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Differentiated instruction : does it work?

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Differentiated instruction : does it work?

Abstract

The fact that every child is unique poses a dilemma for educators. The model for differentiated instruction requires teachers to be flexible in their approach to adjusting the curriculum and presentation of information to learners. Noting that there is no recipe for differentiation, this paper discusses the broad principles and characteristics that are useful in establishing a differentiated classroom. Studies explore the impact differentiated instruction has on students, and research highlights what must be done to transition beliefs about differentiated instruction into action. The outcome of this review indicates mixed results regarding differentiated instruction and implementation. Further research is suggested because the nature of differentiated instruction, its interpretation, and implementation are controversial.

DIFFERENTIATED INSTRUCTION: DOES IT WORK?

A Graduate Review

Submitted to the

Department of Curriculum and Instruction

In Partial Fulfillment

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Master of Arts in Education

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by

Michelle Maher

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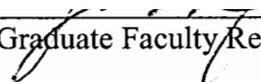
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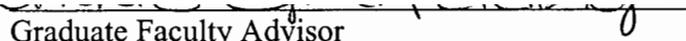
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Abstract

The fact that every child is unique poses a dilemma for educators. The model for differentiated instruction requires teachers to be flexible in their approach to adjusting the curriculum and presentation of information to learners. Noting that there is no recipe for differentiation, this paper discusses the broad principles and characteristics that are useful in establishing a differentiated classroom. Studies explore the impact differentiated instruction has on students and research highlights what must be done to transition beliefs about differentiated instruction into action. The outcome of this review indicates mixed results regarding differentiated instruction and implementation. Further research is suggested because the nature of differentiated instruction, its interpretation, and implementation are controversial.

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Introduction

Differentiated instruction is not a new idea in education. The one room schoolhouse of the past presented teachers with the challenge of finding ways to work with students with a wide range of needs. Today, many children can look around a classroom and easily point out who can read well, who can draw neatly, who struggles with numbers, who can run fast, who can't tell time yet, and who prefers to work quietly by themselves. Students are very much aware of their differences related to interests, talents, and learning profiles. As an educator, I have been intrigued and challenged by this diversity.

The purpose of this paper is to review the scholarly literature related to differentiated instruction, explore its implications in the classroom, and to discover why differentiated learning is often talked about but rarely put into practice.

The primary method to be used in researching differentiated instruction will be through analysis of books, journal articles, and case studies. These include electronic journals and databases available through the Rod Library at U.N.I., resources found on the EBSCO Host database which are available in the Instructional Media Center at the Area Education Agency, and searching the World Wide Web.

Specific questions to be explored will include:

- (1.) What is differentiated instruction?
- (2.) Why differentiate instruction in elementary classrooms?
- (3.) What are the characteristics of a differentiated classroom?
- (4.) What effect does differentiated instruction have on students?

(5.) What instructional challenges does differentiated instruction present to the classroom teacher?

(6.) How can teachers be helped to acquire the skills necessary for differentiated instruction and implement these skills in their classrooms?

Definition of Terms

Historically, the term “differentiation of instruction” was synonymous with “ability grouping” or “tracking.” As Carol Ann Tomlinson points out in her recent work, The Differentiated Classroom (1999a), there is a lot more to differentiation than that. To say there is a single, perfect example of differentiated instruction is a contradiction of terms. Differentiated instruction has as many faces as it has practitioners and as many outcomes as there are learners. Differentiated instruction is not a quick fix, a new set of blackline masters, or a ready-to-go kit (Pettig, 2000). Differentiated instruction represents a positive approach to student learning. As clearly articulated by Carol Ann Tomlinson (1995, 1999a), differentiated instruction requires a change in teaching practices and an evolution of classroom culture. The term “differentiated instruction” is most frequently used to describe good instruction that addresses the needs of struggling and advanced learners. Differentiation is about high-quality performance for all individuals and giving the opportunity to develop their particular strengths. Differentiated instruction is not a strategy. It is a total way of thinking about learners, teaching, and learning (Tomlinson, 2000c). For the purpose of this review, differentiated instruction is defined as instruction that meets

every child at his or her ability level, offering an appropriate level of challenge in order to stimulate growth and learning.

