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Uses of Differentiation within the Classroom

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Dedicated to my Dad, Howard Klewin

August 21, 1956 – April 2, 2012
Abstract

The following quantitative research descriptive study was conducted in the area of differentiation with the focus being the differentiation methods/strategies. Differentiation is defined as teachers meeting the individual interests and abilities of students within their classrooms. Teachers were asked during a pre-survey various questions regarding their current knowledge of differentiation terms and how often it is used within their classrooms. Another pre-survey asked teachers which methods/strategies are currently used within their classrooms or their familiarity with them. Four differentiation presentations were held during a course of two weeks. An overview of differentiation and methods/strategies were discussed, along with ideas associated with differentiation. About a month following the presentations teachers were asked to fill out a post-survey. About half of the teachers responded with the post-survey. Teachers showed an increased knowledge in differentiation methods/strategies that can be used in their classrooms. Teachers also took various assessment strategies away from the presentations that can be used to assess their students.
# Table of Contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Introduction</td>
<td>7</td>
</tr>
<tr>
<td>II. Review of Literature</td>
<td>11</td>
</tr>
<tr>
<td>- Differentiation is defined as…</td>
<td>11</td>
</tr>
<tr>
<td>- Why differentiation is necessary in the classroom…</td>
<td>12</td>
</tr>
<tr>
<td>- Why more teachers do not use differentiation…</td>
<td>14</td>
</tr>
<tr>
<td>- Assisting teachers to become proficient in the area of differentiation…</td>
<td>17</td>
</tr>
<tr>
<td>III. Methodology</td>
<td>22</td>
</tr>
<tr>
<td>IV. Results</td>
<td>28</td>
</tr>
<tr>
<td>V. Conclusions</td>
<td>45</td>
</tr>
<tr>
<td>References</td>
<td>51</td>
</tr>
<tr>
<td>Appendix</td>
<td></td>
</tr>
<tr>
<td>1. Surveys</td>
<td>54</td>
</tr>
<tr>
<td>2. Communications</td>
<td>59</td>
</tr>
<tr>
<td>3. Differentiation Presentations</td>
<td>64</td>
</tr>
</tbody>
</table>
List of Boxes and Charts

<table>
<thead>
<tr>
<th>Boxes</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Box A – Pre-Survey → Differentiation Definitions (Grade Level, Years in Teaching)</td>
<td>29</td>
</tr>
<tr>
<td>Box B – Pre-Survey → How Often Teachers Differentiate Instruction</td>
<td>30</td>
</tr>
<tr>
<td>Box C – Pre-Survey → How Teachers Differentiate Instruction (by grade level)</td>
<td>30</td>
</tr>
<tr>
<td>Box D – Post-Survey → Comparison of Definitions</td>
<td>37</td>
</tr>
<tr>
<td>Box E – Post-Survey → Methods/Strategies Used in the Classroom</td>
<td>38</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Charts</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chart A – Pre-Survey → Teacher Rated Differentiated Terms</td>
<td>31</td>
</tr>
<tr>
<td>Chart B – Pre-Survey #2 → Methods Results</td>
<td>32</td>
</tr>
<tr>
<td>Chart C – Post-Survey → Confidence in Using Methods/Strategies</td>
<td>39</td>
</tr>
<tr>
<td>Chart D – Post-Survey → Confidence in Using Assessment Strategies</td>
<td>40</td>
</tr>
</tbody>
</table>
Chapter One

Introduction

The roles have been reversed you (the teacher) are sitting behind a school desk patiently waiting for a lesson to begin. As your teacher begins to teach the lesson, you are overcome by a feeling of boredom, which may lead to distractions. There may be a variety of reasons for these distractions, including you either do not understand the material being taught or you may know beyond what is being taught within the lesson. You may now understand why some of your students may look bored while you are introducing a new lesson. School classrooms are filled with students that bring a wide range of academic abilities to a class. Teachers need to meet the abilities of each individual student based on his/her ability levels, interests, and learning style through an instructional teaching style of differentiation. As an elementary school teacher I have witnessed students in my own classroom that need a differentiated lesson. I believe that we all learn in our own way, which is very important to how students are learning in our individual classrooms.

According to Tomlinson and McTighe (2006) “Differentiated Instruction focuses on whom we teach, where we teach, and how we teach. Its primary goal is ensuring that teachers focus on processes and procedures that ensure effective learning for varied individuals” (p. 3). The instructional strategy of differentiation can be used in classrooms to meet the wide range of academic and intellectual abilities of these students. Carol Ann Tomlinson describes differentiation as “shaking up” what happens in a normal every day classroom. As described on Carol Tomlinson’s (2012) webpage at http://www.caroltomlinson.com/, she states that “The idea of differentiating instruction is an approach to teaching that advocates active planning for an
attention to student differences in classrooms, in the context of high quality classrooms.” She states that as educators we need to fulfill a promise to meet the individual needs of each one of our students. Tomlinson (2005) also states that “…a differentiated classroom provides different avenues to acquiring content, to processing or making sense of ideas, and to developing products so that each student can learn effectively” (p. 1). Teachers need to create a learning environment within their classrooms that is going to enable each student to meet their full potential both academically and socially. There are many resources that can be used within the classroom to create these rich learning environments that students can use to reach their individual abilities. Teachers need to differentiate lessons that will include the content that is meeting state standards in the school curriculum, a process that is teaching the material and a product that will show that the students have learned the material. Throughout the course of the school year, a teacher needs to keep data on their students and note progressions throughout the school year. Differentiated lessons may help a student progress based on their individual learning needs.

My study consists of a quantitative research plan with a focus in a descriptive study. I have begun my research in the area of differentiation over the course of the last few semesters. Carol Ann Tomlinson is an expert in the area of differentiation. I have found her books and articles to be very helpful in my educational research. In the review of literature section below there will be a more in depth discussion of Tomlinson’s ideas. I would like to continue my research by conducting a written survey, which I will present to my colleagues in the elementary schools in my district. The mission statement of the Elkhorn Area School District states that the “Elkhorn Area Schools, in partnership with the community, area dedicated to providing an education that challenges every student to continually improve and to excel as a respectful, responsible, and productive member of society,” which can be found on the district website at
Differentiation is going to help students become respectful, responsible, and productive members of society by learning in their individualized ways in the classroom in which they learn the best. What they have learned within the classroom will be used within their futures. Within my school district there are three elementary schools, and we have had past presentations on differentiation. Each teacher has implemented Response to Intervention (RtI) into their individual classroom, but differentiation has never been required. It would be very beneficial to have as much feedback as possible from my fellow elementary school teachers within the district on whether or not they incorporate differentiation in their own classrooms. If they do use differentiated lessons, I would like to know how they use these and how many times a week. If they do not use differentiated lessons, I would like to know their reasons for not providing lessons for the varied abilities of their students.

There are many reasons why teachers have not used differentiation in their classrooms, with time constraints being one of the most common reasons. Misconceptions like this and others need to be addressed so that differentiation is included in all classrooms. The biggest misconception is teachers already have too much to do in one day’s time. They do not know when they are going to have time to add differentiation into their day. But differentiation is not meant to add more to a day. It is a routine that teachers need to add to their day to make it easier. For this reason, I would like to conduct a presentation district-wide that would cover the content, process, and product of differentiated lessons, along with various performance tasks that deal with differentiation. The presentation will take place after reviewing my survey information. I will use the information from the survey to increase teacher knowledge of differentiation and various ways of incorporating differentiation into their own curriculum lessons. My presentation will follow the Understanding by Design (UbD) approach that was introduced by Wiggins and
McTighe in 2005 (as cited in Tomlinson and McTighe, 2006, p. 26). My ‘big idea’ of differentiation will be introduced and then supported by facts, concepts, and skills that will increase of teachers can incorporate differentiation in their individual classrooms.

Teachers have to understand that differentiation does not have to be implemented all at one time. I have used differentiation within my classroom in the last couple of years through pre-assessments. These pre-assessments show me which students may have already mastered an area of math and which students need to be taught the concept. The students who have already mastered the concept can be taught a more advanced concept of the lesson. Other students will be taught based on their individual abilities with the lesson concepts. The basics of the concept may be taught to others. I intend to gather more resources and materials on the types of differentiation that are being used by teachers within my district, which I can try in my own classroom and share with others. After learning these differentiation techniques used, it would also be beneficial to speak with a few students to see what they enjoy about these techniques. Differentiation should be used within all classrooms, and to do so teachers need to learn the interests and learning profiles of each individual student in their classroom. This project seeks to design a program to assist teachers to do just that!
Chapter Two

Review of Literature

This review of literature focuses on four areas of differentiation. The first area focused on is how the term differentiation was defined within the research. Differentiation is an area within the field of education that has expanded over the recent years. There are many researchers who have defined differentiation. The second area of focus is why differentiation is necessary in the classroom. Teachers can differentiate lessons in a variety of ways to meet the individual needs and abilities of the students in their classroom. The third area of research focus is why more teachers do not use differentiation in their curriculum lessons. There are many misconceptions out there regarding differentiation. The final area of research included what can be done to assist teachers in becoming proficient in the area of differentiation. The following four sections of the review of literature will focus on readings that were researched in the four areas described above.

_Differentiation is defined as…_

According to an article by Tomlinson, Brighton, Hertberg, Callahan, Moon, Brimijoin, Conover, and Reynolds (2003) “…it is the goal of the teacher to ensure that every student learns effectively and with a sense of satisfaction…” (p.2). The role of educators is to make sure that students are learning the materials that are necessary for them to succeed in the future. By using differentiation, lessons are taught based on student ability and interests levels. Every student has the same opportunity to learn as the student sitting next to them. Bearne (1996) and Tomlinson (1999) stated that
Differentiation can be defined as an approach to teaching in which teachers proactively modify curricula, teaching methods, resources, learning activities, and student products to address the diverse needs of individual students and small groups of students to maximize the learning opportunity for each student in a classroom (as cited in Tomlinson et. al., 2003, p. 2).

When teachers are differentiating instruction it is not a “one size fits all” lesson. Willis and Mann (2000) stated that “Differentiated instruction is a teaching philosophy based on the premise that teachers should adapt instruction to student differences” (p. 1). Teachers need to modify their lessons to meet the needs of the individual students within their class. Differentiated instruction has become more popular in recent years, but it has been around for years! Carol Ann Tomlinson was noted as stating that “Back in the days of the one-room schoolhouse, when students ages 6-16 learned together, differentiated instruction ‘was how they did school’…” (as cited in Willis and Mann, 2000, p. 1). I can imagine a math or reading lesson being taught and then modified based on the grade level of students learning the material at that particular time. Tomlinson also emphasized that “Teachers should address the same concepts with all students but adjust the degree of complexity” (p. 2). There is no need to teach three different lessons, but teach one lesson and modify the same lesson based on the ability levels of the students in the class.

