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Differentiating instruction using authentic, performance assessments and technology integration

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Differentiating instruction using authentic, performance assessments and technology integration

Abstract

A major challenge in education today is to be able to reach and teach all learners. Methodologies and strategies come and go. The philosophy of differentiated instruction, while not new, is being bandied about as the answer to working with all students of all abilities. The beliefs associated with differentiated instruction envelope methodologies and strategies associated with authentic assessment, performance-based assessment, and technology integration.

A common bond inherent within these philosophies is the growing emphasis on assessing students based on their ability to perform real-life tasks, and technology integration is the connecting link. Educators must become facilitators of meaningful learning experiences for all students. Differentiating instruction through authentic, performance-based tasks that integrate technology provides students the skills necessary for the world awaiting them.

DIFFERENTIATING INSTRUCTION USING AUTHENTIC, PERFORMANCE
ASSESSMENTS AND TECHNOLOGY INTEGRATION

A Graduate Review

Submitted to the

Division of Educational Technology

Department of Curriculum and Instruction

In Partial Fulfillment

Of the Requirements for the Degree

Master of Arts

UNIVERSITY OF NORTHERN IOWA

by

Cynthia Seberg

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Abstract

A major challenge in education today is to be able to reach and teach all learners. Methodologies and strategies come and go. The philosophy of differentiated instruction, while not new, is being bandied about as the answer to working with all students of all abilities. The beliefs associated with differentiated instruction envelope methodologies and strategies associated with authentic assessment, performance-based assessment, and technology integration. A common bond inherent within these philosophies is the growing emphasis on assessing students based on their ability to perform real-life tasks, and technology integration is the connecting link. Educators must become facilitators of meaningful learning experiences for all students. Differentiating instruction through authentic, performance-based tasks that integrate technology provides students the skills necessary for the world awaiting them.

Introduction

Each fall as school districts across the state of Iowa return to the business of teaching children, new inservice topics are delineated as teacher focuses for the ensuing year. Generally, the topics are chosen to inform educators about current trends and reforms and assist them in successful integration of new ideas and mandates. Major areas of concern in this reviewer's district have included alternative assessment, technology integration, and most recently, differentiated instruction. The following questions concerning the connections between these issues were instrumental in prompting this review:

1. Why is differentiated instruction important?
2. How can teachers implement differentiated instruction?
3. What part does alternative assessment, particularly authentic and performance-based assessment, play in differentiated instruction?
4. What is the connection with all of these and technology integration?

Answering these questions will hopefully provide valuable and pertinent information for the mandated update and revision of the district's language arts standards and benchmarks and the development of new curriculum.

To ensure understanding, the following terminologies need to be clarified:

(a) differentiated instruction, (b) alternative assessment, (c) authentic assessment, and (d) performance-based assessment. "*Differentiated Instruction* is a teaching theory based on the premise that instructional approaches should vary and be adapted in relation to individual and diverse students in classrooms" (Hall, 2002, Introduction section, para. 1). *Alternative assessment* is a "catchall phrase that includes any practices that are different from traditional paper-and-pencil tests" (Cutshall, 2001, para. 9). Perhaps alternative

assessment can best be defined as “all assessments that are not the typical standardized test types of assessment” (Marzano, Pickering, & McTighe, 1993, p. 13). Within alternative assessment are different options such as authentic and performance-based assessment. *Authentic assessment* has been described as “those tasks and procedures in which students engage in applying skills and knowledge to solve ‘real’ problems and challenges. This authenticity generally replicates the standards of performance typically facing professional workers in the real world” (Cutshall, para. 16). Finally, *performance-based assessment* “at its simplest is asking students to do something and observing and grading both the process and the finished product against specific criteria. (Cutshall, para. 15).

While there is a lot of overlap using the terms ‘alternative’, ‘authentic’, and ‘performance-based’ assessment, what is most important is this growing emphasis on testing a student who is actually performing a skill or activity and testing based on real-life circumstances that could be faced by professionals in the field.

(Cutshall, para. 17).

This review is designed to take an in-depth look at differentiated instruction, the connections to authentic and performance-based assessment, where the integration of technology fits, and how all of these issues can be addressed and facilitated in the classroom.

Methodology

As a member of the district technology and inservice committees, this author had easy access to the district assistant superintendent’s professional library. Many of the books reviewed are district property and were highly recommended as reliable. Other

resources were available for check out through Grant Wood AEA. ERIC and EBSCO electronic sources were used as well as professional journals subscribed to by the district.

