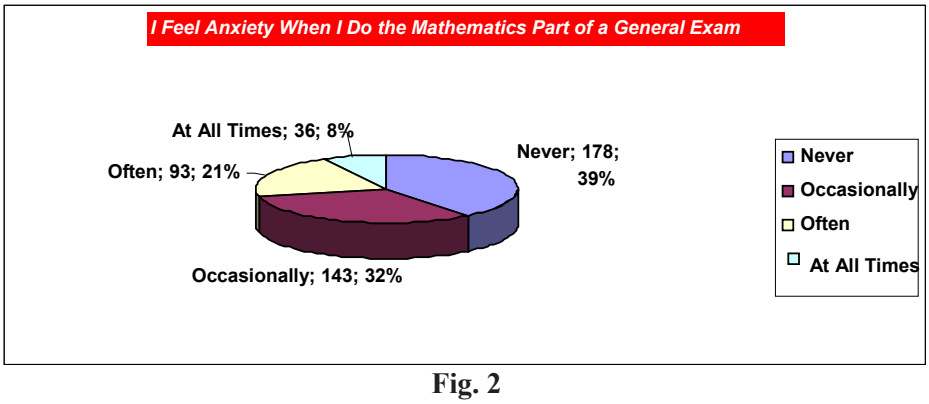

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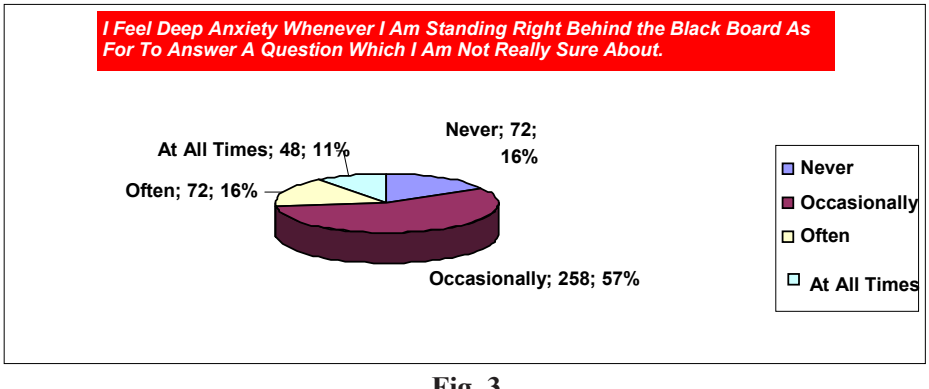

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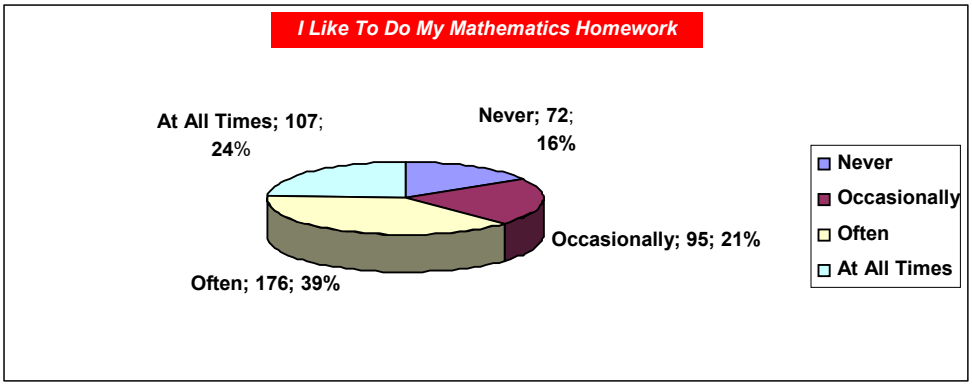

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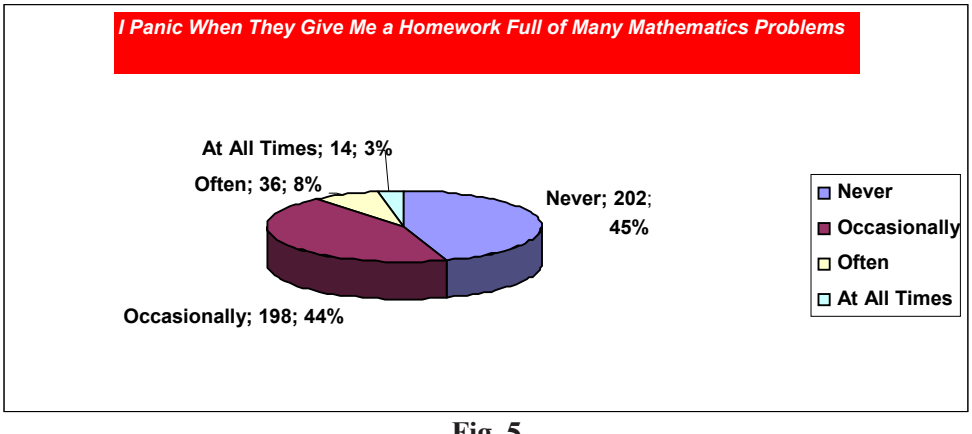

