Differentiated Instruction and Its Impact on Diverse Learners

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Abstract

Students enter classrooms with many learning styles, language proficiencies and abilities. Currently, teachers in 47 out of 50 states in United States and the District of Columbia are mandated to teach Common Core State Standards with the exception of Alaska, Texas, Nebraska and Virginia. Through differentiated instruction strategies, pre-service teachers and teacher educators can meet the needs of all students including English Language Learners and gifted and talented students. In this article, the author provides practical ways for differentiating content and instruction for diverse learners. On-going formative assessment, flexible grouping, learning centers, multilevel activities, accelerated learning, anchor activities, and independent study are also mentioned.

Keywords: Differentiated Instruction, English Language Learners, Common Core, gifted and talented students

Introduction

When students from K-12th grade levels enter school, pre-service teachers and teacher educators are faced with certain challenges in the classroom. Students today arrive with a variety of mixed abilities, wants and needs. Many come with vast pools of background knowledge based on their childhood experiences. More importantly, they exhibit different learning strengths and language skills of which teachers need to be aware of when teaching. This article confirms that differentiated instruction is needed in order to meet the needs of diverse students. In order to accomplish this, this article suggests how to differentiate instruction for English Language Learners (ELLs) and gifted and talented learners.

Learning Styles of Students

Fleming & Mills (1992) identifies four modalities that reflect the learning styles of students and teachers. The acronym that Fleming & Mills (1992) proposed is called VARK. It stands for Visual, Auditory, Read/write and Kinesthetic. Although, Coffield et al. dispute the validity of learning styles as a construct due to the lack of evidentiary research available, (Coffield et al., 2004), experientially students do demonstrate clear proclivities and preferences in the learning process. Students may learn visually with the help of graphic organizers, diagrams and charts. Some may show auditory learning preferences, and learn best by listening to a class lecture, participating in a small group discussion or through the active utilization of headphones and recorded content. Others prefer reading and writing using technology in the form of Google presentation and articles from the Internet. Fleming & Mills (1992) assert that many teachers and students have a strong preference for the reading/writing mode over the other three modalities. The reason for this is because the ability to read and write is a desirable attribute which employers are looking for when hiring prospective employees (Fleming & Mills, 1992). Finally, students who prefer kinesthetic activities are able to connect learning to the real world “either through concrete personal experiences, examples, practice or simulation” (Fleming & Mills, 1992, pp. 140-141). They prefer to experience simulations and demonstrations in order to learn in the classroom. VARK embraces the various learning preferences that teachers can encounter among their students in school.

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Learning Proficiencies of Students

Teachers can also expect students to enter their classroom with various levels of English proficiency. ELLs (English Language Learners) fall into two categories. According to Capps, Fix, Murray, Passel & Herwanto (2005) ELLs are either foreign-born first generation Americans or native born. Both of these EL categories can enter school classified as Non-English Proficient (NEP). This means that NEP population does not speak, listen, write or read in English. They primarily speak their native language. ELLs can also be classified as Limited English Proficient (LEP). Zong & Batalova (2015) report that the LEP population refers to individuals above age five who started speaking English less than “very well,” as stated by the U. S. Census Bureau. In 2013, it was found that about 41% or 25.1 million people in America are considered LEP (Zong & Batalova, 2015). A further group of ELLs are those who become proficient in English after a period of time (5-10 years) and are re-designated from LEP. This third group is called Reclassified Fluent English Proficient (RFEP) (Hill, Weston, & Hayes, 2014). According to Peregoy & Boyle (2013) in order to meet the needs of ELLs in the classroom, teachers need to provide hands on activities along with differentiated opportunities. This will be further discussed in this article.

Common Core and its Impact on Learning

Despite the individual differences teachers encounter in the classroom, secondary students are expected to attain mastery in a variety of subjects such as foreign language, arts, geography, science, and social studies (Werell, 2014). Learning these subjects helps students broaden their knowledge and apply what they have learned into the real world. However, mastering these subjects is simply not enough. With the implementation of Common Core State Standards in 2008, the emphasis is not only on content mastery, but also on college and career readiness. Presently, K-12th teachers across America are helping students prepare for college and career by supplementing content areas such as physical education with the 4 C’s. According to National Education Association (2015), acquiring communication skills, critical thinking, creativity and collaboration are necessary for learning in college and assured success in the global workforce. Teaching students Common Core State Standards along with the 4C’s is a huge challenge that requires innovative thinking.