Review of Literature

Foundational Principles of Differentiated Instruction

In most elementary classrooms, there are some students who struggle with learning, while others perform well beyond grade level expectations, and the rest fit somewhere in between. Every day, teachers struggle to meet the needs of many learners who have individual needs. That struggle often leads to frustration and a sense that meeting so many needs is unrealistic. According to an article written by Carol Ann Tomlinson (1995), there simply is no single learning template for the general class. If students differ in readiness, interests, and learning profiles, and if a good school attempts to meet each student where he or she is and foster continual growth, a one-size-fits-all model of instruction makes little sense. Rather, differentiated instruction seems a better solution for meeting academic diversity, promoting equity and excellence, and focusing on best practice instruction.

Today we understand many things about teaching and learning that we had no way of knowing a century, or even a few decades, ago. Many current understandings about learning provide strong support for classrooms that recognize, honor, and cultivate individuality (Tomlinson, 1999a). According to Tomlinson and Kalbfleisch (1998), brain research suggests three broad and interrelated principles that educators have not always known which point clearly to the need for differentiated classrooms:

(1) Emotionally Safe Environments: Learning environments must feel emotionally safe for learning to take place. When a child feels intimidated, rejected, or at risk, an overproduction of noradrenalin causes that child to focus on self-protection rather than on learning. A fight or flight response may cause misbehavior or withdrawal, but it most certainly will not result in learning (Howard, 1994, Jensen, 1998).

(2) The Importance of Challenging Learning Experiences: To learn, students must experience appropriate levels of challenge. Through increased understanding of both psychology and the brain, we now know that individuals learn best when they are in a context that provides moderate challenge (Bess, 1997; Csikszentmihalyi, Rathunde, & Whalen, 1993; Howard, 1994; Jensen, 1998, Vygotsky, 1986). A task is appropriately challenging when it asks learners to take a risk and leap into the unknown, but they know enough to get started and have additional support for reaching a new level of understanding. For learning to continue, students must believe hard work is required, but hard work often pays off with success. Tasks must escalate in complexity and challenge for students to learn continually. Optimal learning takes place when the brain produces an amount of neurotransmitters that facilitates rather than impedes learning (Howard, 1994; Jensen, 1998; White & Milner, 1992). The trouble with a one-size-fits-all classroom is that the lesson is presented at a single level, virtually ensuring that many students will be overchallenged or underchallenged and, therefore, will not learn.

(3) Constructivist Principles of Learning: The brain is designed to make meaning of ideas and to learn new skills. Intelligence is multifaceted and not fixed.

Providing children with rich learning experiences can amplify their intelligence, and denying them such richness of experience can diminish their intelligence (Caine & Caine, 1991). Concept-based teaching increases the likelihood that each learner can construct and enhance frameworks for meaning, seeing the relationship between the parts and the whole of what is being studied and connecting the topic to what he or she already knows. If teachers want students to retain, understand, and use ideas, information and skills they must be given ample opportunity to make sense of, or “own,” them through involvement in complex learning situations. The brain learns best when it does rather than it absorbs.

In an article written by Renzulli and Reis (1998), it was found that in the policy statements of almost every school district in the nation reflect a commitment to meeting students’ individual needs; and yet in many school classrooms, either teachers do not or cannot put these policies into practice. It was observed that some teachers can and do make necessary adjustments for lower achieving students, but many do not make comparable adjustments for students already achieving at well above average levels. Simply in the interests of equity, these students are entitled to receive the same type of differentiation so readily provided to the students who struggle to learn (Winebrenner, 2000). Although no one in the education field would openly state that all children are the same, this assumption is embedded in the way schools are structured, leaving individual teachers the responsibility of adjusting the curriculum to accommodate individual learning styles and differences (Nehring, 1992). Teacher responsiveness to individual student needs mandates the use of a differentiated model.

Why then differentiate instruction? A simple answer is that the students in the elementary grades vary greatly, and if teachers want to maximize the potential of their students, they will have to attend to the differences (Tomlinson, 2000b).