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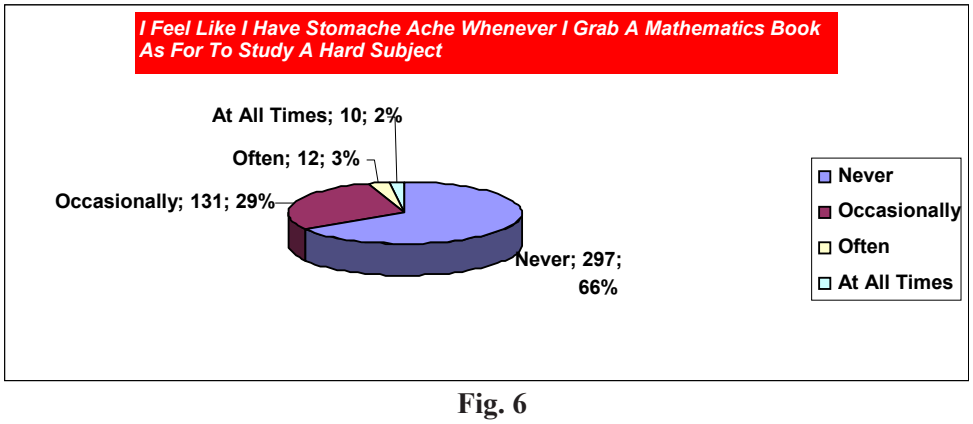

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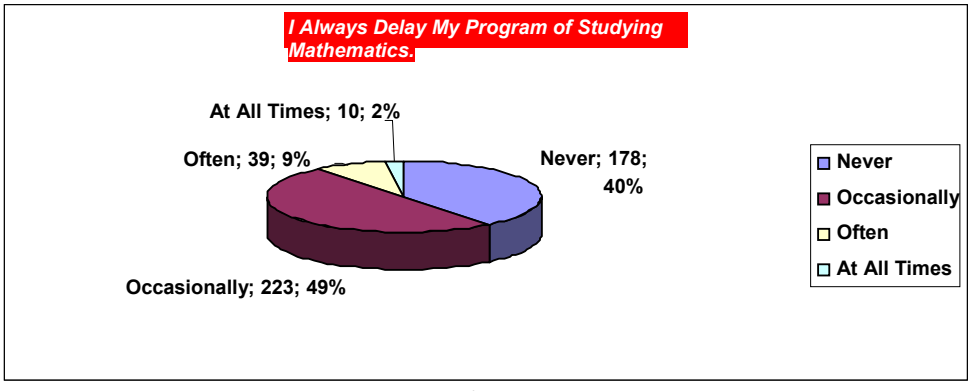

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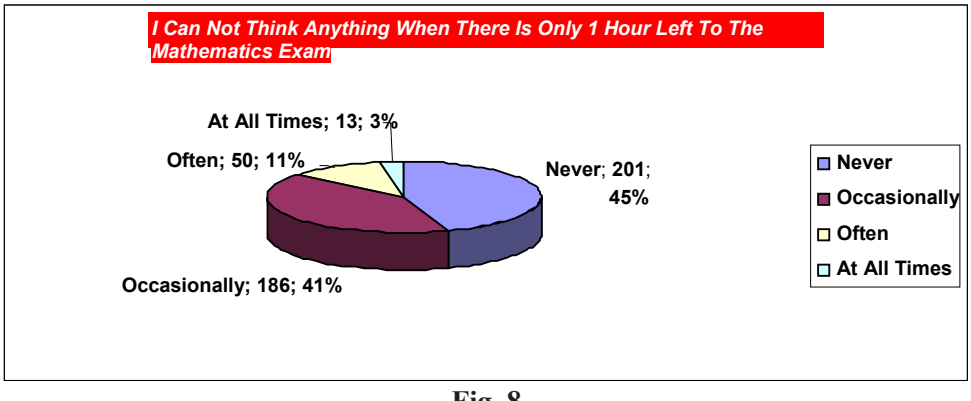

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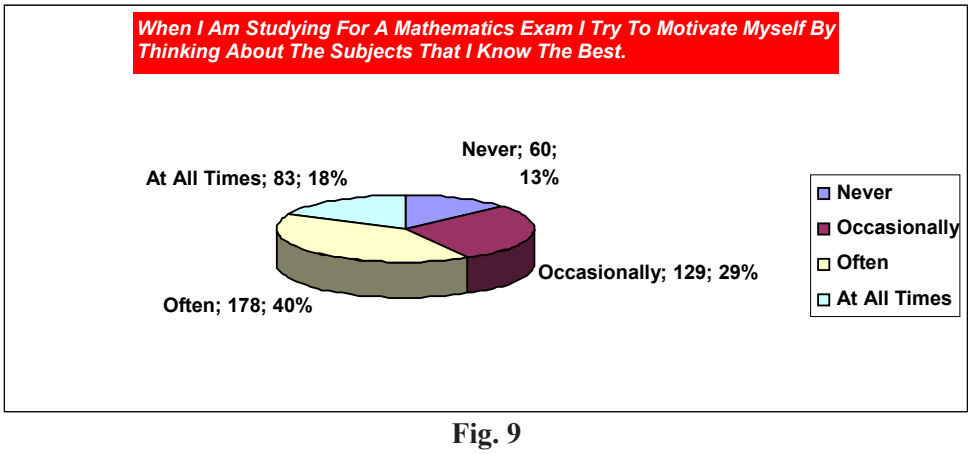

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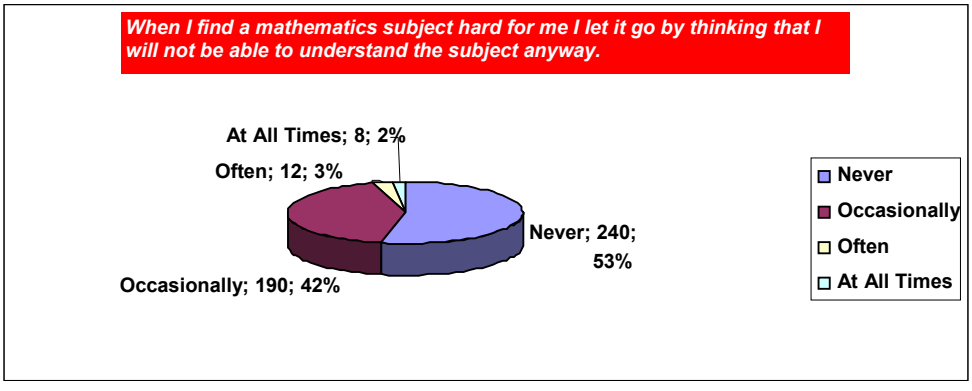