*Why differentiation is necessary in the classroom…*

Differentiated instruction is very important in every classroom because of the wide range of both academic and social abilities of the students that make of up a class. Each student has various abilities that are different from the students they sit next to every day. These abilities
Differentiation needs to be met on a one-to-one individual level. Tomlinson et al. (2003) stated that “…Vygotsky (1978, 1986) proposed that an individual learns in his or her ‘zone of proximal development.’ This term refers to a point of required mastery where a child cannot successfully function alone, but can succeed with scaffolding or support” (p. 6). The ‘zone of proximal development’ is also referred to as ZPD and can be reached by differentiated instruction through the readiness level of each student. The article stated that a “…theory related to learner readiness suggest that instruction should always ‘be in advance’ of a child’s current level of mastery” (p. 6). While teaching within a student’s ZPD, the student is more likely to achieve at their readiness level. If a lesson is taught above or below the zone or readiness level a student is more likely to be confused, which causes limited growth in the lesson topic.

Differentiation also focuses on the students’ interests and learning profiles. In regard to interests, the article stated that “Questions and tasks that are interesting to students are more likely to lead to enhanced student engagement with the task, the student’s sense that the work involved is rewarding, greater evidence of student creativity, increased student productivity, a higher degree of student autonomy, and a higher level of intrinsic motivation” (Amabile, 1983; Brunner, 1961; Collins & Amabile, 1999; Sharan & Sharan, 1992, as cited in Tomlinson et al., 2003, p. 7). The authors’ example was that if a teacher allows his/her students to pick reading materials that are of an interest to them, the students are more likely to show an improvement in their reading performance. As teachers it is very important to make students feel that they are an important part of their own education. Students need to have the responsibility of picking materials that are of an interest to them in the classroom. The article stated that “Determining and designing tasks that top the motivation of particular students is at the heart of interest-based
differentiation” (Tomlinson et al., 2003, p. 8). As teachers we know we all have our own interests that motivate us, why not let our students pick areas that motivate them.

Another area of differentiation is student learning profiles, which is the preferred mode of learning by the student. These preferred modes of learning can be analytical, practical, or creative (Sternberg, 1985, 1996, as cited in Tomlinson et al., 2003, p. 8). Learning profiles can be shaped by both culture and gender. Within the article Dunn (1996) stated that the Learning styles theory points to individual preferences related to categories, such as environment, emotions, interactions, and physical needs, suggesting that such factors as light, temperature, seating arrangements, demand for concentration, degree of learner mobility, time of day, and perceptual mode impact learning (as cited in Tomlinson et al., 2003, p. 8).

Teachers need to take all areas into consideration. It is very important that teachers get to know each one of their students within the first days or week of school. Once they know students, it becomes obvious why someone cannot sit by another student, or that their attention is off while reading because of another disruption in the room. Differentiation is very important in every classroom, because every student that walks into the classroom each new school year is going to have an individual readiness level, interests, and learning profile. Teachers need to meet those needs by modifying our curricular lessons.

Why more teachers do not use differentiation…

According to the article “Peer Coaching to Improve Classroom Differentiation: Perspectives from Project CLUE,” by Latz, Speirs Neumeister, Adams, & Pierce (2009) many classroom teachers have the knowledge about differentiation but very few actually implement it
into their classrooms. The article gave a very interesting statistic that the typical public-school contains twenty-seven students that have academic performances that span across five grade levels. It stated that “…teachers can no longer ‘teach to the middle’ and effectively reach their students” (p. 27). School administrators and classroom teachers need to understand that this is why differentiated instruction is very important in today’s schools. The article stated that one study found that 84% of classroom activities include no differentiated instruction for classrooms with high-ability students.

There are many misconceptions that need to be dealt with when it comes to differentiation in school classrooms. Differentiation is meeting the abilities and interests of individual students based on their readiness levels and learning profiles. The article by Latz et al. (2009) states six reasons why teachers are so resistant to adopting differentiation in their classrooms. The first reason explained was teachers perceive they do not have administrative support. In order for differentiation to be run successfully in a school, the school principal has to be supportive of the strategy. The next area explained that teachers feel that they must follow the curriculum that is required to be taught for standardized testing. Teachers are required in schools to make sure they are teaching the material that will allow their students to succeed on the state testing. This takes up much of the class time, which does not allow time for other activities. The third area mentioned is anticipated problems with classroom management and behavior problems. However, there is research to prove that there are less behavior issues in class because students are more actively engaged in what is taking place in a differentiated instruction. The primary two reasons are that teachers like teaching styles they have been using for many years, and they do not have time for differentiation within their day. Teachers can use what are called anchoring activities, which are used to save time within lesson plans. The last reason teachers
are resistant to differentiation is that parents may not agree to its use, but again research has proven that parents prefer differentiated instruction (Knopper & Fertig, 2005, as cited in Latz et al., 2009, p. 28). The article stated that “Differentiation means different work, not more work” (Cooper, 1998; VanTassel-Baska & Stambaugh, 2005, as cited in Latz et al., 2009, p. 28). The students are able to take more of a role in their own education. They are able to chose materials that are learner-directed, what they are passionate about, and what is adapted to their specific abilities.

In a study by Carolan and Guinn (2007) five master teachers were observed regarding their differentiation styles. A differentiated classroom is a “…classroom in which teaching is tailored to the individual needs of students…” (p. 44). The article mentions three similar barriers that teachers mention when they do not use differentiation. These barriers include a lack of time, lack of professional development resources, and a lack of administrative support. Teachers have to realize that differentiation is not three different lessons that are taught within a subject area, but matching the curriculum to meet the individual abilities and interests of students.

Tomlinson et al. (2003) also cited in their article various reasons why teachers do not use differentiation. The following evidence was stated within the article that

General education teachers may also reject adapting instruction for individual learner needs because they feel doing so calls attention to student differences (Schumm & Vaughn, 1995); they feel it is not their job to do so (Schumm & Vaughn, 1995); they are unaware of learner needs (Schumm & Vaughn, 1992, 1995); they believe special treatment is poor preparation for a tough world that does not provide special treatment (Schumm & Vaughn, 1995); or, in the case of advanced learners, because teachers do not
feel students need adaptations (Tomlinson, 1995) because teachers do not know how to modify the curriculum for students whose proficiencies extend beyond those prescribed by grade-level curricula, standards documents, or both (Callahan, Tomlinson, Moon, Brighton, & Hertberg, 2003; Hertberg, 2003, as cited in Tomlinson et al., 2003, p. 3).

There are many reasons why teachers do not use differentiation in classrooms, but teachers need to see the benefits to differentiation. There are many positive outcomes that result with students who are in differentiated classrooms. McIntosh et al. (1994) stated that “Teachers are unlikely to accept strategies that require them to modify materials, change instructional practices, make long-range plans, or adapt scoring or grading criteria” (as cited in Tomlinson et al., 2003, p. 3). Willis and Mann (2000) stated that “Determined to reach all students, teachers are struggling to tailor their instruction to individual student needs” (p. 1) in order to challenge all students. We need to meet the needs of auditory, visual, and kinesthetic learners who will all be in our classrooms every year. To conclude, nearly all teachers agree with differentiation, but often they lack the strategies to carry the differentiated lessons out within their own classrooms.

**Assisting teachers to become proficient in the area of differentiation…**

“Differentiation must be conceived and practiced as a reflection and extension of educational best practice, not a substitute for it” (Tomlinson et al., 2003, p. 9). There are many strategies that a teacher can use to help with differentiation. Teachers need to plan a variance in their lessons from the start, teach lessons within small groups that reflect readiness levels, interests, and learning profiles, along with varying their teaching materials per the group. Willis and Mann (2000) mentioned flexible grouping. They stated that “Students can be grouped based on readiness, interest, or learning profile” (p. 3). Tomlinson introduces tiered activities stating
that by “…using ‘tiered activities,’ where the teacher keeps the concepts and skills the same for all students but provides ‘routes of access’ that vary in terms of complexity, abstractness, and open-endedness…” (Willis & Mann, 2000, p. 3). A teacher can plan one lesson with three extensions of the same lesson to meet the various levels of students’ abilities in the class.

In the study conducted by Latz et al. (2009), mentors observed (not evaluated) classroom teachers to see how differentiation is being used in classrooms, as well as suggested strategies that can improve classroom differentiation. Robbins (2001) defines peer coaching as “…a confidential process through which two or more professional colleagues work together to reflect on current practices; expand, refine, and build new skills; share ideas; teach one another…or solve problems in the workplace” (as cited in Latz et al., 2009, p. 28). Peer coaching is effective in implementing differentiation, along with assisting teachers in gaining confidence about differentiation. Latz’s et al. study in particular seeks to enhance the knowledge and application of differentiation in mixed-ability classrooms. They found that of the nine mentors who were in classrooms, six of them reported that there was too little differentiation occurring in classrooms, though one mentor did state that “Some mentors were able to refer teachers to resources so that they could have additional ideas and sample lessons” (p. 34). There were various strategies shared with teachers such as anchoring activities, classroom management techniques, and grouping. The results of the study did show that the mentoring was beneficial when teachers were beginning to develop differentiation practices. The mentor was able to help bridge the gap between knowledge and the actual practice of implementing differentiation. “Baum, Cooper, and Neu (2001) have found that peer coaching is a powerful tool in teacher professional development” (p. 35). Professional development opportunities in differentiation give teachers an understanding of how to implement differentiated instruction within their own classrooms.
“By turning to the classrooms of…expert teachers, we can observe how successfully differentiators overcome common obstacles and seamlessly weave differentiation strategies into their practice while true to their personal style” (Carolan & Guinn, 2007, p. 44). These expert teacher have had years of ‘tinkering’ with their lessons to make them work for their students and themselves. This ‘tinkering’ will take place each year as new students enter classrooms every fall. Throughout the course of the study by Carolan and Guinn (2007), there were five master teachers that were interviewed and observed on their differentiation styles. Out of the interviews and observations four common characteristics of successful differentiation surfaced. The first characteristic is scaffolding. Within the article, Graves and Braaten (1996) define scaffolding as “…temporary supports that help a learner bridge the gap between what he or she can do and what he or she needs to do to succeed at a learning task” (as cited in Carolan & Guinn, 2007, p. 45). This could be summed up as teachers need to work one-on-one with their students in understanding their students. The second characteristic is having a flexible means to reach defined ends. This means that teachers need to have multiple pathways to reach the defined learning goals that they have put in place for their students. Since all students learn differently, various performance tasks need to be taken into consideration while planning lessons. Next, teachers need to have the expertise in the subject areas that they are teaching. Students expect their teachers to know the curriculum that is being taught and can represent that in the materials that are presented in class. Teachers choose the materials they expect their students to learn by knowing the abilities of each student. Teachers are able to “tweak” these materials to meet the individual needs to their students. Finally, teachers create a caring classroom environment. Noddings (1984) defines a “caring classroom” as “…an environment that is safe, democratic, diverse, and inclusive” (as cited in Carolan & Guinn, 2007, p. 46). The classroom environment
is a place where all students feel welcome and are looked up to for their knowledge. All students have their own abilities and interests that will come into play at one time or another within the classroom.