Characteristics of a Differentiated Classroom

In classrooms where differentiated instruction is alive and well there are common characteristics (Tomlinson 1995, 1999a, 2000b; Kapusnick & Hauslein, 2001).

First, the curriculum must be clearly focused on the information and understandings that are most valued. Good teaching is predicated upon a teacher's clarity about what a learner should know, understand, and be able to do as a result of a learning experience. In an appropriately differentiated classroom, all learners focus much of their time and attention on the key concepts, principles, and skills identified by the teacher as essential to growth and development, but at varying degrees of abstractness, complexity, open-endedness, problem clarity, and structure. Such instruction enables struggling learners to grasp and use powerful ideas and, at the same time, encourages advanced learners to expand their learning and application of the key concepts and principles. Concept-based and principle driven instruction invites varied learning options and stresses understanding or sense making rather than retention and regurgitation of fragmented bits of information.

Second, assessment is ongoing and tightly linked with instruction. Lessons, activities, and products are designed to ensure that students grapple with, use, and come to understand those essentials. Learning options in content, process, and product are devised based on the gathered data, with materials varied according to

challenge and purpose. Whatever teachers can learn about student readiness, interest, and learning helps the teacher plan next steps in instruction. Sometimes options for learning tasks are based on teacher assessment, and carefully targeted to specific students. At other times, students are given choices based on topics of interest, modes of expression, and learning styles. Assessment is no longer something that comes at the end of a unit to see who learned what. In a differentiated classroom it is continuous and used for the purpose of better understanding today how to modify tomorrow's instruction.

Third, materials and tasks are interesting to students and seem relevant to them. In working with the essential understandings and skills of the subject, all students should be offered tasks that encourage them to use higher order thinking skills. Students should have opportunities to be active learners, work with a variety of peers over time, and be pushed beyond their individual comfort zones. Flexible grouping is consistently used. In a differentiated class, students work in many patterns. Sometimes they work alone, sometimes in pairs, and sometimes in groups. Whole group instruction may also be used for introducing new ideas, when planning, and for sharing learning outcomes. These conditions are essential and demonstrate respect for students as individuals.

Finally, the students are active learners and the teachers guide the exploration. Because varied activities often occur simultaneously in a differentiated classroom, the teacher works more as a facilitator of learning rather than a dispenser of information. Students must learn to be responsible for their own work. Implicit in such instruction

is goal-setting shared by the teacher and student and assessment based on student growth and goal attainment.

The most important factor in differentiated instruction that helps students achieve more and feel more engaged in school is being sure that teachers differentiate high-quality curriculum and instruction. Since there is no specific recipe, these characteristics are useful when establishing differentiated instruction in the classroom. There is one common denominator for differentiation: all require a significant change in our thinking, and all require a lot of time and work in order to redesign curricula. However, as Heidi Hayes Jacobs points out in her book, *Mapping the Big Picture* (1999), if teachers were given the time to map out their curriculum in each grade, an enormous amount of time could be saved.

The Impact of Differentiated Instruction on Student Learning

Despite the substantial number of articles calling for differentiation and describing the structures of a differentiated classroom, little research exists on the effects of using a differentiated curriculum on the academic behavior of students. Recent research on motivation within achievement goal theory, a theory concerned with students' purpose of achievement academically, supports the call of educational researchers for the use of differentiated curricula in mixed ability classrooms. This research indicates that there is a connection between classroom structures, such as the design of the learning task delivery process, and whether students' purpose for achieving is to demonstrate superior ability relative to others or to develop competence and mastery (Ames, 1992). Compared to students focused on demonstrating their ability, students focused on developing competence and mastery

spend more time on learning tasks (Butler, 1987), are more persistent when confronted with a difficult task (Elliott & Dweck, 1988), and perform significantly better on the task (Mueller & Dweck, 1988).