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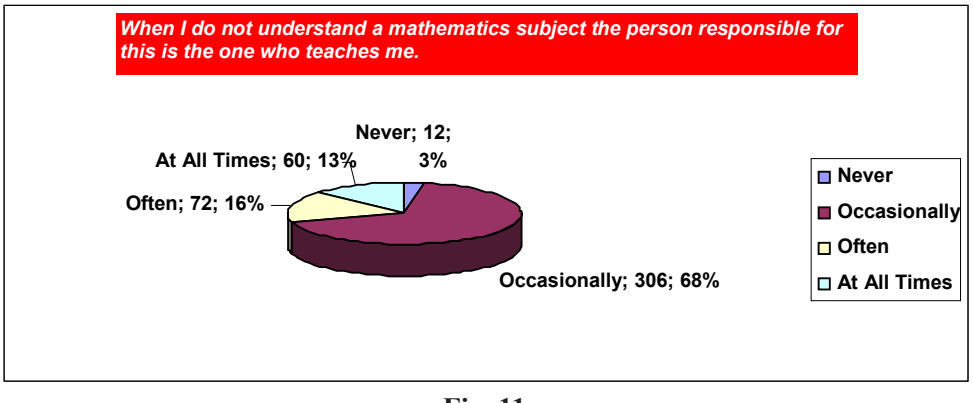

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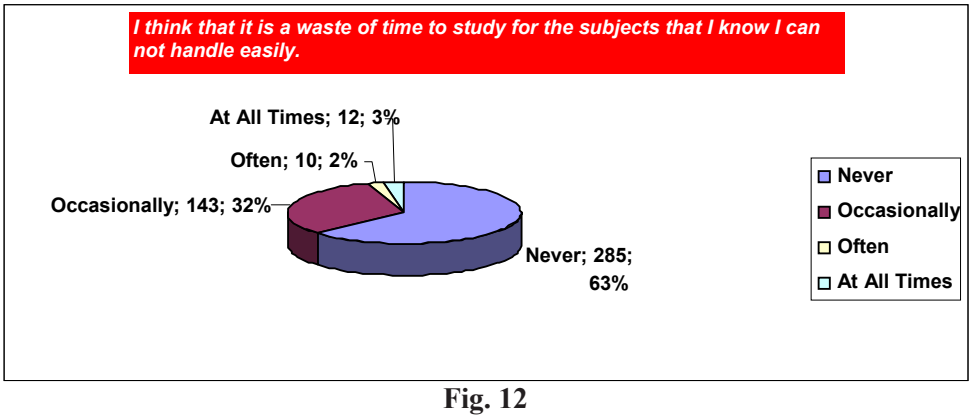

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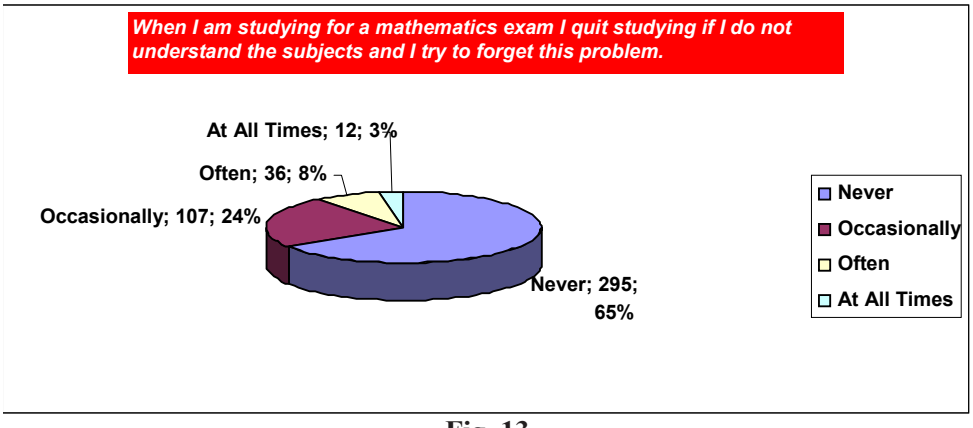

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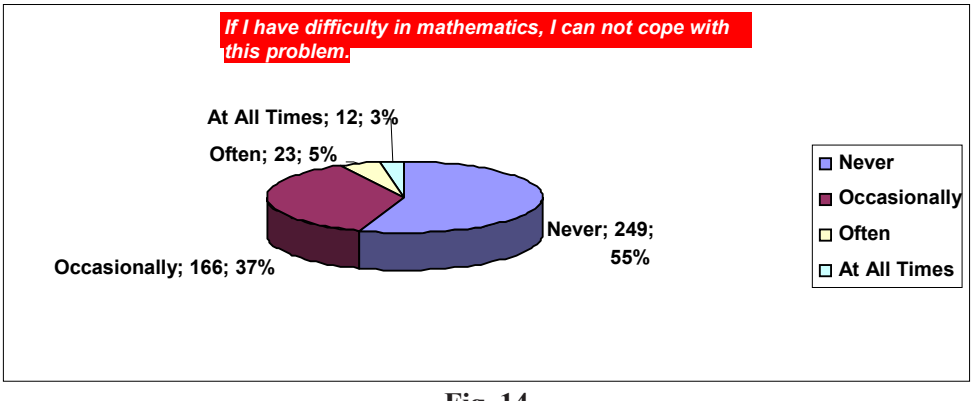

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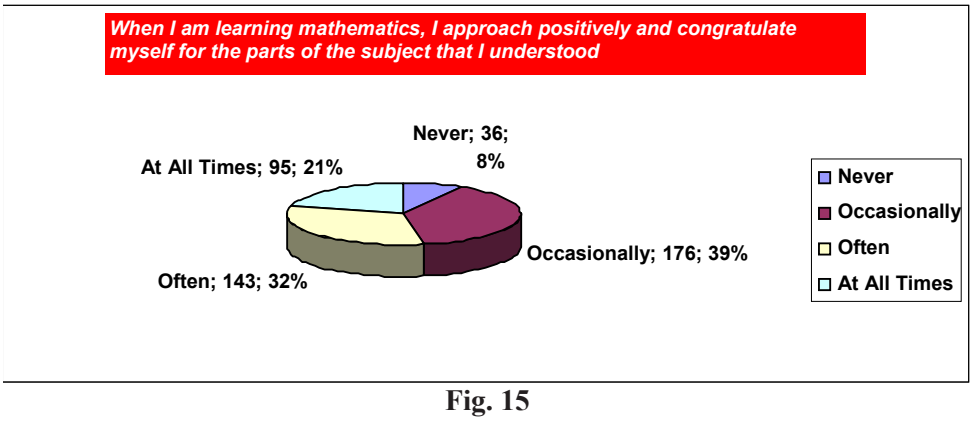

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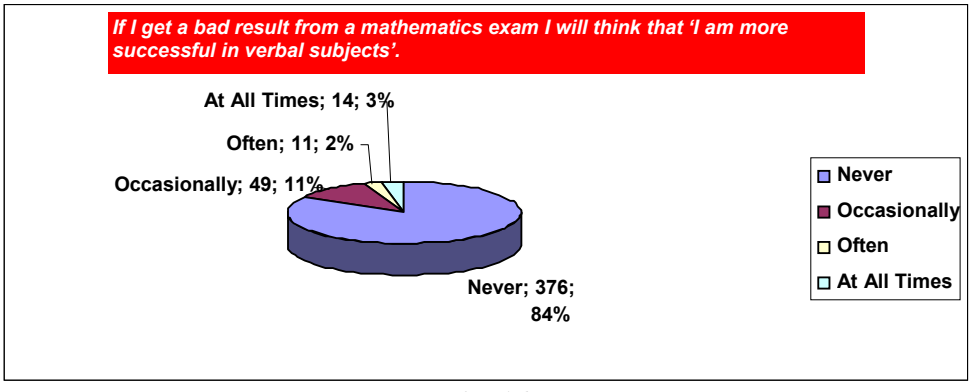

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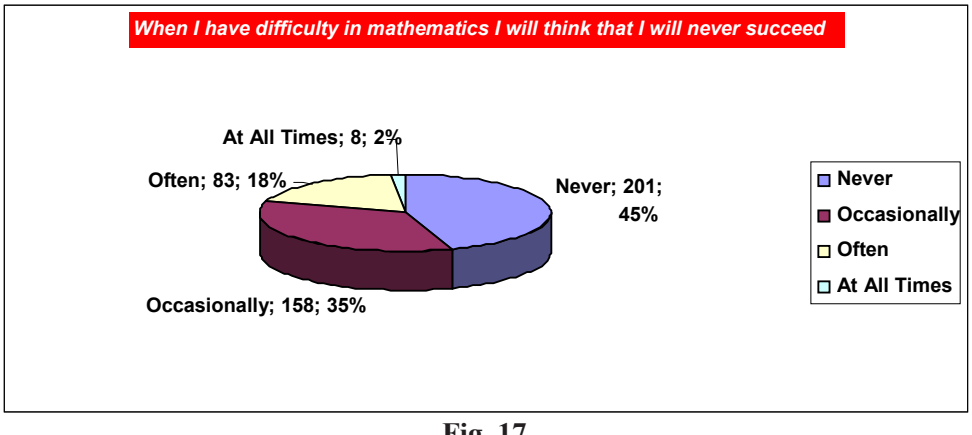

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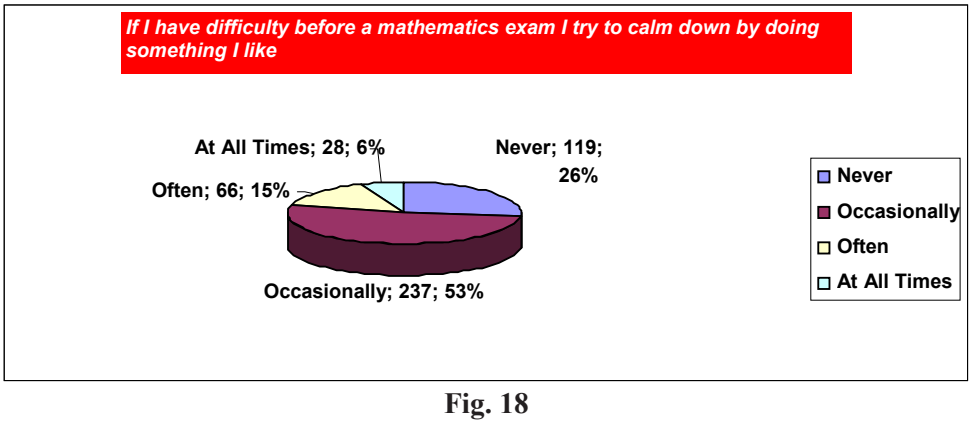

