The Effects of Cooperative Learning on Student Achievement

Abstract

Cooperative learning is when a group of students works together towards a common goal, usually to help one another learn academic material. The effects of cooperative learning on student achievement are debated. It was my goal to explore if cooperative learning had a positive or negative effect on learning. The participants used were eighteen public school 3rd grade students. The students were asked to learn a list of nonsense words independently as well as while they were in a group. They were then assessed on their ability to recall the words. The effects were measured by the correct number of words for each group, which were an average score of the participant’s correct words. The expected results were that the students who worked in groups would be more proficient at recalling the words therefore supporting the idea that cooperative learning is beneficial to a student’s learning.

Introduction

Cooperative learning is when a group of students works together towards a common goal, usually to help one another learn academic material. The effects of cooperative learning on student achievement are debated. Many educators feel that it has positive effects on academic
performance, but does working in groups indeed facilitate learning? This is the topic that I chose to explore.

I measured the effects of cooperative learning on student achievement by having a group of students learn material independently, and then learn that same type of material while they were in a cooperative learning group. To ensure that the students had no prior knowledge of the material, I devised a bunch of nonsense words that had no meaning (for example: hix feg vot). Half the students studied the list of the nonsense words independently while the other half studied the words while in a group of three. After twenty minutes of studying they were assessed on their ability to recall the word. They were given ten minutes to write down on a sheet of paper all the words they remembered. The number of words that were recalled determined the effects.

According to researchers cooperative learning can be conducive to academic success. Yamarik (2007) noted that “students taught by cooperative learning achieved greater academic performance” (p. 261). Yamarik found that cooperative learning had a positive effect on student achievement. It is my feeling that students do benefit from cooperative learning and I expected that the results of my research would support that.

Method

Participants

The participants used were eighteen mixed abilities 3rd graders who attend public school. The participants were divided into two groups of nine children (Group A and Group B). Each group contained mixed ability students, meaning each group had top students, average students and low students. During the first week, the Group A students were put into three groups of
three (each group had a top, an average and a low student). The Group B students worked independently during the first week. In week 2, the Group A children worked independently while the Group B students were put into mixed abilities groups of three. After a one week intermission, the Group A students worked independently first while the Group B students worked with their groups. In the following week, Group A worked with their group and Group B worked independently.

Materials

The materials used were four lists of nonsense words. Each list had ten three letter nonsense words (in consonant, vowel, consonant format). The children were assessed on their ability to recall the words so plain sheets of paper were also used.

Procedure

The study took five weeks. During the first two weeks both Group A and Group B were given a list of nonsense words to study, either in a group or independently, for twenty minutes. Then each participant was given ten minutes to recall as many words as they could and write them on a sheet of paper. There was then a one week intermission. After the intermission the students repeated the first two weeks with the exception of the order, (since Group A worked in a group first they worked independently first in the second cycle). Each group’s correct answers were then averaged and the higher number of correct words determined the effects.
Results

In the first week the students that worked in groups (Group A) had an average score of six and the students that worked independently (Group B) had an average score of four. During the second week the students that worked in groups (Group B) had an average score of seven and the students that worked independently (Group A) had an average score of 6 correctly recalled words. After a one week intermission, in the third week Group B worked in groups and had an average score of 5 and Group A worked independently and had an average score of four. During the fourth week Group A worked in groups and had an average score of six correctly recalled words and Group B worked independently and had an average score of four. The bar graph illustrates that in all four weeks the students that worked in groups were able to recall more words correctly. This supports my expected findings that cooperative learning has more of a positive effect on a student’s achievement.

Discussion

The results support the notion that cooperative learning can facilitate the acquisition of knowledge. According to Mesler (1999) “the reading achievement of both groups of students increased after completing cooperative learning activities making cooperative learning an important strategy” (p.320). Many researchers agree that cooperative learning plays an important role in the classroom. Fleming and Mueller (2001) attest that “cooperative and collaborative learning are recognized as valuable components of classroom learning.” One of the reasons for the outcome may be due to the interactions’ between the students. Working together affords the opportunity to share ideas and strategies for learning new things. Another possibility could be that being in a group allows you to remember the information better because you can
see the implementation of the practice rather than learning the material independently. The positive effects of cooperative learning are evident and there is little question that cooperative learning can be a useful tool and should be utilized in the learning environment.
Cooperative Learning Versus Independent Learning

Number Of Words Correct

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<td>5</td>
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</tr>
<tr>
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<td>6</td>
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References


Nonsense Words

Week 1

sol
gok
ced
kav
pif
nir
mij
zur
bas
nef
Nonsense Words

Week 2

feg
taq
dup
vir
hox
jer
liy
rom
pab
wem
Nonsense Words

Week 3

xud
ris
yaz
nol
zev
cak
tog
peh
jur
bix
Nonsense Words

Week 4

mok
fup
hez
saj
cif
voq
luw
ber
nid
gax