

Differentiated Instruction: A Comparison of  
Elementary and Secondary School Use

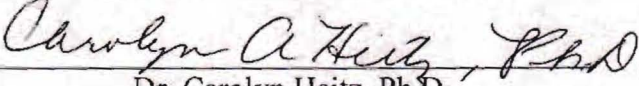
by

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A Research Paper  
Submitted in Partial Fulfillment of the  
Requirements for the  
Master of Science Degree  
in

Education

Approved: 30 Semester Credits

  
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The Graduate School

University of Wisconsin-Stout

June, 2007

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**Title:** *Differentiated Instruction: A Comparison of Elementary and Secondary School Use*

**Graduate Degree/Major:** MS Education

**Research Advisor:** Dr. Carolyn Heitz, Ph.D.

**Month/Year:** June, 2007

**Number of Pages:** 32

**Style Manual Used:** American Psychological Association, 5<sup>th</sup> edition

ABSTRACT

Differentiated instruction refers to teachers paying attention to the differences in student learning and using a flexible teaching style that will meet the students' needs (Tomlinson, 2005). Research says that differentiated instruction helps students become motivated to learn. In addition, differentiated instruction is not only beneficial to students with special learning needs, but to all types of learners. By using differentiated instruction methods, teachers will help student realize a sense of importance and ownership in their education.

To start, differentiated instruction in the classroom can be a time-consuming process (Tomlinson, 2005). However, it can be worth the effort when teachers from all grade levels participate. In this study, the researcher wanted to find out the number of teachers in elementary and secondary schools that practice differentiated instruction at Neillsville School District, Neillsville, WI. The researcher also wanted to uncover the

teachers' attitudes and knowledge base of differentiated instruction. The results were compiled to compare the elementary and secondary school teachers at Neillsville School District, Neillsville, WI.

The first and second chapters introduce readers to differentiated instruction. It gives information about differentiated instruction, along with its impact on specific student populations. The first 2 chapters also give some reactions of teachers that are learning to use differentiated instruction in their classrooms.

This thesis concludes by informing readers that the teachers at Neillsville School District feel the importance of challenging all students at an appropriate level for each learner. However, teachers would value specific in-services on research-based methods to use in their classrooms that will help students learn and enjoy it. Differentiated instruction can be one of those methods.

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### Acknowledgments

I would like to express my appreciation and thanks to my husband and two wonderful children. This program has taken time and financial support from them and I appreciate their patience. In addition, thank you to all of the teachers at Neillsville Elementary and High School who participated in my research of differentiated instruction. I felt they were open and honest about their attitudes, practices, and knowledge of differentiated instruction. Next, I would like to thank the administrative staff at Neillsville School District who let me conduct this study. Finally, I could not have done this study without the ideas, thoughts and encouragement of my research advisor, Dr. Carolyn Heitz. After speaking to Dr. Heitz through emails and phone calls my stressful feelings would subside.

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## Chapter 1: Introduction

Students are individual learners who have their own learning styles. However, some teachers of public schools solely use lecture as their teaching style. At the elementary level, students are being exposed to multiple methods to learn the curriculum. All students have multiple learning styles but the emphasis on a single teaching method in the high school does not allow students to use all of their learning styles. Teachers might argue that the self-contained nature of most elementary classrooms makes it easier to differentiate instruction.

Differentiated instruction is another name for individualized instruction (Duffy, 2005). In other words, differentiated instruction refers to teachers paying attention to the differences in student learning and using a flexible teaching style that will meet the students' needs (Tomlinson, 2005). According to George (2005) it is said that teachers who do not use differentiated instruction have students who lose the motivation to learn new material. In addition, the students can become bored or feel frustration because of a teaching style that does not match their learning style.

Talented and gifted students need more abstract representations of the lesson (Tomlinson, 1995). This does not mean giving the talented and gifted students extra work. A possible solution would be to give abstract task choices to motivate the advanced students.

Students who are at risk of failing in school need to feel the success in learning while exceptional learners need to be challenged. Teachers have to be aware of their students' abilities and disabilities in order to approach them with teaching methods that will make their time and effort count (Tomlinson, 2005). As a result, all students will feel that they are valued as a member of the classroom (Tomlinson, 2002).



The United States has a growing number of immigrant families that speak English as a second language. According to Shore (2005) there are almost 3 million students who speak English as their second language in the United States. Teachers need to be more aware of this student population and adjust their teaching styles to compliment the students' learning styles and interests through differentiated instruction.

Diversity not only is about race, but about people with disabilities. Carol Tomlinson (2005) stresses that all teachers need to be aware of cultural, ethnic, and linguistic diversity in order to help students connect with the information that is being taught. In addition, Tomlinson (2005) goes on to explain that about 96% of teachers in the United States teach students who are in a special education program (U .S. Department of Education, 2001). So to be successful, teachers should focus on how all students learn, not just the portion of the students that respond to their one style of teaching.

Duffy (2005) has also made a point of expressing that a pull-out system for students with learning disabilities is not considered a viable solution since instruction is provided away from their regular education peers and teachers. Hess (1999) writes that Tomlinson stresses the need for regular education teachers to adjust the learning in the classrooms. Flexible seating arrangements and learning stations can be used to facilitate a variety of learning levels. By adjusting the way learning can take place, teachers can assess student progress on multilevel tasks. Rubrics help evaluate student progress in all learning tasks. The rubrics can be designed to evaluate student made projects instead of relying on teacher-made exams that focus on regurgitating information.

The special education teachers can use the team teaching approach in the regular education classrooms to better serve everyone, not just students with special needs. Teachers can facilitate engaging activities if there are more people in the room to help the students.