Differentiated curricula that embeds personal challenge in the design of learning tasks and opportunities for choice in the task delivery process can have positive effects on students' beliefs about the relation between effort and achievement outcome and their purpose for achieving. When undifferentiated curricula are used, tasks assigned by teachers are often poorly matched to students' skill level and abilities, and school performance and grades are generally determined far more by ability than effort (Schuman, et al., 1995). When differentiated curricula are used, tasks are better matched to students' skill levels and abilities. The practice of differentiating the learning task should not be viewed as an independent contributor to students' beliefs about the relation between effort and achievement outcome. If the task structure focuses students' attention on effort in their explanations for their achievement outcome but the process of assigning tasks emphasizes social comparison information about ability, the positive consequences of task differentiation may be undermined. Providing multi-tiered learning activities to accommodate a variety of readiness levels and allowing for choice should make individual differences less noticeable. To achieve a high level of interest, Sewell (1996) suggested that children's ideas for study are often relevant and destined for greater success than teacher initiated topics.

In a study that examined the potential benefits of providing one type of differentiated instruction, Lehmann (2002) found that students benefited when

personal challenge was built into the structure of the learning task and choice was built into the task delivery process. When students chose a task that fit their individual skill level, their perception of the task's challenge level predicted the time they spent working on the task. The more difficult they perceived the task, the longer they worked, and those who worked longer on the task earned higher scores.

Further, the highly skilled students who chose the task to fit their skill level there were additional benefits. They earned significantly higher scores (13% higher) than similar students assigned the same tasks. It is important to note that students of lesser skill apparently did not benefit from task choice as did the highly skilled students, results suggest that they were not negatively affected either. Although students of moderate and high-moderate skill perceived the task as less challenging, differences in working time, scores earned, and self-judgements about the quality of performance for these students were not significant.

The results of this study provide clear evidence of the differential effects that "one-size-fits-all" tasks and student chosen tasks that fit the individual have on students' reasoning and achievement behavior, there were definite benefits when students chose tasks that fit their individual skill level. It is possible that the high-skilled students simply benefited more from the sense of autonomy and control. Finally, it is important to recognize that the findings may reflect features of the particular context in which the study was conducted.

Hertzog (1998), in exploring the notion that differentiation occurs primarily in learner's response to stimuli, focused on providing open-ended activities in classrooms. She found that differentiation did not necessarily align with students'

abilities. Talented and gifted students were not the only ones to demonstrate sophisticated responses to open-ended classroom work. However, she did conclude that differentiated responses were often separated by greater depth of knowledge and expression, complex skill levels, and student utilization of personal learning styles to guide how learning developed.

In the article called "Individual Paths," Sue McAdamis (2001) writes about educators at Rockwood School District in suburban St. Louis County, Missouri who adopted a policy that moved teachers to differentiate instruction. Differentiation has enabled a significant number of students to move out of the lowest-scoring categories on Missouri standardized tests. Districtwide, the percentage of students scoring in the lowest achievement levels decreased 5% in math, 8% in communication arts, and 7% in science. The district can also point to improvements among its highest-performing students. Success on state assessments is just one measure of differentiation's impact on student learning. The teachers also reported that students were more motivated and enthusiastic when provided with acceleration and differentiation. The most influential factors for student success are the importance teachers place on meeting individual needs and their attitudes toward changing traditional teaching practices (Kapusnick & Hauslein, 2001).

Instructional Challenges of Differentiated Instruction

Reforms in teaching have shifted the instructional paradigm from adult-dominated pedagogy to child-centered, constructivist theories, and methodologies. School administrators implementing differentiated instruction recognize that considerable time and combined efforts with teachers and parents are essential for

success. Classroom teachers must balance the demands of curriculum, pacing, and readiness with cultural diversity, high-pressure testing, and accountability. Tomlinson (1999a) noted that the teachers are generally positive about the feasibility of providing instructional adaptations, but are unlikely to make them due to lack of training and support. To organize learning opportunities effectively, teachers must be comfortable with the framework for differentiation and confident in their abilities to manage the individual processes, content, and products of students. Pre-service and in-service instruction in the principles of differentiation and continuous support and commitment of administrators is essential.

According to John Holloway (2000), first-year educators experience many problems during the transition from student to teacher. Pedagogical issues, lack of administrative support, and the need for both materials and planning times are common concerns of most first-year teachers, whether they have been trained as regular or special education teachers. Regardless of how much university preparation regular educators received in differentiation it was typically erased by their student teaching experiences. As a result, very little university pre-service preparation actually reaches the classroom of the regular educator.