Therefore “…expert teachers within our schools provide an invaluable resource for teacher learners” (Carolan and Guinn, 2007, p. 47). This is a professional development opportunity that is very beneficial for all teachers. Teachers need to maximize the potential of all students including those with defined disabilities. They need to match their individual teaching styles to those needs of the learners in their classroom. The Carolan and Guinn (2007) study leaves readers with two practical ways that teachers can learn from the experts. The first way is mentoring in which teachers can learn new ideas from peers and reflect on their own. The second is to view differentiation that is taking place in other classrooms around them. The authors close the article by stating that “It’s time to open these doors and see the dynamic and complex nature of differentiation in practice” (p. 47).

To conclude…

All teachers can use differentiation in their classrooms, and see the rewards in differentiating instruction for their students. According to the article by Willis and Mann (2000) Teachers are inspired to persevere with differentiated instruction when they see results,” Allan says. Students are more engaged and make more rapid progress. Bright students are no longer bored, and struggling students are finding learning more accessible—and hence their sense of self-efficacy is rising. In response, “I see veteran teachers becoming energized and new teachers becoming enormously excited,” Allan says. As one veteran
teacher told her: “This differentiation is exhausting, frustrating, and time-consuming—and I would never go back to the old way (p. 9).

The included research shows that teachers are very hesitant to begin differentiation in their own classrooms because of obstacles that they may perceive stand in their way. But after seeing the benefits that differentiation has for their students, teachers are willing to adjust their teaching styles and strategies for differentiation. Differentiation may not be able to be implemented all at once, but can be introduced in a little bit at a time.
Chapter Three

Methodology

My project is aimed at informing my fellow teaching colleagues of using differentiation within their own individual classrooms. Every student that walks into our classroom at the start of a new school year will have different abilities, interests, and learning profiles. As teachers, it is our responsibility to meet those individual abilities and interests. If a student is interested in a lesson, he/she is more likely to pay attention to what is taking place in the classroom. There are teachers who do not use differentiation in their classrooms because they state that there is not enough time within the school day. The school day does go by very quickly, and at times we cannot fit everything into the day that was initially planned. However, implementing differentiation in the classroom is worth the time and effort to meet student needs.

My study includes a quantitative research plan with a focus in a descriptive study. I plan to begin by surveying my fellow teaching colleagues to find out if they use differentiation, along with their reasons behind their decision. I also plan to use the information that I receive from the surveys to conduct presentations for the elementary teachers within my elementary school. My presentations will define differentiation, how it can easily be incorporated within the school day, and various examples of differentiation. Teachers can share their uses and ideas of differentiation, which in return can be used by their fellow teaching staff.

Role of the Researcher

I will begin my fourth year of teaching in the Elkhorn Area School District in the fall of 2011. I have implemented differentiation in my curriculum lessons for a couple of years now. I have pre-assessed my students before beginning a new math chapter to see the skills that they may already know and which skills need yet to be learned. The students who have passed out of
the pre-assessment are given more advanced work. My future plans include incorporating
differentiation much more into my curriculum lessons by first finding out my students’
individual abilities, interests, and learning profile.

My role is to first of all prepare a survey (see Appendix 1) that will be handed out to all
elementary school teachers in my elementary school. The survey will be brief with several
questions about differentiation. The main purpose of the survey is to find out if teachers are
actually using differentiation within their own classrooms. If they currently are using
differentiation, I would like to know what they are doing to differentiate their instruction and
how often they do it per week. If they are currently not using differentiation within their
classroom, I would like to know their reasoning behind not differentiating.

The second part of my project is to conduct presentations (see Appendix 3) on
differentiation for the grade level teachers in my elementary school. I will introduce the term
differentiation, along with terms associated with differentiated instruction. These terms include:
content, process, product, readiness level, interests, and learning profile. Teachers who
participate in the presentations will learn how to assess their students’ abilities based on each
student’s current knowledge, their interests, and how they learn. The teacher will then be able to
assess their teaching style to meet the needs of each student in their classroom. Using Wiggins
and McTighe’s (2005) approach of Understanding by Design, I will use a sequence of learning
activities that will introduce differentiation and how to use the instructional teaching strategy
within individual classrooms. This will be described within the procedural description.
Participants and Subjects

The participants of my surveys and presentations will be my fellow teaching colleagues at the elementary school I teach at in Elkhorn, WI. There are nineteen grade level teachers in grades kindergarten through fifth that will be invited to participate in the surveys and presentations.

Procedural Description

The following sequence of learning activities will be provided in the presentations on differentiated instruction to fellow teaching colleagues in my elementary school. There will be various handouts (see Appendix 3) during the presentations.

1. Teachers will be pre-assessed to show their understandings of differentiation and the terms associated with differentiated lessons. The pre-assessment will consist of a survey that includes the main concepts of differentiation. They will rate how familiar they are with each of the terms associated with differentiation including: content, process, product, readiness, interests, and learning profile. The survey will be collected before the training continues. This will be given approximately a month before the presentation will take place.

2. After completing the pre-assessment survey, each teacher will be handed a packet of information that will be covered throughout the training. The packet contains the PowerPoint presentations discussed within the training, example surveys, example lessons, and the performance tasks that will be completed.

3. Teachers will be introduced to the term differentiation, along with the components that make up differentiated lessons (content, process, and product) through a PowerPoint presentation. These three components will be examined again later in the training within a differentiated lesson.

4. Teachers will be introduced to misconceptions that are related to differentiation through the PowerPoint presentation.

5. Teachers will then be introduced to the terms readiness, interests, and learning profile through the PowerPoint presentation.
6. To check for an understanding, the teachers will have to complete a chart on readiness, interests, and learning profiles of a student in their current class.

7. Teachers will be introduced to the “equalizer.” The equalizer is a tool that consists of various “buttons” that can be adjusted based on the students’ abilities. A handout is included within the packet that will discuss the various “buttons” and the meaning of each one.

8. The teachers will be given a student scenario to read. They will then need to pick three of the equalizer buttons to describe the student in the scenario. This will be discussed and used to check for understanding along the way of the training.

9. Teachers will brainstorm ideas that they can use for pre-assessments in their current curriculum. These pre-assessments will be used to assess the current readiness level of each student in their class. A list of pre-assessments ideas are listed within the packet of information that was handed out prior to the start of the training.

10. The teachers will be introduced to two examples of interest surveys that are included in their packet of information. This will be discussed as a whole group, and then the pros/cons of the surveys will be discussed with a partner.

11. The teachers will be given time to brainstorm ideas that they would like to incorporate into an interest survey that they could give to their students during the first couple days of school.

12. The teachers will then be introduced to two examples of learning profiles that are included in their packets. These will also be discussed with the entire group, before discussing the likes/dislikes of the example surveys with a partner.

13. After discussing interest surveys and learning profile surveys, each teacher will be checked for understanding in both areas in the following way. On an index card (known as an exit card) they will list one question that they would include on an interest survey and one question they would include on a learning profile survey (which they would use in their own classroom). Included in the packet of handouts there will also be list of websites that include both interest and learning profile surveys. The websites can be searched to find surveys that fit the needs of each individual.

14. The entire group of teachers will be introduced to an example differentiated lesson that includes both critical thinking and problem solving skills. This example differentiated lesson will demonstrate how to break the lesson into the three components (content,
process, and product). Teachers will be given approximately twenty minutes to read through the lesson and note the three components in a chart (which was included within the packet of information). The example lesson will be discussed following the independent work time. The example lesson is also included within the packet.

15. Teachers will be introduced to an example of a tiered activity. The tiered activity consists of a fraction lesson that focuses on adding and subtracting fractions. The three tiers are lower-level, middle-level, and higher-level. The example is included in the packet.

**Lower-Level:** Students will learn the basics of adding and subtracting fractions. This will include finding common denominators between the two fractions and finding the answers.

**Middle-Level:** Students will know the basics of adding and subtracting fractions. They will take their skills and adapt these skills into problem-solving. They will have to work with fractions that allow them to solve story problems.

**Higher-Level:** Students will work independently to solve real-life problems that involve fractions. They will use a favorite recipe from home in which they may have to increase or decrease the amount of ingredients based on the recipe. Their skills may even go beyond addition/subtraction including both multiplying and dividing fractions.

16. Teachers will identify one curriculum area for which they could create a tiered activity. This tiered activity will be shared with a group of three or four fellow teachers at the training. This will serve to check for understanding of the tiered activity.

17. A review will take place that consists of the components associated with differentiation. There will also be a review of the tasks that were completed during the training regarding differentiation components.

18. Teachers will have to complete a follow-up survey that will be sent via e-mail to all teachers involved with the training about a month following the training.

Following the survey and presentations hopefully teachers will have begun to introduce differentiation into their current classrooms. Teachers should be able to implement differentiated lesson plans that include content, process, and product. They should also include the readiness levels, interests, and learning profiles of individual students in their class. Teachers will see the benefits to differentiating their instruction, along with promoting to others the benefits of differentiation!
Data Collection and Analysis

I will evaluate the results of my initial pre-survey before beginning my presentations on differentiation. I will have evaluated the previous knowledge that my fellow teachers have on differentiation before the presentations begin. This prior knowledge will include when differentiation is used and the terms associated with differentiated lessons. Following the presentations the teachers will take the information from the presentations to incorporate it into their own differentiated lesson. Approximately a month following the presentations on differentiation the teachers will be given a follow-up post-survey to complete. The follow-up survey will once again ask the teachers to explain their use of the term differentiation, along with how well they know the terms associated with a differentiated lesson. They will have had approximately a month to use what they learned from the differentiation presentations.

