Hunter vs. Lazeer: Which Lesson Design is Most Effective?

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HUNTER VS. LAZEER
WHICH LESSON DESIGN IS MOST EFFECTIVE?

THESIS

Submitted to the Graduate Committee of the
Department of Education and Human Development
State University of New York
College at Brockport
in Partial Fulfillment of the
Requirements for the Degree of
Master of Science in Education

by
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December, 1998
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The purpose of this study was to determine if one particular lesson design is more effective in teaching vocabulary words and definitions to second grade students.

Eight separate paired two sample t tests were used to investigate the research questions presented in this study: (1) Is there a statistically significant difference between the mean post-test scores of the students who were taught vocabulary words and definitions using the Hunter lesson design, and students who were taught vocabulary definitions using the multiple intelligence model, created by David Lazeer? (2) Which lesson design will produce greater student success for retention of the already learned vocabulary words?

The subjects in this study were 17 second grade students in Western New York state. The students were split into two heterogeneously mixed groups. During the study both groups A and B were taught new vocabulary words and definitions in an effort to enhance pre-reading skills prior to starting a new story in the second grade reading program.

Both groups A and B were taught the same vocabulary words and definitions simultaneously by one of their second grade team teachers. Group A was taught the first three lessons with the multiple intelligence model. Group B was taught the first three units of study with the Hunter lesson design. After each lesson both groups' abilities were measured by the exact same matching test, which was designed for this study. Both groups were then given a cumulative vocabulary test to measure the retention of the words. At this point, both groups switched lesson designs during the final three units of study. Group A was taught with the Hunter model, while group B was taught with the multiple intelligence model. Again the students were tested with the exact same matching tests, then were tested for retention of the vocabulary words and definitions from the final three units of study.
The tests found no significant statistical differences in any of the research questions. Students taught with the multiple intelligence model had a higher mean score when compared to students taught with the Hunter model. Students taught with the multiple intelligence model also had a higher mean score than the Hunter model, when testing for the retention of the new vocabulary words and definitions. Each approach was equally effective.
### Table of Content

**Chapter I**  
Statement of the Purpose  
   - Purpose of the study  
   - Rationale for the study  
   - Definition of terms  

**Chapter II**  
Review of the Literature  
   - The Need for the Multiple Intelligences Model  
   - The Effects of the Multiple Intelligence Theory  
   - The Need for the Hunter Model  
   - The Effects of the Hunter Model  
   - A Comparison of the Two Lesson Designs  

**Chapter III**  
The Research Design  
   - Purpose  
   - Subjects  
   - Materials  
   - Procedures  

**Chapter IV**  
Analysis of the Data  
   - Purpose  
   - Findings and Interpretations  

**Chapter V**  
Conclusions
Table of Contents (continued)

Classroom Implications 33
Implications for Further Research 35

References 36

Appendices

A. Hunter Lesson Design Sample 39
B. Multiple Intelligence Lesson Design Sample 41
C. Vocabulary Test Sample 42
D. Vocabulary Retest Sample 43
E. Standard Deviations 44
Chapter 1
Statement of the Purpose

Purpose of the Study

The purpose of this study was to compare two lesson design models to determine if one is a more successful approach to the teaching of vocabulary words and definitions in second grade.

The study sought to answer the following questions: Is there a statistically significant difference between the mean posttest scores of students who were taught vocabulary definitions using the Hunter lesson design, and students who were taught using the Multiple Intelligence lesson design, created by David Lazeer? Under which lesson design will more second grade students better retain the new definitions learned?

Rationale for the Study

The main goal of a teacher is to try to help his or her students achieve success. All students have very diverse interests and abilities, and do not learn the same way. Educators need to work with a lesson design that best suits the style of the teacher, while also helping the students become successful learners. Teachers need to work with a lesson design that best meets the needs of the students.

Today many teachers are constantly searching for a more effective teaching approach that can meet individual students’ needs in diverse classroom settings. In fact, examining how we teach, measure, and assess student ability is an important theme in current educational literature (Lee, 1994). As teachers we need to take a close look at the wide range of academic abilities and character traits within each child. Schools must insist on fair treatment of all students, by assessing and reporting their entire range of human abilities (Lee, 1994). An interview with Howard Gardner revealed
the pertinent role a teacher has in a child's education: "When a child does not learn, it is premature to blame the child, because, more often than not, the failure lies with the educator. When we educate better, and in a more personalized way, then children will learn better" (Seigel & Schaugnessy, 1994, p.564).

This study was designed to determine if teaching vocabulary words and definitions using the Multiple Intelligence model will result in a more positive mean test score than the Hunter model, or visa versa. These models are based on very different philosophies of learning, but both are considered highly effective. As a teacher I want to know which design will help my students find the most success.

Definition of Terms

For the purpose of this study it was necessary to define several terms. The Seven Multiple Intelligences, (as defined by Lazeer, 1991), are:

1. **Verbal Linguistic Intelligence**- is responsible for the production of language, poetry, humor, story telling, grammar, metaphors, similes, abstract reasoning, symbolic thinking, conceptual patterning, reading and writing. This intelligence can be seen in poets, comedians, and public speakers.

2. **Logical Mathematical Intelligence**- is most often associated with what we call "scientific thinking" or inductive reasoning. This intelligence involves recognizing patterns with abstract symbols. This intelligence can be seen in scientists, accountants, lawyers and bankers.

3. **Visual Spatial Intelligence**- deals with such things as visual arts, map-making, architecture and games such as chess. The key sensory base of this intelligence is sight, but also the ability to form mental
images and pictures in the mind. This intelligence can be seen in architects, graphic artists, and cartographers.