Brian McGarvey and his colleagues (1997) found that teachers were trying to apply the principles of differentiation in their classrooms. However, many teachers needed help incorporating a variety of different instructional skills. Teachers faced many obstacles, including difficulty in planning lessons and adapting their teaching methods to allow for differentiation. In addition, many teachers failed to provide suitable instructional activities for a wide range of student attainment, especially for

students at the extremes. Many teachers provided neither sufficient challenge nor flexibility to allow for slow and accelerated learning. McGarvey and his colleagues also found that fewer than half of the teachers made adaptations in class work for a wide range of student abilities. According to Renzulli and Reis (1998), decisions about which differentiation strategies to use should be guided by factors, such as, time, space, and availability of resource persons and materials. Although practical concerns must be considered, the ultimate criteria for these strategies should be the degree to which they increase academic challenge and the extent to which they meet individual needs. Teachers should select learning experiences that represent individual strengths and interests rather than the assignment of more-of-the-same learning activities.

In differentiated classrooms, teachers face the challenge of being where students are, not in front of a curriculum guide (Tomlinson, 2002). They provide specific ways for each individual to learn without assuming one student's road map for learning is identical to anyone else's. They are challenged to use time flexibility, call upon a range of instructional strategies and become partners with their students to see that both what is learned and the instructional environment are shaped to the learner. Teachers strive to begin with a clear sense of what constitutes a powerful curriculum and engaging instruction. Then they ask what it will take to modify that instruction so that each learner comes away with understanding and skills that offer guidance to the next phase of learning. Teachers in the most exciting and effective differentiated classes don't have all of the answers. Instead, Tomlinson (2002) says,

they are dogged learners who come to school every day with the conviction that today will reveal a better way of doing things—even if yesterday's lesson was dynamite.

One potential threat to innovative teaching is the push for curriculum standards (Gould, 2000). In the country's desire to provide educational excellence and equity, states have developed standards that define the curriculum. Teachers' careers and reputation may ride on how well their students perform. With this new emphasis the curriculum has become a prescribed set of academic standards, instructional pacing has become a race against the clock to cover standards, and the sole goal of teaching has been reduced to raising student test scores on a single test. The value of which has scarcely been questioned in the public forum (Tomlinson, 2002). Many teachers already feel overwhelmed and torn in opposing directions trying to attend to student differences and ensuring that every student becomes competent in the same subject matter and can demonstrate the competencies on an assessment that is differentiated neither in form nor in time constraints. While the goal of standards-based curriculum is to provide an equitable and excellent education for all learners, it overlooks an important reality. There is no such thing as a standard that is appropriately challenging for all learners (Gould, 2000).

The challenge to differentiate instruction is complicated by the pressure to create learning experiences exclusively tied to standards and testing preparation. In a recent case study (Tomlinson, 2000b), in a standards-driven district, a group of teachers listed student names in one of three columns: definitely, maybe, and no hope. These designations showed who would surely pass the standards test, who might pass, and who had no chance of passing. The teachers separated the students because they

said there was no point in wasting time on students who already knew enough to pass the test, and there was no point in wasting time on students who could not be raised to the standard. One teacher commented it's what we have to do to do well on the test.

Differentiating instruction cannot make up for ill-conceived curriculum and instruction. However challenging, there is no contradiction between effective standards-based instruction and differentiation. Curriculum tells teachers what to teach, and differentiated instruction tells them how. Once teachers align standards with high quality instruction, differentiation is likely to follow.

Teaching is hard. Teaching well is fiercely so. Confronted by too many students, a schedule without breaks, a pile of papers that regenerates daily, and increasing demands from every educational stakeholder, it's no wonder teachers become habitual and standardized in their practices. Not only do teachers have no time to question what they do; they also experience the discomfort of change when they ask the tough questions. Nonetheless, the teaching profession cannot progress and the increasingly diverse students cannot succeed if teachers do less.

