STUDENTS MONITOR ACADEMIC PROGRESS USING DATA FOLDERS TO SEE IF ACADEMIC GAINS ARE MADE

By

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ABSTRACT

The purpose of this study was to analyze elementary student’s academic gains when they monitored their own progress in the areas of reading Dolch Sight Words, Spelling and Math. These students don’t typically monitor their academic progress; it is done by the Special Education Teacher. Progress towards academic goals is made; but there is often regression and progress is typically slow. The research includes findings that answer the question, “Are there academic gains when elementary students monitor their progress using student Data Folders?”

In order for the students to have complete ownership of their learning they created their own Data Folders. They created the graph paper and put a title at the top for each subject. After each informal assessment, the students graphed their percentage on the appropriate data graph. The study was conducted during the 2013-2014 school year and compared to the 2012-2013 school year when these same students did not monitor their progress. Six students were involved in this study and their names are anonymous.

The findings were analyzed through A Statistical Program (ASP) software. Findings indicate that there is a difference between the progress elementary students’ make when they monitor their own academic progress and when they do not monitor their own academic progress.
INTRODUCTION

Background, Issues and Concerns

This study focuses on a Special Education Classroom which is located in a suburban elementary school in the Midwest. In the 2012-13 school year, the elementary school had 452 students enrolled; it consisted of 7.3% Black, 10.8% Hispanic and 75.4% White. 134 students or 30.5% were Free or Reduced Lunch. The elementary school had approximately 18 students per classroom teacher and a 95.5% attendance rate.

This elementary school supports two special programs, the Essential Skills Classroom (ESC) and the English Language Learners (ELL).

The Essential Skills Classroom is a special education program which consists of students in grades K-5 who have physical, cognitive and/or multiple disabilities who require a small classroom setting to receive individualized instruction as stated in their Individual Education Plan (IEP). In the 2012-13 school year there were 21 students enrolled in this special program.

Students’ progress is monitored by the Case Manager and reported to the IEP team on a quarterly basis. Students’ Goals are updated annually or as the student makes gains towards their goals. The student is not involved in the monitoring of their progress and therefore, they do not know if progress is being made or not. This project will focus on students keeping track or monitoring their own progress using Data Folders for the subjects of Reading, Spelling and Math. The analysis will determine if using Data Folders will increase individual student progress toward their IEP goal compared to previous years when students did not use Data Folders to monitor their progress. During the 2012-2013 school year; 6 elementary students in this classroom did not monitor their own progress and little progress was made. In 2013-2014 school year; the same 6 students will create Data Folders and graph their academic progress. The teacher will
compare data from 2012-2013 school year to 2013-2014 school year to see if students benefit from monitoring their own progress.

*Practice under Investigation*

This practice under investigation is to engage students in their own learning by having them track and monitor their progress using Data Folders. This practice will give the students ownership of their learning and motivate them towards meeting their IEP goals.

*School Policy to be Informed by Study*

The ESC classroom consists of one Case Manager or Special Education Teacher and two Paraprofessionals. Students will each have their own Data Folder. Each folder will have the student’s IEP Goals for Reading, Math and Spelling. Students will use graphs to track their progress. The Case Manager or Paraprofessional will assist the students in graphing their progress. The Case Manager will also keep track of students’ progress in their own files. All student names and personal information will remain anonymous and confidential.

*Conceptual Underpinning*

Learning to read, spell and knowing how to solve basic addition problems are important life skills for everyone. Especially for students who struggle in those academic areas. As teachers we need to light a fire in our student’s enthusiasm to learn. One way to do this is to have them be a part of their goal setting and monitoring their progress. Carl Rogers, an Experiential Learning Theorist, believes that students learn by doing, by being a part of the experience. He also believes that feelings and emotions are a big part of reaching those personal goals. Teachers can get their students involved by having them create their own Data Folders and talking about why it is so important to read, spell and solve math problems. Teachers should find out what
their interests are and incorporate that into why academics are so important. Students are motivated by positive reinforcements. As they monitor their progress, their motivation and enthusiasm to learn will ignite and maybe huge gains won’t be made, but maybe they will. It is now in their hands to want to succeed.

Statement of the Problem

Students should be involved in setting academic goals and monitoring their progress.

Purpose of the Study

The purpose of this study is to find out if academic gains are made when elementary students monitor their own progress. Students will use graphs and portfolios to monitor their own progress in the areas of math and reading and spelling high frequency words. The information gained will allow the student to become aware of their academic learning and help the teacher decide if their teaching methods are effective or if they need to be changed.