4. **Body Kinesthetic Intelligence** - the ability to use the body to express emotion, to play games, and to create a new product or invention. This intelligence can be seen in actors, athletes, mimes, dancers, and inventors.

5. **Musical Rhythmic Intelligence** - involves the ability to recognize the use of rhythmic and tonal patterns, and sensitivity to the environment, the human voice and musical instruments. This intelligence can be seen in rock groups, music teachers, advertising people, and composers.

6. **Interpersonal Intelligence** - involves the ability to work well with others in a group, as well as the ability to communicate, verbally and non-verbally, with other people. This intelligence is seen in counselors, teachers, therapists, and politicians.

7. **Intrapersonal Intelligence** - involves knowledge of internal aspects of the self, such as knowledge of feelings, the range of emotional responses, thinking responses, and self-reflection. This intelligence can be seen in philosophers and psychiatrists.

The parts of the multiple intelligence Lesson design, (as described by Lazeer, 1991), are:

**Step 1, Awakening the intelligence** - You activate the brain and turn on the senses.

**Step 2, Amplify the intelligence** - This is where you exercise and strengthen the awakened capacities.
Step 3, Teach with the intelligence- This stage involves teaching the “meat” of the material that must be learned by involving the intelligences.

Step 4, Transfer Intelligence- The goal for this stage is for intelligence to become a regular part of our cognitive, affective, and sensory lives.

The parts of the Hunter lesson design, (as described by Berg & Clough, 1991), are:

Anticipatory Set- Takes place at the beginning of class, an activity or statement that focuses student attention.

Purpose- Sharing with the students what they will learn as well as why it is relevant.

Objective- A time when the teacher informs the students what they will be able to accomplish by the end of instruction.

Input- A time when the teacher provides information that is needed by the student to perform a skill or complete a process.

Modeling- When the students see an example of an acceptable product or process.

Checking for Understanding- When the teacher checks for students possession of essential information and skills necessary to achieve the instructional objective.

Guided practice- Students first attempts at learning are guided by the teacher, so that student work is accurate and successful.
Closure- The students sum up what they have learned. They internalize information, by proving that they have met the objective.

**Limitations of the study**

It is important to understand that the findings of this study are only applicable to the second grade classroom in which it took place. The engagement levels are unique to the seventeen students who took part in this study, and could easily have differed with changes in design or procedure. Many factors including home life, illness, and state of mind impact a child’s ability to learn every day.
Chapter II

Purpose

The purpose of this study was to compare two lesson design models to determine if one is a more successful approach to the teaching of vocabulary words and definitions in second grade.

Review of the Literature

The Need for the Multiple Intelligence Model

All teachers strive to meet the individual needs of their students, but this is no easy task. All students have diverse needs, are at different academic levels, and have individual ways of learning. According to Howard Gardner, there are seven multiple intelligences, or ways of knowing, which all people possess.

“All normal human beings have all of these intelligences: verbal linguistic, logical mathematical, visual spatial, bodily kinesthetic, interpersonal, intrapersonal, and musical rhythmic, but for genetic and environmental reasons, individuals differ remarkably among themselves in the particular profiles of intelligences that they happen to exhibit at any given moment of their lives” (Gardner, 1993, p.71).

For too long our schools have solely focused on the verbal linguistic, and logical mathematical intelligences.

Our current educational system does not provide a justified amount of instructional support for the students who are successful artists, inventors, and athletes, since so much time is narrowly focused on only two of the seven intelligences. Thomas Armstrong argues (1988) that the abilities of many children, including learning disabled, are never displayed because schools don’t provide the opportunity within the curriculum. We can easily solve this problem by meeting
the needs of the "whole" student while teaching all of the multiple intelligences.

Learning through the many diverse intelligences offers reluctant learners a chance to prove and demonstrate that they have the ability to "possess sophisticated knowledge that goes beyond their skills of reading and writing" (Samples, 1992). Students who are not strong in the area of problem solving, or the written spoken word, (which so much success in the classroom is based on), may consider themselves "dumb" if they repeatedly perform inadequately in our school systems (Samples, 1992). Thus, these other ways of knowing are pertinent to the mental well-being of all students (Samples, 1991).

Teaching using the multiple intelligences has the potential to drastically revolutionize the ways in which we think about school and education (Blyth & Gardner, 1990). Within each child is a special area of giftedness which needs to be identified and allowed to flourish by a teacher (Hoerr, 1992). When teachers approach subject matter in different ways, (involving all of the seven intelligences), each student will be exposed to numerous ways of learning, understanding, and retaining academic information (Campbell, 1991).

Some students may not even be aware that they are gifted in a particular area, simply because they have not been exposed to all of the intelligences which they possess. Once an educator knows where a student's giftedness lies, the teacher can heavily rely on that intelligence to train a weaker intelligence. According to David Lazeer, (1991) "Much of one's full potential is in a state of latency due to disuse, but it can be strengthened and trained (p. 91). Students also develop a better understanding of themselves as they learn where their strengths and weaknesses are. When they find their strongest area of intelligence, they will become more self-confident individuals (Campbell, 1992).
According to Howard Gardner (1990), teaching using the multiple intelligence theory offers alternatives to our current educational system in several areas. First, we are now addressing the entire range of abilities of each student, we are broadening that narrow focus which limited student learning.

Hands-on practice with procedures, materials and problems are crucial to achieving deep knowledge within all of the intelligences. The multiple intelligence theory challenges the reliability of the standard machine scored multiple choice assessments, "(which by their very nature amplify students knowledge through linguistic, mathematical intelligences)" (Gardner, 1990, p.35).