The district superintendent and technology coordinator and the author's principal, assistant principal, and media specialist also offered suggestions and names of noted and reliable authors and journals. During the extensive review of literature, the author also pursued websites offered as other sources for information.

What was most necessary was reading the district's information about differentiated instruction. The author then chose the most current information about alternative assessment options and methods. Finally, but by no means of lesser importance, literature discussing the meaningful integration of technology was considered. Throughout the reading of literature, the author focused on the information fulfilling the question criteria and making the necessary connections.

Analysis and Discussion

Professional development is an important component of the education profession. School districts yearly make decisions about issues deemed important for teacher training. Educators oftentimes feel besieged by yet one more task they have to perform or one more strategy they must learn to implement, only to have the task replaced or changed the next year. Such was the case when the Washington Community School District introduced differentiated instruction as the district inservice focus for the year 2002-2003. Complaints were voiced about "jumping on a new bandwagon" and "never letting teachers just teach." The inservice committee cited Tomlinson (2000) and adamantly maintained:

Differentiation is not a recipe for teaching. It is not an instructional strategy. It is not what a teacher does when he or she has time. It is a way of thinking about teaching and learning. It is a philosophy. As such, it is based on a set of beliefs:

- students who are the same age differ in their readiness to learn, their interests, their styles of learning, their experiences, and their life circumstances;
- the differences in students are significant enough to make a major impact on what students need to learn, the pace at which they need to learn it, and the support they need from teachers and others to learn it well;
- students will learn best when supportive adults push them slightly beyond where they can work without assistance;
- students will learn best when they can make a connection between the curriculum and their interests and life experiences;
- students will learn best when learning opportunities are natural;
- students are more effective learners when classrooms and schools create a sense of community in which students feel significant and respected; and
- the central job of schools is to maximize the capacity of each student. (pp. 6 & 7)

The majority of the teachers found difficulty arguing with these beliefs. This attitude was the hope and the intent of the inservice committee since differentiated instruction was/is not simply a one-time, one-year commitment. Differentiated instruction has been incorporated as part of the district philosophy.

Using this set of beliefs as a foundation, why is differentiated instruction important? According to Henderson (2002), differentiated instruction is a way to meet

children where they are and help them to achieve maximum growth as learners by offering different learning experiences in response to student differences in readiness, interest, and learning profile. Specifically, differentiated instruction teaches

- how to recognize and plan for student differences in readiness, interest and learning profile.
- how to create and support a student-centered learning environment.
- how to fashion instruction around the essential concepts, principles, and skills of a subject.
- how to modify the content you teach, the processes students use to learn the content, and the products students produce to demonstrate what they have learned, to maximize all student growth.
- how to use a variety of assessment techniques as diagnosis of student understanding to make adjustments in learning experiences.
- how to manage a differentiated classroom by flexible use of time, materials, and grouping.
- instructional strategies that support a differentiated classroom such as stations, complex instruction, orbital studies, centers, entry points, tiered activities, learning contracts, group investigation, compacting, and choice boards. (p. 3)

Certainly all teachers want to maximize learning for all learners. “To differentiate instruction is to recognize students’ varying background knowledge, readiness, language, preferences in learning, interests, and to react responsively. Differentiated instruction is a process to approach teaching and learning for students of differing abilities in the same class” (Hall, 2002, Definition section, para. 1). Anyone who teaches in a public school

knows how varied student abilities are, and the difficulties associated with allowing for and facilitating individual differences.

Tomlinson (2001) stressed:

Differentiation calls on a teacher to realize that classrooms must be places where teachers pursue our best understandings of teaching and learning every day, and also to recall daily that no practice is truly best practice unless it works for the individual learner. (p. 17)

She further stated, “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). Tomlinson also maintained, “While differentiated instruction offers several avenues to learning, it does not assume a separate level for each learner. Differentiated instruction focuses on meaningful learning or powerful ideas for all students. Differentiation is probably more reminiscent of the one-room-schoolhouse than of individualization” (p. 2). Though the majority of today’s teachers have only read about the one-room schoolhouse in history books, many college methods classes extol the virtues of the collaborative and readiness learning afforded by the one-room school.

Why differentiate instruction? The answer appears quite simple. Differentiating instruction is a good teaching practice.