My calculations will compare the percentage of teachers that use differentiation before the presentations compared to the amount of teachers that use the strategy in their classrooms following the presentations. I will also rate how teachers explain their use of differentiation both pre- and post-presentations through the use of a chart. I will write down the uses and mark if the statement was made by more than one teacher to ensure consistency. I will look for an increase in the ratings based on how familiar teachers are with the differentiation terms before and after the presentations. I am also looking for indications of the misconceptions that are associated with differentiation in the initial survey. Hopefully, by the end of the presentations I will have changed my fellow teachers’ perspectives on reasons to differentiate instruction. I am hoping that all teachers will be on board and begin implementing differentiation into their classrooms a little at a time.
A pre-survey was sent out to each grade level teacher in the participating elementary school. The pre-survey included basic questions asking each teacher to specify their grade level and years of teaching. Each teacher was asked to describe how they define differentiation, misconceptions that they hear or see regarding differentiation, and how differentiation is used within their classrooms. Each teacher was also asked to rate terms associated with differentiation on a scale of one to three (with three being very knowledgeable within the area). The data was collected from two initial pre-surveys. Based on the initial surveys, four PowerPoint presentations were created that lasted four different days during the first two weeks in December 2011. A month following the presentations a post-survey was sent to all grade level teachers. The time between the presentations and the post-surveys allowed teachers to implement a few of the differentiation into their own classroom settings.

The research began with two pre-surveys that were given to each grade level teacher in the elementary school. The first pre-survey included the following information to be answered by each person completing the survey. The teachers were asked:

1) To briefly define the term differentiation within education.
2) If differentiation was used within the classroom.
3) How often differentiation is used on a weekly basis within lesson planning.
4) To list one way in which lessons are differentiated within the classroom.
5) Why differentiation may not be used within the classroom.
6) Why differentiation may not be used within the classroom.
7) To rate differentiation terms (content, process, product, readiness level, interests, and learning profile) based on a scale based on familiarity.

The teachers’ names were not asked on the survey for confidentiality reasons. The only personal information that was asked about the teacher was the grade level that he/she teaches and the number of years he/she has been in teaching. The pre-survey information was then used to begin the planning of the four differentiation presentations. Four primary pieces of information were used as a basis for the four presentations beginning with the definitions that each teacher gave on differentiation. The following responses were obtained and are shown within Box A listed below…

**Box A – Pre-Survey ➔ Differentiation Definitions (Grade Level, Years in Teaching)**

<table>
<thead>
<tr>
<th>Definition</th>
<th>Grade</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Ideally, it’s meeting each child at his/her intellectual, academic, and social level of need. Realistically, it’s trying to coordinate your instruction so that it meets at least some of your students’ different learning styles (each child has 3-7 different styles).”</td>
<td>Grades 1 &amp; 3</td>
<td>15+ years</td>
</tr>
<tr>
<td>“Modifying lessons to fit the needs and learning styles of the student(s).”</td>
<td>Grade 2</td>
<td>0-5 years</td>
</tr>
<tr>
<td>“To me differentiation is teaching your objectives and standards but tailoring the assignment to each student’s needs.”</td>
<td>Grade 2</td>
<td>15+ years</td>
</tr>
<tr>
<td>“The adapting of classroom activities to meet the specific needs of individual students.”</td>
<td>Grade K</td>
<td>15+ years</td>
</tr>
</tbody>
</table>

The pre-survey also told if the teacher uses differentiation within the classroom and how often lessons are differentiated. Out of the fifteen pre-surveys, all fifteen teachers stated that they use differentiation within their classrooms. The results shown below in Box B relate to how often teachers use differentiation in their classrooms.
Differentiation

Box B – Pre-Survey → How Often Teachers Differentiate Instruction

<table>
<thead>
<tr>
<th>Daily</th>
<th>10 teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly</td>
<td>2 teachers</td>
</tr>
<tr>
<td>Quite Often</td>
<td>1 teacher</td>
</tr>
<tr>
<td>No Response</td>
<td>2 teachers</td>
</tr>
</tbody>
</table>

The following pre-survey results show the ways in which teachers differentiate instruction. The following box (Box C) shows the ways lessons are differentiated by grade level.

Box C – Pre-Survey → How Teachers Differentiate Instruction (by grade level)

Grade K → Parents work with groups of 2 or 3 children on remedial for enrichment activities.
- Leveled reading books/reading carts

Grade 1 → Leveled books
- Modified/challenge spelling lists
- Individualized time tests
- Challenge math group
- Individual/small group help
- Odyssey

Grade 2 → Focus groups during Daily 5
- Alternate math assignments (challenge)
- Differentiated packets for higher math and reading students (these are provided by the district)
- Aide works with special education students
- Reading Groups
- Individualized instruction/reteaching for low learners

Grade 3 → Challenging spelling lists
- Differentiation math packets
- Students who struggle with addition/subtraction are using touchpoints, while others have moved onto multiplication.
- Flexible grouping

Grade 4 → Lexile levels in reading
- Guided reading/literature circles
- Odyssey
- Narrow the scope/focus of a lesson
- Alter activities
- Teach with different learning styles in mind
- Pre-testing
- Math menus

Grade 5 → Choose books according to lexile levels
- Modify lessons for a special education student
- Pre-test and offer differentiated lessons for those who pass out of a lesson
The final set of data taken from the pre-survey included the area of knowledge that each grade level teacher had within the terms associated with differentiation. A scale was given with one = no or very little knowledge with the term, two = some knowledge with the term, and three = very knowledgeable with the term. The following chart (chart A) shows the results.

**Chart A – Pre-Survey → Teacher Rated Differentiated Terms**

<table>
<thead>
<tr>
<th>Term</th>
<th>Three</th>
<th>Two</th>
<th>One</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>13</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Process</td>
<td>10</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Product</td>
<td>10</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Readiness Level</td>
<td>10</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Interests</td>
<td>9</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Learning Profile</td>
<td>3</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

A second pre-survey was given to all eighteen grade level teachers that included methods and strategies that are associated with differentiation. Teachers were asked how they felt about each area. This survey was used to identify the methods/strategies that teachers felt comfortable using in their classroom, as well as those areas that teachers were less comfortable. There were five specific areas that were included within the four presentations based on teacher responses for more information. The five areas included: Cubing, Think-Tac-Toe, 4-MAT, R.A.F.T., and Flexible Grouping.
Chart B – Pre-Survey #2 → Methods Results

(Yes = More information was needed for classroom use, and No = Knowledgeable on the Method)

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cubing</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>Think-Tac-Toe</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>4-MAT</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>R.A.F.T.</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
<td>Flexible Grouping</td>
<td>14</td>
<td>3</td>
</tr>
</tbody>
</table>

The first day of presentations was titled “Differentiation: Meeting the Interests and Abilities of your Students” on December 6th, 2011. The first presentation day included the following information:

1) A scenario in which teachers had to picture themselves positioned in the seats of their students. They had to imagine themselves listening to a lesson and either not understanding a word of what was taking place or being bored with the material because it has been previously learned.

2) The definition of differentiation was covered, as well as definitions that were given through the pre-survey by those in attendance.

3) A major misconception associated with differentiation in which some people refer to differentiated instruction as chaotic.

4) Discussion of the major terms associated with differentiation. These terms are the curricular elements of content, process, and product. These terms are there to encourage
growth in all students. Students will learn better if lessons are based on their readiness level, interests, and learning profiles.

5) Interest surveys and learning profile surveys that give teachers an idea of where their students’ interests stand and their individual learning styles were discussed.

6) The individual learning styles were then discussed using the Theory of Multiple Intelligences by Howard Gardner. These include: logical – mathematical, spatial, linguistic, bodily – kinesthetic, musical, interpersonal, intrapersonal, naturalistic, and existential.

7) The first presentation concluded with each teacher completing exit cards, which is a differentiation strategy. Each teacher was asked to place something that they learned on one side, while placing a question on the other side.

The second day of presentations was titled “Methods/strategies that You Can Use with Your Students…” on December 8th, 2011. The following took place during the presentation.

1) The 4-MAT System by Bernice McCarthy (as cited in Wormeli, 2007, p. 74) was discussed in which she describes the four different types of learners.

2) Various groupings were discussed that included whole group, small group, and individual work. Building accountability in groups was discussed in relation to group sizes.

3) Flexible grouping was defined, along with strategies that can be used to accommodate flexible grouping. Various strategies were given such as: Fair & Equal are Not the Same, Numbered Heads Together, Think-Tac-Toe, and R.A.F.T.

4) The second presentation concluded by answering the questions that were asked by the grade level teachers during the first presentation.
The third day of presentations was titled “Continuation of Methods and Strategies to Use in Your Classroom” on December 13, 2011. The following information was on the agenda for the third day of presentations.

1) The term “tiering” as described in relation to differentiation, along with examples of below average, average, and above average lessons to use with students was discussed.
2) “The Equalizer” was used in relation to how lessons are used with individual students in mind.
3) Lev Vygotsky’s (1979) Zone of Proximal Development was discussed in relation to the achievement zone. The zone where you want all of your students to be!
4) Bloom’s Taxonomy was used as a guide to differentiation. Teachers can use the knowledge, comprehension, application, analysis, synthesis, and evaluation in terms of challenging levels.
5) Teachers were left reflecting on students in their classroom in which tiered activities could be used, along with feeling confident in the process.

The fourth day of presentations was titled “Continuation Strategies and Methods, along with Assessments” on December 15, 2011. The differentiation presentations will be completed with the following information.

1) The Cubing Strategy was discussed in detail with examples.
2) Assessments were described with evaluation and grading, along with the three ways in which teachers evaluate their students. These ways include pre-assessments, formative, and summative.
3) Assessment strategies were described to use within each area of assessments. These included anticipation guides, signal & exit cards, four square products, and students being able to self-assess themselves.

4) Grade level teachers who attended the presentation were reminded that a post-survey would be sent out in about a month. This would give all teacher time to implement the methods and strategies that were discussed within the four presentations.

5) A conclusion was given thanking everyone who participated in the presentations and discussions.

Following each presentation, the PowerPoint was e-mailed to each grade level teacher, school librarian, school principal, and the district Gifted and Talented Coordinator. There were also other attachments that included handouts that were included as part of each PowerPoint. These handouts could have been photocopied for future classroom use. Web links were also included for teacher use at a later time with their students.