Research Question

RQ1: Is there a difference in elementary student academic gains between students who monitor their progress using graphs and student portfolios compared to students who do not monitor their progress using graphs and student portfolios?

Null Hypothesis

There is no difference in academic gains when students monitor their progress using student Data Folders.

Anticipated Benefits of the Study

The result of this study will show the effects of academic gains when elementary students use graphs and student portfolios to monitor their own progress. While the students monitor their
progress, the teacher will determine if their instructional methods are effective or if they need to change their teaching methods in order for the student to become successful.

Definition of Terms

Dolch Sight Words: Dolch word list includes the most common 220 words and 95 nouns encountered in children’s books. Dolch words, or sight words, are critical in early reading development because they represent high-frequency words and are difficult to sound out or to illustrate (k12reader.com).

Monitoring: Student progress monitoring is a practice that helps teachers use student performance data to continually evaluate the effectiveness of their teaching and make more informed instructional decisions.

Summary

This research is looking to find out if academic gains are made when elementary students monitor their own progress. In the past the teacher was the one collecting the data and the students were not part of this process. By having the students create and maintain data folders, the students will become more aware of their progress and therefore have more academic gains. The goal is to make progress towards their IEP goals and reach them in order to become closer to their grade level skills.
REVIEW OF LITERATURE

Students who monitor their own learning are creating their own goals and becoming independent in their learning and how they learn. Research has demonstrated that when teachers use student progress monitoring, students learn more, teacher decision making improves and students become more aware of their own performance (Safer & Fleischman 2005). Students are able to find out where they are lacking and also see what great improvements they are making. Teachers are able to adjust their teaching methods in order for the students to reach the goal that is set for them. Student progress monitoring is easy to fit into the routine of the classroom, by having the data folders on hand and ready to graph as soon as the student’s assessment is completed.

According to Marzano (2009), when students track their own progress using graphic displays, the academic gains increase. When students monitor their data, it increases interactions between the teacher and the student, provides students with clear guidance on how to enhance their learning. In a study that Marzano (2009) researched, in one class the teacher had students track their progress and in a second class the teacher taught the same content for the same length of time and did not have the students track their progress. On average, the practice of having students track their own progress was associated with a 32 percentile point gain in their achievement. By having the students see a visual of their progress and have them involved in the process makes a huge difference in the gains that are made. More and more classrooms are implementing Data Notebooks or Folders and then having the students use them during Parent/Teacher Conferences so that students can explain what they are doing in class and how they are doing in that area.
In an article by McLane (2006), Integrating Student Progress Monitoring into Your Classroom, she stated that students enjoy using graphs as they provide such a clear picture of learning over time and it also shows the students how to read graphs. The graphs can also be used as a motivational tool for students as they like to see their graph change each week. Graphs can be an easy tool for students and others involved with the student to see what kind of progress the student is making and if there needs to be any instructional changes.

Students want to be in charge of their learning and in order for students to be in charge of their data collection, teachers are letting their students create their own graphs or choose from a variety that are already made. Student progress monitoring has become so effective in the classrooms, that there are many Blogs and teacher resources of already made graphs and example of one is http://helloliteracy.blogspot.com. These blogs are from teachers who have implemented graphing and portfolios and have had tremendous growth in their student’s academics when they are involved in the process. Jones (2012), author of this blog stated, “When students know what it is they need to do, specifically, to improve and grow, the more targeted and accelerated their growth will be.” (para. 3)

In a study by Dodson and Henderson (2009), student portfolios were introduced to a first grade and second grade split classroom and a third grade classroom. They wanted authentic assessments of their students’ work and for students to examine their own work. Keeping their portfolios created a sense of ownership of their learning and the students were able to identify their learning goals and show progress over time.

In the first grade and second grade classrooms the teacher noticed that the students were eager to add pieces to their portfolios. They had a sense of independence and accomplishment. The teacher also noticed that she was able to have self-evaluation conversations with her students
about their portfolio. The same outcome was happening in the third grade classroom as well
with a 30% increase in reading scores. Overall, the teachers in this study thought that
implementing student portfolios was a positive experience.
RESEARCH METHODS

Research Design

A quantitative study was conducted to see if academic gains are made when students monitor their own progress. The independent variable is monitoring student progress and the dependent variable is the students’ academic progress.

