Instructional Methods to Foster Student Learning

Rudolfo Barcena Rulloda

NorthCentral University

May 28, 2011

Abstract

With an increasing number of African American, Asian, and Hispanic students in many California classrooms, this presents a challenge to teachers because all of the students in the classrooms have different learning styles and techniques. However, this offers an opportunity for teachers to experiment on the ingenious teaching methods that will foster students learning. And by implementing these appropriate instructional methods, teachers would greatly improve their personal teaching practices.

Introduction

With an increasing number of African American, Asian, and Hispanic students in many California classrooms, this presents a challenge to teachers because all of the students in the classrooms have different learning styles and techniques. However, this offers an opportunity for teachers to experiment on the ingenious teaching methods that will foster students learning. And by implementing these appropriate instructional methods, teachers would greatly improve their personal teaching practices.

Cultural diversity is becoming an argumentative discussion, especially in the classroom environment (Sturz & Kleiner, 2005), where most teachers are not taking the time to find out their students' likes and dislikes about school, what are the students' favorite subjects and what the students want to be when they complete high school, and what the students do after school. Consequentially, most teachers are over-looking their students' learning style and continue teaching their students by traditional teaching methods, where most teachers are taught and trained using traditional teaching practices. And these teachers are teaching the curricula, the focal points of the instruction, to the entire class as a whole, where these teachers expect their students to learn. This process is considered the best and effective teaching practices.

Teachers reinforced their lessons and activities through homework assignments, after school activities for the students requiring additional help in reading, mathematics, and English, and provided classroom aides that speak Spanish and the Asian languages. With all of these assistances to promote effective student learning, students are still receiving failing grades for their academic performances.

Discussion

Considering the time and effort teaching these students, there are two possible contributing factors for effective student learning, and these two factors are: teachers' teaching practices and curricula.

Teachers' Teaching Practices

In the traditional teaching practices, it is apparently a major contributor to the students' debilitating academic performance. For example, the report from the California Department of Education indicated that this school district's third graders were tested under the Standardized Testing and Reporting (STAR) Program in four areas: California Standards Test (CST), California Alternative Performance Assessment (CAPA), California Achievement Test (CAT – grades 3 and 7 only, and Spanish Assessment of Basic Education (SABE). In 2005, the 6,256 third graders district-wide that took the test and in CST English-Language Arts had 26% of the total were considered Far Below Basic, 28% were Below Basic, 29% were Basic, 14% were Proficient, and 4% were Advanced. The CST Mathematics indicated that 6250 third graders that took the test, 8% were considered Far Below Basic, 30% were Below Basic, 25% were Basic, 25% were Proficient, 12% were Advanced.

When the third graders, who are now in middle school (eighth grade), took the test in 2010, their scores were extremely disappointing; to illustrate, in CST English-Language Arts where 4,976 students district-wide took the test , 12% were considered Far Below Basic, 17% were Below Basic, 34% were Basic, 21% were Proficient, and 16% were Advanced. In the CST General Mathematics 3,017 students district-wide that took the test and 21% were considered Far Below Basic, 30% were Below Basic, 32% were Basic, 15% were Proficient, and 2% were Advanced. In CST History – Social Science Grade 8 where 5,307 students district-wide that took the test and resulted with 22%, were considered Far Below Basic, 14% were Below Basic, 30% were Basic, 19% were Proficient, and 14% were Advanced. In the CST Science – Grade 8 Life

Science where 4,912 students district-wide that took the test and resulted with 17% were considered Far Below Basic, 15% were Below Basic, 23% were Basic, 21% were Proficient, and 24% were Advanced.

In addition, the public is asking why this is happening, and with the large amount of tax payers' money into education, the California education system is still below than the rest of the nation, and subsequently this country is behind the rest of the world (Ravitch & Cortese, 2009). The public is now accusing the teachers as the possible cause for students' poor academic performances. The blame game can go back to the 1980s and 1990s when another education reform, "A Nation at Risk," where the problem was caused by "bad teachers," and the perception then is still with us today (Blake, 2008). The federal government has also stepped into the fray by passing the "No Child Left Behind Act of 2002," which makes teachers accountable for students' academic performance and the "Race to the Top" grants for education reforms of $3.5B (Quaid, 2009). The incentives for accepting these grants include: the firing of the principal and half of the staff and reopen the school with new personnel, converting the low performing school to a charter school operator, and closing the school and sending the students to higher-achieving schools in the district (Quaid, 2009); as an example, an elementary school where the author first began as a student teacher, the school district fired the principal and did away with half of the staff and replaced them with new personnel. With the "No Child Left Behind Act of 2002" being implemented, highly qualified educators will think twice before teaching in low-performance schools (Hardman & Dawson, 2008). Also, highly qualified educators that have their choice of schools will avoid schools that face danger of a faculty overhaul (Sanders, 2008).