The multiple intelligence theory emphasizes the highly individualized ways in which each person in the classroom learns (Blythe & Gardner, 1990). Finally the multiple intelligence theory enables a teacher to find a student's strongest intelligence, which allows the student to survive and flourish outside the school setting.

Howard Gardner feels that teaching using the multiple intelligences can only positively impact the lives of each student.

Our current educational system needs to stop pretending that all individuals have, (or ought to have), the same minds, we should instead try to ensure that everyone receive an education that maximizes his or her own intellectual power" (Gardner, 1993, p.71).

Effects of the Multiple Intelligence Theory

Teaching using the multiple intelligence theory has many positive effects on the entire scope of our educational system. According to Howard Gardner (1993), teaching using his theory has proven to be very effective because parents and teachers start to see the full potential and achievement in a child.

Many educators who teach using the full range of intelligences have reported not only academic improvement but behavioral
improvement. The students were able to transform disruptive energy into creative energy in the classroom (Samples, 1992; Campbell, 1992; Griss, 1994). The academic improvement which occurs while teaching using the multiple intelligence theory can be measured both through classroom testing and standardized testing as well (Campbell, 1992). Studies have shown improvement in achievement occurred in the areas of retention and comprehension (Campbell, 1992; Griss, 1994). A specific example of this is, “Interpreting a concept through physical means helps children grasp, internalize and maintain abstract information” (Griss, 1994, p.79).

Teachers may discover that their students, who may be at very diverse levels, will develop a highly complex understanding of a new concept if taught using the multiple intelligence theory (Samples, 1992). Those very high achieving students also benefit from the seven ways of knowing by becoming more “flexible and diverse” in their thinking (Samples, 1992).

The most positive effect of teaching using the multiple intelligence theory is that every student has the opportunity to find success in at least one area of intelligence, (usually students find success in three or four areas), (Campbell, 1992). It is important for students to feel successful and have a brief moment to “shine” on a regular basis throughout the school day. This in itself builds motivation and self-esteem. Teaching to the whole student allows this to happen more frequently.

Parents who have become aware of the seven multiple intelligences acquire an “increased respect for the child’s abilities, now that they hold the standard of intelligence” (Ellison, 1992, p. 70). The child who is gifted at drawing is now respected for showing a strength in the visual spatial intelligence. The intelligence label helps
validate the importance of the skill which a child is talented in performing (Ellison, 1992).

Teaching using the multiple intelligence theory has positive effects on teachers who take the time to learn how to implement the theory successfully. Effective teachers are lifelong learners who are forever looking for more diverse, creative, multi-modal ways of teaching (Hoerr, 1992; Campbell, 1992). Using the multiple intelligence design will allow for growth, creativity, and diversity in a teacher.

One school that applies the seven multiple intelligences feels that by implementing this theory all teachers have benefited as learners. The teachers themselves stated, "We also reaffirmed our belief that each child has special talents and it is our job to identify and cultivate them (Hoerr, 1992, p.72).

We need more teachers to broaden their scope of teaching and consider using the multiple intelligence theory because according to Howard Gardner it is capable of bringing very positive changes to our world of education. "The multiple intelligence theory constitutes precisely the kind of flexible but powerful entry point for the changes that all agree are needed in our American educational system” (Gardner, 1993, p.582).
The Need for the Madeline Hunter Lesson Design

Madeline Hunter, the creator of the Hunter lesson design, found it necessary to create a model for teachers that is a “teacher decision-making model” (Goldberg, 1990). Hunter explained during an interview, “all the 5,000 decisions a teacher makes every day fall neatly into three categories: what are you going to teach (content category), what the students are going to do to learn, and let you know they have learned it (learning behavior category), and what you, as a teacher, will do to facilitate and escalate that learning (teaching behavior category)” (Goldberg, 1990, p.41).

After Madeline Hunter became a school psychologist she found that a lot of teachers were not aware of the “cause-effect relationships” between teaching and learning. Because of this finding, Hunter began working with teachers to “translate psychological theory into language a teacher could understand” (Goldberg, 1990, p.41).

Hunter’s goal became a quest to take theory and translate it for classroom teachers through the use of her lesson design (Goldberg, 1990). Hunter’s design is a necessity because it allows you to be aware of what is coming next, and how to be prepared for it. “Teaching is an action performance behavior like music, dancing, athletics and surgery. You have to automate many behaviors so you can perform them artistically at high speed” (Goldberg, 1990, p.42).

According to Robert Slavin, Hunter’s lesson design is important because it is common sense translations of well founded instructional theory put forth into practical terms” (Hazi, 1988, p.670). In a study conducted at the University of Pennsylvania, (Garman & Hazi, 1988), 200 teachers, who taught using the Hunter model, were interviewed.
They noted that:

"Teachers have a common language to talk about teaching. Teaching is now seen as scientific instead of a craft. This design heightens a teachers sense of professionalism. It creates a much needed standardization for teachers. Teachers will know what behaviors will be expected of themselves and can perform accordingly. The model provides a much needed framework for teaching" (p.670).

Hunter describes her model as “being applicable to any mode or style of teaching, to any learner, and for any objective” (Hunter, 1989, p.16). She goes on to explain that the parts of the design are not steps to follow in a lesson, but rather elements to be considered in planning a teacher-learning episode (Hunter, 1989). The mission behind the Hunter model is to allow a teacher the artistic freedom to design and teach extraordinary lessons which can be very unique while also having “similar principles” as a framework to follow (Hunter, 1989).