1. Differentiated instruction is proactive. Therefore the teacher proactively plans a variety of ways to “get at” and express learning.
2. Differentiated instruction is more qualitative than quantitative.
3. Differentiated instruction is rooted in assessment. Assessment is no longer predominately something that happens at the end of a unit to determine “who got

it.” Assessment routinely takes place as a unit begins to determine the particular needs of individuals in relation to the unit’s goals.

4. Differentiated instruction provides multiple approaches to content, process, and product.
5. Differentiated instruction is student centered.
6. Differentiated instruction is a blend of whole-class, group, and individual instruction.
7. Differentiated instruction is “organic.” Students and teachers are learners together. (Tomlinson, 2001, pp. 2-5)

Effective educators are concerned about the learning that is/is not occurring in their classrooms. Differentiated instruction can assist teachers in enabling more effective learning experiences for all students.

For the classroom teacher the second research question is perhaps the most important one. How can teachers implement differentiated instruction? This question is actually a two-fold one. How can they find the time, and how does differentiated instruction look in practice? First of all, an advantage would be to look at what differentiated instruction is and what it is not. Henderson (2002) shared the following information describing differentiated instruction:

Differentiated Instruction is:

- providing multiple assignments within each unit, tailored for students of different levels of achievement.
- allowing students to choose, with the teacher’s guidance, ways to learn and how to demonstrate what they have learned.

- permitting students to opt out of material they already know and progress at their own pace through new material.
- structuring class assignments so they require high levels of critical thinking but permit a range of responses.
- having high expectations for all students.
- creating learning centers with activities geared to different learning styles, levels of thinking, areas of interest, and levels of achievement.
- providing students with opportunities to explore topics in which they have strong interest and find personal meaning.

Differentiated Instruction is not:

- assigning more work at the same level to high-achieving students.
- requiring students to teach material they have mastered to others who have not mastered it.
- giving all students the same work most of the time.
- grouping students into cooperative learning groups that do not provide for individual accountability or do not focus on work that is new to all students.
- focusing on student weaknesses and ignoring student strengths.
- using only the differences in student responses to the same class assignment to provide differentiation. (pp. 12-14)

At first glance, differentiating instruction may appear a lengthy, time consuming, nearly insurmountable endeavor. In the beginning stages differentiation does require additional planning, a variety of resources, and big changes in classroom management and lesson planning. But as McCullen (2003) challenged, “If teachers have a variety of ability levels

in the classroom, why wouldn't every teacher offer several activities to meet the needs of their students" (pp. 34 & 35). Acknowledging the time constraints educators feel pressured by, McCullen further contended, "Differentiating instruction may be the single best strategy in addressing the demands in the No Child Left Behind Act" (p. 34). Teachers are being held accountable, as never before, so perhaps now is the time to find the time to initiate change.

Numerous strategies and tools can be employed to differentiate instruction. Regardless of the specific combination of techniques one might choose, there are several key characteristics or elements that form the foundation of effective differentiated learning environments:

- Teachers and students accept and respect one another's similarities and differences.
- Assessment is an ongoing diagnostic activity that guides instruction. Learning tasks are planned and adjusted based on assessment data.
- All students participate in respectful work—work that is challenging, meaningful, interesting, and engaging.
- The teacher is primarily a coordinator of time, space, and activities rather than a provider of information. The aim is to help students become self-reliant learners.
- Students and teachers collaborate in setting class and individual goals.
- Students work in a variety of group configurations, as well as independently. Flexible grouping is evident.
- Time is used flexibly in the sense that pacing is varied based on student needs.

- Students often have choices about topics they wish to study, ways they want to work, and how they want to demonstrate their learning.
- The teacher uses a variety of instructional strategies to help target instruction to student needs.
- Students are assessed in multiple ways, and each student's progress is measured at least in part from where that student begins. (2000b, para. 13)

Differentiated instruction focuses on ways to promote learning for all students. “An obvious feature of the differentiated classroom is that it is student-centered. Shifting the emphasis from the ‘teacher and instruction’ focus to the ‘student and learning’ focus means redefining the role of the teacher” (2000b, para. 9). Initially, planning may take more time, but the benefits for students should far outweigh the time expended.

An important consideration is “teachers who differentiate instruction focus on their role as *coach* or *mentor*, give students as much responsibility for learning as they can handle, and teach them to handle a little more” (Tomlinson, 2001, p. 16). Instruction can be differentiated in several ways. Theroux (2002) considered four areas in which differentiation can occur in the classroom: content, process, product or environment.