Teachers may think differentiated instruction is too time consuming. According to Tomlinson (2005) getting started can be time consuming. However, if improvements in students learning are made, the time and effort would be worthwhile. Teachers in a school district in Geneva, IL, have indicated that at first differentiated instruction was very time consuming. They learned how to alleviate the time it takes to plan by asking for help from specialists in the school, being very organized, and sharing ideas with other teachers (Hess, 1999). With the help of an enrichment coordinator, the Geneva School District is trying to put differentiated instruction in each of their classrooms. This is an ongoing process that requires schools to have staff development and continuing support (Hess, 1999). Analysis of ongoing assessment results along with teacher reflection on practices are keys to success for students and teachers. This study will determine the difference in teaching style of secondary teachers and elementary school teachers. Through an anticipation guide and follow-up interviews the examiner can determine teachers' knowledge of and feelings towards differentiated instruction.

In the follow-up interview, the teachers will be asked to reflect on their practices and knowledge on how to improve learning for all students and teachers. This study could serve as an impetus for professional development opportunities to expand on differentiated instruction practices and attitudes.

#### *Statement of Problem*

The purpose of this study is to compare general educators' practices, knowledge, and attitudes about differentiated instruction at the elementary and secondary levels. The researcher

will identify the previously mentioned aspects of differentiated instruction using an anticipation guide and follow-up interviews at the Neillsville School District, Neillsville, WI.

The researcher will distribute anticipation guides during the 2006-2007 school year. The anticipation guide will assess the secondary and elementary teachers' knowledge of differentiated instruction. In addition, a follow-up individual interview will ascertain teachers' knowledge of differentiated instruction practices and attitudes. In turn, this research will promote the awareness of the components of differentiated instruction. An outgrowth of the results could be used to provide professional training related to aspects of differentiated instruction.

### *Research Hypothesis*

Elementary school teachers will have the following:

- Use differentiated instruction in their classrooms more often than secondary school teachers,
- have a greater knowledge of differentiated instruction when compared to secondary school teacher, and
- possess a more positive attitude toward differentiated instruction than secondary school teachers.

### *Definition of Terms*

*Differentiated instruction:* Teaching approaches that are unique to the individual learners while they are in a whole group setting. Students are given many choices to their learning.

*On-going assessment:* On-going assessment can be formal or informal tests. It is

used to measure student progress for learned material in the curriculum. On-going assessment can include student work samples, interviews, check lists, reports, and classroom discussions (Hall, 2002).

*Content:* The "what" in teaching. Some examples are: World War II, the periodic table or photosynthesis.

*Process:* The "how" in teaching. Some examples are small groups, whole class, and individual projects (Hall, 2002).

*Flexible grouping:* Students working with each other to obtain certain set goals. The groups can be combined by readiness, aptitude and interest. These groups are regrouped many times to meet the needs of the lesson that is being taught. This will encourage the students learn and share with everyone in the classroom.

*Readiness:* "The difficulty of skills taught should be slightly in advance of the child's current level of mastery" (Hall, 2002).

*Collaboration:* People working together to obtain a common goal.

*IEP:* Individualized Education Plan developed for each child in the special education program.

### *Assumptions and Limitations*

This study includes an anticipation guide (Appendix A) and interview that requires teachers to be honest and willing to share their classroom practices. In addition, the interview asks teachers for their own knowledge and attitudes toward differentiated instruction. Teachers from elementary and secondary school were selected to be individually interviewed.

## Chapter II: Literature Review

Teachers always try to find the best approaches to teaching all students. Differentiating instruction in the classroom is one approach which is supported by many researchers. According to Hall (2002) differentiated instruction is an on-going process. Continuous assessment of teaching methods and students' progress by teachers is essential. As a result, adjustments in teaching methods will assist all students of every ability level and cultural background to learn the concepts that are taught in the classroom. Hall also says that teachers need to teach students according to their readiness levels (2002). Tomlinson (1995) goes on to explain, "In a differentiated class, the teacher uses a variety of ways for students to explore curriculum content, a variety of sense-making activities and a variety of options through which students can demonstrate or exhibit what they have learned" (p. 9). In addition, research supports teachers using differentiated instruction for all grades.

Willoughby (2000) describes differentiated instruction and identifies strategies that can assist teachers. To begin with, Willoughby stresses the benefits of using multiple teaching methods that work well with students' interests and differing abilities. This does not mean that teachers need to plan separate lessons for each student. It means giving the students more ownership in their learning by providing options in activities which will help the students comprehend the lesson that is taught. Another misconception is that the curriculum would have to be watered down to a basic level to assist students with lower abilities. This is not so. Differentiated instruction is used to give students challenges at their individual learning style and ability level. All students would feel challenged during the lesson. Furthermore, Willoughby (2000) explains that differentiated instruction can not happen overnight. It takes a lot of planning and determination. The first step is knowing the students. For example, teachers can look at

standardized test scores or give an interest and learning style inventory. The next step is studying the curriculum to find an area where differentiated instruction can be started. Another helpful step would be to become familiar with different teaching methods. This can be done by brainstorming with other teachers. Also, along with teaching methods, teachers should examine their methods of assessing. The goal of discussions, projects, and tests should be to understand the students' abilities after the lesson is taught. Assessments not only show how much students have learned, but help the teachers plan and examine their own teaching methods.

Orkwis (2002) discusses a type of differentiated instruction called Universally Designed Instruction or UDL. Universal design for learning has been examined by the Center for Applied Science Technology (CAST). "Universal design for learning (UDL) is the design of instructional materials and methods that makes learning goals achievable by individuals with wide differences in their abilities" (Orkwis, 2002). In addition, the Do-It Project at the University of Washington mirrors the methodology of differentiated instruction (Orkwis, 2002). First of all, flexible grouping is very important in this design. In addition, flexibility is important for the curriculum, teaching methods, classroom environments, and assessments. The students do not change their learning style, but instead the curriculum comes to them in different forms. Orkwis goes on to explain the universal design for learning makes an easy transition to differentiated instruction because it is simple and almost effortless if combined with other good classroom practices. UDL also encompasses six principles of an effective curriculum. The six principles are big ideas, conspicuous strategies, mediated scaffolding, strategic integration, judicious review and primed background knowledge (Orkwis, 2002).