According to an inservice program which focuses on teacher effectiveness, (Batesky, 1987), the Hunter model is necessary because it tells the teacher what to contemplate before teaching and after teaching. The seven steps of this model can be used in very diverse settings, with a variety of teaching styles and with all age groups. The combinations and possibilities are endless (Betesky, 1989).

It is up to the individual teacher’s discretion to make the Hunter design fit the personal needs of the students in his or her classroom. In Hunter’s words, (1989, p.18), “You are a professional if you are making decisions which combine the science of human learning with your own teaching style to design and artistically implement effective lessons.”
The Effects of the Hunter Lesson Design

In the field of education the Hunter lesson design is very widely implemented and accepted in the classroom. According to Hunter, (1989), if you use her design, and have the proper training, you will find academic improvement in your students. Growth will occur in the area of retention, an increased rate and quantity of newly learned concepts will develop, and students will increase their use of higher level thinking skills, while remaining on task (Betesky, 1987, Hunter, 1990, Lindauer, 1990, Sousa, 1990). When teachers take the time to consciously consider all steps in the Hunter model, both the teacher and the student will benefit by “increasing the probability of learning” (Betesky, 1989:p.91).

In the past years there have been studies which closely examined the effectiveness of teaching using the Hunter lesson design. One research project called the Napa Study (Stallings, Krasavage, 1986) was implemented in hopes to improve teaching and increase students’ academic achievement in reading and mathematics. According to Hunter, (1986), during the three years of the study researchers reported significant gains while using the Hunter model. Researchers indicate:

- During the first year of research there were significant gains in implementation of the model, students engaged rates and achievement in reading. There was a significant gain in mathematics achievement the first year, but not the second. At the end of the third year a decrease was found in the implementation scores, engaged rates and achievement” (Stallings & Krasavage, 1986; Donovan, Sousa & Walberg, 1992) p.117.

Another study called the South Carolina Program for Effective Teaching (Mandeville & Rivers, 1989) also tested the effectiveness of the Hunter lesson design. Research concluded that: “A Hunter based program provided a common framework for improving instruction—but has failed to improve student achievement” (p. 63). Other
researchers suggest that there is very little evidence that the Hunter lesson design can improve student success (Slavin, 1987, Gibboney, 1987, Mandeville & Rivers, 1989).

The West Orange Project (Donovan, Sousa, Walberg, 1992) found more positive results and proved that the Hunter lesson design allowed for achievement in mathematics and reading. “The Hunter method was successfully implemented by the teachers and student achievement increased during the period of implementation” (Donovan, Sousa, Walberg, 1992, p.165).

From the past research it is obvious that the effectiveness of the Hunter lesson design is a very controversial issue (Brandt, 1988, Hunter, 1988, Berg & Clough, 1991). Many educators stand by Slavin’s opinion that “the results of the Napa, West Orange and South Carolina evaluations offer little hope that the Hunter approach will produce any academic improvement” (Berg & Clough, 1991, p.84). While other researchers feel that some of the concluding evidence in the studies testing the Hunter lesson design “may be a comment on inservice education rather than the Hunter model, so that many educators have taken the model to task for being inflexible and limiting. The training to effectively implement the Hunter lesson design should take at least two years” (Goldberg, 1990, p.43).

“Some educators feel that a great amount of time and energy is being spent on this single teaching design, at a time when there is a need to understand the diverse needs of students and the eclectic richness of good teaching practice” (Garman, Hazi 1988, p.672). Others feel that this overwhelming acceptance of Hunter’s lesson design may be limiting the instructional options which are available to teachers (Slavin, 1987).
Madeline Hunter’s response to the negative criticism concerning her design are:

Educational excellence does not stem from the quick fix of merely helping teachers learn about effective, professional behaviors. Excellence requires long-range planning and assistance to help teachers internalize those behaviors and use them on a regular basis with integrity and artistry" (Hunter, 1989, p.68).

A Comparison of the Hunter Lesson Design and the Multiple Intelligence Design

The multiple intelligence lesson design as well as the Hunter lesson design are both implemented in hopes of helping students find success in academic achievement. Although both models are very different, there are studies that suggest that both can be very effective.

The two designs are similar in that they can be taught to any grade level, as well as in all subject areas (Hunter, 1989, Lazeer, 1991).

Madeline Hunter’s theory (Goldberg 1990) behind her lesson design is:

“All instruction is based on the premise that teachers are decision makers. Her purpose for the model is to tell teachers what to consider before deciding what to do...and as an end result, base their educational decisions on sound theory, not just their intuitive knowledge” (p.41).

The theory behind the multiple intelligence lesson design is to implement the model for three diverse purposes. First, “each intelligence can be taught in its own right, such as teaching music, language or art, as a formal discipline,” (Lazeer, 1991, p. 165). Secondly, “the multiple intelligence model can be used as a means to gain knowledge in areas beyond themselves, such as using body
movements to learn vocabulary words or music to teach math”, (Lazeer, 1991, p.165). For the purpose of this study we focused on this previous lesson type for learning vocabulary words and definitions involving the multiple intelligences. The final purpose of this design addresses “lessons that deal with meta-intelligence processes. Students are learning about their own intelligences, how to access them, to train and define them, and to actively use them in learning and everyday life” (Lazeer, 1991, p.166).

The multiple intelligence model has four stages, which all must be implemented in sequence during a lesson. All four stages must be integrated into every lesson to ensure a more positive learning outcome (Lazeer, 1991).

The Hunter model has seven parts, but according to Madeline Hunter, (1989), it is not necessary to use every part of the design in every lesson, nor to follow the steps in sequenced order.

