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Effects of Guided Notes on 6th Grade Math Students' Academic Achievement and Self-Perceptions of Learning

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Effects of Guided Notes on 6th grade math student's academic achievement and self-perceptions of learning Colin Strange, Del Gillispie

Introduction

The purpose of this research project is to study the effects of guided notes on the self-perceptions of learning of 6th grade math students at a rural school in Northwest Indiana. It will also compare the student achievement levels without using guided notes and with using guided notes as well. This project seeks to accomplish this task by teaching the students by having them take notes on their own accord. Next, students will then be given a guided note sheet to take notes and the achievement levels from both periods will be compared. Additionally, the students will fill out a brief survey that asks them to self-assess their own achievement levels. The results of the project indicated that guided notes had both a positive effect on students own self-perceptions of learning as well as their actually achievement levels.

One reason why I have such a strong interest in this subject is due to the fact that when I was in school I often times had trouble taking effective notes that actually helped me learn effectively. Then during my Calculus class my senior year of high school my teacher had us fill out guided notes for every class which was something that I felt helped me learn the new material. Therefore I was interested if guided notes actually did have a positive effect on student learning and whether they would be something that I could use effectively in my future classroom.

Methodology

Setting/Context: The school that the action research took place was found in a rural community that consisted of mostly middle class families. There was not a whole lot of diversity in the community with very few minority students in the general student body population. Most of the student diversity in the school was with regards to differences in ability and also diversity with regards to students who have disabilities and those who do not. In a couple of the classes there were numerous students with varying disabilities. The action research took place in a 6th grade math class amongst four different ability based classes. The classes ranged all the way from an upper ability class to three different middle ability based class. The middle ability classes were also ability ranked from low to high.

Subjects/Participants: The students who took part in this research covered the ability spectrum from high to low and everything in between. In fact we had a few students who scored in the 99th percentile on standardized testing and also a couple who scored below the 10th percentile as well. Most of the students are Caucasian with very few students from minority backgrounds. However, the few that are from minority backgrounds fit right in and there is no notice of students

Description of Research Methodology: In this study data was recorded using two methods. First, the data for student achievement was recorded through the use of short spiral reviews on material that the students has just learned the previous class. The students' scores for spiral reviews where they used guided notes and when did not use guided notes when then compared to find the effectiveness of guided notes. The total time of the research was over a six week period

Literature Review

While most of the research on guided notes is rather recent the availability and scope of the research is rather broad. Some of the most significant findings of research on the field has indicated that guided notes:

•are an effective strategy to improve the overall quality and accuracy of students notes

have a positive effect on student learning and achievement

•can be used to help scaffold and support learners

•engages students in a more active manner that traditional note taking •are beneficial for a diverse range of students across K-12 and college students

•allows students the opportunity to participate in class and ask more questions

Does the use of guided notes improve the achievement levels for 6th grade math students?

| Data Table and Analysis | | | |
|-------------------------|--------------|---------------------|------------|
| | | | |
| Class Period | Average with | Average | Difference |
| (Ability) | Guided Notes | without | |
| | | Guided Notes | |
| 2 (Middle | 77.74 | 73.66 | +4.08 |
| High) | | | |
| 4 (High) | 86.10 | 82.09 | +4.01 |
| 5 (Middle | 72.28 | 58.69 | +13.59 |
| Low | | | |
| 7 (Middle) | 72.92 | 64.53 | +8.39 |
| | | | |

High Ability Assessment Scores

| Assessment | Guided Notes | Assessment | Without Guided Notes |
|------------|--------------|------------|-------------------------|
| 5.1 | 76.86 | 4.4 | 68.57 |
| 5.2 | 89.81 | 4.5 | 80.36 |
| 5.3 | 95.74 | 4.6 | 81.75 |
| Quiz | 82 | 4.7 | 86.56 |
| | | 4.8 | 86.56 |
| | | 4.9 | 88 |
| | | Quiz | 82.82 |
| Average | 86.10 | Average | 82.09 |