In January 2012, each grade level teacher was given a post-survey in relation to what was discussed in the differentiation presentations. The amount of time between the presentations and the survey would allow teachers to implement the methods that were discussed into the presentations into their classrooms and lessons. The following information was asked on the post-survey.

1) Provide a definition of differentiation

2) What methods and strategies were implemented into classroom lessons

3) Use of interests or learning profile surveys

4) If there was an increase in knowledge of differentiation as a result of the presentations.
5) If there was an increased level in confidence when planning differentiated lessons as a result of the presentations.

6) Complete the chart describing the strategies/methods.

7) Complete the other chart on the use of assessment strategies.

The results of the study were based on the comparison of the pre-survey results given in early November and the post-survey results at the end of January following the differentiation presentations. Participants were not asked for their names, but grade levels were given and their years in teaching. The pre- and post-surveys were matched up based on the grade level and the years in teaching. The results were categorized by the following information:

1) The definitions of differentiation were compared.

2) How/when differentiation was used within the classroom.

3) The confidence level teachers felt in using the differentiation methods/strategies.

4) When/if differentiation methods and strategies were used within each classroom.

The pre-survey return rate was very high with fifteen surveys returned out a possible nineteen surveys that were handed out. During the four differentiation presentations, there were anywhere between ten to fifteen grade level teacher present (kindergarten through fifth grade), the school librarian, the school principal, and the district’s Gifted and Talented Coordinator. When it came to the post-survey, there was a bit of a snag. There were not as many post-surveys as there were pre-surveys returned. Out of the nineteen post-surveys that were handed out only six were returned. A reminder e-mail was sent out to grade level teachers with two more surveys being returned after this time.
The first section of results was looked at in comparison to the differentiation definitions that were given in the pre- and post-surveys. The following box shows the definition of both the pre- and post-surveys followed by the grade level and years in teaching for each survey that was returned. The results show an enhanced definition of differentiation based on the information that was presented within the four presentations. Pre-survey results included definitions of meeting students’ needs and abilities. The post-survey results now included actual differentiation related concepts. These included interests, learning profiles, and teaching in a variety of ways.

**Box D – Post-Survey ↔ Comparison of Definitions**

<table>
<thead>
<tr>
<th>Grade 2, 15+ years in teaching...</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Survey</strong> → “To me differentiation is teaching your objectives and standards but tailoring the assignment to each students needs.”</td>
<td></td>
</tr>
<tr>
<td><strong>Post-Survey</strong> → “Differentiation is meeting the individual academic needs of your students.”</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade 4, 11-15 years in teaching...</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Survey</strong> → “Doing different activities/instruction/curriculum to meet the diverse learners in the classroom.”</td>
<td></td>
</tr>
<tr>
<td><strong>Post-Survey</strong> → “Meeting the needs of all students through various instructional methods geared toward them individually.”</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade 5, 15+ years in teaching...</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Survey</strong> → “Leveling student work according to ability and interest.”</td>
<td></td>
</tr>
<tr>
<td><strong>Post-Survey</strong> → “Teaching the content in a variety of ways to meet the needs of each student and their learning style.”</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade 5, 15+ years in teaching...</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Survey</strong> → “Teaching to the needs of students.”</td>
<td></td>
</tr>
<tr>
<td><strong>Post-Survey</strong> → Differentiation is doing what works for each student to help them succeed.”</td>
<td></td>
</tr>
</tbody>
</table>

The following section of the results looked at methods/strategies that were discussed within the four differentiation presentations. Teachers were asked within the post-survey which
Differentiation methods/strategies were used by teachers in their classrooms since the presentations. Box E shows the methods/strategies that were used by teachers within each grade level.

**Box E – Post-Survey ➔ Methods/Strategies Used in the Classroom**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Methods/Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade K</td>
<td>No post-surveys were returned.</td>
</tr>
<tr>
<td>Grade 1</td>
<td>Think-Tac-Toe</td>
</tr>
<tr>
<td>Grade 2</td>
<td>Anticipation Guides</td>
</tr>
<tr>
<td></td>
<td>- Flexible Grouping</td>
</tr>
<tr>
<td></td>
<td>- Think-Tac-Toe</td>
</tr>
<tr>
<td>Grade 3</td>
<td>Interests/Learning Profile Surveys</td>
</tr>
<tr>
<td></td>
<td>- Flexible Grouping</td>
</tr>
<tr>
<td></td>
<td>- Tiered Lessons</td>
</tr>
<tr>
<td></td>
<td>- Equalizer</td>
</tr>
<tr>
<td></td>
<td>- 4-MAT</td>
</tr>
<tr>
<td>Grade 4</td>
<td>Flexible Grouping</td>
</tr>
<tr>
<td></td>
<td>- R.A.F.T.</td>
</tr>
<tr>
<td>Grade 5</td>
<td>Cubing</td>
</tr>
<tr>
<td></td>
<td>- Numbered Heads Together</td>
</tr>
<tr>
<td></td>
<td>- Think-Tac-Toe</td>
</tr>
</tbody>
</table>

In regards to the interest and learning profile surveys, there were mixed results. About half of the results stated that time was not allowed to put the surveys into place, or the surveys were not at the right level for younger children. For example, there was a question raised from a kindergarten teacher during the presentations that learning profiles may be more difficult to explain to younger elementary students than for older elementary students. Another teacher found these useful in planning lessons; while another had tried the online surveys with his/her students. The students enjoyed the online surveys, and the teacher was able to learn more about the students in his/her class.

All the teachers who participated in the post-survey found the presentations to increase
their knowledge in the area of differentiation. The teachers commented that they felt more confident in planning their own differentiated lessons. One teacher commented that the presentations were good refreshers, while another teacher commented that “It was reassuring to hear that we don’t have to differentiate every lesson for every student all the time. It can be overwhelming to think about.” This is a fear of teachers that differentiation has to be done and takes too much time, but it does not have to be done on a daily basis. Teachers have to know to take it one step at a time.

The final section of the results section deals with the two charts that were listed on the back side of the post-survey. Chart C deals with how confident teachers feel in using the methods and strategies in their own classroom lessons, while Chart D deals with the assessment strategies and how confident teachers feel in planning their assessments of students.

### Chart C – Post-Survey → Confidence in Using Methods/Strategies

<table>
<thead>
<tr>
<th>Differentiation Method/Strategy</th>
<th>Yes</th>
<th>Maybe</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest Surveys</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Learning Profile Surveys</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4-MAT</td>
<td>2</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Flexible Grouping</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Fair &amp; Equal are Not the Same</td>
<td>5</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>- Numbered Heads Together</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Think-Tac-Toe</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- R.A.F.T.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchor Activities</td>
<td>3</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Tiered Lessons</td>
<td>4</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>The Equalizer</td>
<td>2</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Zone of Proximal Development</td>
<td>3</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Cubing</td>
<td>3</td>
<td>3</td>
<td>-</td>
</tr>
</tbody>
</table>
The following graphs show the results between the pre-survey and the post-surveys. The first set of horizontal bar graphs show the number of teachers who had not used surveys related to interests and learning profile surveys in the past. One-third (33%) of the teachers surveyed within the pre-survey had never used surveys related to interests and learning profiles in their classrooms before. The post-survey shows that 83% of the teachers stated they felt confident in using or trying the surveys within their classrooms. The difference between the two surveys revealed that teachers showed an increase in the level of use with the interests and learning profiles surveys when it comes to the students in their class, along with the confidence of using them.

The next two pie graphs below show the results between the pre- and post-surveys of the differentiation method using 4-MATing. The pre-survey showed that 0% showed any use of the
method before the presentations. Following the introduction of 4-MATing within the presentation, 100% stated they would use or maybe use the differentiation method in their classroom. The post-survey showed an increase in knowledge and use of the method.

The method known as flexible grouping includes the differentiation methods Fair & Equal are Not the Same, Numbered Heads Together, Think-Tac-Toe, and R.A.F.T. The following two pie graphs show that sixteen of the eighteen surveyed teachers had never used methods such as R.A.F.T.s and Think-Tac-Toe in their classrooms before. Following the presentation on flexible grouping, all the teachers who returned post-surveys stated they would use or consider using the methods.
Within the realm of differentiation, tiering is leveling lessons based on student abilities (below average, average, and above average). The pie graphs below show that while completing the pre-test 20% of the surveyed teachers stated that they already tier lessons based on their students’ abilities. Following the presentation on tiering, 67% stated they would use the differentiation method in their classrooms, along with 33% who will consider the option in the future. The results showed an increased level of confidence when it comes to planning tiered lessons.

According to the pre-survey, 0% of the surveyed teachers were familiar with the differentiation method of cubing. The method is quite easy to use and works with a variety of subject areas. Following the post-survey, 100% of the responses stated they would use or consider the method of cubing. The pie graphs below show the results of the surveys with respect to the cubing method.
One of the most important aspects of teaching is that teachers are able to assess their students’ abilities and progress. Teachers should use a variety of assessment strategies such as pre-assessments to formative and summative assessments. Within differentiation, pre-assessments are used by teachers to evaluate where each of their students stand before beginning a new lesson. When asked prior to the presentations how many teachers pre-assess before beginning a new unit, 35% stated they do pre-assess. Following the presentations, 80% stated they felt confident in using pre-assessments while the remaining 20% responded with a maybe as shown in the pie graphs below.
To summarize, the results show that teachers have shown an increased knowledge and confidence level with all the information and methods that were presented within the four differentiation presentations. Teachers who participated in the presentations were given various methods and strategies that can be used within their lesson planning for their students. Certain areas of the presentations may not have fully addressed grade level differences, but most teachers could see where adaptations could be made to meet the needs of the grade levels. This will be addressed in more detail within the conclusions section of the paper. Although the surveys only indicated what teachers now feel confident to do in the area of differentiation rather than how they have actually changed their instruction, its increase in knowledge is the positive sign. Teachers have increased their knowledge and confidence levels to be able to use these methods with their students, and therefore they are able to plan lessons to differentiate the individual interests and abilities of their students.
Chapter 5