To face this enormous challenge, teachers are implementing an instructional framework called differentiated instruction. This type of instruction permits teachers to take factors such as learning preferences, ability levels, identified special needs and language proficiency into consideration when planning and delivering lessons. Within a differentiated classroom, teachers structure the learning environment in such a way as to meet the needs of diverse learners.

Rationale and Significance for Differentiated Instruction

Differentiation is a way of teaching which asks teachers to know their students well enough to provide each individual with certain experiences and tasks that improve learning (Robb, 2008). Teachers provide a course for all students to learn as deeply as possible and as quickly as possible without assuming that one learner’s path for learning is the same as everyone else (Tomlinson, 1999). Tomlinson (1999) emphasizes that differentiation means giving students a variety of learning options to begin with. Providing adequate opportunities such as recognition of diverse learners, problem solving and a menu of learning choices are a part of differentiated instruction (Robb, 2008).

Clearly differentiated instruction is not about direct instruction where content is delivered explicitly using lectures on, or demonstrations of, the material. Often times, direct instruction when poorly done, can take the format of a static lecture where the teacher talks in front of the classroom while students listen and copy down copious notes. Today’s educators realize that not all students learn best from this approach. Kinesthetic and visual students who experience static, direct instruction can find it challenging and at times frustrating.

Tomlinson (1999) mentions that true learning takes place when standardized instruction is left behind and engaging instruction is emphasized. This is not to say that standards themselves are left behind, rather the approach promoted by experts in the Common Core State Standards indicates the need for collaborative and creative learning experiences that advance both communication and critical thinking, (the 4C’s discussed earlier). One method of engaging student critical thinking and creativity that utilizes both collaboration and communication is the implementation of flexible grouping in the classroom. Flexible grouping can help ensure access to a variety of learning opportunities and working arrangements (Tomlinson & Allan, 2000). In this type of setting, teachers’ instruction varies between whole class instruction, small group collaboration and individual, personalized discovery, dependent on the assessment of student needs.
Flexible grouping allows for homogeneity of student readiness in groups when content or skills warrant it, while also allowing for heterogeneity of student readiness in groups in different circumstances. This flexibility can promote peer scaffolding, through the collaborative sharing of different student experiences and knowledge. Tomlinson & Allan (2000) assert that when flexible grouping is used in a consistent and meaningful way, the following may result: (1) individualized and targeted learning experiences, through thoughtful teaching practice, (2) universal access to course materials and content for all students in the classroom through the use of individualized instructional practices, (3) opportunities for students to experience a variety of learning contexts, and (4) richer formative assessment data collected by the teacher her/himself. Further, implementing this flexibility in grouping may directly benefit learners who are auditory, visual, reading/writing and kinesthetic, as activities are adapted from whole group lecture to small group and individualized activities, which may include more variety of materials and activities. Flexible grouping also allows students to observe and learn from one another (Robb, 2008).

A key principle that guides differentiated instruction is student engagement. It is important to have all students work on activities that are fascinating and appealing. Tomlinson & Allan (2000) suggests that teachers should provide specific tasks that are both interesting and that allow for equal access to mastery and skills. Tasks such as learning about a culture by analyzing its art or researching and designing a sustainable bridge allow students to feel challenged while they learn. Irujo (2004) emphasizes that it is a matter of presenting the same task in different ways and at different levels, so that ultimately students can approach it in their own way. Problem solving occurs when students are encouraged to explore big ideas and expand the understanding of key concepts instead of just reading straight from a textbook (Robb, 2008). Ultimately, the goal of differentiated instruction is to provide learners a way to understand issues, apply them and be able to move on to the next learning stage (Tomlinson & Allen, 2000). Differentiated instruction meets students at their level. It empowers them to move forward and not backward in their learning.

Another key principle that directs differentiated instruction is the implementation of ongoing formative assessments. As teachers teach, they continually assess to identify students’ needs and strengths so they can meet students where they are and move them forward (Robb, 2008). A few forms of assessment for collecting evidence of student learning are as follows: 1) direct student observations with documentation in the form of note cards, notebooks or labels; 2) questioning to check for understanding; 3) exit cards that show what was learned; 4) individual whiteboards with answers to a specific question that will eventually be erased in order to make room for more responses; 5) quizzes in the form of multiple choice, fill in the blank or short answer questions, or technology based quizzes such as Kohoot.it to check for mastery; 6) think-pair-share where students are asked to verbally share what they have learned with their partner while the teacher walks and listens in on the conversation; and 7) learning logs which record acquired knowledge and questions students still have for teachers to read and monitor student progress. Implementing formative assessments during differentiated instruction provides information for teachers to adjust their teaching and learning outcomes. It guides them to the next steps of teaching or even re-teaching in order to meet the needs of all students.