Another important aspect of good classroom practice that works well with UDL is setting attainable and concise learning goals for each of the students. Also, teachers should not be afraid

to use supplemental materials. Teachers' own interpretations of the lessons are more valuable. Teachers should also use the technology available. In addition, teachers' expectations should not be a secret. It is helpful for instructors to share their expectations with their students. The U.S. Department of Instruction is financially backing the University of Connecticut project for universal design instruction jury-reviewed products. The university is putting together a list of instructional products that use UDL. These products could help teachers make a transition, if needed, to differentiated instruction.

According to Hess (1999), there are doubts to whether differentiated instruction works in a teacher-directed setting. The teacher is the facilitator in a differentiated instruction classroom. Differentiated instruction is about choices. The teachers and students work together as partners who both learn new things. Some say the approach is too time consuming (Hess, 1999). Teachers who use the approach do admit that differentiating instruction for all students at all age levels does require a lot of time and work when the approach is in its initial stages. However, Tomlinson says, "Anything that is worth doing is complicated" (Hess, 2). But, Hess gives some teacher options to help make the transition to differentiated instruction. Hess goes on to explain that teachers working together can make the transition better for everyone. Although differentiating instruction is a slow process that can take up to 10 years to really work in the school, but with supported staff and development opportunities, it can be done.

Teachers and administrators are realizing that students learn in different ways and they want to accommodate these ways. Tomlinson recognizes the hardships that standards-based instruction and high-stakes testing is making on individualizing and differentiating instruction (2000). However, teachers can use the standards to help them as long as they do not lose sight of their students' needs. "Differentiation is not a recipe for teacher; it is away of thinking about

teaching and learning" (Tomlinson, 2000). Tomlinson goes on to explain that standardization is not about differentiation. There is a time frame that gets in the way of learning. Teachers have to teach students certain concepts by a certain time in order to get good test scores. Tomlinson says that there are problems with this kind of teaching. Some teachers, Tomlinson writes, say "We are telling instead of teaching. Joy in classrooms has been replaced by fear that is first felt by the teachers and then by the students" (2000). Teachers have to find a way to not let standards-based teaching get in the way with best teaching practices. Tomlinson says one way to look at standards-based teaching is to look at the standards-based curriculum as the "what" to teach. Then use differentiated instruction as the "how" to teach it.

Tomlinson's (2003) reiterates the four classroom elements used to help differentiate instruction at the elementary school level. The four classroom elements are content, process, products, and learning environment. An example of content would be the information the student learns. Process is the different ways the student learns the content. Products are the activities the students complete to show their progress in learning and attainment of the content. The fourth element is learning environment. Learning environment is the classroom, whole school building, or playground.

In order to assist students with content, teachers should incorporate materials that have different reading levels. Also, to help a student learn printed material, the text can be put on tape. In addition, small groups can help overcome the barrier of low reading ability levels by showing students that they can help each other read the material. One small group strategy that helps the development of reading comprehension and communication skills is called Think-pair-share. In this strategy students are grouped with members that could be outside their peer group to share



the responsibility of the reading and reflect on the topics. Along with different teaching strategies, teachers can use visuals to help present the material (Tomlinson, 2003).

Process is how the curriculum is taught which can include using manipulatives, varying length of time it should take to complete a task for each student or using personal agendas. Manipulatives are visual and tactile representations of the activity. Another example of process is using personal agendas. Personal agendas make students set their own goals and expectations about the curriculum. This gives them ownership in their own learning.

Teachers could give the students options of how they want to display their learning (Tomlinson, 2003). Students' products let the teachers know if their instruction was effective. Rubrics help teachers assess their students' learning. However, the rubrics should match each student's individual learning style.

The last element is learning environment (Tomlinson, 2003). Routines are important in the learning environment. A goal of routines is that no time is wasted. The students should be self-directed to keep their learning going even when the teacher is busy.

After explaining the four elements of differentiated instruction, Tomlinson (2003) gives teachers advice to help them differentiate instruction. Tomlinson says, "Begin to change at a pace that pushes you a little bit beyond your comfort zone-neither totally duplicating past practice nor trying to change everything overnight" (p. 5). It is also recommended that teachers document their use of teaching strategies and reflect upon ways to improve instruction in journals. Using journals allows teachers to assess how they feel about their teaching strategies and how to improve them. Another recommendation Tomlinson expresses is to draw upon the support of the building specialists such as, librarians, special education teachers, and technology

support staff. Tomlinson's last piece of advice (2003) is to enjoy the time. Remember that teaching is a learning process for both the students and teachers.

Another aspect of differentiated instruction is that teachers do not have to do it alone. Daack (1999) expresses the benefits of an inclusive setting. A resource teacher and the regular education classroom teacher can work together to cover all of the needs of the students while in the same classroom. Brainstorming new activities can be made easier when more than one person is brainstorming. This model is called collaborative, co-teaching. There are different types of collaborative teaching. The first is one teacher working with one support teacher to help with all of the students. Another design is parallel teaching. Each teacher takes a small group of students in parallel teaching to review or re-teach the content. Therefore, one of the teachers takes a group of students to another part of the classroom to review or re-teach the content in a way that will help the students comprehend the material. These teaching methods provide the students with more teacher time. As a result, students are more on-task and are being assessed by two teachers.