Some teachers already orchestrate vigorously differentiated classrooms. For most of them, however, developing and refining the skills of differentiation is complex, uncertain, and carries an initial price tag of discomfort and added effort. Change of this nature takes time and requires consistent support. Teachers may need assistance in developing a sound rationale for differentiation, identifying and understanding the needs of diverse learners, and preparing students and parents for differentiated instruction. Teachers must overcome the challenges of managing a differentiated classroom, identify key understandings and skills in their subject,

applying principles of differentiation, use instructional strategies that facilitate differentiation, and take steps in beginning to implement differentiation. Certainly teachers need training in these areas.

They also need assurance from the administration that they will be valued more for attempting positive change, even when early attempts are imperfect, than for preserving the status quo. Teachers need time for planning, support for in-classroom coaching, and time to visit and work with others who are pursuing differentiated instruction. Policymakers also need to help teachers reconcile the call for responsive and flexible classrooms with practices that discourage responsiveness and flexibility, for example, rigid report cards, fragmented time blocks, and overemphasis on standardized testing. Like students, teachers are a diverse group. They, too, need a differentiated approach to learning and growing along with supportive, responsive environments. The positive possibilities that could stem from differentiated instruction are immense. Like most worthwhile endeavors, this one is challenging and should be undertaken with awareness of both price tags and payoffs.

Implementing Differentiated Instruction

Nearly all teachers believe it's better to differentiate instruction, experts agree, but the challenge lies in transitioning that belief into action (Willis & Mann, 2000).

Recent research indicates that only a small number of teachers offer differentiation in their classrooms (Reis, Kaplan, Tomlinson, Westberg, Callahan, & Cooper, 1998). If the journey of differentiating classroom instruction was such a simple, well-marked route, we'd all be there by now, says Kim Pettig (2000), the Project Challenge Coordinator for the Pittsford Central School District in Pittsford, New York.

Differentiated instruction requires persistent honing of teaching skills plus the courage to significantly change classroom practices. Pettig (2000) and her colleagues are convinced that teachers can slowly shift from a one-size-fits-all paradigm and adopt a differentiated instructional approach. Crucial to this shift is the view of where teachers are going, the opportunity to try, and the long-term support from administrators to get there. Tackling the challenge of many students with many different needs is not easy; it's a career long pursuit.

A serious pursuit of differentiation, or personalized instruction, causes educators to grapple with many of their traditional and sometimes questionable ways of "doing school" (Tomlinson, 1999b). Is it reasonable to expect all second graders to learn the same thing, in the same ways, over the same time span? Do single-textbook adoptions send inaccurate messages about the sameness of all learners? Can students learn to take more responsibility for their own learning? Do report standards drive instruction? These questions resist comfortable answers. The nature of teaching requires doing which leaves very little time to ponder the imponderables. Every journey begins with a single step. The journey to successfully differentiated classrooms will succeed only if teachers carefully take the first step and ensure a foundation of best practice and curriculum instruction. It's the first step in making differentiation work that is the hardest. In fact, Tomlinson (1999b) says, it's the same first step that is required to make all teaching and learning effective: We have to know where we want to end up before we start out—and plan to get there. Having a solid curriculum and instruction in place is harder than it seems.

Teachers, like students, all begin their journey to a differentiated classroom from different starting points, with different strengths, interests, and experiences. Some of the teachers may understand and implement the strategies immediately while others will need more time and guidance. How can teachers be helped to acquire the skills necessary for differentiated instruction and implement these skills in their classrooms? In an interview, Nancy Waldron and James McLeskey (2001) note that effective differentiation of curriculum and instruction really grows out of thoughtful teacher reflection. Teachers need time to think about how all of these procedures can help all students. By giving teachers a range of options to consider and time to reflect and collaborate with others they can then start to think about curriculum and instruction in new ways.

To ask a general classroom teacher to master the skills of managing a differentiated classroom is no small request. It is important for administrators to nurture the teachers on their own voyage, as we expect teachers to nurture their students. Differentiation will work best when time and support are provided for a team of educators to collaborate in reconfiguring classrooms and redesigning curriculum in ways that draw upon the expertise of each participant in the planning process.

