



# Classroom Management with Concept Cartoons

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## Abstract

This research aims to decrease the misconceptions and concerns of students in mathematic lessons, increase their interest towards the lesson and bring it to the desired level through concept cartoons and help teachers manage their classrooms efficiently. A cartoon delivers an idea directly while shaking the thinking worlds of individuals. Therefore, 11<sup>th</sup> Grade students studying in 20 Temmuz Science High School during 2015-2016 academic year were chosen. Concept cartoons were applied in mathematics lesson throughout the research. Concept cartoons were prepared for each concept concerning the lesson that would also include the students. 9 concept cartoons were developed on this issue. The application was conducted in 8 weeks. Students were interviewed after the application. A further study needs to be done in order to find out its effectiveness on learning and classroom management.

## Subject Areas

Education

## Keywords

Concept Cartoons, Classroom Management, Geometry

## 1. Introduction

The Turkish word for geometry is originated from *géometrie* in French. The French word is originated from “geodesy” in Ancient Greek. The Ancient Greek term for geometry is the combination of “location” and “measure”. According to many researchers, babies encounter with various geometric shapes since the birth; their perceptions of shapes and sizes start from the early ages; the babies learn information about shapes with their mouths and hands, experience about the shapes of objects and the development of geometric thinking starts with games [1] [2] [3] [4] [5]. Since the beginning of school life, children come across with geometric shapes. Before they learn numbers, they play with geometric

shapes. Geometry is very important in the education life of students. The deductive thinking method acquired in geometry lesson may also be used in different disciplines for the solution of problems. Through the adoption of artistic aspect of geometry, the environment is perceived and analysed better. Geometry is a daily concept encountered by individuals. The background knowledge of students about geometry determines their interest levels for the lesson. When the geometry is not delivered through a constructive method, students begin to experience misconceptions towards geometry lesson. In order to have functional and permanent learning, students should be active in the knowledge building process [6]. When teachers are aware of the background knowledge of students, their learning styles and teaching methods, the lessons can be provided in a much organic way. The classroom environment ensures an effective and efficient classroom management and the perceptions of students towards the geometry. A positive perception that would be established eliminated the potential negative behaviours. In Turkish Republic of Northern Cyprus, geometry lessons are not taught in high schools as a separate lesson. In Turkey, education is under a restructuring program, and geometry lesson will no longer be taught [7]. Intensive curriculum and lack of revisions by teachers increase the concern. Lack of geometry related tools and reluctance of teachers have a negative impact on students. The lessons are taught by traditional methods and difficulties experienced during the geometry lessons affect the classroom management for the teachers, which lead the teachers to find different teaching methods.

## 2. Classroom Management

Classroom management is the organisation of academic and administrative activities that are required for the establishment of a good learning environment for the students in the classroom and maintain the learning. Classroom management is to eliminate the obstacles interrupting the teaching in classroom, ensure that students do not have any behaviours and ideas distracting their interest and attention for the lesson, plan the teaching activities, use the time in the classroom effective and efficient, ensure student participation, select and use of appropriate classroom tools and manage the physical factors, resources, relations and people [8] [9] [10] [11].

Effective classroom management:

Based on the individual and psychological needs of students;

Establishment of a good student-teacher relationship;

Use of an academic program and method that meets the needs of each student or group;

Prior identification of misconceptions and background knowledge of students and taking measures [12].

An effective teacher organizes the relations within classroom, ensures the establishment and development of an order and acts as a counsellor as well as an effective teacher is the individual who is affected from the classroom climate.

He/she creates a class as a stage in the way that the attention of student would not go outside of the stage. A teacher sitting behind the teacher's table for the majority of time would allow the in-class conflicts and disputes [12].

[12] argues that for the provision of an effective classroom management, the teacher should have the following:

- Content knowledge;
- Professional knowledge;
- General culture.

Improvement	Aimed knowledge and skills		Questions required to be answered in classroom management
Much bigger scale	Increase in the amount of information (accumulation of information)	The information increase on the basis of much bigger improvement	Where there is any accumulated information, "how to teach?"
Faster	Increase in information diversity	The information diversity increase on the basis of faster improvement	Where there is various information to teach, "which to teach?"
Shorter intervals	Obsolescence in the content of information	The content of information that increased in amount and diversity on the basis of shorter improvement becomes rapidly obsolescent.	When the information that increased in number and diversity change in shorter intervals, "why to teach" such temporary information?

### Concept Cartoons

The concept cartoons have designed and used by [13] for the first time. The word of cartoon is originated from "*caricature*" in French. According to the definition of [14] cartoon is "a comic picture telling all kinds of issues about people and society in an exaggerated way while leading to think". [15] explains cartoon as the most simple and drastic field for the "comprehension, interpretation and narration" efforts of art. A cartoon delivers an idea directly while shaking the thinking worlds of individuals. Teaching geometry with humour would enhance the interest of student into the lesson. Entertaining and interesting cartoons would make concentration easier for students. When the concept cartoons are related with the students and everyday life, the students would have more interest. Concept cartoons create a simple strategy route that engage students to the lessons and encourage more effective teaching, learning and evaluation in mathematics. The students may not relate the cartoons with the lesson before the lesson starts, however it is possible to bring an idea with posters [16].