Conclusions Section

My research question was to see how teachers increased their use of differentiation in their classrooms to meet the interests and abilities of their students. I wanted to increase the knowledge regarding differentiation so teachers would be able to individualize their instruction for the students in their class. The pre-survey results showed that the majority of teachers in the researched elementary school had some knowledge of differentiation and used some form of differentiated instruction in their classrooms on a weekly or daily basis. Teachers indicated that much of their differentiation was shown in how they grouped their students. Students were grouped with other students based on their ability levels or did individual work with the teacher. Students’ reading levels were covered with leveled readers, along with pre-assessments given before students began a new unit to assess for prior knowledge. Lessons were then taught based on the knowledge of the students with lessons toned down or geared up to meet the students’ needs. The differentiation used in the classrooms was generic in explanation according to the pre-surveys. The pre-surveys also indicated that there were no specifically named methods/strategies that teachers said they use, but the upcoming presentations then focused on these areas. Teachers were also asked in an additional pre-survey about their knowledge in specific methods such as Cubing, Think-Tac-Toe, 4-MAT, R.A.F.T., and Flexible Grouping. These methods were thoroughly discussed during the differentiation presentations. The post-survey, given a month following the presentations, showed the teachers increased knowledge in the methods with specific differentiation methods they could now name for future use.
The post-survey results showed that teachers had an increase in knowledge. Teachers were also introduced to various surveys that could be used with students to identify their interests and learning profiles. Anchor activities and tiered lessons were discussed in relation to differentiation, along with a tool called the equalizer. Anchor activities are individual lessons students can work on that meet their abilities, while tiered lessons are those lessons that are meeting students’ abilities whether at a below average level, at an average level, or at an above average level. The equalizer is a tool teachers can use to see where their students stand with respect to their abilities. Teachers who attended the differentiation presentations were able to see the relationship between Bloom’s Taxonomy and tiered lessons, as well as the connection between Howard Gardner’s Theory of Multiple Intelligences (as cited in *Finding Your Multiple Intelligences*, 2012) and the various learning profiles. The final presentations discussed the ways teachers can assess their students based on pre-assessments, formative, and summative assessments. There were many examples and handouts of the methods and assessments presented for teachers to take with them for later use. All teachers within the elementary building were e-mailed the PowerPoint presentations and handouts also for later use.

Additionally according to the post-surveys, teachers were also able to expand their definitions on differentiation. Definitions following the presentations now included actual concepts that included the interests and abilities of the individual students. A fifth grade teacher stated in a pre-survey that differentiation is “Leveling student work according to ability and interest.” Following the presentations the teacher’s definition extended to differentiation as a way of “Teaching the content in a variety of ways to meet the needs of each student and their learning style.”
There was a decrease in the number of post-surveys returned in comparison to the pre-surveys. Teachers may not have had enough time to implement the methods/strategies into their own classroom lessons within the month that was allowed and, therefore, felt unable to complete the survey. Anecdotally, many teachers stated they had not had time to use the methods but planned on using certain ones. The presentations were conducted two weeks before Christmas and the post-surveys were handed out three to four weeks following the Christmas break. The timing of all involved may have played a role in the number of post-surveys returned. It is possible that teachers may have forgotten about implementing the methods in their classrooms with other holiday activities taking place during this time of the school year. Teachers had stated in one-on-one conversations that they had taken some very valuable information away from the presentations. They stated there was new information along with ideas that were reviewed and reinforced. When time allowed they would use it within their own classrooms. Although the size of the sample prevented a statistically significant difference in the measure of the increase in knowledge and use of differentiation, the indication that scores increased in every single category is a positive sign of change in teaching methods to come.

An interesting piece of data following the presentations was that no kindergarten post-surveys were returned even though there was one kindergarten teacher who attended the presentations every time. A comment was made during the second of the four presentations that certain topics may be hard to explain to students in the younger grades. The comment was made within the discussion on Gardner’s Theory of Multiple Intelligences. The teacher asked how a learning profile could be given to six-year-olds with results such as one may be a visual or auditory learner. She asked how these could be broken down into easy to understand concepts for younger children. An answer was given that the teacher would have to explain examples or a
definition of the multiple intelligences. For example, if the student was a visual learner the teacher could explain that he/she learns better when they see something. Other answers were given as the teacher could continue to research surveys that were aimed at younger grade levels or the survey could be adapted by the teacher to fit the younger grade level. The presentations were aimed primarily at the upper elementary (grades three through five) grade levels. Therefore, a possible change for future research could be for the presentations to be aimed in two different levels. One set of presentations for teachers who taught kindergarten through second grade and one for those who taught grades three through five.

When looking at other possible changes that could have been made in this research, one would be to insure that more time be given for teachers to implement the methods and strategies within their classrooms. Future research might include observations that could have been done in classrooms prior to the pre-survey and once again following the post-survey. These observations could provide first-hand accounts of what was taking place in the classrooms. A pre-observation could have taken place prior to the differentiation presentations, noting which differentiation methods were done in the classroom that could have been observed and recorded. The same could be done following the differentiation presentations with a post-observation. The observer could then compare the differentiation methods that had taken place prior and following the presentations to show an increased knowledge in the methods. The pre-surveys could have also listed the actual differentiation methods that were used in the classroom prior to the presentations. In this research, teachers were not asked for names on either survey for anonymous reasons. A possible conflict with the observations would be that the differentiation results would be known based on each teacher. Prior to my research, a comment was made the some teachers like to remain anonymous if they are not using differentiation effectively.
This research and the presentations are important as differentiation is becoming more common in classrooms over the last few years. Teachers need to use differentiation in their classrooms to meet the interests and abilities of the students in their classrooms. Every single classroom includes students that have a wide range of academic abilities. Teachers need to meet these abilities of each individual student in their classroom based on his/her ability levels, interests, and learning styles. These areas need to be met through various instructional teaching styles applying differentiation and assessed with various assessment styles. Every teacher has witnessed students in their classroom that seem bored with the material that is being taught to them. There may be various reasons for this boredom that includes the material being too difficult or too easy. By differentiating instruction, teachers are meeting the needs of each individual student based on their abilities. If teachers are able to keep the attention of their students on a daily basis, they will keep them involved and excited about their education.

School districts need to make sure that their teachers are using a variety of differentiated methods and strategies. Teachers are responsible to create a learning environment that enables their students to reach their full potential both academically and socially. Teachers need to differentiate their lessons to meet the needs of students at a below average, at average, and above average level. There are a variety of ways to increase the knowledge of differentiation in schools. Districts could hold seminars during in-service days within the school year, as well as sending district representatives to conferences that are held to bring back the materials to others in the district. Districts may have instructional libraries that include educational resource books. These resources could be shared by teachers, and may provide the knowledge of differentiation and other important educational topics. Districts need to make sure teachers are keeping up with their differentiated methods and strategies. There are many times when in-services are held and
teachers take their notes and place them in the file cabinet never to be seen again. School administrators and teacher leaders need to keep an eye on what is being done to differentiate instruction and provide support and feedback. Based on this research, even simply attending short presentations twice a week for two weeks will give teachers information on methods/strategies that teachers can take back to their classrooms. However, there needs to be plenty of time to implement these methods into classroom instruction. A teacher cannot expect to do everything in one week. Do not be afraid to start out at a slow pace…it will take time!
References

*Abiator’s Online Learning Styles Inventory Test 2.* (2005). Retrieved December 4, 2011 from Abiator’s Online Learning Styles Inventory. Website:


*Assessment: Find Your Strengths!* (n.d.). Retrieved December 4, 2011 from Multiple Intelligences for Adult Literacy and Education. Website:


Willis, S., & Mann, L. (Winter 2000). Differentiating instruction finding manageable ways to meet individual needs. Alexandria, VA: ASCD.

Appendix One

Surveys
Appendix One – Surveys

A. Pre-Survey for all Grade Level Teachers

**Pre-Assessment Survey on Differentiation**

*Please answer the following questions to the best of your ability.*

Grade Level Taught: ____________

Number of Years in Teaching (please circle the following range):

<p>| | | | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>0-5 years</td>
<td>6-10 years</td>
<td>11-15 years</td>
<td>15 or over years</td>
</tr>
</tbody>
</table>

1. How would you briefly define differentiation within education?

2. Do you use differentiation within your classroom?
   - YES or NO

3. If you answered yes, how often would you say you differentiate your lessons on a weekly basis?

4. If you answered yes, name one way that you differentiate instruction?

5. If you answered no, what is one reason why you do not use differentiation in your classroom?

Please rate the following terms associated with differentiation on how familiar you are with each term. *(1 = no or very little knowledge, 2 = some knowledge, 3 = very knowledgeable)*

a. Content = _____
b. Process = _____
c. Product = _____
d. Readiness Level = _____
e. Interests = _____
f. Learning Profile = _____
### B. Pre-Survey (Methods) for all Grade Level Teachers

Your grade level ____________________________ Your school ________________________________

Please simply place an "X" the boxes that are MOST appropriate for YOU:

<table>
<thead>
<tr>
<th>Management of kids and parents in differentiated classrooms</th>
<th>I have NO idea what this is or how to do it</th>
<th>I do know what this is, but I don't use it in my classroom</th>
<th>I try to use this, but I have some snags and would like to improve my use</th>
<th>I know what this is and I use it regularly in my classroom</th>
<th>I would like to attend a 30 minute 'mini-inservice' at my school to learn about / improve my skills. (This 30 minutes would include one practical 'hands on' experience, not just theory!)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of differentiated classroom</td>
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<tr>
<td>Method: RAFTS</td>
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<td>Method: Graphic Organizers</td>
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<td>Method: Scaffolded Reading</td>
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<tr>
<td>Method: Cubing</td>
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<tr>
<td>Method: Think-Tac-Toe</td>
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<td>Method: Learning Contracts</td>
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<tr>
<td>Method: Tiering</td>
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<tr>
<td>Method: Learning / Interest Centers</td>
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<tr>
<td>Method: Independent studies</td>
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<tr>
<td>Method: Intelligence preferences</td>
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<tr>
<td>Method: Orbitals</td>
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<tr>
<td>Method: Complex Instruction</td>
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<tr>
<td>Method: 4MAT</td>
<td></td>
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<tr>
<td>Method: Web Quests / Inquiry</td>
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<tr>
<td>Methods for Flexible grouping</td>
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<td></td>
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<tr>
<td>Methods for Pre-assessment</td>
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</tbody>
</table>

Other questions or concerns: ________________________________________________________
______________________________________________________________________________
Appendix One – Surveys
C. Post-Survey for all Grade Level Teachers

Differentiation Post-Survey

Grade Level Taught: ________________

Years of Teaching (please circle)
0-5  5-10  10-15  15 and over

Please answer the following questions based on the differentiation presentations that were given in December 2011.

1) How would you define differentiation following the presentations?
   Has it remained the same or changed?

2) Have you used any of the differentiation methods/strategies that were discussed during the presentations? If yes, which have you used? If not, which do you plan to use in the future?