There are parts of each lesson that are quite similar. The first stage of each model serves the same purpose of turning the brain onto learning while, tuning out other thoughts and daydreams. Both the “Awakening stage,” (M.I. model), and the “Anticipatory set,” (Hunter model), help to focus student attention at the beginning of a lesson (Lazeer, 1991, Berg and Clough, 1991).

Stage three of the multiple intelligence model, “teaching for/and with the intelligence” is very similar to the “input” stage of the Hunter design in that both models provide the students with academic information which is necessary for learning to take place. In the multiple intelligence lesson design the goal of stage IV, “transfer of intelligence” is for the intelligence to become a regular part of our “cognitive, affective and sensory lives,” students internalize what they have just learned (Lazeer, 1991, p.xviii). “Closure,” the last stage of the Hunter design allows for the student to internalize what they have just learned before moving along to another academic area of study.
All lesson designs have one common goal, to promote student learning in a successful manner. A teacher is a professional, and how a teacher goes about accomplishing this goal is up to one’s own discretion. According to Hunter: (1989)

“Teaching is artistic, teachers are free to design and teach beautiful lessons which do not look at all the same but imply many similar principles of effective teaching to yield lasting learning” (p.18).
Chapter III

The Research Design

Purpose
The primary purpose of this study was to compare two lesson designs in order to determine if one is a more successful tool in teaching vocabulary words and definitions.

Null Hypothesis
There will be no statistically significant difference in the test scores of the groups which were taught vocabulary words and definitions with the Hunter lesson design and the Multiple Intelligences model.

Subjects
The subjects in this study were 17 students in a second grade classroom. The class of students were randomly split into two groups. The subjects selected attended a public school in Western New York State.

Materials
Lesson designs as well as vocabulary tests were created by the researcher (see Appendix).

Procedures
During the study both groups A and B were taught the same vocabulary words and definitions simultaneously by one of their second grade team teachers. Group A was taught the first three lessons with the Multiple Intelligence model. Group B was taught the same vocabulary words and definitions using the Hunter lesson design for the first three units of study. After each lesson both groups’ abilities were measured by the exact same matching test, which was designed for this study. When the first three units were complete the students were retested with a cumulative random sample of
vocabulary words and definitions. The purpose for this test was to see which group better retained the new vocabulary words during the first three units of study.

After the first three vocabulary units were complete, the groups then switched lesson designs. The groups were switched to ensure that all students had an equal opportunity to learn from both models. Group A was taught the last three vocabulary units using the Hunter model while group B was taught the final three units of study with the Multiple Intelligence model. Once again both groups were assessed with the exact same matching tests.

After the completion of all six stories and lessons, both groups were retested with a cumulative random sample of vocabulary words and definitions. The purpose for the final test was to measure which group better retained the information learned during the final three units of study (see Appendix). The teacher/researcher investigated which lesson design produced the greatest student success.

The teacher/researcher designed all of the six multiple intelligence lesson designs, and Hunter designs for each of the two groups. The vocabulary words and definitions used for this test were derived from the Second grade Houghton Mifflin Reading Series. Each group was taught the vocabulary words prior to actually reading a story, in order to enhance their pre-reading skills. The focus of each lesson was to introduce the students to new words which they may have never heard of, or might have difficulty pronouncing. The two groups then had practice learning the words and definitions through different methodologies, due to the diversity in each of the models (see Appendix).
Chapter IV

Analysis of the Data

Purpose

The primary purpose of this study was to compare two lesson designs to determine if one is a more successful tool in teaching new vocabulary words and definitions.

Research Questions

The following research questions were investigated:
(1) Is there a statistically significant difference between the mean post-test scores of the students who were taught vocabulary definitions using the Hunter lesson design, and students who were taught vocabulary definitions using the multiple intelligence model, created by David Lazeer.

(2) Which lesson design will produce greater student success for retention of the already learned vocabulary words.

Results of test #1

The first test investigated which lesson design allowed for higher student success while learning new vocabulary words and definitions. The total mean score for the multiple intelligence lesson design was 97.2. The total mean score for the Hunter lesson design was 94.5. The paired two sample t-test measure was used to find a statistical significant difference between the two approaches. A t-test value of +/- 2.14 declares a significant difference between the two variables, and would suggest additional statistical analysis. The obtained t-test value for these two variables was -0.92. This indicates there was no statistical significant difference between the results of the two different lesson designs used for teaching new vocabulary words and definitions.
Table 1

The paired two sample t-test between the mean raw scores of the students taught vocabulary words with the Multiple intelligence lesson design, and those taught with the Hunter lesson design.

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>mean</th>
<th>t-obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Intelligence</td>
<td>14</td>
<td>97.2</td>
<td></td>
</tr>
<tr>
<td>Hunter</td>
<td>14</td>
<td>94.5</td>
<td>.772</td>
</tr>
</tbody>
</table>

t-critical = +/- 2.14
Results of test #2

The second test investigated which lesson design allowed for higher student success while learning new vocabulary words and definitions. The total mean score for the multiple intelligence lesson design was 100.0. The total mean score for the Hunter lesson design was 100.0. The paired two sample t-test measure was used to find a statistical significant difference between the two approaches. A t-test value of +/- 2.13 declares a significant difference between the two variables, and would suggest additional statistical analysis. The obtained t-test value for these two variables was 0. This indicates there was no significant difference between the results of the two different lesson designs used for teaching new vocabulary words and definitions.

Table 2

The paired two sample t-test between the mean raw scores of the students taught vocabulary words with the Multiple intelligence lesson design, and those taught with the Hunter lesson design.