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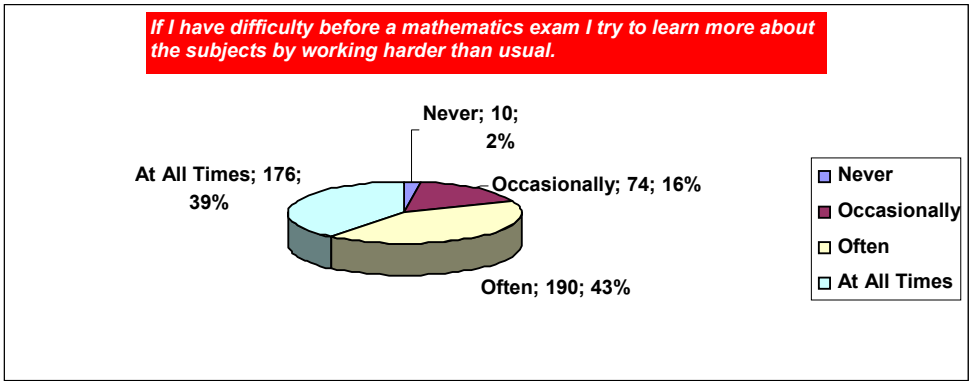

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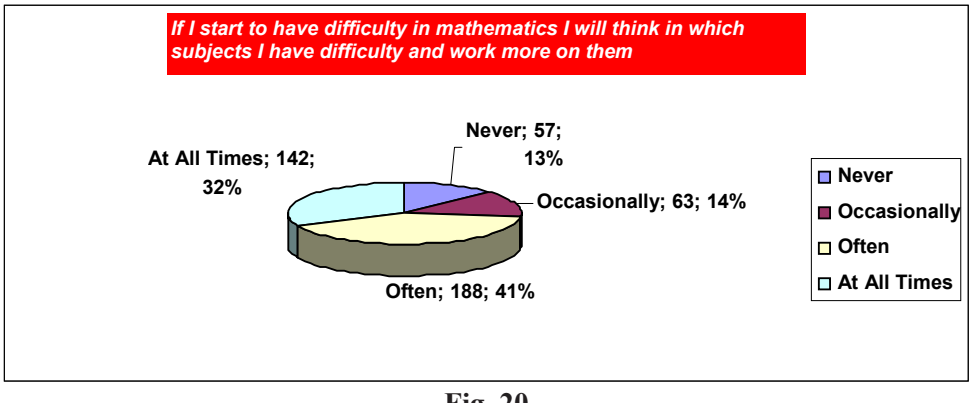

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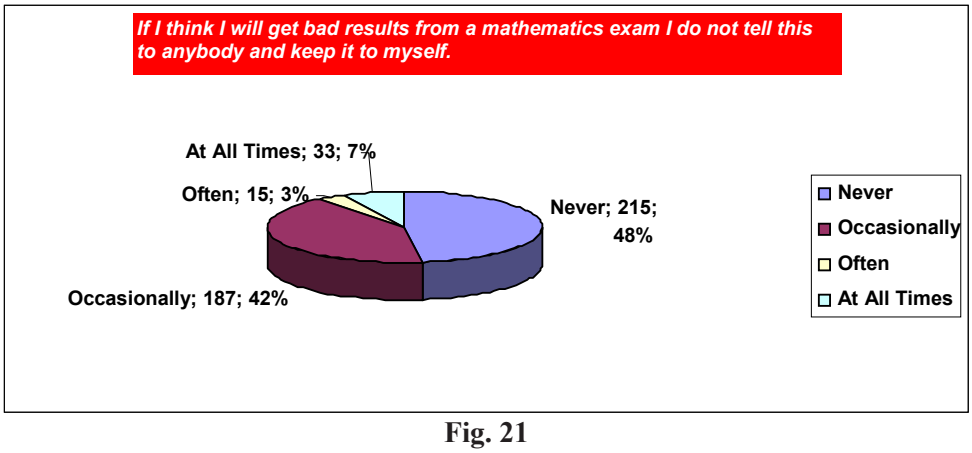

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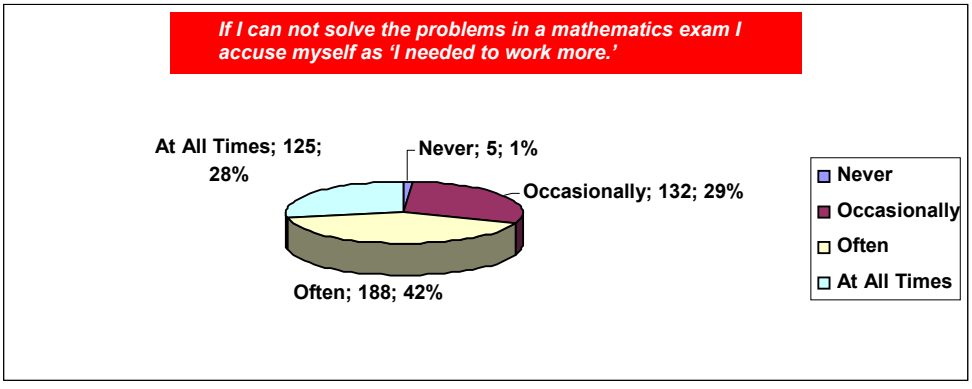