According to Moskal (2003), classroom assessment can be very difficult for teachers. However, Moskal explains that rubrics can help assess students. For example, analytic and holistic are the two types of rubrics. Assessment is a very important part of differentiated instruction; therefore, teachers need to use the right instruments. "Analytic rubrics divide performance into separate facets and each facet is evaluated using a separate scale" (Moskal, 2003). Holistic rubrics use one scale for the whole task (Moskal, 2003). A recommendation for the development of rubrics is that what is being assessed matches what was taught and the task the student completed. When teachers administer assessments they need to present the directions in oral and written forms. In the beginning of a unit students need to be given the overview of the

content objectives along with how their learning will be assessed. They need to be supplied with rubrics and models to guide their understanding of content.

By researching the use and process of differentiated instruction, it appears to the researcher that all students can benefit from this method of teaching. This chapter suggests ways teachers can differentiate instruction in their classroom. Looking at the four elements would be a good place to start. According to Tomlinson content, process, product and learning environment work together to help students learn in their own way. Teachers, as facilitators, can help the students with content, process, product, and learning environment.

The research shows that differentiated instruction focuses on how students learn and teachers meeting the students at that place through their teaching methods. However, do teachers fall into negative default teaching methods? Tomlinson says yes (2003). She states that using standards-based instruction can make schools a stressful place by putting time factors in place for students. However, it does not have to be this way. Standards-based instruction is the "what" in teaching. Teachers can use differentiated instruction to teach the standards-based curriculum (Tomlinson, 2003). Also, are secondary teachers more apt to fall into negative default teaching methods? To find the answer to this question the researcher plans to examine more about the various uses of differentiated instruction in secondary and elementary schools. A comparison of differentiated instruction practices, attitudes and knowledge in a secondary school along with an elementary school will provide insight into differences and similarities of teaching approaches at the two levels.

## Chapter III: Methodology

### *Introduction*

The purpose of this study was to compare high school and elementary teachers' knowledge, attitudes, and practices of differentiated instruction. In this chapter, the researcher will discuss why high school and elementary teachers were compared in their knowledge, attitudes and practices of differentiated instruction. The type of instruments that were used in this study will be defined. In addition, how teacher feedback was collected will also be explained. Furthermore, the interpretation of material and limitations of the instruments used will be addressed in this chapter.

### *Selection and Description of the Sample*

The educators involved in this study are from the high school (grades 9 to 12) and elementary (grades kindergarten to 5) levels in the Neillsville School District, Neillsville, Wisconsin. One high school teacher was randomly selected from health, English, science, math, and social studies which are state-required subjects. The sample of elementary teachers consisted of two out of the three or four classroom teachers in grades kindergarten through five. A total of 16 teachers were involved in the study.

There were no special education teachers involved in the study. Students with disabilities have individual education plans (IEP) that make it mandatory to differentiate instruction according to students' learning styles and needs. Therefore, the researcher assumed that the special education staff know and use differentiated instruction.

### *Instrumentation*

The anticipation guide (Appendix A) consisting of 9 statements was used to gather information to assess teachers' knowledge, attitudes and practices of differentiated instruction. Anticipation guides can activate a person's knowledge and interest for a subject. A person can predict what he/she will learn in lessons by completing an anticipation guide. Anticipation guides also give a purpose for learning a unit. The researcher found information to use in this survey from the website Tools for Schools (2006). Tools for Schools is a teleconference series that was made to assist schools in improving their students' learning. The Tools for Schools document consists of a self-assessment that can help teachers improve their teaching methods. In addition, Tools for Schools displays clear charts explaining differentiated instruction. A table in the site presented information from Kluth (2000) to explain what differentiated instruction is/is not. The anticipation guide developed for this study asked teachers if they agreed, disagreed or are unsure because they had no background related to the statement. A comment space was provided for the teachers to further clarify their response to individual statements. The final item in the survey was an open-ended question designed to solicit what more the teacher would like to know about differentiated instruction.

The researcher also conducted an individual interview with a random selection of 4 participants to clarify their knowledge, practice and attitudes of differentiated instruction. The anticipation guide completed by the teachers was used to guide the interview process. The teachers were given an opportunity to substantiate the responses they made on the survey.

### *Data Collection*

The anticipation guides were delivered to each secondary and elementary teachers' mailbox. The teachers were requested to return their anticipation guide to the researcher by a

certain date through the interschool mail. Participants were required to put a significant name other than their own on the anticipation guide to safeguard their identity. The anticipation guide statements were divided into knowledge, attitudes and practices categories. There was also a space to include comments after each statement. Appendix A shows two versions of the anticipation guide with one labeled teacher anticipation guide and the other researcher anticipation guide. The researcher's anticipation guide displays the correct answers in bold with the categorized statements. Before each item the letters K (Knowledge), A (Attitude), and/or P (Practices) was indicated before each item number. Some of the categories overlapped.

Teachers from each school were randomly selected to participate in an individual interview after they filled out the anticipation guide. The selected teachers were then able to identify their anticipation guide by their significant name.

#### *Data Analysis*

The data taken from the anticipation guides and individual interviews gave the researcher insight into how much teachers know and use differentiated instruction. The researcher first administered the anticipation guides. The anticipation guides were then used to make a numerical profile on each teacher. The next step was to randomly select teachers to be individually interviewed. The anticipation guide responses guided the researcher into starter conversations with the teachers during the individual interviews. The teachers were also given a chance to further explain their responses. By combining the anticipation guide results with the individual interview result, the researcher assessed the teachers' knowledge, attitudes and practices of differentiated instruction.

*Limitations*

This study required teachers to be open and honest about their knowledge, attitude, and practices of differentiated instruction. The examiner may unintentionally convey personal opinions on differentiated instruction in the interview which could influence teachers' responses. Furthermore, there is a small sample of high school teachers when compared to the elementary teachers. Therefore, the comparison of percentages are distorted.