Although concept cartoons look very simple in terms of their nature, some aspects should be taken into consideration during the preparation of cartoons. [17] listed such aspects as follows:

Limited number of texts, thus accessible by all age group learners regardless their limited illiteracy;

Integration of scientific ideas with daily events, so that students can relate between scientific and daily circumstances;

Projected alternative ideas are based on common misunderstandings and researches defining misconceptions; therefore learners are ensured to see the majority of alternatives within the ideas as reliable;

Alternative ideas introduced with characters comprise scientifically accepted perspective/perspectives;

Ensuring to consider alternative ideas as all equal, yet preventing the learners to find out the correct alternative among issue.

According to [16], the general features of concept cartoons are as follows:

Ensuring the revealing of the existing knowledge and ideas of students;

Facilitating the elaboration of ideas through questioning and deepening;

Providing alternative perspectives;

Used as a stimulant to create a discussion platform;

Ensuring that the students question their own ideas;

Identifying misconceptions and indecisiveness and ensuring their elimination.

Leading to research;

Increase participation and motivation;

Possibility to use in assisting for summarising or revising a subject;

Concept cartoons enhance the attention of students towards the lesson and positively affect the misconceptions.

#### **Aim and importance of research**

The researcher prepared concept cartoons for enabling active learning in geometry lessons.

#### **Research issue**

The research issue was noted as what the opinions of students are on using concept cartoons during geometry lessons.

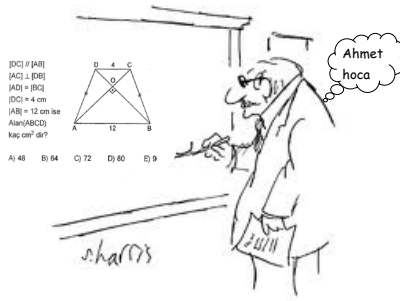
### **3. Methodology**

The sampling of the study is comprised of 11D class students from 20 Temmuz Science High School located in Nicosia, Northern Cyprus for 2015-2016 academic year. Concept cartoons were prepared in accordance with the geometry subjects to be taught during a lesson that will cover 8 lesson hours (each lesson takes 40 minutes.). Trapezoid was chosen as the subject for concept cartoons. The features of trapezoid subject and students were included in the same cartoon.

#### **Research design**

For this study, interview, as a qualitative study, was used in order to indicate the opinions of students concerning the concept cartoons. According to [18], interview is “a process of mutual talk, which the participant is a part of, based on the questions on the research subject” [19]. Semi-structured interview technique was used during the interview. In such a technique, the researcher prepares the interview questions beforehand, however allows a partial-flexibility to the un-





## Yamuk lokantası



## 4. Findings

This part explains the answers and frequency distribution as shown in the table below for the experimental and control group.

What was your reaction when you see the concept cartoons?			
Experiment group (9 people)	f	Control group (9 people)	f
I saw the concept cartoons for the first time	9	I saw the concept cartoons in the lesson for the first time	9
Cartoons were fun	9	Cartoons were fun	9
It was interesting	8	It was interesting	8
It was funny	9	It was funny	8
I understood what it is after a close look	9	I understood what it is after a close look	9
What are your opinions on the use of trapezoid in the concept cartoon?			
Experimental group (9)	f	Control group (9)	f
My interest for the lesson increased	9	My interest for the lesson increased	5
Being a part of cartoon arouse my attention, which increased my interest towards the lesson and cartoon	8	I wish to be part of the cartoon	8
I did not like the trapezoid subject but now I have an interest	8	I am not good in geometry. Nothing can change this	8

The students in the experimental group, that their names were included in the cartoon, were observed to have an increase in their interest for the lesson. The students that had no interest in geometry lesson were felt as privileged and they started to study more.

The students in the control group were defined their introduction with the concept cartoon as interesting. However, since their names were not given in the cartoons, they continue to have no interest for the lesson.

## 5. Discussion and Conclusion

For an effective classroom management in geometry lesson, the learning should be structured on the basis of interests and perception styles of students, and by using daily events. Concept cartoon is frequently used in daily life; a visual based practice usually delivers the desired information and leads people into thinking. When students relate (Build Bridge) their everyday lives with the activities, the learning becomes permanent. Teachers may eliminate the misconceptions of students by making constant changes in the classroom management. When effectiveness gains continuity, the student will have sustained interest. Technical knowledge is required for the preparation of concept cartoons. Getting help from cartoonists would create more effective work during the preparation phase of concept cartoons. The existence of a traditional management and teachers predominantly in the schools would consider the new activity as meaningless and unnecessary.

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