Medium High Ability Assessment Scores

| Assessment | Guided Notes | Assessment | Without Guided Notes |
|------------|--------------|----------------|-------------------------|
| 4.1 | 66.95 | 3.4,3.5 | 68.86 |
| 4.2 | 85.32 | 3.6 | 79.35 |
| 4.3 | 69.55 | 3.7 | 76.4 |
| 4.4 | 81.43 | Missing Angles | 60.48 |
| Quiz | 85.46 | Quiz | 83.2 |
| Average | 77.74 | Average | 73.66 |

Medium Ability Assessment Scores

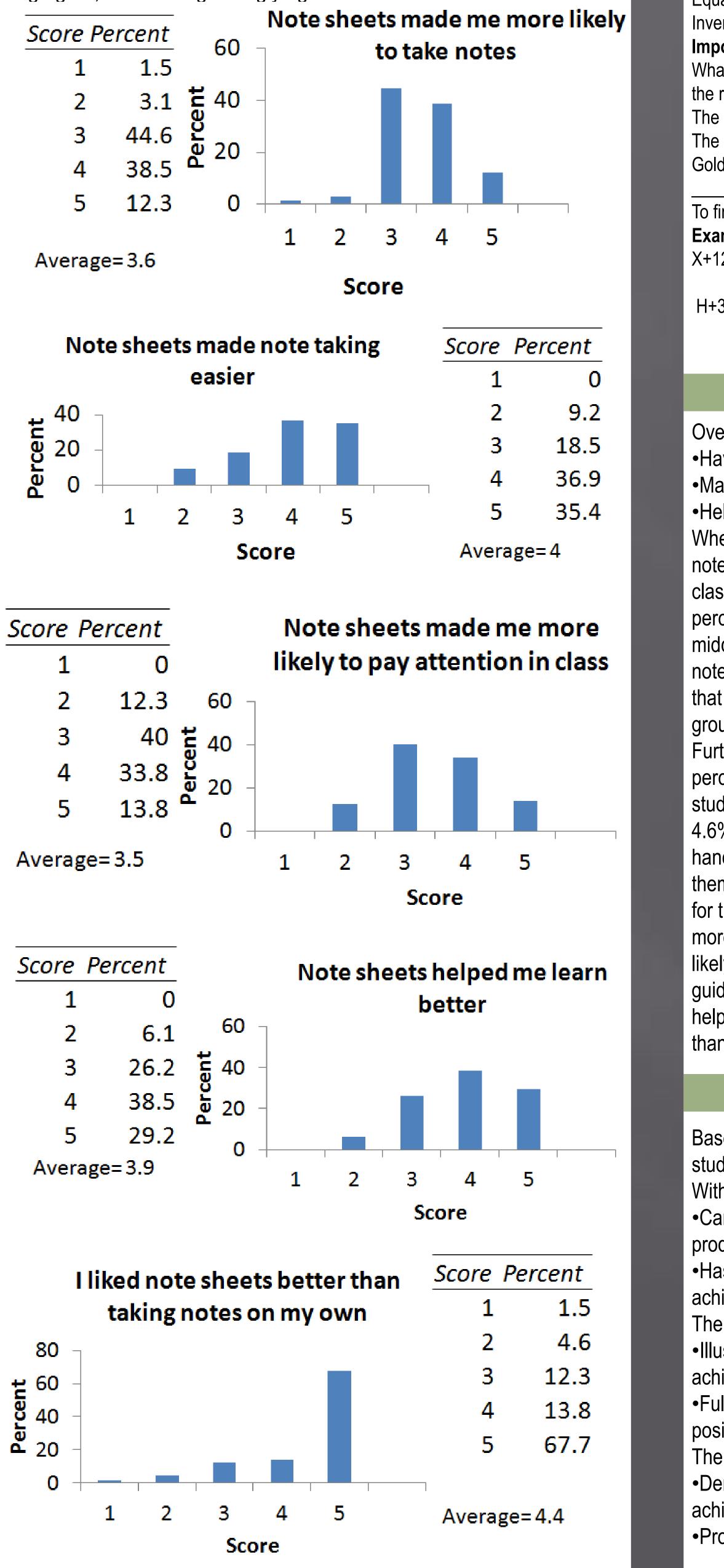
| Spiral Review | Guided Notes | Assignment | Without Guided Notes |
|---------------|--------------|----------------|-------------------------|
| 4.1 | 61.72 | 3.4,3.5 | 56.04 |
| 4.2 | 77.68 | 3.6 | 70 |
| 4.3 | 65.56 | 3.7 | 72.61 |
| 4.4 | 81.3 | Missing Angles | 51.85 |
| Quiz | 78.33 | Quiz | 72.13 |
| Average | 72.92 | Average | 64.53 |