1. Differentiating the Content/Topic: content can be described as the knowledge, skills and attitudes we want the children to learn. Differentiating content requires that students are pre-tested so the teacher can identify the students who do not require direct instruction.
2. Differentiating the Process/Activities: differentiating the processes means varying learning activities or strategies to provide appropriate methods for students to

explore the concepts. It is important to give students alternative paths to manipulate the ideas embedded within the concept.

3. **Differentiating the Product:** differentiating the product means varying the complexity of the product that students create to demonstrate mastery of the concepts. Students working below grade level may have reduced performance expectations, while students above grade level may be asked to produce work that requires more complex or more advanced thinking.
4. **Differentiating By Manipulating The Environment or Through Accommodating Individual Learning Styles:** varying teaching strategies makes sure that students will occasionally learn in a manner compatible with their own learning preference but also expands their repertoire of alternative learning strategies in turn.

Teachers embarking on differentiated instruction for the first time, need to find a colleague with whom to work. Colleagues need to discuss critical issues and essential knowledge, share their concerns with one another, and then move forward. “Effective differentiation is based on the foundation of good instructional principles. Without good instruction there won’t be effective differentiation” (2000a, para. 1). The use of common concepts and essential understandings plays a vital role in differentiating instruction.

Another consideration is what part, if any, authentic and/or performance-based assessment play when differentiating instruction. Since alternative assessment was a past focus in the district, the author was concerned about continued implementation while practicing differentiated instruction. Throughout the review of literature, however, all fears were allayed. The principles of differentiated instruction work hand-in-hand with authentic and/or performance-based assessment. Student involvement in the learning

process is a key to differentiated instruction, authentic assessment, and performance-based assessment as well.

Authentic assessment, according to Newmann and Wehlage (1993) “should distinguish between tasks that are significant and meaningful as opposed to those that are trivial and useless” (para. 1). They further suggested that authentic achievement should be based on the following criteria:

1. students construct meaning and produce knowledge,
2. students use disciplined inquiry to construct meaning, and
3. students aim their work toward production of discourse, products, and performances that have value or meaning beyond success in school. (para. 2)

Well-designed educational technologies can support these criteria. “Technology has certain unique capabilities that can make crucial contributions to the creation of workable and meaningful forms of authentic assessment” (ERIC, para. 5). Authentic tasks should have the following characteristics: (a) multidimensional and complex, (b) various levels of learning, (c) learned-practice activities, (d) practice and feedback opportunities, and (e) alignment with school standards and outcomes (Farmer, 1997). Authentic assessment includes performance tests, observations, open-ended questions, exhibitions, interviews, and portfolios.

The aim of authentic assessment is to engage students in challenges that better represent what they are likely to face as professionals and as responsible citizens. To be authentic, the context, purpose, audience, and constraints of the assessment

should connect in some way to real world situations and problems. (Bruder, 1993, para. 45).

Technology becomes a crucial component for today's students trying to make connections with the real world. Kimble (1999) stated, "Today's kids—two-thirds of whom use a personal computer either at home or at school—want to be active participants, not just viewers or listeners" (para. 15). Authentic assessments incorporating technology offer students the opportunity to be actively involved in their own learning. The use of technology-based authentic tools affords students the chance to work with groups, incorporate multimedia, and work with student selected real-life situations (Prestidge & Glasser, 2000). Such assessments may include but are not limited to: computer generated reports and stories; project exhibits incorporating digital pictures, scanned documentation, and internet information; videotapes of student demonstrations and activities; PowerPoint or Hyperstudio presentations; and electronic portfolios with QuickTime movies of performances.

Students engaged in authentic assessments are engaged in large measure in extended guided practice, although the specifics of the practice may be unique to each student. Because authentic assessments by their nature extend over time between the teacher/coach and the student/performer, classrooms more frequently have a "workshop look" (guided practice) than a "lecture look." As with differentiated instruction,

authentic assessments tend to be organic; they are perpetually in progress. All of life's tasks tend to be organic and ongoing: parenting, teaching, citizenship, even recreation. All are marked by an ongoing need to reflect on our efforts and seek greater effectiveness. (Kreisman, Knoll, & Melchior, 1995, p. 124)

Authentic assessment then appears a natural extension of differentiated instruction and a springboard to meaningful technology integration.