## Chapter IV: Results

The participants in the study were 5 secondary and 11 elementary school teachers. The purpose of this study was to compare general educators' practices, knowledge, and attitudes about differentiated instruction at the elementary and secondary levels. These practices were explored through anticipation guide statements, comment section, and interviews.

Table 1 reveals the breakdown of responses of each statement by percentage from the teachers in the elementary and secondary schools. In addition, the shaded boxes indicate the correct or desired responses. The letters in front of each numbered item represent practice, knowledge or attitude. The unsure column is not considered right or wrong.

Table 1 shows the majority of the elementary teachers responded correctly to 8 out of 9 anticipation guide statements. The only anticipation statement that displayed a score that was lower than the secondary school teachers was statement number P5 which measured practices of differentiated instruction. The secondary teachers responded more times in the unsure section of Table 1 than the elementary teachers. In addition, elementary and secondary school teachers each scored 100% correct/desired on anticipation statement KA7. This statement assessed if teachers thought differentiated instructed was just for students with special needs. All teachers disagreed indicating they knew differentiated instruction is for all students.

Table 1

Responses of Teachers by Percentages

AG Item	Unsure		Disagree		Agree	
	Elem.	H.S.	Elem.	H.S.	Elem.	H.S.
P1	0	0	0	20	100	80
P2	18	40	82	60	0	0
P3	0	20	0	0	100	80
KP4	0	40	118	0	82	62
P5	18	0	36	80	46	20
K6	9	20	91	40	0	40
KA7	0	0	100	100	0	0
KA8	27	40	0	0	73	60



<b>K9</b>	0	20	0	0	100	80
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P=Practice

Shaded Boxes = Correct/Desired Answers

K=Knowledge

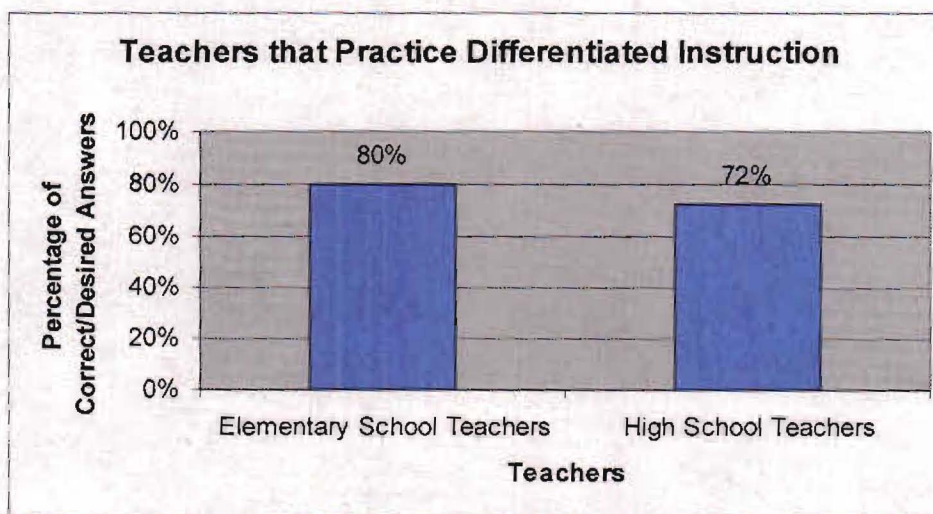
A=Attitudes

### *Research Question One*

The first question wanted to examine if elementary school teachers used differentiated instruction more often than secondary school teachers. The question was studied by the use of anticipation guide statements (Appendix A) labeled with the letter P before the numbered item. There were 5 statements that measured teachers' practices of differentiated instruction.

Table 2 is a bar graph consisting of the comparison of elementary and secondary teacher use of differentiated instruction. It shows 80% of elementary teachers studied use differentiated instruction in their classrooms. Secondary teachers scored at 72% in the use of differentiated instruction in their classrooms. Therefore, 8% more elementary teachers practice differentiated instruction when compared to secondary school teachers.

Table 2

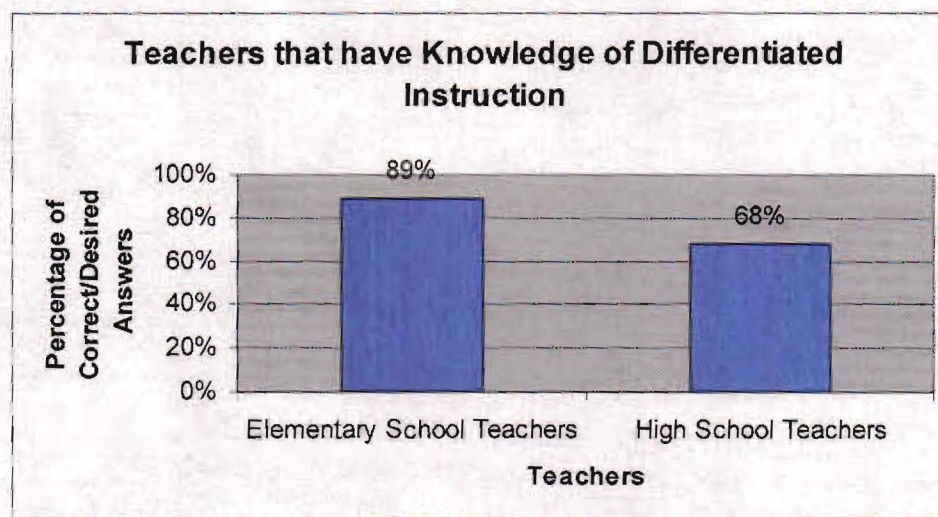


### *Research Question Two*

The second question examined if elementary teachers had a greater knowledge of differentiated instruction when compared to secondary school teachers. This question was studied through the use of the anticipation guide statements labeled with the letter K before the numbered item. Table 1 shows that there are 5 anticipation guide statements that measure teacher knowledge of differentiated instruction.