3) Have you used any of the interest or learning profile surveys with your students?
   Do you find these useful to use when identifying the interests and abilities of your students?

4) Do you feel the presentations increased your knowledge in the area of differentiation?
   What is one area that was new to you during the presentations?

5) Do you feel your confidence level has increased since attending the differentiation presentations when implementing differentiation into your own lessons?

Please Complete Side 2 →
Please check the appropriate box below if you feel confident in using the differentiation method/strategy in your own classroom lessons.

<table>
<thead>
<tr>
<th>Differentiation Method/Strategy</th>
<th>Yes</th>
<th>Maybe</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest Surveys</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning Profile Surveys</td>
<td></td>
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<tr>
<td>4-MAT</td>
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<td></td>
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<tr>
<td>Flexible Grouping</td>
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<tr>
<td>- Fair &amp; Equal are</td>
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<tr>
<td>- Not the Same</td>
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<tr>
<td>- Numbered Heads</td>
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<td>- Together</td>
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<tr>
<td>- Think-Tac-Toe</td>
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<tr>
<td>- R.A.F.T.</td>
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<tr>
<td>Anchor Activities</td>
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<tr>
<td>Tiered Lessons</td>
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<td></td>
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<tr>
<td>The Equalizer</td>
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<td></td>
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<tr>
<td>Zone of Proximal Development</td>
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<tr>
<td>Cubing</td>
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</tbody>
</table>

During the last differentiation presentation the types of assessment strategies were discussed. The assessments include: pre-assessments, formative, and summative. Do you feel you would use the following strategies within your lessons?

<table>
<thead>
<tr>
<th>Assessment Strategies</th>
<th>Yes</th>
<th>Maybe</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipation Guides</td>
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<td>Signal Cards</td>
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<td>Exit Cards</td>
<td></td>
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<tr>
<td>Four Square Products</td>
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</tbody>
</table>

Please feel free to list any additional comments you feel may be helpful...
Appendix Two

Communications
Please join us for a series of presentations on Differentiation!

Given by: Stacey Klewin

Topics include...

The presentations will begin with a brief introduction of the differentiation definition and terms associated with it! We will also cover various differentiation methods that can be used with your students, along with surveys you can have your students complete to show their interests and abilities. Even if you feel confident using differentiation we will offer new methods you can use!

When: Tuesday, December 6th, 2011
Thursday, December 8th, 2011
Tuesday, December 13th, 2011
Thursday, December 15th, 2011

Times for all four days are 7:50-8:10 a.m.
(I promise to keep it short!)

Where: Tibbets - Computer Lab

Please mark your calendars!
I would love to see you there!
Please consider attending all four presentations, because they will build off of one another!
There will also be a “differentiated” breakfast snack following each presentation!
Hello Classroom Teachers!

Attached you will find the survey related to differentiation that was included in the e-mail sent this morning. I know we are all busy right now, but if you could please take a few minutes between now and next Wednesday (the 26th) to fill it out I would greatly appreciate it! The data from the survey will be used towards my final project for my master’s degree. My final project is on classroom differentiation, but before implementing my project I need to collect the initial data.

The information on the survey is completely anonymous, and your name is not asked on the survey. The information asked is basic information related to differentiation and will only be used for research purposes within my project. Once again, if you could please complete the one-page survey I would appreciate it! You will also find a little treat in your mailbox to enjoy while completing the survey! After you have filled it out you can place it back in my mailbox.

Thanks,
Stacey
Differentiation Post-Survey

I hope you have had some time to implement the differentiation methods/strategies that were discussed at the four differentiation presentations in December. If you would please answer the following questions on the attached post-survey I would greatly appreciate your advice. If you were unable to attend the presentations you may still answer the questions based the Power Point presentations that were sent out via e-mail!

This data is the important information I need to write the results and conclusions sections of my final Capstone paper towards my Masters Degree.

The information provided in the surveys and presentations will be used within my Capstone paper to show the knowledge of differentiation and how it is used within the classroom. The data will be compared as to the knowledge about differentiation before the presentations and following the presentations.

**NOTE:** All information will only be used for data purposes within the Capstone paper. No names were asked and will not be used in the paper. All the surveys and answers will only be read by myself and will only be used in the aggregate for report purposes. If you have any questions please feel free to ask. You may also contact Melissa Freiberg (freiberm@uw.edu) or Denise Ehlen (ehlend@uw.edu), from the Office of Institutional Research at the University of Wisconsin-Whitewater regarding my research.

Attached you will find the post-survey. If you could have it back to me on or before Wednesday, February 8th that would be great! I have included a treat to enjoy while completing the survey.

Thank you once again for everyone’s time and participation!

Stacey Klewin
Various e-mails were sent to the teachers in the building...
- as reminders the day before each presentation and to return surveys.
- with attachments (PowerPoint slides and handouts) following each presentation.
- a final thank you to all who participated.
Appendix Three

Differentiation Presentations
Appendix Three – Differentiation Presentations
A. Day 1 → PowerPoint Slides

Differentiation
Meeting the Interests and Abilities of your Students

Presented by... Stacey Klewin

Imagine yourself sitting in math class learning about adding and subtracting fractions. You either have no idea what is taking place or you already know the topic. You may feel completely bored with the entire math lesson. While sitting in class you want a lesson that is at your current ability level that may be a bit of a challenge. You would want to be able to understand what is taking place.

This is how your students may feel if they do not understand the lesson or if they have previously learned the information. You want to plan and teach a lesson that is going to challenge their current ability level.

What is fair...
...isn’t always equal.

Definition of Differentiation...
Differentiating instruction is doing what’s fair for students. It’s a collection of best practices strategically employed to maximize students’ learning at every turn, including giving them the tools to handle anything that is undifferentiated. It requires us to do different things for different students, some, or a lot, of the time. It’s whatever works to advance the student if the regular classroom approach doesn’t meet the students’ needs. It’s highly effective teaching.
Definitions of the Surveys Showed...
(Here is what you already know)

- "Ideally, it’s meeting each child where they are right now, academically, and socially. It’s really about meeting each child’s needs."
- "Modifying lessons to fit the needs and learning styles of individual students."
- "To me, differentiation is teaching the objectives and standards, but tailoring the assignment to each student’s needs."
- "The adapting of classroom activities to meet the specific needs of individual students."

Definitions from Staff

Misconception regarding Differentiation...

Some people may think that differentiated instruction is chaotic, but it is not. It does take a little extra time in the beginning, but overall it saves time. Differentiated instruction is effective and efficient in classroom instruction.

Terms Associated with Differentiation...

Students learn better if:
1. They are a close match for their skills and understanding of a topic, which is readiness.
2. The skills tasks are challenging, which is readiness.
3. The assignment encourages students to work in a preferred manner, which are learning profiles.

Tasks will allow teachers to assess their students’ individual academic and social abilities.

Interests Surveys

Learning Profile Surveys
Learning Styles Inventory

http://www.berghuis.co.nz/ahistor/istlisttest2.html

A person’s learning style can be found by clicking on the descriptions that describe you! The learning styles inventory will tell you which type of learner (learning profile) you are: visual, auditory, or kinesthetic.

Multiple Intelligences

The Theory of Multiple Intelligences by Howard Gardner (1983) are learning profiles that show how a person learns the best.

1. Logical – Mathematical
2. Spatial
3. Linguistic
4. Bodily – Kinesthetic
5. Musical
6. Interpersonal
7. Intrapersonal
8. Naturalistic
9. Existential

Assessment: Find Your Strengths!

Another online survey to determine a person’s strongest intelligences.

http://literacyworks.org/ml/assessment/findyourstrengths.html

To conclude...

Exit Cards

Before leaving the presentation today, please complete an exit card. On the index card please write down one idea that you are taking away from the presentation today, along with one question you may have at this point!

Thanks for coming! We will see you this coming Thursday, Dec. 8th
We will continue with differentiation methods that you can use with your students.

Topics will include:
Flexible Grouping
4-MAT
Appendix Three – Differentiation Presentations

B. Day 2 → PowerPoint Slides

DIFFERENTIATION
DAY 2
Methods/strategies that you can use with your students...
Your presenter...
Stacey Klewin

What we will cover today...
- 4MAT System
- Flexible Grouping
  - Strategies
- Your Questions from Tuesday!

4MAT System
By: Bernice McCarthy (2007)
There are four types of learners with different learning styles:
1) Type 1 Learners → "These students respond well to experiences in which they can think reflectively, pondering the why of the situation. They seek connections and are good observers."
2) Type 2 Learners → "These students respond well to hearing and listening to the facts and concepts expressed by experts. They want to analyze things and know the what of the situation."

4MAT Con't...
3) Type 3 Learners → "These students prefer to learn by doing. They like to explore and analyze how things work. They seek relevance."
4) Type 4 Learners → "These students prefer to explore the what-if questions. They like trial and error and making discoveries on their own."

Past and Present
In the past teachers have used fixed grouping, which is when students sit in rows and listened to lectures.

Today, teachers use flexible grouping, which...
"...is the practice of grouping students according to their learning needs and the goals of a particular lesson."

Jell-O ???
Flexible grouping is like Jell-O... groups are short term. Once the needs/goals are met they dissolve like Jell-O powder.
Next...Types of Grouping
Whole Group...

**Is used when**
- introducing a new concept
- leading a discussion
- facilitating a class debate
- demonstrating how to do something
- giving directions
- getting students involved in team-building activities

Small Groups...

1) These are according to varying degrees of the readiness level.
   - cooperative learning
   - learning from one another
   - goal building
   - social/collaborative skills

2) According to like readiness level...
   - to work cooperatively

Independent/Individual Work

**The students are**
- assessed for mastery of content
- practicing a skill
- contracts
- projects

Group Sizes

- **Pairs**
- **Triads/Quads**
  - group various learning profiles and interests together.
  - when grouped in these ways it changes the groups and students are not identified with a single skill.
- **Groups of Five**
  - "In groups of five, students can hide."
  - assign roles to each person so all are involved (structured participation).

Building Accountability

**Group Accountability**
- "...the success of the group depends on the success of all members of the group. Students must have an underlying commitment to the effort and success of the group."

"Variety is Key"

You need to take the students' needs and the lesson objectives into consideration.
Differentiation

Teachers ask themselves...

What do other students do when I am working with a small group of students?

Answer: Anchor Activities
- These are activities that are related to content, are meaningful to the student, along with challenging.

Your role...

You are both the coach and facilitator.
- The coach is there to help the students develop their ideas and skills.
- The facilitator is there to support all of their students in doing their best work and their best thinking.