Study Group Description

This study group consisted of six students in a Special Education Classroom or ESC. This is a Self-Contained classroom in which the students are with the same teacher for no more than two consecutive years.

This elementary school supports two special programs, the Essential Skills Classroom (ESC) and the English Language Learners (ELL).

The Essential Skills Classroom is a special education program which consists of students in grades K-5 who have physical, cognitive and/or multiple disabilities who require a small classroom setting to receive individualized instruction as stated in their Individual Education Plan (IEP).

Data Collection and Instrumentation

The data that was collected is from six students in the 2013-2014 school year. It is compared to the same six students in the previous year 2012-2013, when they did not track their own data. Data was only collected by the Special Education Teacher in the 2012-2013 school year. The students used bar graphs to monitor their Dolch Sight Words, addition facts and spelling words. The bar graphs were easy for the students to visually see the progress that they were making in each area.
Statistical Analysis Methods

A Statistical Package (ASP) software was used to complete the statistical calculations in this study. Descriptive statistics and t-tests were completed with an Alpha Level of 0.25. One of the t-tests measures the progress of March scores from 2013 and the other t-test measures the progress of March scores from 2014.
FINDINGS

The charts below are the data that the students collected on their own. Over half of the students made steady progress in reading, spelling and math. There is some regression for some students and that would typically occur during a long break from school. This usually happens during the December and January months and sometimes during the month of March due to Spring Break.

Dolch Sight Words-Student Monitored 2013-2014 School Year

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<td>1.</td>
<td>75% Pre-</td>
<td>85% Pre-</td>
<td>93% Pre-</td>
<td>95% Pre-</td>
<td>98%</td>
<td>38% Primer baseline</td>
<td>50% Primer</td>
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<td>2.</td>
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<td>90% Pre-</td>
<td>100% Pre-</td>
<td>56% Primer baseline</td>
<td>63% Primer</td>
<td>76% Primer</td>
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<td>3.</td>
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<td>63% Pre-</td>
<td>78% Pre-</td>
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<td>48% Primer baseline</td>
<td>60% Primer</td>
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<td>4.</td>
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<td>45% Pre-</td>
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<td>53% Primer</td>
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<td>78% 1st Gr.</td>
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<td>60% Primer</td>
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<td>62% Primer</td>
<td>73% Primer</td>
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Spelling Words 50 1st Grade Words-Student Monitored 2013-2014 School Year

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<td>66%</td>
<td>78%</td>
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<td>3.</td>
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<td>46%</td>
<td>56%</td>
<td>68%</td>
<td>82%</td>
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<td>5.</td>
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<td>62%</td>
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<td>84%</td>
<td>80%</td>
<td>94%</td>
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<td>6.</td>
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<td>44%</td>
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<td>68%</td>
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Addition facts to 50- Student Monitored 2013-2014 School Year

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During the 2012-2013 school years, these same students did not have the steady progress that is shown in the charts above. Only students 5 and 6 had steady progress and the rest had very little progress or more regression. When the students graphed their progress, they were able to see how they were doing and strived to do better the next time.
Student #1 had a 23% increase in reading pre-primer words and 12% increase reading primer words. In the area of spelling 50 first grade sight words, this student increased their percentage by 56%. In the area of math, they had a 27% increase when monitoring their own data. Student #2 had a 20% increase reading pre-primer words and 29% increase reading primer words. In the area of spelling, they had a 58% increase. In the area of math this student had a 53% increase. Student #3 had a 40% increase reading pre-primer words in the span of four months. They had an increase of 23% reading primer words. In the area of spelling, they had a 74% increase and in the area of math they had a 47% increase. Student #4 had a 26% increase reading pre-primer words, in the area of spelling they had 24% increase and in the area of math, they had a 47% increase. Student #5 had a 29% increase reading primer words and a 24% increase reading 1st grade sight words. In the area of spelling, they had a 50% increase and in the area of math they had a 50% increase. Student #6 had a 43% increase reading primer words. In the area of spelling, they had a 68% increase, which was the largest gain and in math they had a 13% increase. This year there were many gains toward the student’s individual IEP goals and therefore students should continue to monitor their progress using data folders.
t-Test Analysis Results for Students Monitoring and Not Monitoring Spelling Data 2013-2014