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>mean</th>
<th>t-obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Intelligence</td>
<td>15</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Hunter</td>
<td>15</td>
<td>100.0</td>
<td>0</td>
</tr>
</tbody>
</table>

t-critical = +/- 2.13
Results of Test #3

The third test investigated which lesson design allowed for higher student success while learning new vocabulary words and definitions. The total mean score for the multiple intelligence lesson design was 78.18. The total mean score for the Hunter lesson design was 84.09. The paired two sample t-test measure was used to find a statistical significant difference between the two approaches. A t-test value of +/- 2.13 declares a significant difference between the two variables, and would suggest additional statistical analysis. The obtained t-test value for these two variables was -.557. This indicates there was no statistical significant difference between the results of the two different lesson designs used for teaching new vocabulary words and definitions.

Table 3
The paired two sample t-test between the mean raw scores of the students taught vocabulary words with the Multiple intelligence lesson design, and those taught with the Hunter lesson design.

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>mean</th>
<th>t-obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Intelligence</td>
<td>15</td>
<td>78.18</td>
<td></td>
</tr>
<tr>
<td>Hunter</td>
<td>15</td>
<td>84.09</td>
<td>-.557</td>
</tr>
</tbody>
</table>

$t$-critical = +/- 2.13
Results of Test #4

Test number four was a cumulative, random selection of 11 vocabulary words learned throughout the first three units of study. The purpose for this final test was to determine which lesson design helped students better retain the new vocabulary words and definitions over an extended period of time. The total mean score for the multiple intelligence lesson design was 97.2. The total mean score for the Hunter lesson design was 94.5. The paired two sample t-test measure was used to find a statistical significant difference between the two approaches. A t-test value of +/- 2.14 declares a significant difference between the two variables, and would suggest additional statistical analysis. The obtained t-test value for these two variables was .772. This indicates there was no statistical significant difference between the results of the two different lesson designs used for teaching new vocabulary words and definitions.

Table 4
The paired two sample t-test between the mean raw scores of the students taught vocabulary words with the Multiple intelligence lesson design, and those taught with the Hunter lesson design.

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>mean</th>
<th>t-obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Intelligence</td>
<td>14</td>
<td>97.2</td>
<td></td>
</tr>
<tr>
<td>Hunter</td>
<td>14</td>
<td>94.5</td>
<td>.772</td>
</tr>
</tbody>
</table>

t-critical = +/- 2.14
Results of Test #5

The fifth test investigated which lesson design allowed for higher student success while learning new vocabulary words and definitions. The total mean score for the multiple intelligence lesson design was 96.6. The total mean score for the Hunter lesson design was 96.2. The paired two sample t-test measure was used to find a statistical significant difference between the two approaches. A t-test value of +/- 2.17 declares a significant difference between the two variables, and would suggest additional statistical analysis. The obtained t-test value for these two variables was .079. This indicates there was no statistical significant difference between the results of the two different lesson designs used for teaching new vocabulary words and definitions.

Table 5

The paired two sample t-test between the mean raw scores of the students taught vocabulary words with the Multiple intelligence lesson design, and those taught with the Hunter lesson design.

<table>
<thead>
<tr>
<th>Lesson Design</th>
<th>df</th>
<th>Mean</th>
<th>t-obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Intelligence</td>
<td>12</td>
<td>96.6</td>
<td></td>
</tr>
<tr>
<td>Hunter</td>
<td>12</td>
<td>96.2</td>
<td>.079</td>
</tr>
</tbody>
</table>

t-critical = +/- 2.17
Results of Test #6

The sixth test investigated which lesson design allowed for higher student success while learning new vocabulary words and definitions. The total mean score for the multiple intelligence lesson design was 100.0. The total mean score for the Hunter lesson design was 91.25. The paired two sample t-test measure was used to find a statistical significant difference between the two approaches. A t-test value of +/- 2.16 declares a significant difference between the two variables, and would suggest additional statistical analysis. The obtained t-test value for these two variables was 1.40. This indicates there was no statistical significant difference between the results of the two different lesson designs used for teaching new vocabulary words and definitions.

Table 6

The paired two sample t-test between the mean raw scores of the students taught vocabulary words with the Multiple intelligence lesson design, and those taught with the Hunter lesson design.

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>mean</th>
<th>t-obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Intelligence</td>
<td>13</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Hunter</td>
<td>13</td>
<td>91.2</td>
<td>1.40</td>
</tr>
</tbody>
</table>

$t$-critical = +/- 2.16
Results of test #7

The seventh test investigated which lesson design allowed for higher student success while learning new vocabulary words and definitions. The total mean score for the multiple intelligence lesson design was 98.8. The total mean score for the Hunter lesson design was 95.5. The paired two sample t-test measure was used to find a statistical significant difference between the two approaches. A t-test value of +/- 2.11 declares a significant difference between the two variables, and would suggest additional statistical analysis. The obtained t-test value for these two variables was 1.25. This indicates there was no statistical significant difference between the results of the two different lesson designs used for teaching new vocabulary words and definitions.

Table 7

The paired two sample t-test between the mean raw scores of the students taught vocabulary words with the Multiple intelligence lesson design, and those taught with the Hunter lesson design.