Adhering to the idea that authenticity generally replicates the standards of performance, then performance assessment, by its nature, is full of possibilities for student involvement with technology because it is based on observations of the process being demonstrated or on evaluation of the products created. Teachers can involve students by . . .

sharing the performance criteria; collaborating in establishing criteria; creating opportunities for students to develop visual displays; engaging them in development of performance options; directing students in comparing/contrasting examples of high-quality and lesser-quality work; engaging them in the process of establishing performance criteria for personal checklists, rating scales, and rubrics; having students evaluate their own and each others' performance individually and/or in cooperative groups; having students write about growth over time; storing samples of performances to compare with later. (Stiggins, 2001, p. 223)

Performance-based assessment asks students to perform tasks that require specific skills. Employing well-designed performance tasks, Bruder (1993) explained, asks students to perform “with knowledge instead of merely recalling or recognizing other people’s knowledge” (para. 46). The integration of technology, Bruder further proclaimed, “enables students to use computer-generated writing, simulations, graphing, drawings, and multimedia presentations to communicate what they know” (para. 61).

Performance-based assessment closely aligns with the foundation elements of differentiated instruction as well. As with differentiated instruction, “performance assessments are designed to test what we care about the most—the ability of students to use their knowledge and skills in a variety of realistic situations and contexts” (Moorcroft, Desmarais, Hogan, & Berkowitz, 2000, p. 22). According to Arter and Busick (2001), effective performance-based assessment, like differentiated instruction, suggests incorporation of the following learning intelligences in well-designed tasks:

Visual-Spatial: thinking in pictures; seeing and showing ideas with shapes, colors, size; learning by seeing: posters, drawings, murals, maps;

Verbal-Linguistic: thinking in words and using language to express ideas: reports, essays, journals, oral presentations, storytelling;

Mathematical-Logical: using logic and reasoning to learn and problem solve; making sense of things by calculating, measuring, analyzing: charts, logs, tables, diagrams, mind maps, webs;

Musical-Rhythmic: using hearing, tone, rhythm, and patterns to learn: songs, chants, using musical instruments, patterned sounds;

Bodily-Kinesthetic: using body and hands to learn and show learning: demonstrations, role plays, puppet shows, physical demonstrations, hands on displays, dances;

Interpersonal: understanding and learning best through interaction with others; and through group activity and chances to work with a partner: group presentations, choral readings, joint projects;

Intrapersonal: learning through reflection; thinking about what you've done; your work and what can make it better; knowing your feelings (metacognition—able to think about your own thinking): journal writings, one-on-one interviews, conferences, writings, self assessment, reflection logs; and

Naturalistic: awareness of nature; learning from observation; being attuned with surroundings and the environment: demonstrations with materials from the environment. (p. 222)

Performance-based assessment effectively fulfills the learning expectations, goals, and outcomes associated with differentiated instruction. In order to enhance these learning intelligences through the integration of technology, McKenzie (2002) suggested the following additions:

Visual-Spatial: digital camera/camcorder, scanner, graphics editor, HTML editor, digital animation/movies;

Verbal-Linguistic: word processing, electronic mail, desktop publishing, Web-based publishing, keyboard, speech recognition devices, text bridges;

Mathematical-Logical: spreadsheet, search engine, directory, FTP clients, gophers, WebQuests, problem-solving tasks, programming languages;

Musical-Rhythmic: headphones, tape player/recorder, digital sounds, online pattern games, multimedia presentations, speakers, CD-ROM disks, CD-ROM player;

Bodily-Kinesthetic: mouse, joystick, simulations that require eye-hand coordination, assistive technologies;

Interpersonal: collaborative projects, chat rooms, message boards, instant

messenger; and

Intrapersonal: real-time projects, online surveys, online forms, digital portfolios with self-assessments. (p. 25)

The integration of technology enhances many aspects of both differentiated instruction and performance-based assessment.

According to McCullen (2003), “technology offers educators the means to differentiate instruction for students” (p. 34). Research of new trends discussed by Lemke and Coughlin (1998) suggested the following benefits for students through technology integration:

- accelerates, enriches and deepens basic skills. Technology has been shown to enhance reading, writing, mathematics and the sciences. Far from replacing these basics, technology has the potential to enhance the ability of students to develop these essential skills and apply them in today’s digital age. Students must be able to work collaboratively in applying problem-solving and critical thinking skills together with basic skill competencies through online communication, analyzing and processing of data, and designing and producing products.
- motivates and engages students in learning. New technology can engage students in real-life applications of academics and encourage students to be more independent and responsible for their own learning. Interesting applications of technology facilitate the study of the academics within the context of meaningful, authentic applications.
- helps relate academics to the practices of today’s work force. Learners face significantly different and more complex challenges and opportunities than

previous generations. If American education is to remain relevant, it must account for these changes in its curriculum.