**Differentiated Instruction for English Language Learners**

With the recent emphasis on Common Core standards, there has been much talk about what is considered appropriate content, instruction and strategies for ELLs. As educators have wrestled with this issue, it is apparently clear that for ELLs to succeed academically they must receive the same content as native English speakers (Ford, 2011). According to Fairburn & Jones-Vo (2010) the right approach to achieve this goal is through differentiated instruction that takes into account ELL’s English language proficiency, as well as other factors that impacts learning.

Teachers can differentiate instruction for ELLs by providing background knowledge prior to introducing new concepts so that students can decode the information presented. Providing translation in an ELL’s native language to help them understand is another strategy a teacher can use to differentiate for individual English Language Learners (Peregoy & Boyle, 2013). Bilingual aides can also help translate and explain key ideas during instructional time. Ford (2011) asserts that instruction is most successful when professionals such as teachers and bilingual aides collaborate together.
When complex content such as DNA is introduced, teachers need to differentiate by not teaching everything about the subject all at once. In this process, known as chunking, the content is divided up into different segments in order for ELLs to digest and build on newfound knowledge. For example, if the unit is on DNA, teachers need to teach about genes, replication and mutation separately and not all in one setting as it can be overwhelming for the ELL learner. Ford (2011) asserts that the content should not be “watered down” for students who are still developing language skills, and chunking is a way of providing the same content in a way that is more comprehensible.

Teachers must think of creative ways to help students understand key materials. This may also mean leaving out excessive words or unnecessary resources in order to avoid confusion or frustration. Peregy & Boyle (2013) emphasizes that ELLs acquire content knowledge by learning basic key words and ideas that they can grasp. Krashen (1981) summarizes that teachers need to make content comprehensible by providing ELLs alternative ways of accessing key content. Ford (2011) suggests the following differentiated strategies that are useful for ELLs; 1) charts; 2) books written in their first language; 3) simplified text written by the teacher; and 4) ongoing discussion of was learned. Ford (2011) believes that implementing these tactics allows ELLs to learn the same materials as other students in the classroom. English language skills are also developed when content is clear and purposeful.

Furthermore, teachers need to also differentiate assignments for ELLs. Upon instruction, teachers need to provide extended time in order to write assignments, projects and tasks. It is important to keep ELLs from feeling rushed, challenged or frustrated when completing their assignments. Krashen (1981) believes that maintaining a low affective filter is critical as it allows error correction and for learning to take place in a safe environment. Peregy & Boyle (2013) mention that teachers should not force a speedy production, but rather allow time to think, process and complete assignments in order to give ELLs stronger acquisition of language knowledge.

Another differentiated opportunity for ELLs is to utilize graphic organizers. One type of graphic organizer is called a thinking map. According to Northcutt & Watson (1986) they are proven to help process information. Northcutt & Watson (1986) emphasizes that cognitive maps appeal to ELLs because it is not only visual and spatial but teachers and their students find it a particularly useful strategy. ELLs are able to recall what they have learned by drawing or writing a few words or phrases inside circles or lines. Topics for thinking maps include; 1) defining in context; 2) describing qualities; 3) comparing and contrasting; 4) classifying; 5) sequencing; 6) cause and effect; and 7) analogies. Therefore, providing differentiated instruction in the form of background knowledge, accessing key content, extended time and thinking maps creates a flexible environment for ELLs to effectively acquire and master English language skills.

**Differentiated Instruction for Gifted Learners**

Today’s heterogeneous classroom also consists of gifted learners with advanced abilities and talents. Teachers often assume that just because gifted students are highly intelligent and skilled they do not require any form of differentiation (Galbraith & Delisle, 2015). This is quite the contrary to gifted students’ reality in the classroom. Gifted students have social, affective, and academic needs that should not be ignored or neglected in the classroom. To ensure that their intellectual and academic needs are fulfilled, teachers should provide a variety of instructional encounters for gifted learners through the differentiation of content, product, process, learning environment and affect (Tomlinson, 2000).