Fair & Equal Are Not the Same

- Students need to understand that in order for it to be fair everyone will receive lessons for them to successful.
- There will be different groups working on different lessons at the same time.
- Students and parents need to know that you have high expectations for everyone.
- Lessons:
  - Journals: Students can write about experiences associated with fearness.
  - Literature: Passages from To Kill a Mockingbird

Flexible Grouping Strategies

Numbered Heads Together

- Each student will receive the number 1, 2, 3, or 4.
- Divide the class into groups with a 1, 2, 3, and 4 in each group.
- The groups will all receive a discussion question in which they will put their heads together and brainstorm. Everyone will participate.
- The class will come back together for a class discussion.
- A number will be called and the student with that number from their group will respond to the question.

Think-Tac-Toe

- You will create nine activities that accompany the content lesson you are teaching. Some should be at a greater level of difficulty than others. Place them randomly on the Think-Tac-Toe board (place so the students have varying levels to complete).
- The students will choose three of the nine activities to complete. They will have to make a Tic-tac-toe from the three activities to have completed it.
- This is an individual assignment.
Think-Tac-Toe Examples

R.A.F.T.
- An acronym that stands for Role, Audience, Format, and Topic.
- A creative writing activity in which the students will write from a viewpoint different than their own to an audience that is not the teacher.
- This is an example of an anchor activity.

A R.A.F.T. Example
R (role) → Heart
A (audience) → French Fries
F (format) → Complaint
T (topic) → Effects of Fat in the Diet

"...the heart is to write a letter to the french fries, complaining about the effect on the body of the fat in the fries."

Reflections...
- What is your "ahah" or insight or thinking after the presentation of strategies?
- What strategy will you try first?
- How will you use it in your classroom?

Questions ???

Your Questions...
- Are there ever too many different styles to teach to in one class?
- What is the timing and organization of differentiation?
- How do the surveys apply to younger kids?
- How to you explain the learning styles in simpler terms to younger kids?

Thank You!
We will see you next Tuesday,
December 13th.
Same place, Same time!

Topics will include:
Tiered Lessons
The Equalizer
Appendix Three – Differentiation Presentations
C. Day 3 → PowerPoint Slides

Differentiation Course Handouts from Course “Differentiation in the Classroom.” Course taken Summer 2011 with Professor Maureen Griffin.
AVERAGE ASSIGNMENT (MIDDLE LEVEL)
For students who did not quite meet mastery level on the pre-assessment, are working at the middle of the class and at an average pace...this is probably the assignment you would use if you were not differentiating.

EXAMPLE...
Students will know the basics of adding and subtracting fractions. They will use what they know and adapt the skills into problem-solving skills. They will have to work with fractions that allow them to solve story problems.

If two sisters share a pizza, one sister eats 2/8 and the other sister eats 3/8, how much of the pizza will be left over?
2/8 + 3/8 = 5/8
8/8 - 5/8 = 3/8
Answer: 3/8 of the pizza is left

ABOVE-AVERAGE ASSIGNMENT (HIGHER LEVEL)
For students who demonstrated solid mastery on the pre-assessment, grasp material quickly, work quickly, grasp complex and abstract concepts, would benefit from acceleration and/or enrichment.

EXAMPLE...
Students will work independently to solve real-life problems that involve fractions. They will use a recipe from home in which they may have to increase or decrease the amount of ingredients based on the recipe. They may even go beyond addition/subtraction including both multiplying and dividing fractions that may lead to improper fractions.

Bella is making cookies. She needs 1/4 of a cup of sugar. She wants to double her recipe. If she has 2 cups of sugar at home will she have enough sugar to make the cookies?

1/4 x 2 = 6/4 = 1 1/2 cups
Yes, she will have enough sugar to make the cookies.

THE EQUALIZER
The Equalizer...
- allows me to plan lessons with individual students in mind. I could place each student on the equalizer scale. I will think about the content in terms of my students starting with a basic idea or an idea that they are able to stretch into a more complex thought. Some of my students may need to start just with the "bones" of a topic, while others may see more of the "muscle" of a topic. It will also help me with grouping my students. Some students may be more dependent on help, while others may work better independently on a particular project.

ZONE OF PROXIMAL DEVELOPMENT

"The difference between what a child can do with help and what he or she can do without help." By: Lev Vygotsky (1979)

What Zone Am I In ???

TOO EASY...
I get it right away...
I already know how...
This is a clinch...
I'm sure to make an A...
I'm coasting...
I feel relaxed...
I'm bored...
No big effort necessary...

ON TARGET...
I know some things...
I have to think...
I have to persist...
I hit some walls...
I'm on my toes...
I have to re-group...
I feel challenged...
Effort leads to success...

TOO HARD...
I don't know where to start...
I can't figure it out...
I'm spinning my wheels...
I'm missing my key skills...
I feel frustrated...
I feel angry...
This makes no sense...
Effort doesn't pay off...

Where do you want your students to be ???

ON TARGET
This is called the ACHIEVEMENT ZONE !!!

From PowerPoint titled "Tiered and Anchor Activities" by Rebecca Warn you date given.

Handout from Julie Supernaw (Slide 14-18)
**ACTIVITIES CAN BE TIERED BY...**
- Challenge Level
- Complexity
- Resources
- Outcome
- Process
- Product

**BLOOM’S TAXONOMY...**
- can be used "...as a guide to develop tasks at various challenge levels."
  - **Lower Levels:** knowledge, comprehension, and application
  - **Higher Levels:** analysis, synthesis, and evaluation

Heacox, D. - "Differentiating Instruction in the Regular Classroom" (2002).

**BLOOM’S TAXONOMY**

**Tiering Assignments and Assessments Advice by Rick Wormeli**

"Begin by listing every skill or bit of information a student must use in order to meet the needs of the task unsuccessfully. Most of what we teach has subsets of skills and content that we can break down for students and explore at length."

"Tier tasks by designing the full-proficiency version first, then design the more advanced level of proficiency, followed by the remedial or early-readiness level, as necessary."

Rick Wormeli - "Designing a Differentiated Lesson Plan - From Bennett" (2000), (Chapters 2-7).
"Respond to the unique characteristics of the students in front of you. Don't always have high, medium, and low tiers."

"Don't tier every aspect of every lesson. It's often okay for students to do what everyone else is doing."

"When first learning to tier, stay focused on one concept or task."

REFLECTIONS...

- Are students coming to mind that would fit into the various tiers of lessons/activities?
- Do you feel confident in planning lessons for students in your classroom based on their ability levels?

Questions and/or Comments ???

THANK YOU !!!

Thanks for coming once again !!!
We only have one day left to complete the differentiation presentations... on Thursday, December 15th.
(Same place, same time!)

Topics to be covered:
- A few last strategies/methods including Dubing.
- Assessments
- Anything else you would like to see ???

12/13/2011
Differentiation

Day 4
Continuation with Strategies and Methods, along with Assessments
By: Stacey Klewin

We will be covering...
- Cubing Strategy
- Differentiation Assessments
- Differentiation Assessment Strategies
- What comes next ???

Cubing Strategy
Cubing is a visual approach of a topic in multiple directions.

Cubing Con't...
Students are able to express their learning in many ways through cubing.
- visual
- auditory
- kinesthetic
- along with Bloom's Taxonomy

Cubing Examples

Assessments...

12/15/2011
Our students learn best when...
- "...we give students an explanation of what's correct and what's incorrect..."
- we give specific suggestions for growth.
- we provide feedback for them in a timely fashion.
- students are given an opportunity to continue working on responses until they succeed.
- students are part of the assessment process.

As teachers we need to make the goals clear to our students that we have set for them.

Assessment Definitions
1) Assessment → gathering and reviewing data.
2) Evaluation → judging the data.
3) Grading → the reporting system.

As the teacher you must be proactive when it comes to assessment and evaluation. In order for each student to reach success a teacher must intervene if necessary.

Teachers must use a variety of classroom assessments.

Teachers need to move beyond quizzes and tests.

How do you help students grow and achieve success?
"...you're constantly gathering and reviewing data and making judgments about where your instruction should go..."
Assessing in Three Areas

**Pre-assessment**
"...determining students' prior understanding and readiness for content, as well as what interests them concerning the content."
Only pre-test if you plan on using it!

**Formative Assessment**
"...tracking students' progress, as well as giving them the opportunity to track their own growth."

**Summative Assessment**
"...making sure they've reached the goals that have been set."

**Timing...**
Plan your pre-assessments in plenty of time, so you have time to adjust your teaching. You will need time to plan lessons that will adjust to the various level of learners in your classroom.

**Formative Assessments will help you see...**
- what entry points into content might be effective for certain groups.
- how best to group your students.
- how the students are feeling about their own progress.
- how to help students set their own goals.
- what mini-lessons you might need to teach to help all students be successful.
Assessment Strategies

Anticipation Guides
- They help students anticipate the direction of the unit lessons.
- The major concepts are identified of the upcoming lessons.
- You list three to seven statements regarding the main concepts of the lessons (agree and disagree statements).
- You can establish prior knowledge of the concepts with your students.
- A class discussion can follow if you wish.
This is a pre-assessment strategy.

Examples of Formative Assessment

Signal Cards
Students can hold up cards that say "Yes," "No," and "Maybe" to show if they understand a concept that is being taught during class.
At the teacher you can glance around the room and see the progress of your students.

Exit Cards
Students can write what they have learned on an index card at the end of the lesson. As the teacher you can use these to plan your lesson for the next day.

Four Square Products
- Students can demonstrate what they have learned throughout the unit. They can pick their own products or have you set a limit on their development.
- It honors the various learning styles.

A summative assessment approach.

Student Self-Assessment
Students can use to reflect on and assess their work at the end of a class period.
Rubrics can also be used so student know what is expected and required of them on an assignment.
Portfolios can be used to show student progress over time.

Important to Remember that...
"Choice motivates students and helps them become partners in the learning that takes place in your classroom."

Information from...
Brenda Bailey (2007) - Differentiating Instruction in a Whole Group Setting

12/15/2011
Final Thought...

"Differentiating instruction is doing what's fair for students."

Rick Vernet (Lead)
Dysgraphia/Differentiation
Lesson Plan – From Scratch

Post-Survey...

Would you please consider implementing two or three of the differentiation strategies (from the presentations) in your own classroom lessons?

I will be sending out a post-survey to see how the strategies worked in your classroom, along with your responses! These will be sent out the middle of January.

A HUGE THANK YOU !!!

Thank you for attending the differentiation presentations.