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>mean</th>
<th>t-obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Intelligence</td>
<td>16</td>
<td>98.8</td>
<td></td>
</tr>
<tr>
<td>Hunter</td>
<td>16</td>
<td>95.5</td>
<td>1.25</td>
</tr>
</tbody>
</table>

\( t\text{-critical} = +/- 2.11 \)
Results of Test #8

Test number eight was a cumulative, random selection of 11 vocabulary words learned throughout the final three units of study. The purpose for this final test was to determine which lesson design helped students better retain the new vocabulary words and definitions over an extended period of time. The total mean score for the multiple intelligence lesson design was 100.0. The total mean score for the Hunter lesson design was 97.7. The paired two sample t-test measure was used to find a statistical significant difference between the two approaches. A t-test value of +/- 2.13 declares a significant difference between the two variables, and would suggest additional statistical analysis. The obtained t-test value for these two variables was 1.23. This indicates there was no statistical significant difference between the results of the two different lesson designs used for teaching new vocabulary words and definitions.

Table 8

The paired two sample t-test between the mean raw scores of the students taught vocabulary words with the Multiple intelligence lesson design, and those taught with the Hunter lesson design.

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>mean</th>
<th>t-obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Intelligence</td>
<td>15</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Hunter</td>
<td>15</td>
<td>97.7</td>
<td>1.23</td>
</tr>
</tbody>
</table>

\[ t\text{-critical} = +/- 2.13 \]
The statistical analysis shows there was no statistically significant difference between the test results taught by the Hunter lesson design and the Multiple Intelligence lesson design which were used for teaching new vocabulary words.

The statistical analysis shows there was no statistically significant difference between the test results taught by the Hunter lesson design and the Multiple Intelligence lesson design when testing for retention of the new vocabulary words.

The study investigated the use of two different teaching models in hopes of finding one which is a more successful tool for teaching vocabulary words.

The analysis failed to reject the null hypothesis.
Chapter V

Conclusions and Implications

Purpose

The primary purpose of this study was to compare two lesson designs in order to determine if one is a more successful tool in teaching vocabulary words and definitions.

Conclusions

The statistical analysis shows there was no statistically significant difference between the test results taught by the Hunter lesson design and the Multiple Intelligence lesson design which were used for teaching new vocabulary words.

The statistical analysis shows there was no statistically significant difference between the test results taught by the Hunter lesson design and the Multiple Intelligence lesson design when testing for retention of the new vocabulary words.

Data worth noting include the total mean scores of the two instructional approaches. The students taught with the Multiple Intelligence model received a total mean score of 95.13. Students taught with the Hunter model received a total mean score of 93.6. The standard deviation for the group taught with the Multiple Intelligence model was 6.96. The standard deviation for the group taught with the Hunter model was 4.61 (see Appendix).

In six out of the seven tests given, students taught with the Multiple Intelligence model received an equal or higher average score than those taught with the Hunter model. Students taught with the
Multiple Intelligences Model also performed better producing an overall higher average score in the area of retention than those taught with the Hunter model. When tested for retention of the newly learned vocabulary words, after the first three units, students taught with the Multiple Intelligence model received a mean test score of 97.2. Students who were taught with the Hunter model received a mean score 94.

The final test for retention, which was given after the last three units of study, showed that students taught with the Multiple Intelligence model received an average score of 100. Students taught with the Hunter model received a mean score of 97.7. Both averages being quite high prove both designs are equally effective, though the Multiple Intelligence model proved to be somewhat higher.

It was interesting to note which students performed better when taught with each model. Readers with weak comprehension skills performed better when taught with the Multiple Intelligence lesson design. One student in particular, student 15, received an average score of 100 when taught with Multiple Intelligence design. Her average score when taught with the Hunter lesson design was 75. In this case, the Multiple Intelligence model provided more active student participation. During these lessons the students were drawing, singing, and role playing while learning the new words. The weaker readers internalized the new vocabulary words better throughout this method.

Students who read with fluency and strong comprehension skills performed with equal success for each lesson design. Six students received an average score of 100 for both the Multiple Intelligence Model as well as the Hunter model. This proves that both lesson designs are equally effective for stronger readers.
Student 1 was classified with Attention Deficit Disorder, and was also unmedicated at the time of this study. This student performed better when taught with the Hunter model. He received a mean score of 84 when taught with the Multiple Intelligence model. This student received a mean score of 100 when taught with the Hunter model.

The Hunter model provided student 1 with the structure he needed in order to perform successfully. When taught with the Multiple Intelligence model this student was easily distracted and interrupted the learning process for both other students, as well as the instructor. Student 1 also exhibited more negative behaviors while taught with the Multiple Intelligence model. Throughout the testing process, each Multiple Intelligence lesson was more time consuming when compared to the Hunter designs. Most students were able to remain focused for the lengthy period of time due to the active participation involved. During test #2, student 1 was completely off task. During the assessment segment of the lesson he claimed, “I just can’t sit here any longer to finish.” Therefore according to this study, a student with behavioral concerns, or a student with ADHD performs better with the structured design of the Hunter model.
Teaching: students in a small group environment is a positive way to enhance learning. Throughout this study the instructors were fortunate to work with eight or nine children in each group. This way the instructor was in tune with how well each student was learning on a daily basis. By looking at the mean scores for each individual student, a teacher could identify which lesson design worked better for that particular student. A teacher could make note of the areas where he or she has strengths, and weaknesses, and work to enhance both of those areas. For example, a teacher who is looking to provide enrichment activities for student 15, could look at the scores and find out the best possible way to better meet the student’s needs. After examining her test scores for each lesson, a teacher could prove that this student has strong artistic talents with drawing. This child would benefit from using symbols or pictures to help her internalize new information being taught in all other subject areas as well.