Medium Low Ability Assessment Scores

| Assignment | Guided Notes | Assignment | Without Guided Notes |
|---------------------|--------------|-----------------------|-------------------------|
| 4.1 | 63.32 | 3.4,3.5 | 62.59 |
| 4.2 | 79.88 | 3.6 | 43.53 |
| 4.3 | 71.33 | 3.7 | 69.64 |
| 4.4 | 82 | Missing Angles | 53.89 |
| Quiz | 64.86 | Quiz | 63.82 |
| Average | 72.28 | Average | 58.69 |
| Contact Information | | | |

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The is the results of a survey I gave the students asking them to assess their own perceptions of guided notes and learning. The survey consisted of five questions that asked the students to rank their response from 1 to 5 with 1 being strongly disagree, 2 being disagree, 3 remaining neutral, 4 being agree, and 5 being strongly agree.



subtraction Vocabulary Equation: Inverse of Importan Whatever the right s The invers The invers Golden Ru

To find the Examples X+12=45

H+3=12



This is an example of a guided notes sheet that was given to the students

Learning Goal: To be able to solve one-step equations using addition and

| perations: t to remember | | |
|-------------------------------------|--------|---------------------|
| is on the left side must equal the | | _ as whatever is on |
| se of addition is | | |
| se of subtraction is | | |
| ule of Algebra: Do to one side what | | |
| e solution you must | | |
| 8: | | |
| | t-9=10 | |
| | | |

r-6=-3

Conclusion/Discussion of Results

Overall, it was discovered that guided notes:

•Have a positive effect on student achievement

•Made students feel like they learned more effectively

•Helped students take notes more effectively and more often

When comparing the student achievement levels it was shown that guided notes helped all four class averages go up. For the middle high ability high class the average went up 4.08 percent, the high ability class went up 4.01 percent, the middle low ability class went up 13.59 percent, and finally the middle ability group went up 8.39 percent. The data also confirms that guided notes may be especially effective to students with disabilities as the classes that had the most students with disabilities, middle low and middle ability grouped classes, improved the most overall.

Furthermore, there were also many findings from data on students own perceptions of learning, note taking, and motivation. It was found that 50.8% of students felt that guided notes made them more likely to take notes while only 4.6% of students felt that it made them less likely to take notes. On the other hand 72.3% of students felt that guided notes made note taking easier for them while only 9.2% felt that guided notes made guided notes more difficult for them. Additionally, 47.6% of students felt that guided notes made them more likely to pay attention in class while 12.3% felt that it made them less likely to pay attention in class. Moreover, 67.7% of students believed that guided notes made them learn better while only 6.1% thought that it did not help their learning. Lastly, 81.5% of students liked taking guided notes better than traditional notes while only 6.1% of students liked taking traditional notes.

Implications

Based on the results of this study there are many potential implications for students participants, myself, and even the field of education in general. With regards to the student participants the implications are as follows: •Can be an effective way to increase their motivation to take notes and produce higher quality notes as well

•Has a positive effect on their own self-perceptions of learning and actual achievement levels as well

The implications concerning my self as a teacher education candidate: •Illustrated that guided notes can be an effective means to increase student achievement and increase my readiness for class

•Fully answered my research question by proving that guided notes have a positive effect on student achievement and self perceptions of learning. The implications pertaining to the field of education and other teachers : •Demonstrates an effective and easy to use method to increase student achievement and motivation.

•Proven to be effective for an diverse range of students