

**The Effect of Utilizing Storytelling
Strategy in Teaching
Mathematics on Grade Four
Students' Achievement and
Motivation towards Learning
Mathematics**

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Aims

- This study aimed to investigate the effect of using storytelling approach in teaching Mathematics on fourth grade students' achievement and motivation towards learning Mathematics.

Literature review

- The mind organizes better in a storytelling form (Egan,2005).
- [NCTM, 2000] in its communication standard suggested that the child needs to use his language and make dialogue in mathematics.

Literature review

- listening to a story and having dialogue with the teacher and peers about it is events, then participate in the activity to resolve the problem in the story, may enhance this standard (Goral& Gnadinger, 2006)

Participants

- Two fourth grade classes from the same school were randomly assigned to control and experimental groups.
- The study sample consists of 68 students, 34 in each group.

Instruments

- Mathematics test.
- Motivation questionnaire.
- Re-written of fractions unit in storytelling form, each story included a concept on fractions that corresponds to one lesson from the fractions unit in the text book.

Methodology

- a quasi-experimental design approach was followed.
- prior motivation questionnaire and achievement mathematics tests were applied. Data were analyzed by t-test.

The results indicated that the two groups were equivalent.

Methodology

- The control group was taught the fractions unit in a traditional way, while the experimental group studied the same unit with the storytelling strategy.
- post motivation questionnaire and achievement mathematics tests were applied. Data were collected and analyzed by t-test

Question 1

- What is the effect of using storytelling strategy in teaching mathematics on fourth grade students' achievement in mathematics?

Teaching method	M	σ	t	F	Sig(2-tailed)
Traditional method	13.29	6.37	-2.6	4.39	.011*
Story telling method	18.05	8.39			

(the effect size = .75)

Question 2

- What is the effect of using storytelling strategy in teaching mathematics on fourth grade students' motivation to learn mathematics?

Teaching method	M	σ	t	F	Sig(2-taild)
Traditional method	2.35	.31	-2.38	2.38	.02*
Story telling method	2.55	.37			

(the effect size = .65)

The results of this study

Using storytelling in teaching mathematics increases students' motivation towards learning mathematics, increases students' ability to understand fraction concepts, and to solve mathematics problems, thus increases their math achievement.

Agreement Findings with other studies

Storytelling in teaching mathematics can help in understanding complex thoughts and ideas, because it encourages students to focus and think harder (Zazkis & Liljedahl, 2009).

Storytelling in teaching mathematics can create a favorable environment for learning, and reduces students' tensions and improves students' memory for what they learn (Balakrishnan, 2008 ; Shirley, 2008).

Recommendations

this study recommends the use of storytelling by

- Teachers.
- Education policy makers, to include the strategy of storytelling in designing and preparing curricula and training programs.
- Future researchers to do more research in employing storytelling in teaching to grade levels other than fourth grade, and topics other than fractions.

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