Table 3 bar graph shows that teachers' knowledge of differentiated instruction. Again, elementary school teachers know more about differentiated instruction than secondary teachers. The results were as follows: 89% elementary teachers to 68% secondary teachers. This question displayed the greatest gap between the 2 teacher samples (21% difference).

Table 3



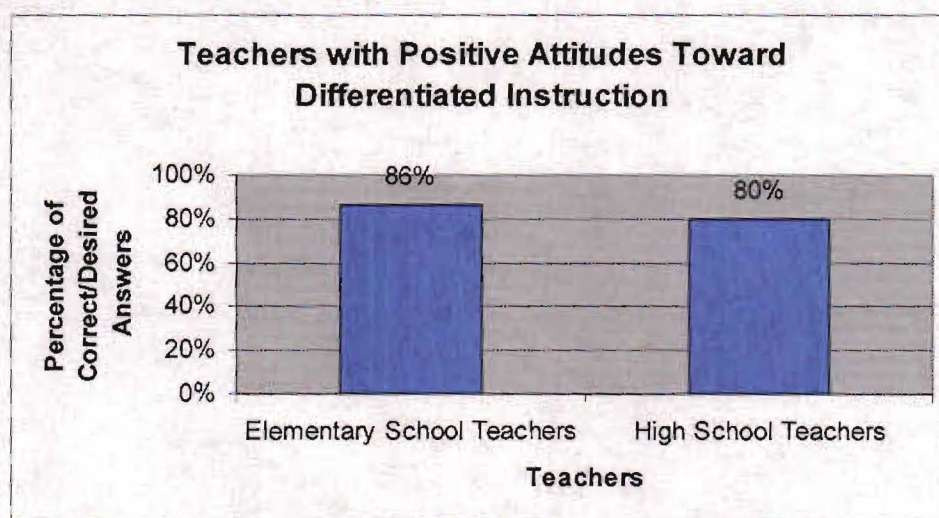
### *Research Question Three*

The third research question asked teachers to reflect upon their attitudes toward differentiated instruction. Table 1 shows that there are 2 questions that measure teachers' attitudes toward differentiated instruction by using the letter A before each numbered item. The

researcher was assessing if elementary school teachers had a more positive attitude towards differentiated instruction when compared to secondary teachers.

Table 4 shows more elementary school teachers (86%) have a positive attitude toward differentiated instruction when compared to secondary teachers (80%). However, this question displayed a smaller difference between the two sets of teachers when compared to the other questions (6% difference).

Table 4



Results suggest that elementary teachers used more differentiated instruction in the classroom and are more knowledgeable of the method. Furthermore, elementary school teachers do have a better attitude towards differentiated instruction when compared to secondary school teachers. When given the opportunity, teachers had questions and comments about differentiated instruction.

## Chapter V: Discussion

The purpose of this study was to compare general educators' practices, knowledge, and attitudes about differentiated instruction at the elementary and secondary school levels. Eleven elementary and five secondary teachers from Neillsville School District, Neillsville, WI participated in the study.

The literature review provided background knowledge regarding differentiated instruction. It described the strategies, explained the hardships, and elaborated on the four classroom elements of differentiated instruction which are content, process, products, and learning environment. Adjustments have to be continuously made to each of the elements to help students learn the material that is taught. The goal is to have students feel a comfortable level of challenge with each project, lesson, and assessment.

In this study elementary and secondary teachers were compared in the use, knowledge, and attitudes of differentiated instruction. Three research questions are discussed in relationship to the findings of the anticipation guides and the interviews.

Research question number one: Do elementary school teachers use differentiated instruction in their classrooms more often than secondary school teachers? Of all the anticipation guide statements that were identified with the letter P (P=Practice) before the number, the elementary school teachers did choose the desired answers for four out of the five P questions. However, more high school teachers did correctly answer the P5 anticipation statement right. This meant that the high school teachers knew that differentiated instruction was not just changing parts of a lesson for one or two students. One first grade teacher indicated unsure for P5 because she thought differentiated instruction was changing parts of a lesson for anyone who is not mastering the skill, not just one or two students. An English teacher in the

high school commented that she disagreed with P5 because she changes strategies and assessment scales, not lesson plans. The English teacher's practice of not changing lesson plans, just strategies, may be due to the fact that she does teach general education classes containing many diverse learners. She has to teach the assigned curriculum, but has the freedom to use methods that will help her students learn the material.

The high school math teacher thought that when change is made to the lesson, everyone should benefit not just one or two students. In an interview, the math teacher expressed the need to see examples of teacher practices and students' math projects that use differentiated instruction.

Some of the practices of differentiated instruction that the elementary teachers commented on were giving students different work; not extra work, adjusting vocabulary, and daily assessment of individuals to help them move between and within groups. In addition, during the interviews each teacher, no matter if they taught in elementary or high school, wanted to see examples of differentiated instruction being used in the classroom. However, according to the teachers, it is hard to put differentiated instruction into practice because it does not match the way state assessments evaluate the students.

Research question number two: Do elementary teachers have a greater knowledge of differentiated instruction than secondary school teachers? Again, the anticipation guide showed that elementary school teachers do have more knowledge of differentiated instruction than secondary school teachers. According to the interviews and comments in the anticipation guides, teachers admitted they need to know more about appropriate assessments to use with differentiated instruction. In addition, a good percentage of teachers in each group know that differentiated instruction is student centered, however, they worry about the preparation time. A

very legitimate concern of teachers is trying to provide differentiated instruction when their day is already packed with other teaching duties and responsibilities.

Research question number three: Do elementary teachers possess a more positive attitude toward differentiated instruction when compared to secondary teachers? There were two questions that measured teacher attitude toward differentiated instruction. Elementary school teachers had a more favorable attitude toward differentiated instruction than the secondary school teachers. However, there was just a 6% gap between the two percentages. It was interesting to discover that all teachers felt that differentiated instruction is student centered, but some high school teachers were unsure. An unsure answer may be given because the teachers lack the knowledge of differentiated instruction. Through the comments and interviews the teachers expressed the need to learn more about differentiated instruction.

This study provided a valuable dialogue between teachers of how much they care about students and their learning. It was evident in the interviews, anticipation guide statements and comments that the teachers of both levels would like to learn more about differentiated instruction. Therefore, a school in-service on differentiated instruction or other research-based teaching methods would be welcomed.

#### *Limitations*

There were some limitations in this study. The anticipation guide's responses showed that some of the teachers do not know they are practicing differentiated instruction because they lack exposure to the strategies for delivery of this method. The researcher has worked closely with teachers in the high school to help them service students with special needs. These teachers are delivering differentiated instruction.

Another limitation was time. The examiner could not interview all of the participants because of teacher time constraints. However, the comment portions of the anticipation guides were provided so teachers could express their ideas and questions.

### *Recommendations*

The following recommendations are directed toward Neillsville School District, Neillsville, WI. The results of the study suggested that teachers would like the school district to offer in-services on differentiated instruction. There is a big push to align the curriculum to the Wisconsin Teaching Standards in each subject. Therefore, a lot of in-service time is spent developing curriculum for each subject area and grade levels. The teachers would next like to be exposed to research-based strategies for delivery of the curriculum to all levels of learners.

### *Conclusion*

The purpose of this study was to compare general educators' practices, knowledge, and attitudes about differentiated instruction at the elementary and secondary school levels. The teachers in the study felt that all students should feel an appropriate level of challenge during lessons. However, some teachers do not know how to provide that challenge so that it is fair to all levels of learners. With more knowledge of differentiated instruction, teachers would find that giving more ownership to the students for their learning will help students enjoy what is being taught. Teachers who take advantage of their students' learning styles will bring about a flexible way of teaching, learning, and assessing.

The anticipation guide, along with the comments from teachers, did prove the hypothesis right in this study. Elementary teachers do use differentiated instruction more often in their classrooms when compared to secondary school teachers at Neillsville School District. In addition, elementary teachers know more and have a better attitude toward differentiated

instruction than secondary teachers. It would be interesting to assess changes in teacher practices, knowledge and attitudes after in-service training on differentiated instruction.



## References

- Batts, K. and Lewis, S.G. (2005). How to implement differentiated instruction? *Journal of Staff Development*, 26 (4), 26-31. Retrieved November 29, 2005, from Wilson Web.
- Daack, E. E. (1999). Inclusion models for a building level. Retrieved July 23, 2006, from [http://www.uni.edu/coe/inclusion/preparing/building\\_levels.html](http://www.uni.edu/coe/inclusion/preparing/building_levels.html).
- Duffy, F .M. (2005). Collaboration helps teachers learn to differentiate instruction. *Journal of Staff Development*, 26 (1), 68-69. Retrieved November 29, 2005, from Wilson Web.
- George, P.S. (2005). A rationale for differentiated instruction in the regular classroom. *Theory Into Practice*, 44 (3), 185-193. Retrieved September 18, 2006, from EBSCOhost database.
- Hall, T. (2002). *Differentiated instruction*. Wakefield, MA: National Center on Accessing the General Curriculum. Retrieved September 1, 2006, from [http://www.cast.org/publications/ncac/ncac\\_diffinstruc.html](http://www.cast.org/publications/ncac/ncac_diffinstruc.html).
- Hess, M.A. (1999). *Teaching in mixed-ability classrooms*. Wisconsin Education Association Council. Retrieved November 29, 2005, from <http://www.weac.org/kids/1998-99/march99/differ.htm>
- Moskal, B.M. (2003). Developing classroom performance assessments and scoring rubrics – part II. Eric Clearinghouse on Assessment and Evaluation. Retrieved October 17, 2006, from <http://www.ericdigests.org/2005-2/rubrics.html>.
- Orkwis, R. (2003). Universally designed instruction. ERIC ED475386 Clearinghouse on Disabilities and Gifted Education. Retrieved October 17, 2006, from <http://www>.

[ericdigests.org/2003-5/universally.htm](http://ericdigests.org/2003-5/universally.htm).

- Pettig, K.L. (2000). On the road to differentiated instruction. *Education Leadership*, 8 (1), 14-18.
- Shore, K. (2005). Success for ESL students, 12 practical tips to help second-language learners. *Instructor Magazine*. Retrieved December 14, 2006, from <http://content.scholastic.com/browse/article.jsp?id+4336>.
- Tomlinson, C.A. (1995). Differentiating instruction for advanced learners in the mixed-ability middle school classroom. ERIC EC Digest. Retrieved November 20, 2006, from [http://www.kidsource.com/kidsource/content/diff\\_instruction.html](http://www.kidsource.com/kidsource/content/diff_instruction.html).
- Tomlinson, C.A. (2000). Reconcilable differences? Standards-based teaching and differentiation. *Educational Leadership*, 58 (1), 6-11. Retrieved November 20, 2006, from [http://www.ascd.org/ed\\_topics/el200009\\_tomlinson.html](http://www.ascd.org/ed_topics/el200009_tomlinson.html).
- Tomlinson, C.A. (2002). Invitation to learn. *Educational Leadership*, 60 (1), 6-10.
- Tomlinson, C.A. (2003). Differentiation of instruction in the elementary grades. ERIC Digest. Retrieved October 17, 2006, from <http://www.ericdigests.org/2001-2/elementary.html>.
- Tomlinson, C.A. (2005). Traveling the road to differentiation in staff development. *Journal of Staff Development*, 26 (4), 8-12. Retrieved November 29, 2006, from Wilson Web.
- Tools for Schools. Retrieved 2006, from <http://www.emsc.nysed.gov/ciai/sate/resources/diffinstr.pdf>
- Reis, S.M., Kaplan, S.N., Tomlinson, C.A., Westbert, K.L., Callahan, C.M. and Cooper, C.R., (1998). How the brain learns, A response: Equal does not mean identical.