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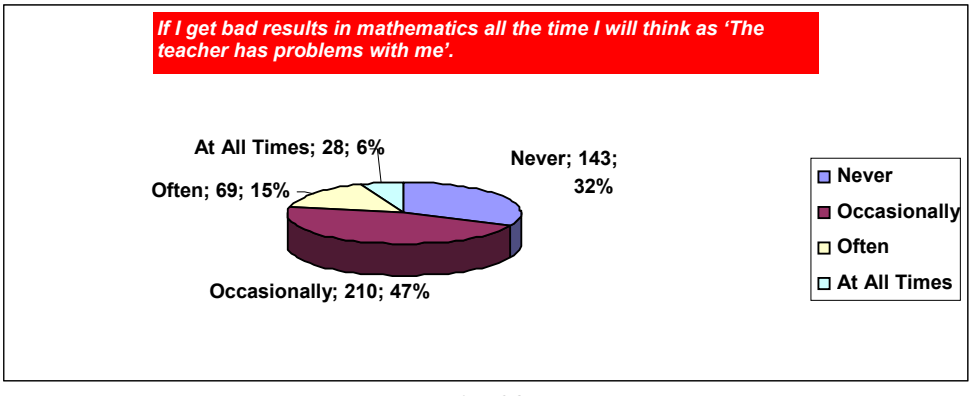

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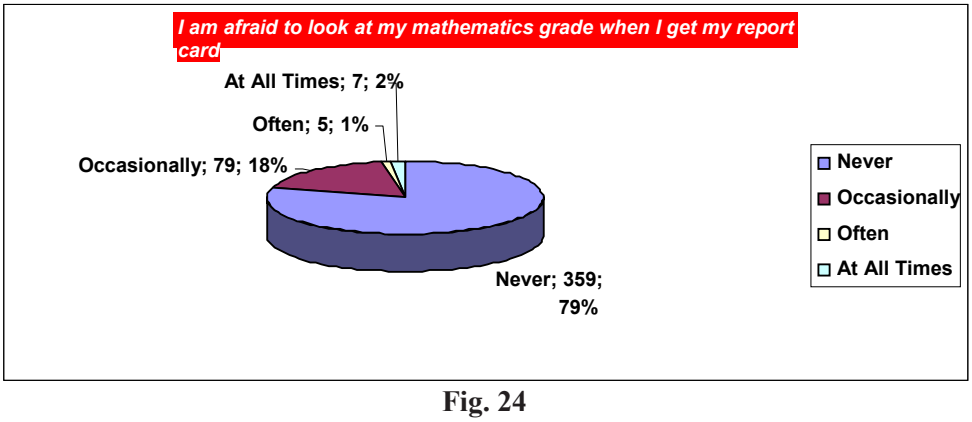

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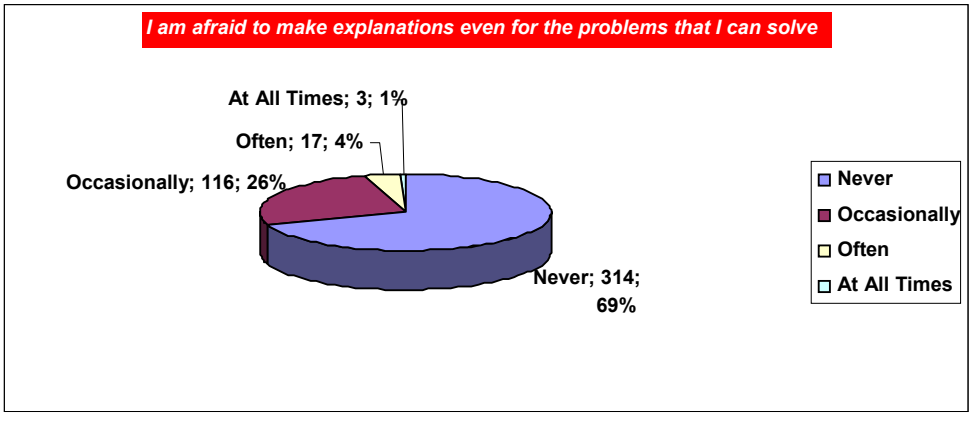

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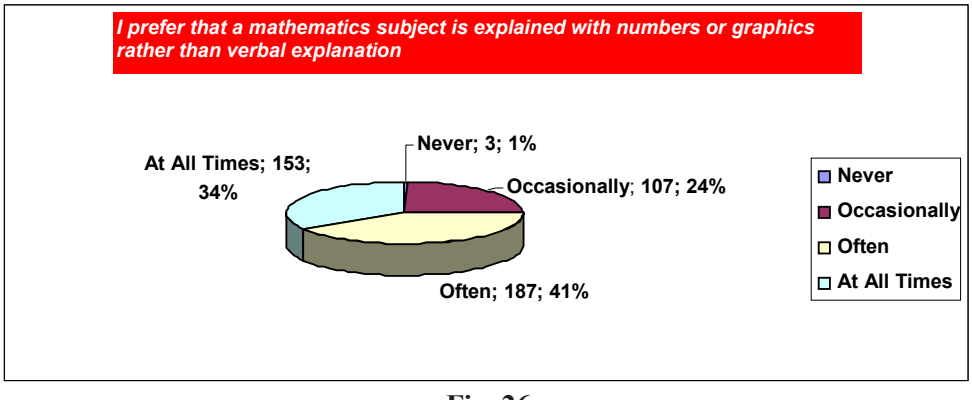

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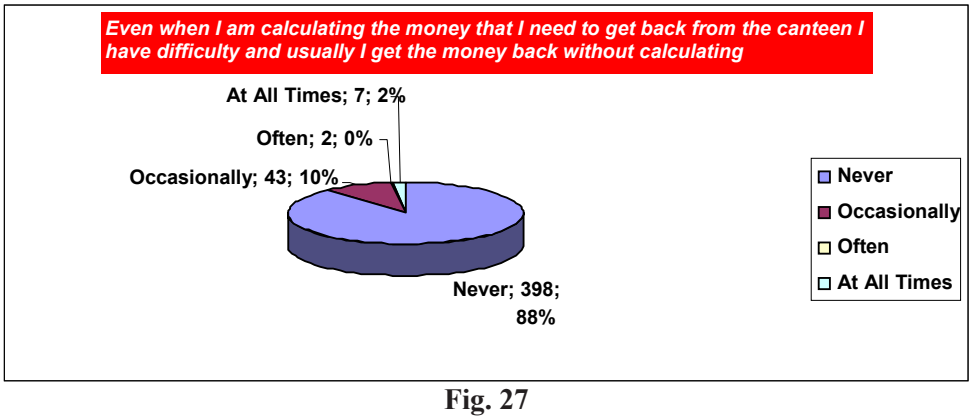

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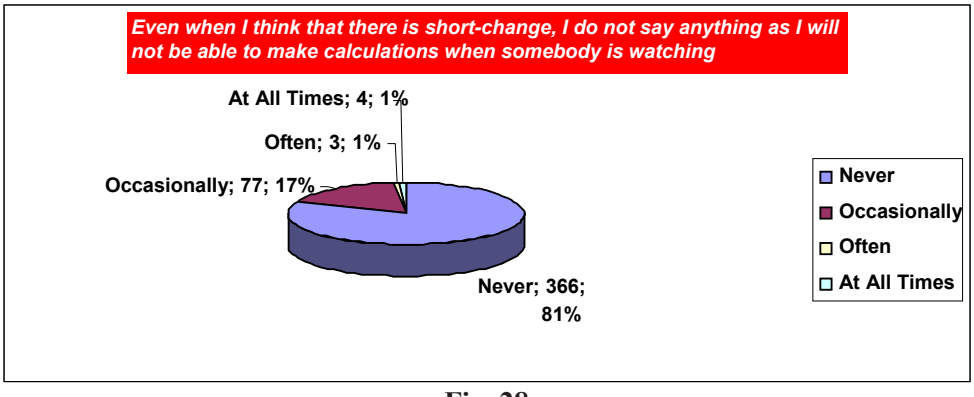

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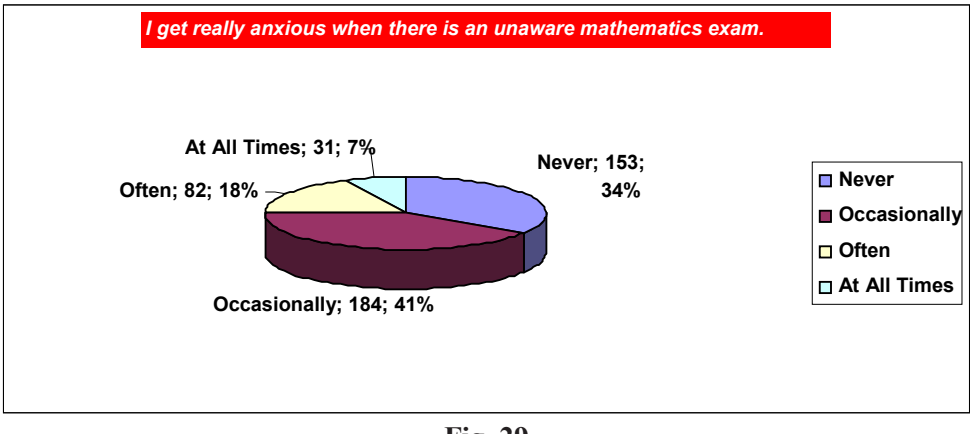

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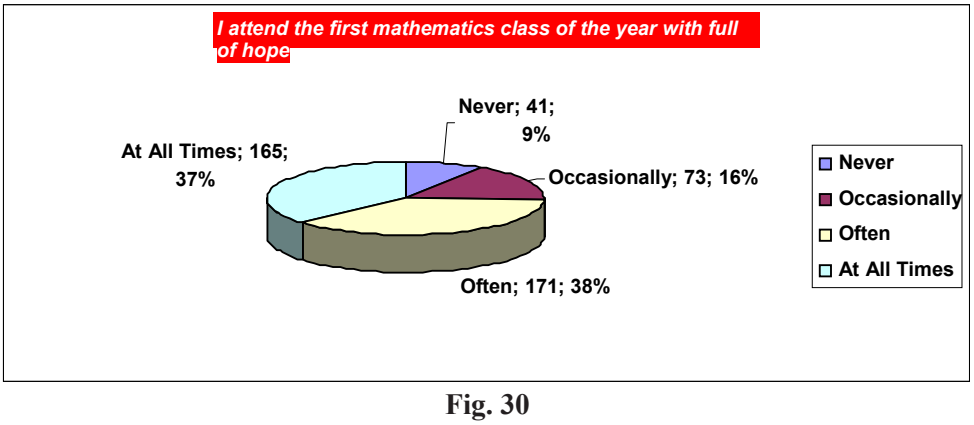