According to Holloway (2000), the message is clear, to successfully implement differentiated instruction in schools school leaders must provide teachers encouragement, support, and nurturing all delivered through effective professional development that is founded on competent training and effective mentoring and that is conducted by experienced, skilled professionals. In Tomlinson's article (2000a),

creating staff development for transfer would likely include: planning, carrying out, and assessing effectiveness of differentiated instruction; setting expectations for classroom implementation of ideas gained; ensuring that differentiation is spoken of in common language; and establishing teacher-administrator understanding and collaboration for mutual growth. Gould (2000) agrees that staff development must be ongoing and a one in-service training session at the beginning of the year, never to be followed up, will most likely not yield successful results.

Goal setting can be helpful in the quest for differentiation. The goals can fit the readiness level of the teacher and help them take baby steps toward innovative teaching for a diverse group of learners (Wehrmann, 2000). Traveling on the road to differentiated instruction takes time and often consists of wrong turns. Developing positive partnerships often helps make the road to differentiated instruction smoother. Partnerships may include providing time for teacher planning and execution of plans, providing ample and suitable materials for the academically diverse classroom, and making sure that district procedures and policies support differentiation. Start small and take small steps advises Pettig (2000). If differentiation is the goal of a district, it must be a central, predominant, and lasting goal that leaders must plan for. It cannot be the focus of a one-year, five-year, or even a ten-year plan. The changes teachers make are not add-ons they are systematic. They speak to the very heart of what teachers believe about teaching and learning. These changes present new ways to engage in the teaching and grow professionally. Moving toward differentiated instruction is a long-term change process and planning for differentiation is forever. The journey is never ending.

Recommendations and Conclusions

The results of this review show that differentiation is recognized to be a compilation of many theories and practices. Studies on differentiated learning are lacking. However, proponents note that the reports on models of differentiated instruction are promising. Whether differentiation is perceived as an adjustment to instruction, a modification to curricula, or both, recent research confirms that it is seldom carried out because of lack of training and time (Olenchak, 2001). In spite of numerous initiatives to serve all students, recent studies revealed that differentiation, either in instruction or curriculum, was virtually nonexistent (Westberg, Archambault, Dobyms, & Slavin, 1993). The nature of differentiated instruction, its interpretation, and its implementation are controversial.

While no empirical validation of differentiated instruction was found for this review, there are a great number of testimonials and classroom examples provided by authors of several publications describing differentiation. There are perceived advantages and disadvantages of differentiated instruction and evidence to support or refute such claims. There is an acknowledged and decided gap in this area of research and future research is warranted.

The design and development of differentiated instruction as a model began in the general education classroom. The initial application came to practice for students considered gifted who perhaps were not sufficiently challenged by the content provided in the general classroom setting. As classrooms have become more diverse with the introduction of inclusion of students with disabilities, and the reality of

diversity in public schools, differentiated instruction has been applied at all levels for students of all abilities. The push for standards and excellence continue to add additional burdens to teachers with an already overcrowded school day and fewer and fewer resources. The results of this research indicate that more extensive training is required in the areas of individualized and differentiated instruction techniques.

As teachers become more familiar with the strategies that work best for themselves and their students, they can adjust instruction gradually. Learning to differentiate takes time and practice. It demands clear priorities and learning goals for each subject and a growing repertoire of strategies that give teachers the flexibility to adjust the curriculum in a variety of ways. A differentiated classroom promises to reach many more students in the education system by responding to their individual learning styles, abilities, disabilities, and cultural and academic backgrounds. Many authors of publications about differentiated instruction strongly recommend that teachers adapt the practices slowly and work together to develop ideas and options for students.

At one time or another we have all been drawn into arguments about what is the best way to educate young people. Indeed, a good deal of professional time and energy has been devoted to deciding whether the traditional classroom is better than a differentiated approach. Meeting the needs of diverse learners will never be an easy challenge. However, the task is critical if teachers are to get students to maximize their potential. Those teachers who are struggling with differentiated instruction will be the first to say that the work is as difficult as it is unfamiliar. Differentiated instruction implies a different way of defining formal education. Differentiated

instruction is not the delivery of instructional services; it's a philosophy that involves meeting each student at their own level, and providing each individual with the knowledge and skills needed to survive in a rapidly changing world.

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