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<tr>
<th>Source</th>
<th>Mean</th>
<th>Mean D</th>
<th>t-test</th>
<th>df</th>
<th>p-value</th>
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<tr>
<td>Mar. 2013 (n=6)</td>
<td>28.7</td>
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<tr>
<td>Mar. 2014 (n=6)</td>
<td>83.7</td>
<td>-55</td>
<td>-5.15</td>
<td>10</td>
<td>4.25E-4</td>
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</tbody>
</table>

Note: Significant when p<=0.25

The mean of March 2013 was 28.7% and the mean of March 2014 was 83.7% which caused the mean difference to be -55%. The t-Test results were -5.15 with a df of 10. The p-value was 4.25E-4 which is less than the Alpha Level of 0.25, there is significant benefit for monitoring versus non-monitoring in the month of March for the two school years. The null hypothesis was rejected as there is a difference in their Spelling performance when students monitor compared with students not monitoring their performance.

t-Test Analysis Results for Students Monitoring and Not Monitoring Math Data 2013-2014

<table>
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<th>Source</th>
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<th>t-test</th>
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<tr>
<td>Mar. 2013 (n=6)</td>
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<tr>
<td>Mar. 2014 (n=6)</td>
<td>83.3</td>
<td>-39.5</td>
<td>-4.25</td>
<td>10</td>
<td>1.69E-3</td>
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</table>

Note: Significant when p<=0.25

The mean of March 2013 was 43.8% and the mean of March 2014 was 83.3% which caused the mean difference to be -39.5%. The t-Test results were -4.25 with a df of 10. The p-value was
1.69E-3 which is less than the Alpha Level of 0.25, there is significant benefit for monitoring versus non-monitoring in the month of March for the two school years. The null hypothesis was rejected as there is a difference in their Math performance when students monitor compared with students not monitoring their performance.
CONCLUSIONS AND RECOMMENDATIONS

This study proved that the null hypothesis was rejected because there were great gains when the students monitored their own progress. The graphs proved to be huge motivators for the students as it provided a visual and they wanted to complete the graphs.

The findings of the study show there is a significant difference between having the students monitor their data and not monitor their data.

The null hypothesis states that there is no difference in academic gains when students monitor their progress using student Data Folders. The p-value for Spelling was 4.25E-4 which is less than the Alpha Level of 0.25, which is a significant difference. The t-test results from the 2013 testing year indicated that the mean was 28.7 and the mean from 2014 was 83.7 which is a mean difference of -55. This would indicate that the null hypothesis tested is rejected. There is a difference in academic gains when elementary students monitor their progress using student Data Folders.

In the area of Math, the p-value was 1.69E-3 which is less than the Alpha Level of 0.25, which is again a significant difference. The mean of March 2013 was 43.8% and the mean of March 2014 was 83.3% which caused the mean difference to be -39.5%. This would indicate that the null hypothesis tested is rejected in the area of Math as well. When students monitored their data compared to not monitoring their data, they were able to see the progress they were making and were motivated by seeing the graph go up. There was a great impact on the students academics when they began monitoring their own progress using Data Folders.

The conceptual underpinning of theorist Carl Rogers, an Experiential Learning Theorist, believes that students learn by doing, by being a part of the experience. Students want to have
control and input in their learning and when students graph and see the progress that they are making, they have a sense of ownership in their education and learning.

The data supports the conceptual underpinning with the fact that the students were motivated and engaged in their learning when they became involved in the process of monitoring their own data. As they met their goals, they were able to make more goals and try to reach those as well. During the 2012-2013 school years, these students did not have the steady progress that they had in the 2013-2014 school years. Only two students had steady progress and the rest had very little progress or more regression. When the students graphed their progress the next year, they were able to see how they were doing and strived to do better the next time. Some students increased their reading scores by 23% and others increased their spelling scores by 68%, which was the largest increase in all academic areas. Some students increased their math scores as much as 50%. The teacher is planning on continuing the practice of student data folders for the next school year.

Teachers should implement student monitoring, data graphs and portfolios into their classrooms. It could mean more work for the teacher to create, but with all of the free resources and affordable resources, teachers can have the students create their own.

When students monitor their own progress, they are able to understand how they are learning and what they are learning, which makes Parent/Teacher Conferences or Student Led Conferences easier for all to know the progress of the student.

More training or research could be completed by teachers to find the most effective way or the Best Practice in implementing Data Folders or Portfolios into the classroom. It takes organization and time in order for it to become a part of the weekly schedule and for students to understand what they are doing. Once it is introduced, students are eager to graph their progress.
REFERENCES


McLane, K. (2006). Integrating Student Progress Monitoring into Your Classroom:
