

The Impact on Student Achievement within Small Groups Based on Learning Styles, Interest, and Student Readiness

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Abstract

This action research project will be focused on a group of third grade students. Each student will be placed into three different groups based on similar learning styles, similar interests, and student readiness. These small groups will be occurring within my third grade classroom during our bi-weekly science lesson. The purpose of this action research project is to determine where student achievement is greatest within these small groups. This study will continue throughout the rest of the 2010-2011 school year, then to be followed by an interpretation and analysis of the data collected.

The Impact of Small Groups

Introduction

Through this action research project, I have the opportunity to take part in a study that will challenge me as a professional, as well as encourage me to be the best teacher possible for my students. Through this action research project, I will be reflecting upon how students learn best. Through strategic grouping of students, I will be measuring and assessing student achievement, while students work in three different types of groups. The motivation for this study came from a desire to ensure that all students are achieving at the greatest rate possible for them as individuals.

Due to my diverse group of third grade learners, it is imperative that I differentiate instruction, and do it in a way that will benefit all learners. I understand that through differentiation, all students should be making gains within the classroom. The question that must be answered is how should we group students in a way that is conducive to learning and will ensure students reach their highest potential? Through the conduction of this project, I hope to find the most effective way to group students within a diverse classroom so that all students are achieving at their own individual levels. By implementing these groups, I believe I will be successful in finding the most effective way of grouping students so that individual goals are met.

As the 2010-2011 school year continues at Juniata Gap Elementary School, I must continue to strive to make learning meaningful and effective for all students within my classroom. The students within this classroom consist of six gifted students, two students who have been identified with learning disabilities, a student who is emotionally unstable due to her outside environment and eighteen other students who range from “at risk” students to advanced students.

The Impact of Small Groups

My action research project will focus on what types of small groups are most effective on all student achievement within the classroom.

According to Mills (2011), “If we conduct our research in a systematic, disciplined manner, we will go a long way towards minimizing personal bias in our findings.” This statement is so important, yet it is sometimes hard to disregard our biases and underlying assumptions toward something. In order to keep the research valid, reliable, and generalizable, it is crucial that we ignore these aspects that may hinder the research results we are seeking.

When beginning the process of brainstorming biases and assumptions I had related to the project, I felt I didn't have any that would hinder the research. Through discussion with colleagues and reflecting, I realized that I do have some assumptions that could affect the research. One assumption that I created was, only my “at risk” students would need manipulative objects within a small group setting. I'm not sure this is necessarily true, especially for the kinesthetic learners. Another assumption I created was that groups of students will be relatively the same for each activity. Again, this assumption proved to be wrong as I reflected the diversity of learning styles and interests within the classroom.

A bias that was revealed was homogeneous groups are more effective than heterogeneous groups. This is a bias that I must overcome in order to obtain the research in a non-biased manner. This must be kept in mind when creating data analysis tools. In order to overcome this bias, I must implement research data tools that will be valid and reliable. It is the information gathered there that will be used to interpret and analyze the data found. If it is not kept in mind, my biases may be exposed throughout the qualitative and quantitative instruments (Korzym, 2010k)

The Impact of Small Groups

Area-of-Focus Statement

The purpose of this study is to identify the most effective ways to create groups of students within my classroom, so that through differentiated instruction they will be able to reach their greatest potential within the content area of science.

Literature Review

Listed below are pieces of literature that will be used as tools during this action research project. They all provide important insights and ideas that are directly related to my area of research. They are as follows:

Bereiter, C. & Scardamalia, M. (2010). Can children really create knowledge? *Canadian Journal of Learning and Technology*, 36(1). Retrieved from <http://www.eric.ed.gov/PDFS/EJ910469.pdf>

This article takes an in depth look at how students create knowledge. One of the key factors that helps students create meaningful knowledge is making the material authentic. When students have the opportunity to create knowledge, they are able to attain more and therefore become more successful in the classroom (Bereiter & Scardamalia, 2010). This article will help in my endeavor to measure student success in small group settings that are based on interest. If I can take the interests of the students and present the new content material in a way that is authentic to them, they will easily retain and obtain new knowledge that will help in their achievement as students

Bikarian, S. (2009). *The effects of heterogeneous and homogeneous grouping on reading achievement*. Sierra Nevada College, Incline Village, NV.

The Impact of Small Groups

This thesis was written in order to find out which group, homogeneous or heterogeneous, creates greater student achievement within the area of reading. The piece of research talks about the ability grouping of students, limitations they had, and the different data collection tools they used. This research was conducted strictly on the ability of students. The author came to the conclusion that it the different groups did and did not have an impact on student achievement (Bikarian, 2009). Although I will not be basing all of my action research on ability grouping, I still feel that it will be a valuable tool that will offer valuable insights and experiences that I may encounter along the way of my project.

Brighton, C., Hertberg, H. L., Moon, T. R., Tomlinson, C. A., & Callahan, C. M. (2005, September). *The Feasibility of High-end Learning in a Diverse Middle School* (RM05210). Charlottesville, VA: The National Research Center on the Gifted and Talented.

This was a study conducted in order to provide teachers with strategies that will benefit all learners within their classrooms. It discussed matters that related to my own classroom situation, such as principles and realities for diverse groups, a variety of instructional practices that can be used, the use of student grouping, and factors influencing differentiated instruction. By using this study as a tool, I know it will guide me to use strategies that may work in creating small group activities that would benefit those students in the higher achieving groups (Brighton et al., 2005). This would take place when students are grouped according to their readiness to proceed in a specific content area.

Daniel, L. (2007, February). *Research summary: Heterogeneous grouping*. Retrieved from

The Impact of Small Groups

<http://www.nmsa.org/Research/ResearchSummaries/Heterogeneous%20Grouping/tabid/1264/Default.aspx>

According to this article, homogeneous grouping does not create a classroom environment conducive to learning (Daniel, 2007). Instead it creates poor attitudes and negativity toward the content. Through this article, it has opened my eyes to the controversial topic of ability grouping. I've always felt that ability grouping was the most effective way to group students since they could move at a pace that would benefit them individually. Instead, this article proves that more harm can be done than good through this type of grouping. By finding this article, it will remind me how important the research data is that will be provided. I will not be able to apply my opinions and biases to any part of this action research project if it is to be a reliable source of how to increase student achievement within small groups.

Egg Harbor Township Schools (2008). *Differentiated instruction: Student interests/interest surveys*. Retrieved from <http://eht.k12.nj.us/~Jonesj/Differentiated%20Instruction/Interest%20Surveys.htm>

The Egg Harbor Township Schools website provided a page of valuable information and tools that I can take from and use within my action research project. It states that we as teachers are required to teach certain areas that may not be of interest to students, but if we pull in student interest, it then becomes more meaningful for them (Egg Harbor Township Schools, 2008). This website also provided information of how students self esteem from past requirements can be restored due to the implementation of their interests. As if that wasn't enough data to motivate me to incorporate student interests within small group settings, the site also provides student interest surveys that can be printed and used as a placement tool.

The Impact of Small Groups

Faris, A. O. (2009). *The Impact of Homogeneous vs. Heterogeneous Collaborative Learning Groups in Multicultural in Classes on the Achievement and Attitude toward Nine Graders towards Learning Science*. Retrieved from <http://www.eric.ed.gov/PDFS/ED504109.pdf>

This article takes a look at student achievement within three different situations. The author's main purpose is to gather data based on these different groups to understand how students in multicultural classrooms learned best. As a result of this study, the author found students possessed a positive attitude throughout all groups studied, but the student achievement was enhanced when students in heterogeneous groups also were exposed to students from different cultures (Faris, 2009).

Although I will not be using the multicultural factor within my action research plan, I believe that this study will help benefit my project as I can look to it for guidance when analyzing and interpreting results. It provides a number of data analysis tools, along with advantages of data sources. This research is similar to what I will be conducting, but I will not begin to assume that I will have the same outcomes. In order for my action research plan to be valid and reliable, I must leave all assumptions and biases at the door.

Kluth, P. & Danaher, S. (2010). *From Tutor Scripts to Talking Stick: 100 Ways to Differentiate Instruction in K-12 Inclusive Classrooms*. Baltimore, MD: Brookes Publishing Company.

According to Kluth & Danaher (2010), "differentiated instruction engages students of all abilities as active learners, decision-makers, and problem solvers--making educational

The Impact of Small Groups

experiences more meaningful for all.” It is a proven fact that differentiation within the classroom is effective, but sometimes it can feel overwhelming. This book will be a key tool in creating differentiated activities within groups that were created based on student interest and student readiness, yet it will still enable students in each group to reach the same goal. Whether students need to be re-taught content or are in need of enrichment, these simple strategies show that differentiation within the classroom is beneficial to all students.

O’Brien, L. (n.d.). *Learning Channel Preference*. Rockville, MD: Specific Diagnostic Studies, Inc. Retrieved from http://www.as.wvu.edu/phys/rotter/phys201/1_Habits_of_the_Mind/Learning_Styles.html

This online article focuses on the importance of understanding how students learn. It is important to know that students learn differently. This article provides assessments that can be given in order to discover ways in which students learn best. The article goes even further to provide ways in which students can better understand information according to their learning styles.

As a teacher who is willing to try grouping students by learning styles, this article is important because it provides tools that can be used in the classroom to identify the groups. The three main groups addressed in the article are auditory, visual, and hepatic or kinesthetic. The suggestions for students in the article can be used by the teacher as well. By understanding how students differ and learn more effectively, I can take those suggestions and implement them within the small groups accordingly (O’Brien, n.d).

Ormrod, J. E. (2003). *Educational Psychology: Developing learners (4th ed.)*. Upper Saddle,

The Impact of Small Groups

New Jersey: Merrill Prentice Hall.

This book touches upon the importance of using student interest as a way of students acquiring more knowledge. It discusses how students are more likely to become self efficient in an area that will in turn stir up intrinsic motivation within that student if they are exposed to their individual interests (Ormrod, 2003). If personal interest is incorporated within a new content area, the students will gain interest and therefore become more successful. This source will be a beneficial tool as I begin to plan activities based on student interest in order to measure student achievement.

Schultz, T. (2011). *Accommodating different learning styles to improve comprehension*.

Retrieved by http://www.associatedcontent.com/article/7785998/accommodating_different_learning_styles.html?cat=4

This blog was very informative. Shultz (2011) states, “For optimum comprehension and learning for all students, teachers need to incorporate methods in their lessons that address all three learning styles”. As I begin to plan for strategies to use during the different learning style groups, this blog will be something that I will use as a resource. It offers different modes of presenting materials so that it is reaching students who have specified learning styles. This will be extremely beneficial during that time of the action research project.

Tomlinson, Carol Ann. (1999). *The Differentiated Classroom: Responding to the needs of all learners*. Alexandria, VA: ASCD.

Carol Tomlinson (1999) answers the burning question for every teacher who tries to differentiate their instruction, “How do I divide my time, resources, and myself so that I am an

The Impact of Small Groups

effective catalyst for maximizing talent in all my students?” This text gives insight of the differentiated classroom and illuminates the many factors that affect it. This text will be used as a tool while completing my action research project because it shares a wealth of information from instructional strategies, to elements of differentiation, and how teachers to make it all work.

Tomlinson, Carol Ann. (2001). *How to Differentiate Instruction in Mixed Ability*

Classrooms. Alexandria, VA: ASCD.

From this text, Tomlinson shares how differentiation is proactive, qualitative, rooted in assessment, has multiple approaches, is student centered, and is a blend of whole group instruction to individual instruction. The author shares how we as teachers need to create a learner friendly environment that is flexible for all learners (Tomlinson, 2001). This book will be a guiding light as I embark on this action research project because it addresses the diversity typical of classrooms with mixed abilities. It also discusses the role as the teacher, strategies for managing these classrooms and an in depth look at different classrooms that implement differentiated instruction.

Tomlinson, C. A. & McTighe, J. (2006). *Integrating Differentiated Instruction and*

Understanding by Design: Connecting content and kids. Alexandria, VA: Association for Supervision and Curriculum Development.

From this source, I was able to see how using backwards design can be effective in a differentiated classroom. Tomlinson & McTighe (2006) state, “curriculum built on the goal of student understanding, integrated with instructional approaches that emphasize reaching every learner, can provide teachers with more specific teaching targets and more flexible ways to reach

The Impact of Small Groups

them.” By integrating and studying information from this book, I will become better at designing my curriculum so that the differentiation is easily implemented through backwards design. I will also be able to create assessments that target student understanding through differentiated performance tasks.

Williams, J, Ed.D., (2010). *Reading Comprehension, Learning Styles, and Seventh Grade Students*. Ann Arbor, MI: ProQuest LLC.

This study is a beneficial piece of research for me as I will be embarking on an action research project. The goal of the project is to implement small groups to differentiate instruction in order for all students to become successful. This study has shown a high correlation between students who are considered “at risk” in the area of reading comprehension and the learning styles in which the material is being presented (Williams, 2010). Through this study, it was proven that in order for students to be successful, they must be presented material in ways that best suit their different learning styles.

This study will benefit my action research project because it offers more insight to the learning styles and how impactful they can be when students have the opportunity to learn in that way. As I begin grouping students according to their learning styles, I will be anxious to see how effective this strategy is and if my results measure the same as the study group above.

Research Process – Stage One: Data Collection Matrix

A data collection matrix is provided below. Multiple sources of data will be implemented throughout the study to ensure that the data is valid and reliable pieces of evidence. Through triangulation, both qualitative and quantitative, sources will be used in a manner that

The Impact of Small Groups

will allow the data to show patterns and themes that will be used to analyze the information provided by the assessment tools (Mills, 2011).

Data Collection Matrix

Research Questions	Data Source #1	Data Source #2	Data Source #3
What is the impact on student success of grouping students based on individual learning types?	Learning Style Quiz - to provide student learning styles needed to create small groups based on learning style.	Student Survey - to provide teacher with student insights during small group work.	Teacher Observation Checklist – to provide the teacher with evidence of student cooperation and learning environment during small group work.
What is the impact of grouping students based on student readiness?	“Please Do Now” -to provide teacher with evidence of student readiness within a certain content area.	Teacher Observation Checklist – to provide the teacher with evidence of student cooperation and learning environment during small group work.	“Ticket out the Door” – to provide teacher with immediate feedback of student achievement during that specified time.
What impact does student interest have on student achievement within small groups?	Student Interest Quiz - to provide the teacher with groups of students with similar interests in order to create homogeneous small groups.	Student Survey - to provide teacher with student insights during small group work.	Teacher Observation Checklist – to provide the teacher with evidence of student cooperation and learning environment during small group work.

In order to analyze each data source so that the data collected becomes a valuable tool in the action research project, it is imperative to “count what counts” (Mills, 2011). Information that is gathered from the prerequisite quizzes (Student Learning Style Quiz and Student Interest Quiz) helps to create groups based on the specified focus. Once the students have been identified, the

The Impact of Small Groups

next two pieces of data can be collected and analyzed.

The next two pieces of data that would be analyzed together would be the qualitative tools, student surveys and the teacher observation checklist. When analyzing both pieces of data collection, the effectiveness of the groups can be measured by comparing the data collected through the teacher observation checklist and the student survey. Although, I may feel that the group was very productive and on task with an environment that was conducive to learning, the students may have thought the complete opposite. By analyzing both pieces, I will be able to understand the group as a whole, not just from one perspective. In order to collect data that will be valid, reliable, and generalizable, different modes of data must be collected (Mills, 2011).

The data sources listed above work cohesively to provide data that will be valid. Through both quantitative and qualitative sources, the data shows what students know before and after a lesson that involves small groups. Although when one or two sources, whether quantitative, qualitative, or both, are given to measure student achievement within a particular group may not be dependable, when other sources that work together are added, it becomes more dependable, credible, and can be confirmed time and time again (Mills, 2011).

Data Analysis

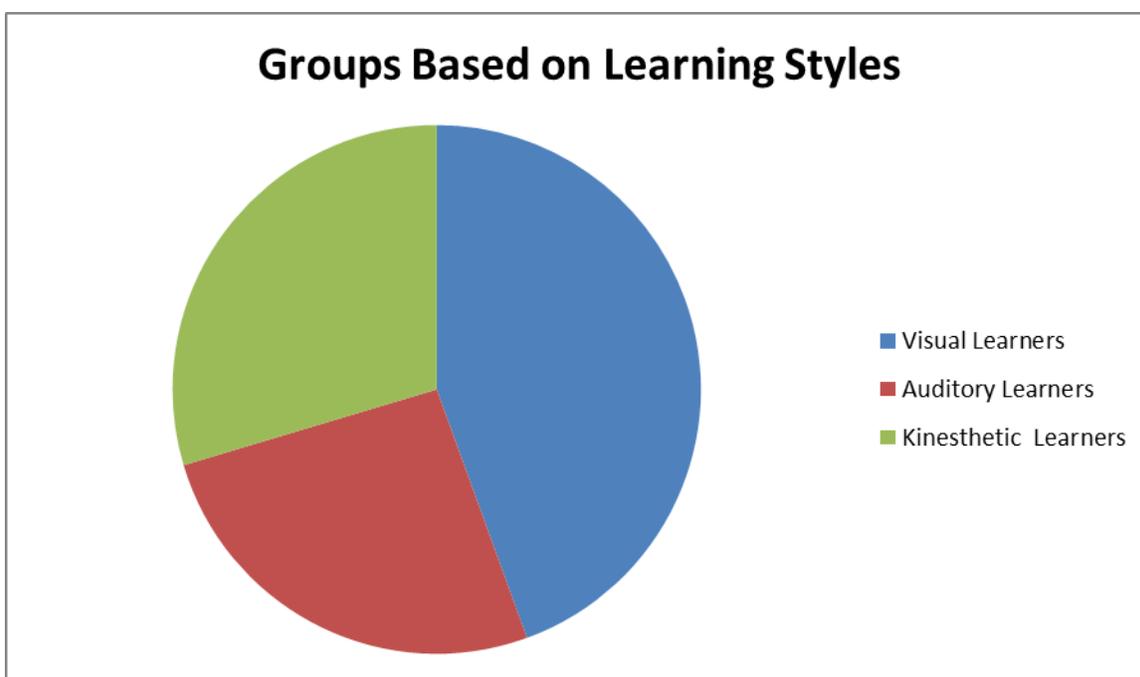
The data collected and analyzed within the action research project shows the impact of different groupings within a classroom setting. The data collected first was to answer the following question: What is the impact on student success of grouping students based on individual learning types? To answer this question, three data sources were implemented, a learning style quiz, a student survey, and a teacher observation checklist.

Questions from the quiz consisted of how students feel they learn best, their likes and dislikes while learning, and how they remember things best. After completing the quiz, students

The Impact of Small Groups

tallied their answers to discover what type of learning must take place to best suit their needs.

From the learning style quiz, I was able to see that seven of my twenty-seven students learned best through auditory instruction. Eight of my twenty-seven students learned best through kinesthetic instruction. Twelve of my twenty-seven students learned best through visual instruction. Through these findings, I was able to differentiate instruction based on the student's learning needs.



After whole group instruction, the students broke into their groups and had to complete different tasks that still led to the expected learning outcomes. For the auditory group students had the opportunity to read together and discuss their findings. They answered questions together and read together to meet their auditory needs as a learner. The visual learners read independently then had the opportunity to watch an educational video that explained the new concept through diagrams and pictures along with third grade friendly cartoon characters.

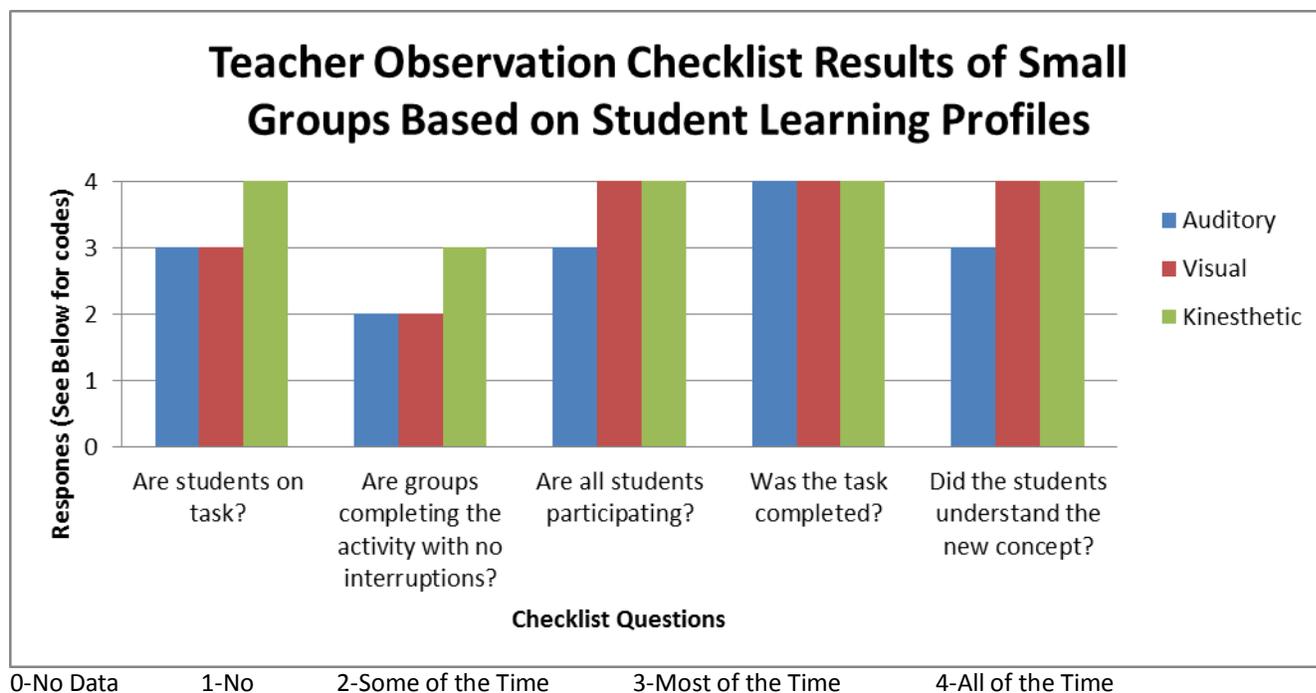
The Impact of Small Groups

Through these techniques, the visual learners were able to enhance their learning experience through supplemental visuals. The kinesthetic group also had to read the required text. After they were finished reading, their activity consisted of hands on experiments and activities that offered the kinesthetic learners opportunities that best suited their learning needs.

Once the groups were formed and activities were created for each of the three groups, the students were asked to complete a survey at the conclusion of the activity to provide insight as to whether or not they felt the activities were beneficial to them as learners. Students provided great feedback as to whether the group was successful in working together, if learner goals were met, and if they enjoyed their activity.

While looking through the data that the students provided, I could see that although they completed their activities within their small groups, all seven students who were visual learners and ten of my twelve auditory learners shared that they did not enjoy working in that small group. These students specifically stated that other classmates were off task. Also within the survey the auditory and visual groups explained how they would not like to work in this group setting again because of the activities that took place. Students within the auditory and visual groups had a more difficult time staying on task due to the lack of motivation to complete the activity.

During the small group activity, I walked around to each of the groups and began to fill out a teacher observation checklist. By completing this data source, I was able to see how students were working together and completing the activity through answering questions during the group work. I then completed the teacher observation checklist after the students have handed in their work. I could assess how each group of students did while participating in their small groups based on learning styles.



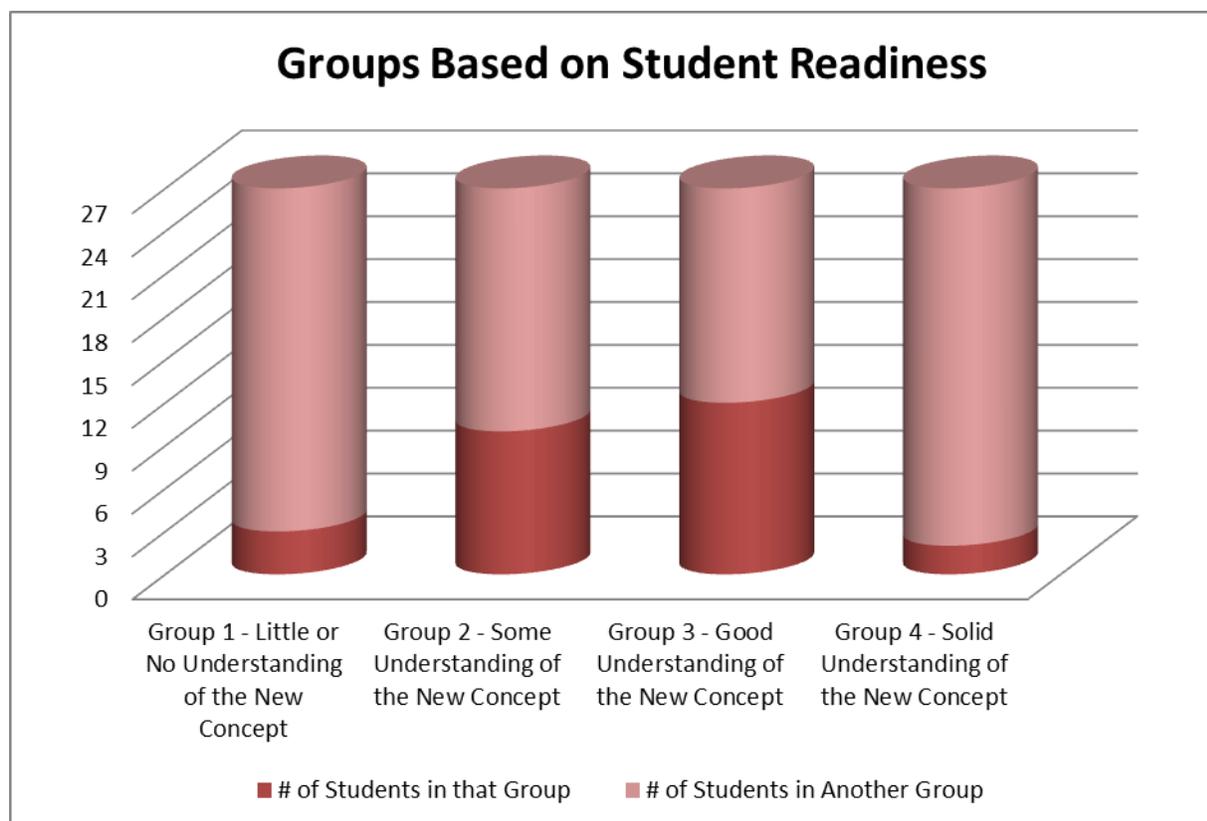
After all the data was collected, I could easily see the students' achievement within all three of the learning style groups. What is the impact on student success of grouping students based on individual learning types? Students who are grouped according to learning style are able to complete the task; two of the three groups completed the task with mastery of the new concept. However, there are variables that also took place within these groups such as, off task students, low motivation, and difficulties while trying to work with a new group of students. These variables can hinder student achievement if the students are not able to focus on the task at hand.

The next set of data collected was to answer the following question: What is the impact of grouping students based on student readiness? To answer this question, three data sources were implemented: a "Please Do Now", a teacher observation checklist, and a "Ticket out the Door".

During this phase of the action research project, I had the opportunity to group students according to their readiness of the concept. To begin the grouping process, I asked students to

The Impact of Small Groups

complete a “Please Do Now”. This is an instructional tool that I use frequently to determine what students already know about a new concept that we will be working with. After students have completed this portion, it was my job to work quickly to determine where students should be placed within groups based on their previous knowledge of the new concept. When all students were finished with the “Please Do Now”, I introduced the new topic followed by a short educational video that went into more depth. During this time, I grouped students according to their readiness. Three of my twenty-seven students had little or no understanding of the new concept. Twelve of my twenty-seven students had some understanding of the new concept. Ten of my twenty-seven students had a good understanding of the new concept. Two of my twenty-seven students had a solid understanding of the new concept.

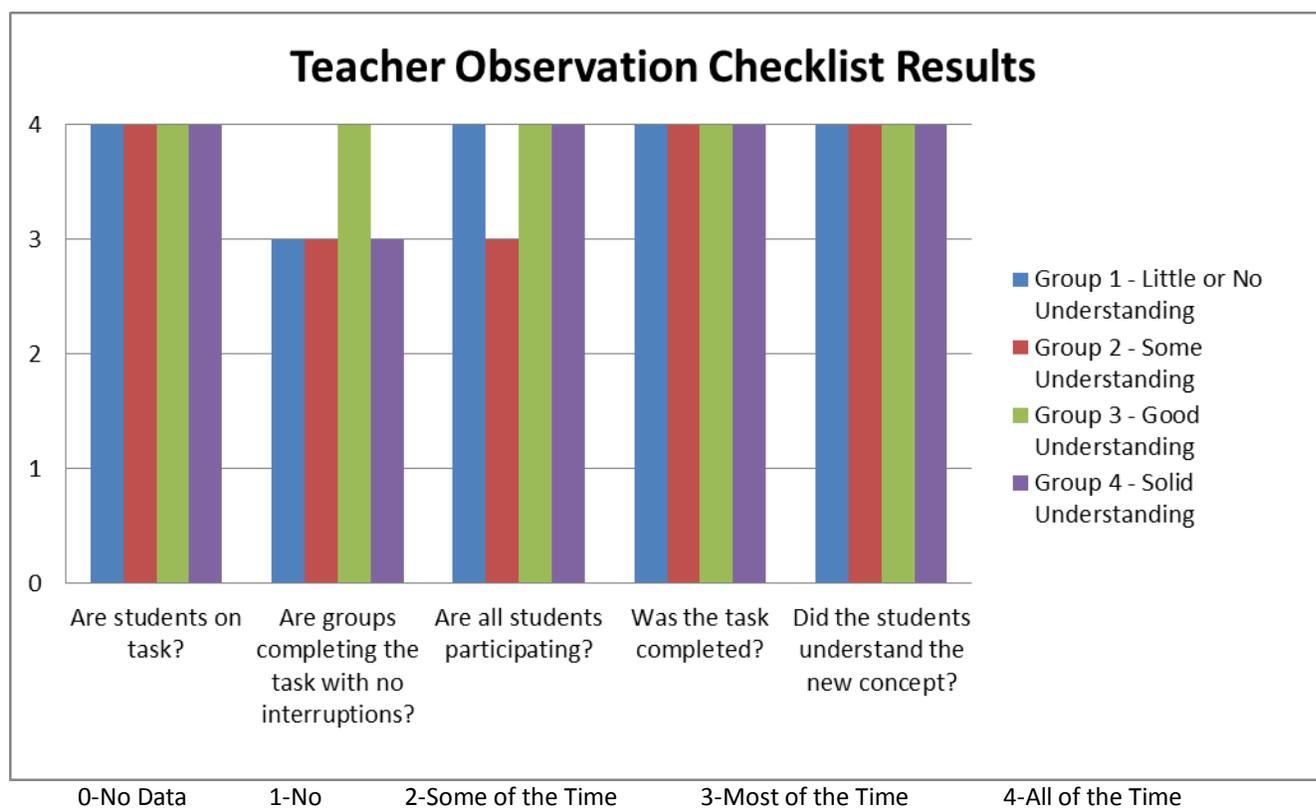


After students were grouped according to their readiness, I was able to have them complete the pre-planned activities based on the findings. Each group activity had the same

The Impact of Small Groups

expected learning outcomes, but the activities were modified in order for effective learning to take place within each group.

During the small group activity, I walked around to each of the groups and began to complete a teacher observation checklist. By completing this data source, I was able to see how students were working together and completing the activity through answering questions during the group work. I then completed the teacher observation checklist after the students have handed in their work. I could assess how each group of students did while participating in their small groups based on student readiness.

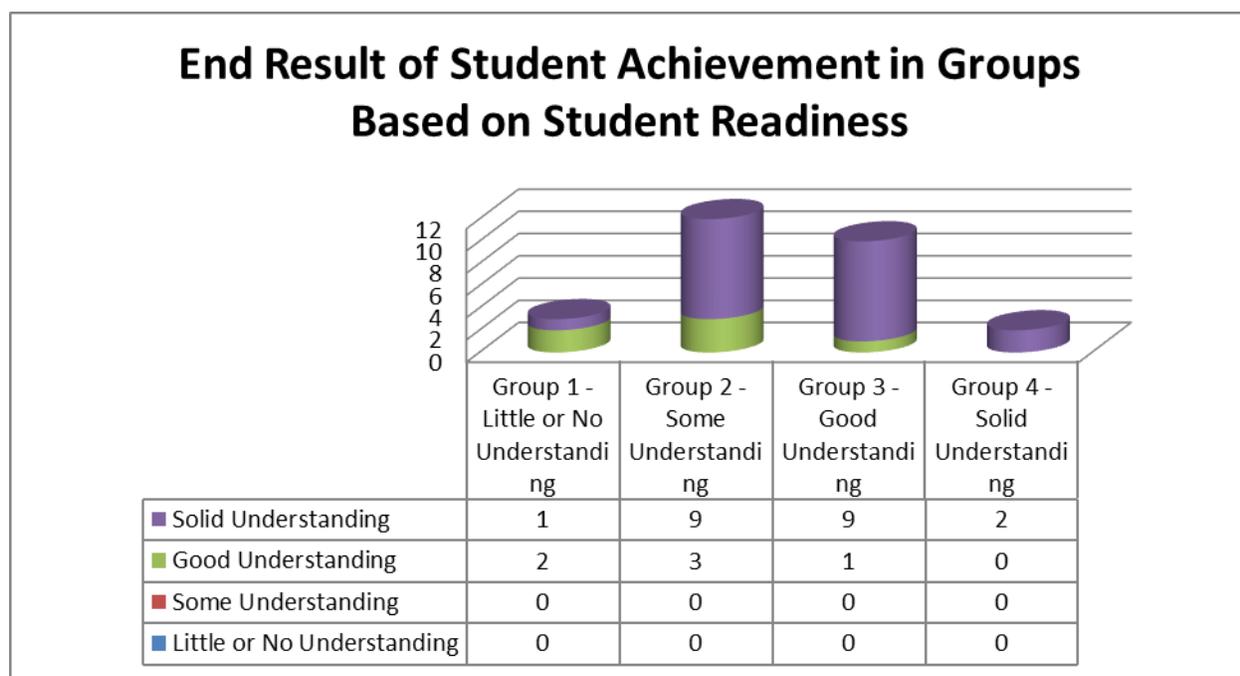


From the teacher observations all four groups were on task during the activity. Although students were on task, at the end of the lesson students who were early finishers began to disrupt those who were still working. This unfortunately affected some students who began the lesson with some understanding of the new content. All small groups completed the task and did so

The Impact of Small Groups

with mastery.

When the lesson came to a close, the students then had to complete a “Ticket out the Door”. This is an assessment to see what the students learned during that lesson. The “Ticket out the Door” is directly related to the “Please Do Now”. These two instructional strategies work together to measure student achievement within the lesson. The following chart shows what the students knew at the conclusion of the lesson in comparison to what they knew at the beginning of the lesson.



Three of the students who had little or no understanding of the new concept at the beginning of the lesson based on the “Please Do Now” had a better understanding of the concept based on the “Ticket out the Door”. Two of the three students now had a good understanding of the concept while one of the three had a solid understanding of the new concept. Twelve of the students who had some understanding of the new concept showed growth after the implementation of the instructional strategies discussed above. Three of the twelve students had

The Impact of Small Groups

a good understanding, and nine of the twelve had a solid understanding. Ten of the students who had a good understanding of the new concept showed growth after the implementation of the instructional strategies discussed above. One of the students stayed at that level in which they started while the other nine students grew from a good understanding of the concept to a solid understanding of the new concept. Finally, the students who started with a solid understanding of the new concept maintained their solid understanding.

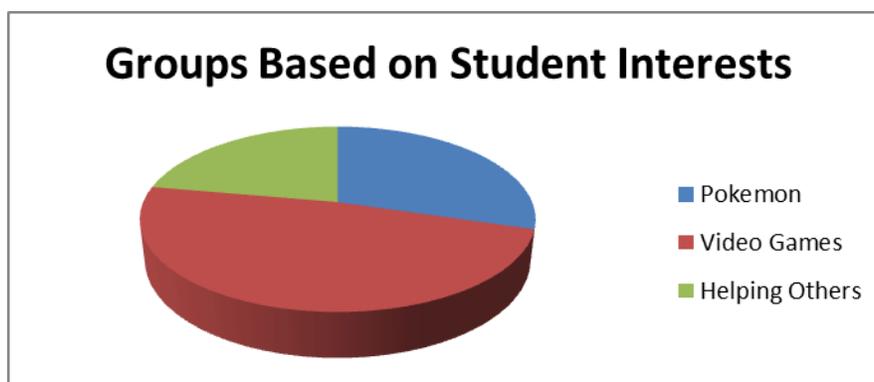
After all the data was collected, I could easily see the students' achievement within all four of the groups based on student readiness. What is the impact of grouping students based on student readiness? Students who are grouped based on student readiness showed progress in student achievement throughout all study groups. They all were able to complete the task; most with mastery of the new concept. Although students showed growth throughout the lesson, some students were not always participating therefore causing disruption within the groups. Even with these distractions that may have hindered an effective learning environment, students were still able to show growth throughout all four, small groups.

The last data collected was to answer the following question: What impact does student interest have on student achievement within small groups? To answer this question, three data sources were implemented, a student interest quiz, a student survey, and a teacher observation checklist. Through this data, student achievement based on student interest was measured.

In order to narrow down interests throughout the classroom, I had students list their top three interests in their journals. From the information provided by the students in their journals, I picked the five most popular responses and then had all students take a quiz in order to find out what the top three interests were in the classroom. From this quiz I found that the top three interests were Pokemon Characters, Video Games, and Helping Others. I then created activities

The Impact of Small Groups

based on these three interests intertwined with the science concept of ecosystems. These are the following groups.



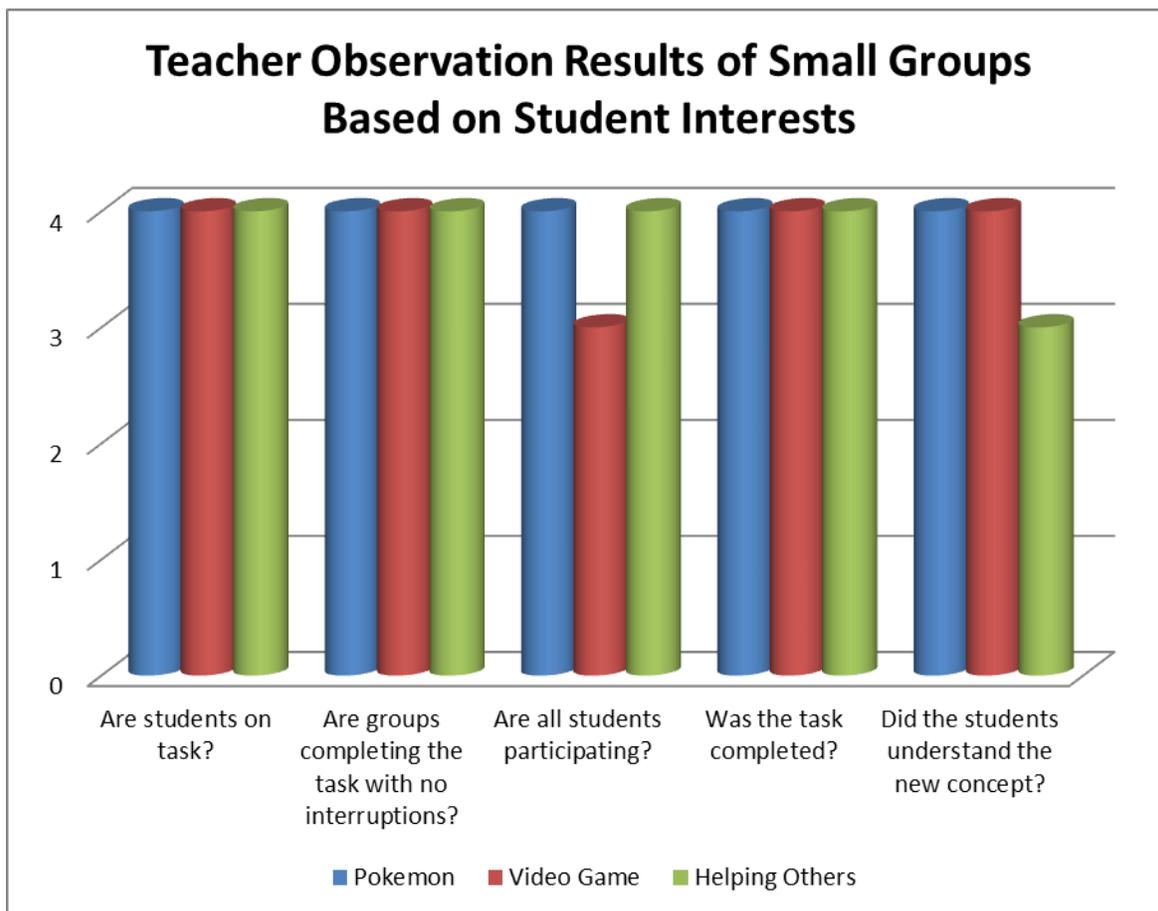
Once the groups were formed and activities were created for each of the three groups, students were asked to complete a survey at the conclusion of the activity to provide insight as to whether or not they felt the activities were beneficial to them as learners. Students provided great feedback as to whether the group was successful in working together, if learner goals were met, and if they enjoyed their activity.

While looking through the data that the students provided, I could see that, with the exception of two of my twenty-seven students, they enjoyed working in that small group. All twenty-seven students stated that other classmates were on task. Also within the survey, twenty-one of my twenty-seven students stated that they enjoyed working in their respective groups. All twenty-seven students stated that they enjoyed the activity that was to be completed within their small group.

During the small group activity, I walked around to each of the groups and began to complete a teacher observation checklist. By completing this data source, I was able to see how students were working together and completing the activity through answering questions during the group work. I then completed the teacher observation checklist after the students have handed in their work. I could assess how each group of students did while participating in their

The Impact of Small Groups

small groups based on similar student interests.



0-No Data

1-No

2-Some of the Time

3-Most of the Time

4-All of the Time

After all the data was collected, I could easily see the students' achievement within all three of the groups based on student interests. What impact does student interest have on student achievement within small groups? Students who are grouped based on similar student interests showed progress in student achievement throughout all study groups. They all were able to complete the task; two of the three groups with mastery of the new concept. Although students showed growth throughout the lesson, one student from one of the three groups was not always participating. Fortunately there were no disruptions within that student's group. By grouping students according to similar student interests, an effective learning environment was created and

The Impact of Small Groups

students showed achievement and growth in all areas within all three groups.

Action Plan

Through conducting this action research project, I had the opportunity to see how students achieve when working within different types of groupings. Each group had positive attributes and negative attributes. Through completing the action research project, I found that students can be placed in many different groups and still complete work at a high quality.

From this project, I have learned that there is not one specific way of grouping that effects student achievement more than another. I have found that students enjoyed working in different groups. Because the groups were not always the same, and differed from time to time, the students were motivated to work and achieve the goal at hand. Throughout my career, I will differentiate groups based not only on ability but also by student learning profiles, student interests, and student readiness.

It is important to realize what an impact the different groups had on student motivation and more importantly student achievement. From this experience, I have learned that the ideal group size is about four students. This gives everyone a chance to participate and take ownership in the group. If the group expectations are set in a thorough manner, I feel confident that students are capable of achieving in all three grouping models in a way that helps them progress in their academic growth.

As I continue through my teaching career, I will implement these three types of groups. I feel that each style of group offers students the opportunity to reach academic goals that may have been deterred due to the monotonous groupings previously used. As students are placed in groups based on learning styles, they have the unique opportunity to achieve the instructional goals through their own personal learning styles. This gives the students concrete resources that

The Impact of Small Groups

will help them meet the goals for that lesson. This allows them to understand the content in a way that is specific to their learning styles. As students are placed in groups based upon student readiness, they are able to pick up materials and resources that are at their personal level of instruction and/or understanding. Through this type of grouping, students were challenged at their own personal level of instruction. They could build the confidence they needed to continue through the material at a successful rate. Through conducting the student interest groups, students thoroughly enjoyed working on activities that were specific to an interest of theirs. Through this style of grouping, students anticipated the activities and took true ownership in them. This was also a group that allowed the students to have creativity within their assignments.

I believe that if other professionals took the time to create these groups based on student learning profiles, student readiness, and student interests, they would see a tremendous growth in student confidence, motivation, but more importantly student achievement. Through the implementation of these different groups, students would be excited to take on the goals for that instructional time. Though grouping students in this manner is time consuming and may require more work for the teacher, the students would be the main beneficiaries, and in the end be able to achieve at their greatest potential.

Reference Page

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The Impact of Small Groups

Appendix A

Data Collection Matrix

Research Questions	Data Source #1	Data Source #2	Data Source #3
What is the impact on student success of grouping students based on individual learning types?	Learning Style Quiz - to provide student learning styles needed to create small groups based on learning style.	Student Survey - to provide teacher with student insights during small group work.	Teacher Observation Checklist – to provide the teacher with evidence of student cooperation and learning environment during small group work.
What is the impact of grouping students based on student readiness?	“Please Do Now” -to provide teacher with evidence of student readiness within a certain content area.	Teacher Observation Checklist – to provide the teacher with evidence of student cooperation and learning environment during small group work.	“Ticket out the Door” – to provide teacher with immediate feedback of student achievement during that specified time.
What impact does student interest have on student achievement within small groups?	Student Interest Quiz - to provide the teacher with groups of students with similar interests in order to create homogeneous small groups.	Student Survey - to provide teacher with student insights during small group work.	Teacher Observation Checklist – to provide the teacher with evidence of student cooperation and learning environment during small group work.