- increases economic viability of tomorrow's workers. Technology is key to a strong and vibrant 21st century American economy. Workers fluent in both how to think with and use technology will make the workplace more effective, increasing productivity and helping ensure America's competitiveness in a global economy.
- strengthens teaching. Technology adds a powerful tool to teachers' repertoires, enabling them to meet the individual learning needs of their students more effectively.
- contributes to change in school. The decline in public confidence in America's public schools is due in part to the incompatibility of an industrial age model attempting to meet the educational requirements of today's information-based society. Technology can be an effective catalyst for education reform, as it requires educators to rethink current practices and inspires them to make fundamental improvements in the system.
- connects schools to the world. Connecting learning to the world beyond the classroom can bring relevant, real-life context to the study of basic skills, work skills, and critical thinking. (p. 15)

The infusion of technology in schools has opened the door for opportunities to use the technology to provide authentic student assessments that will measure their abilities for connecting knowledge learned with real-world applications. Evidence indicates that when used effectively, technology can also support higher-order thinking by engaging students in authentic, complex tasks within collaborative learning contexts. Students should be

able to use technology to deepen their understanding of the content in the academic standards and advance their knowledge of the world around them (Moore, 2003).

Educators, who adhere to the belief that the central job of schools is to maximize the capacity of each student, must view technology integration designed to differentiate instruction through authentic, performance-based tasks as instrumental in fulfilling this belief.

Classroom experiences indicate that students benefit by participating in the research, design, and presentation of multimedia projects. Multimedia products are typically the culmination of days or even weeks of work by students, working individually or in conjunction with other members of a group. Students may initiate the process by developing a good question, the place from which they begin their research. They learn the value of asking a good question, one that will direct their process. They also develop research skills as they select the sources for their information, make decisions about the relevancy of information, synthesize and shape information, and use information to confirm or refute their assumptions. Once completed, multimedia products are typically shared with an audience that may be much wider than students are accustomed to. Thus, with the stakes raised, students have the additional benefit of developing an understanding of the value of their published work and the concurrent importance of perfecting it for an authentic audience (Prestidge & Glaser, 2000). The differentiated learning experiences facilitated through the use of technology in well-designed, authentic performance tasks provide students with multiple approaches to their education.

Educators can no longer “afford to play games and keep up appearances in this reality-based world, and the ‘just-in-case’ academic curriculum, ancient though it be, will be of little use” (Campbell, 2000, p. 407). If students cannot apply the math they know, then they do not know it, no matter how many tests they passed. If they cannot work well with a team to solve a problem, then they cannot think independently and teach themselves what they need to know. It is the job of today’s educators to prepare their students for the world awaiting them (Campbell). Today’s educators must become facilitators of “just-in-time” authentic skills. In order to promote lifelong learning for all students, differentiated instruction incorporating technology within performance-based tasks becomes their challenge for the future.

Conclusions and Recommendations

Differentiated instruction is not a new educational phenomenon, a method of teaching, a recipe for teaching, a set of strategies, nor is differentiated instruction something a teacher “does” when they have the time. Instead, differentiated instruction is a philosophy about teaching and learning based on a set of beliefs. Inherent within this philosophy is the belief that students of the same age have different learning needs. This difference in student needs may best be addressed through the development of a variety of authentic, performance-based strategies involving the integration of technology.

Differentiated instruction encourages the use of strategies and methods that enhance student interest and participation thereby promoting understanding. Differentiating instruction within an existing curriculum will take time, planning, and organization, but more importantly, differentiation is a positive approach for educators striving to improve learning for all students. Differentiated instruction encompasses

effective teaching that encourages and requires increased student responsibility and involvement.

Authentic, performance-based tasks create real life learning experiences for students that extend beyond the walls of the classroom. As with differentiated instruction authentic, performance-based assessments focus on the ability of all students to use their knowledge and skills in a variety of realistic situations. Authentic assessments will measure students' abilities for connecting their learning with real-world applications and performances. The integration of technology becomes the connecting link. The use of technology-based authentic tools affords students the chance to work with groups, incorporate multimedia, work with student selected real-life situations, and offers students the opportunity to be actively involved in their own learning. Differentiating instruction using authentic, performance tasks and the meaningful integration of technology becomes the challenge for educators who truly believe the job of schools is to maximize the capacity of each student.

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