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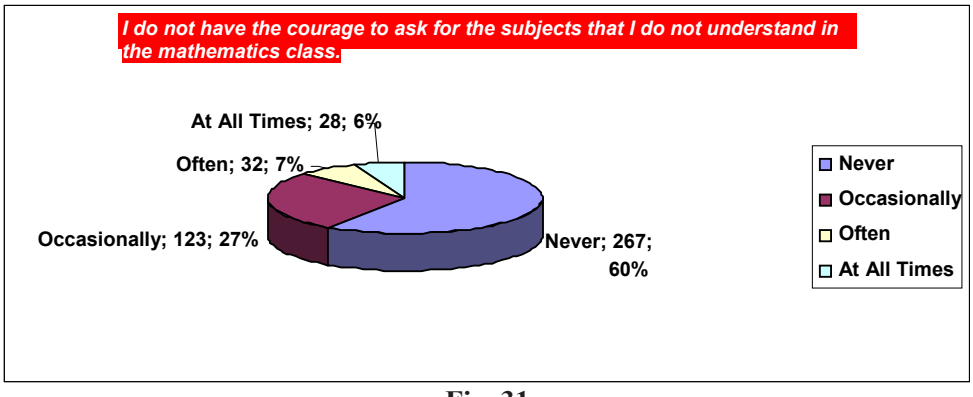

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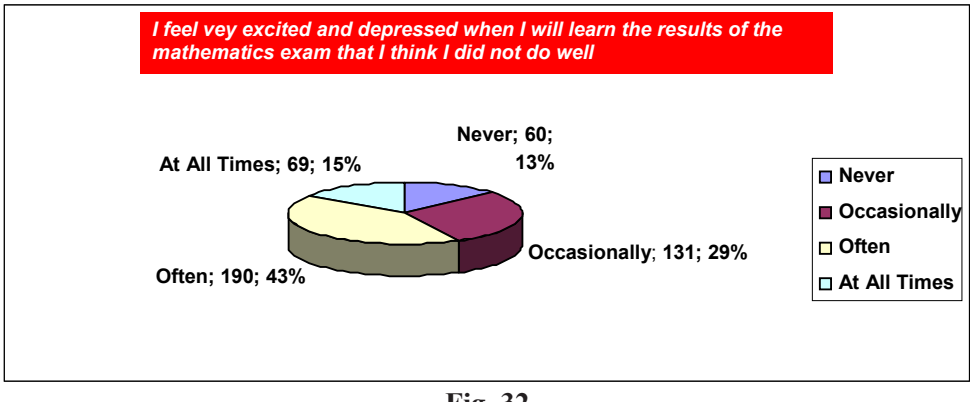

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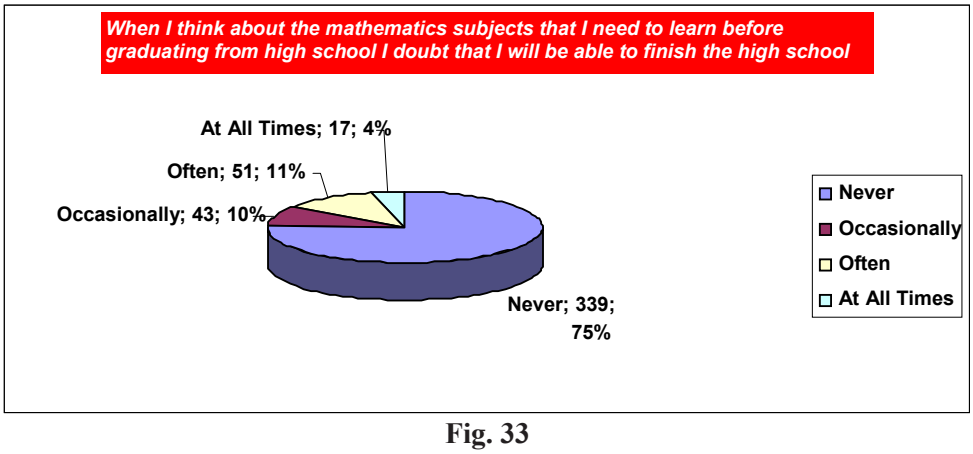

Fig. 33

Results and suggestions

Outputs of the research suggest that students are not concerned about mathematics or they have a low level of concern. This suggests that the students have self confidence and they are relatively relax during mathematics course. The outputs are comply with the fact that Kırklareli province is among top provinces in aspect of OSYM exam results.

It is estimated that university entrance exam concern of the students gets higher as exam date expires.

Majority of the students abstain fron mathematics activities with the fear to make mistakes.

To form positive changes in approach of students towards mathematics as grades are passed shall be one of the main duties of then schools. Following measures may be suggested to ensure this:

1. The students shall confront with mathematics activities comlplying with their level of mathematics and capacity exceeding activities shall be avoided as of the first grade of primary school.

2. Long lasting and boring homeworks shall be avoided and students shall be given short homeworks requiring calculation, which make them practice shall be given in addition to ordinary practices.

3. Meaning shall be attcahed importance instead of memorizing while teaching transaction concepts and their techniques, course materials in nature of implying and explaining transaction techniques shll be kept in enviroment until concept and alpgorithms are conceived.

4. Tecaher shall imply the high number of techniques resulting in equal result, shall attach importance to different techniques developed by students, shall encourage such.

5. Students shall be spared enough time as making transactions, and drawing and solving problems, they shall not be concerned about time limit. In addition the mistakes of students while solving problems and making transactions shall be tolerated, remedying and guiding activities shall be performed.

6. Joyful, relaxing aspect of mathematics shall be introduced to students and game activities in mathematics teaching shall be performed. Pattern and enrichments introduced in this book may be used for this purpose.

7. Students shall be given oppurtunity to submit their own ideas, their ideas should be evaluated, different solutions and unique enterprises shall be encouraged.

8. It shall be ensured that relatively successful students hinder students with low learning rate.

9. Heterogenous student groups shall be formed and students shall be given oppurtunity to discuss with each other on subjects. Participation of each student shall be ensured.

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