*Educational Leadership*, 56, 3.

Using UDL to accurately assess student progress. Factor 1: Individual learning differences. Retrieved October 31, 2006, from [http://www.cast.org/teaching\\_everystudent/ideas/tes/chapter7\\_3.cfm](http://www.cast.org/teaching_everystudent/ideas/tes/chapter7_3.cfm).

Weber, N. *Differentiating instruction in mixed ability classrooms*. CESA 10, Summer Institute. (2006) Altoona, WI.

Willoughby, J. (2000). *Differentiating instruction: Meeting students where they are*. Glencoe/McGraw-Hill. Retrieved October 31, 2006, from [http://www.glencoe.com/sec/teachingtoday/subject/di\\_meeting.phtml](http://www.glencoe.com/sec/teachingtoday/subject/di_meeting.phtml)

**Appendix A**  
**Anticipation Guide**

Teachers:

The purpose of this survey is to collect information anonymously regarding the understandings teachers in our district have regarding differentiated instruction. Differentiated instruction is a way of teaching and learning so that all students have many options to use to comprehend the information the teacher presents. I chose to focus on the topic of differentiated instruction for my UW-Stout master's degree study.

Anticipation guide statements are used in the survey as a means to determining your knowledge of differentiated instruction. You are to respond to the nine statements below by indicating whether you agree, disagree or are unsure of how you would respond. Space is given under each statement for any further comments you may have. There is also an open-ended question at the conclusion of the survey that you may respond to if you wish to know more about differentiated instruction.

After completing the anticipation guide, some teachers will be interviewed to get further information regarding their knowledge, attitudes and practices of differentiated instruction. The results of the survey and interviews will be reported in my UW-Stout master's thesis.

Thank you for taking your time to assist me in my study.

Marcy Kunze

**Researcher Anticipation Guide**

*Please use a name, other than your own, that is significant to you.*

Name: \_\_\_\_\_

Grade Level or Subject \_\_\_\_\_

P1. A combination of individual student work, student projects, and teacher observation is used to assess student achievement.

**AGREE**

**DISAGREE**

**UNSURE**

**Comments:** \_\_\_\_\_

P2. Differentiated instruction is adaptations that are "tacked on" to pre-developed lessons.

AGREE                      DISAGREE                      UNSURE

**Comments:** \_\_\_\_\_

K3. Differentiated instruction is curriculum, instruction, and assessment that is carefully designed to incorporate the needs of all learners.

AGREE                      DISAGREE                      UNSURE

**Comments:** \_\_\_\_\_

KP4. Differentiated instruction is creating diversity in instruction and continuously "mixing up" lesson formats when teaching.

AGREE                      DISAGREE                      UNSURE

**Comments:** \_\_\_\_\_

P5. Differentiated instruction is changing parts of the lesson for one or two students.

AGREE                      DISAGREE                      UNSURE

**Comments:** \_\_\_\_\_

K6. Differentiated instruction is anew and unfamiliar approach to teaching and learning.

AGREE                      DISAGREE                      UNSURE

**Comments:** \_\_\_\_\_

KA 7. Differentiated instruction is an approach designed primarily to meet the needs of students with disabilities.

AGREE                      DISAGREE                      UNSURE

**Comments:** \_\_\_\_\_

KA8. Differentiated instruction is student centered.

AGREE                      DISAGREE                      UNSURE

**Comments:** \_\_\_\_\_

K9. Differentiated instruction is a mixture of whole class, group and individual student instruction.

**AGREE**

**DISAGREE**

**UNSURE**

**Comments:** \_\_\_\_\_

*What more would you like to know about differentiated instruction?*

K=Knowledge

A=Attitudes

P=Practices

**\*\*Bolded are the correct answers.**

### Teacher Anticipation Guide

*Please use a name, other than your own, that is significant to you.*

Name: \_\_\_\_\_

Grade Level or Subject \_\_\_\_\_

1. A combination of individual student work, student projects, and teacher observation is used to assess student achievement.

**AGREE**

**DISAGREE**

**UNSURE**

**Comments:** \_\_\_\_\_

2. Differentiated instruction is adaptations that are "tacked on" to pre-developed lessons.

**AGREE**

**DISAGREE**

**UNSURE**

**Comments:** \_\_\_\_\_

3. Differentiated instruction is curriculum, instruction, and assessment that is carefully designed to incorporate the needs of all learners.

AGREE

DISAGREE

UNSURE

**Comments:** \_\_\_\_\_

4. Differentiated instruction is creating diversity in instruction and continuously "mixing up" lesson formats when teaching.

AGREE

DISAGREE

UNSURE

**Comments:** \_\_\_\_\_

5. Differentiated instruction is changing parts of the lesson for one or two students.

AGREE

DISAGREE

UNSURE

**Comments:** \_\_\_\_\_

6. Differentiated instruction is anew and unfamiliar approach to teaching and learning.

AGREE

DISAGREE

UNSURE

**Comments:** \_\_\_\_\_

7. Differentiated instruction is an approach designed primarily to meet the needs of students with disabilities.

AGREE

DISAGREE

UNSURE

**Comments:** \_\_\_\_\_

8. Differentiated instruction is student centered.

AGREE

DISAGREE

UNSURE

**Comments:** \_\_\_\_\_

9. Differentiated instruction is a mixture of whole class, group and individual student instruction.

AGREE

DISAGREE

UNSURE

**Comments:** \_\_\_\_\_

*What more would you like to know about differentiated instruction?*