Moreover, Dabrowski’s (1964) Theory of Positive Disintegration helps teachers understand gifted learners’ developmental needs more thoroughly (Neihart, Reis, Robinson, & Moon, 2002). Dabrowski’s theory proposes that one’s original endowment of intelligence, special talents and abilities can develop into five forms of experiencing called overexcitabilities (OEs) (Neihart, Reis, Robinson & Moon, 2002, pg. 54). Gifted social and emotional research suggests that Dabrowski’s overexcitabilities may indicate developmental potential and may be a measure and indicator of giftedness (Neihart, Reis, Robinson & Moon, 2002, pg. 54). Specifically, although all people have potential towards the overexcitabilities and positive disintegration, the gifted show a higher proclivity for developing towards self-actualization and the higher levels of disintegration at a younger age (Daniels & Piechowski, 2008). Dabrowski (1937) identifies overexcitability in five forms: 1) psychomotor; 2) sensual; 3) intellectual; 4) imaginative; and 5) emotional. Gifted students can demonstrate one or more of these OEs in their social and emotional development as diagnosed by the Overexcitability Questionnaire which consists of 50 item questions that measure the presence and degree of the five overexcitabilities (Falk, Lind, Miller, Piechowski, & Silverman, 1999).
Piechowski (1997) mentions that gifted students might not be fully understood by those who don’t share or understand their unique traits that are exhibited in the classroom. As such, it is important that teachers understand the five overexcitabilities that are commonly found among gifted students and differentiate instruction for those exhibit one or more overexcitability.

The psychomotor learner has a love for movement. This gifted learner can exhibit rapid speech with his or her tongue, violent or impulsive activity, restlessness, pressure for action, and driven-ness (Piechowski & Cunningham, 1985). Teachers should tailor their instruction by providing this type of learner with independent study. Gifted learners can benefit from independent study because learning at their own pace allows them to use their inner drive to complete tasks. They can voice their opinions and findings out loud as many are prone to fast speech. During independent study gifted students develop connections to real world problems and maintain depth of content (Kelly, 2011). According to Kelly (2011) topics can either be related to a class subject or interest-based. To avoid restlessness, teachers should also have a plethora of activities within the student’s ability level on standby. Offering them choices of projects that reflect their learning interests and abilities is one strategy to differentiate instruction (Robb, 2008). A few choices to offer gifted learners are; 1) project based learning that provides students with ample time to examine and respond to a problem or question; and 2) tiered activities that are motivating and challenging; including experiments, timelines or story maps. Bearing in mind the character traits of psychomotor learners when planning for differentiated instruction allows for projects geared toward gifted learners need to move, speak and think independently.

Sensual overexcitability is expressed in having the need to touch, taste, hear and smell things (Piechowski & Cunningham, 1985). Gifted learners who exhibit this form of overexcitability can benefit from instruction through the use of manipulative or realia in the classroom. Examples of this could include touching objects such as wooden blocks or rulers when learning math or displaying basil plants to learn about the importance of photosynthesis. Teachers should differentiate their instruction by providing hands on activities as it gives sensual learners pleasure and enjoyment (Neihart, Reis, Robinson, & Moon, 2002, pg. 54).

Learning centers offer opportunities for hands on learning to take place. Kelly (2011) indicates that learning centers is a gifted differentiation strategy that can work when task cards are written with clear directions. Teachers provide students with materials or concepts designed to enhance their understanding of topics at the learning center. Gifted students can employ their five senses when placed at a center with the following components; 1) dissecting a frog preserved in formaldehyde; 2) making food using common plants around the community; 3) painting a mural that depicts the strands of DNA; and 4) constructing a terrarium using a jar, rocks, charcoal, soil, and plants. By implementing these tasks at a learning center, gifted learners can fully express their sensual outlet without any restrictions. Fredericks (2005) emphasizes that this type of differentiated instruction can enrich and enhance their appreciation and understanding of the topics through individual experiences in the center. Further it is essential for teachers of the gifted to recognize when a child exhibits the sensual overexcitability, as the learner may struggle with sense-related issues like classroom noise level and sensitivity to light.

According to Piechowski & Cunningham (1985) intellectual overexcitability manifests itself as having a sharp sense of observation, independence of thought, development of new concepts and thirst for knowledge. Gifted learners who exhibit this overexcitability are prone to asking questions and seeking the truth. Teachers who have intellectual learners should differentiate by implementing meaningful strategies that provide depth of learning rather than breadth. Effective strategies for intellectual students may include (Johnson and Ryser (1996, pg. 16); 1) posing open-ended questions that require higher-level thinking; 2) modeling thinking strategies, such as decision making and evaluation; 3) accepting ideas and suggestions from students and expanding on them; 4) facilitating original and independent problems and solutions; 5) helping gifted students to identify rules and relationships; and 6) taking time to explain the nature of errors. Stepanek (1999) summarizes that these instructional strategies have been linked to improved student achievement and an increase in critical thinking, problem-solving capabilities and creativity among gifted learners. Kaplan’s Icons of Depth and Complexity (1996) are often used in school districts currently to aid gifted students in learning at a deeper level.
Another way to differentiate for the intellectual learner is to offer accelerated learning. Although Kelly (2011) asserts that this is the best strategy for gifted learners as they are able to attend class with the next grade level and learn at a quicker pace, it is important that a child be socially ready to take courses with children who are older. According to Robinson (2008) all gifted students need at least one of the following opportunities; 1) early admission to kindergarten or first grade; 2) in-class grouping by skill levels; 3) advanced curriculum in self contained gifted class; 4) grade skipping or double promotion; 5) mixed-grade classes, with gifted students condensing two years into one or three years into two; 6) subject-matter acceleration where they attend a higher class for subjects in elementary school or one or more classes at a higher grade in secondary school; 7) online classes that provides high school credits; and 8) early college entry. According to Robinson (2008) the right amount of challenge requires gifted students to stretch themselves and grow intellectually; too little challenge produces boredom and turnover, an inevitable erosion of ability and commitment (pg. 1).

The imaginational overexcitability is recognized as having rich association of images, vivid and animated visualization, intense living in the world of fantasy, fondness for fairy and magic tales and poetic creations dramatizing to escape boredom (Piechowski & Cunningham, 1985). Teachers who have this type of gifted learner in class should differentiate instruction by having anchor activities. Anchor activities are ongoing activities which students work independently. It is self-directed, engaging, meaningful tasks and not busywork with packets of worksheets (Kelly, 2011). Kelly (2011) believes that anchor activities provide students with relevant, meaningful activities that can be completed without the teacher’s help. Anchor activities allow learners to complete tasks such as visualizing and writing down specific thoughts in their journal or working on a portfolio (Tomlinson, 1999).

In addition to this, teachers can differentiate instruction by having multilevel activities or lessons. Kelly (2011) indicates that these are open-ended activities or lessons allow students to work naturally at various ability levels. Open-ended activities can include but are not limited to the following; 1) writing an essay about the fantasy world you live in; 2) producing a poem or play about your favorite fairy or magic tale; and 3) reading science fiction texts or novels.

Lastly, teachers should take imaginative learner’s strong visual senses into account when teaching. Tomlinson & Allan (2000) believe that teachers should use a plethora of computer applications, texts with vivid imagery and videos to convey key concepts when teaching to gifted learners. In this way the learning needs of imaginative students are met with this type of differentiated instruction.

The characteristic expressions of emotional overexcitability are; 1) shyness; 2) timidity; 3) enthusiasm; 4) intense loneliness; 5) concern for others; and 6) an intense desire to offer love (Piechowski & Cunningham, 1985). Teachers who have gifted students in this form should differentiate by providing flexible grouping. In flexible grouping the teacher ensures that students of mixed readiness work together in settings that draw upon the strengths of each student (Tomlinson & Allen, 2000). This means that emotional gifted learners can utilize traits within a group setting. They can show their eagerness to learn and display genuine interest towards their classmates. More importantly, flexible grouping addresses the social aspect of learning. When placed in a heterogeneous group, shyness, loneliness and timidity can dissipate. This can lead to meaningful discoveries and learning opportunities for learners who possess emotional overexcitabilities.

**Perspectives as Learners Move Forward**

It is imperative that differentiated instruction is in place to meet the needs of diverse learners. As educators become aware that not all children learn the same way in school, providing different techniques and teaching strategies is essential to their academic growth. Knowing the students’ needs and wants is primary in figuring out what kind of differentiation is exactly needed. When differentiation is identified and implemented consistently, success can occur in the form of high achievement. There is no doubt that the overall educational goal is for all students to become college and career ready when proper differentiated instruction is in place for ELLs and gifted and talented students.
References