It is my hope that all teachers work with a lesson design that benefits both the students in the classroom, and in turn is a design that he or she is comfortable using. As a result of this study I have found that an educator needs to be flexible and willing to try new, diverse ways of teaching throughout his or her career. There are times when students would greatly benefit by being taught with the Hunter lesson design, as well as other opportunities when students will benefit by being taught through the Multiple Intelligence technique. That decision lies within the teachers own discretion.

Both of these designs help to keep the teacher on task as well as the students. It is helpful to know ahead of time what goal you hope your students will accomplish, as well as what steps to take to ensure that your students will achieve this goal.
Teachers are life-long learners who are always searching for better ways to meet all of the needs of children in his or her classroom. Both the Hunter design, and the Multiple Intelligence lesson design helped to achieve student success in a second grade classroom, as proven by this study.
Implications for Further Research

1. Additional research is suggested in a longitudinal study to show comparisons of teaching using the two different instructional approaches over an extended period of time. In a follow up study it might be more advantageous to use a larger student sample.

2. Studies measuring affective behaviors would be beneficial in a follow up study as well.

3. Additional research might be beneficial in investigating the correlation of affective measures in contrast to strengths and weaknesses in the multiple intelligences.

4. A questionnaire could be administered to teachers about their preference of lesson designs which they use in the classroom.
REFERENCES


Appendix A
Hunter Lesson Design Sample

Anticipatory Set:
What is big, and tall and has squares all over? A building. What is a riddle? A riddle is a way of describing something to another person by giving them clues.

Purpose:
Today we’re going to practice solving riddles vocabulary about words from the story that we will be reading tomorrow.

Objective:
The learner will be able to recall the definition of each vocabulary word by solving the riddle which describes each word.

Input:
I will explain what to do when you solve a riddle. I will explain all of the steps involved.

Modeling:
I will go through the process of solving a riddle, by modeling steps involved in the thinking process in order to read the clues carefully, then come up with a solution to the riddle.

Checking for Understanding:
Students will try solving one of the riddles and checking with me when they have an answer.

Guided Practice:
With a partner, students will solve two of the riddles, (vocabulary words). Next the students will share their riddles with the rest of the groups.
Closure:
Pick which riddle you thought was the hardest to figure out? Think of some better clues so that you will always remember the riddle.
Appendix B

**Multiple Intelligence Lesson Design Sample**

**Visual/Spacial Intelligence**

**Lesson Objective:** The learner will be able to communicate vocabulary words and definitions through diagrams and/or pictures.

**Step 1. Awakening the intelligence:**
I will show pictures of a beach. I will ask the students to imagine they are taking a journey, (through guided imagery), to the ocean. We will share what we see, hear, and smell.

**Step 2. Amplifying the Intelligence:**
We will practice drawing our feelings. We will make a picture of our faces when we are at an amusement park, when we lost our dog, or when we got stung by a bee. (We are expressing three different emotions through pictures).

**Step 3. Teaching the intelligence:**
I will help the students read all of the vocabulary words. Each student will pick two vocabulary words. Next, each student will draw a picture of what that word means, and share their work with the class.

**Step 4. Transfer of the Intelligence:**
Share with the class which definition was the most fun to draw, and why.
<table>
<thead>
<tr>
<th></th>
<th>Word Bank</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>hospital</td>
<td>A building where doctors and nurses take care of sick people.</td>
</tr>
<tr>
<td>2</td>
<td>grandfather</td>
<td>A close relative, your father's father.</td>
</tr>
<tr>
<td>3</td>
<td>sneeze</td>
<td>To force air through your nose and mouth, while jerking your head quickly.</td>
</tr>
<tr>
<td>4</td>
<td>recognize</td>
<td>To know or remember something that you saw or did from the past.</td>
</tr>
<tr>
<td>5</td>
<td>phonograph</td>
<td>A machine that plays music from a record.</td>
</tr>
<tr>
<td>6</td>
<td>elephant</td>
<td>The largest four-footed animal, with a long trunk.</td>
</tr>
<tr>
<td>7</td>
<td>tower</td>
<td>A square or round building that reaches high into the sky.</td>
</tr>
<tr>
<td>8</td>
<td>shoulder</td>
<td>The place on your body where your neck and head rests.</td>
</tr>
<tr>
<td>9</td>
<td>pile up</td>
<td>To place a collection of objects one on top of the other.</td>
</tr>
<tr>
<td>10</td>
<td>amusement park</td>
<td>A place where people pay money to play games and go on rides.</td>
</tr>
</tbody>
</table>
1. **Curious**  To want very much to learn or know something.
2. **Medal**  Usually this is round and flat, and people try very hard to win one.
3. **Parachute**  Something that opens up like an umbrella and is used for dropping down slowly from the sky.
4. **Escape**  To get away from danger.
5. **Launching site**  The place where a space ship takes off from.
6. **Museum**  A building where special things are displayed, like pictures, paintings, and sculptures.
7. **Flight**  A trip through the air.
8. **Enormous**  Something that is very big or huge.
9. **Naughty**  When someone is bad and does something he or she is not supposed to do.
10. **Squealing**  What baby pigs might do when they are hungry.
Appendix E
Standard Deviations

<table>
<thead>
<tr>
<th>M.I. Mean scores</th>
<th>Hunter Mean scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>97.2</td>
<td>94.5</td>
</tr>
<tr>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>78.18</td>
<td>84.09</td>
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</tr>
<tr>
<td>96.6</td>
<td>96.2</td>
</tr>
<tr>
<td>100</td>
<td>91.25</td>
</tr>
<tr>
<td>98.8</td>
<td>95.5</td>
</tr>
</tbody>
</table>

Standard Deviation: 6.96311374

Standard Deviation: 4.61072972