Curricula

Ornstein and Hunkins (2009) indicated that the 1983 report "A Nation at Risk" concluded that U. S. schools are falling short of their education goals and the educational foundations are

being eroded by a tide of mediocrity. Montague (2004) further suggested the "No Child Left Behind Act of 2002" honors "core-content" courses such as mathematics, language arts, science, history and other courses often taught in "straight-line" progress, where these courses are inadequate to develop the whole child, even when students grasp core-content courses easily. Nevertheless, the traditional subject contents such as language arts, English, mathematics, science, and reading are taught separately, where students of diversity are voided in their educational development in exploring and discovering their personal capabilities and strengths for effective learning.

Multiple Intelligences

Two of the poignant questions the author kept asking are: "There must be a better way of teaching the students?" and "What teaching practices will be useful in assisting teachers' diverse students?" An answer to these two questions leans to: the implementation of multiple intelligence for students of diverse backgrounds.

Multiple intelligences are unique, and Gardner (2006) described "intelligence" as abilities, talents, or mental skills and "multiple" is the different attributes such as musical intelligence, bodily/kinesthetic intelligence, logical/mathematical intelligence, linguistic intelligence, spatial intelligence, interpersonal intelligence, intrapersonal intelligence, and naturalist intelligence constitute individuals' learning spectra.

With the introduction of multiple intelligences, there are a number of positive attributes for using multiple intelligences in the classroom: First, the concept is viewed as students' centered; secondly, multiple intelligences take a holist approach, where students are given the opportunity to discover their own learning abilities; third, teachers are discovering that multiple intelligences are teacher friendly and finding their teaching role is shifting from regular teaching to that of mentors or guides; and finally, teachers would be able to identify their students'

strengths and be able to accommodate their students according to their students' orientation for effective student learning.

Armstrong (2000) further suggested the four major reasons for implementing multiple intelligences and these are:

1. Each of us has all of the eight intelligences.
2. When taught correctly, many of us can develop all of the eight intelligences to a competent level.
3. Intelligences are enhanced when a few or many of the intelligences work together.
4. There are innumerable avenues for each person to be intelligent.

Lazear (2003) also indicated that multiple intelligences promote deep and lasting understanding in students. In addition, Gray and Waggoner (2002) suggested that multiple intelligences have the potential of reaching a greater number and broader range of learners.

In a teaching strategy, Lazear (2003) described three different ways of teaching multiple intelligences and these are: first, as subject content, where teachers might consider teaching intelligence separately; for example, the author considers teaching linguistic intelligence to the class because of a significant number of students of diversity in the classroom. Secondly, a process to acquire knowledge, where teacher use this process for their students to gain knowledge beyond the single intelligence; to illustrate, besides teaching linguistic intelligence, the author would also add spatial intelligence, since most students learn through this process. And finally, metaintelligence, meaning the thinking and analyzing of one's own thinking process, teachers might consider using this approach for all of their students.

Lazear (2003) further stressed this process by incorporating all of the intelligences into one lesson because the students really learn when taught from many ways, the students will tend to remember what is taught, and the students will fully understand their intelligences and eventually their intelligences become part of the students' profile. In addition, multiple

intelligences' tools offer teachers ideas, strategies, methods, and techniques for their lessons and in such as abstract symbols/formulas and problem solving (logical/mathematical intelligence), journal/diary keeping and creative writing (linguistic intelligence), drawing and patterns/designs (spatial intelligence), music performance and singing/humming (musical intelligence), cooperative learning strategies and group projects (interpersonal intelligence), caring for plants and nature encounters/field trips (naturalist intelligence), physical exercise and role playing (bodily/kinesthetic Intelligence), and metacognition techniques and thinking strategies (intrapersonal intelligence).

Curriculum Integration

In the article, "Curriculum Integration" by Teaching Today indicated that students learn best when curriculum are related to each other and connected to real-life experiences, where students examine concepts and themes to see how they "fit" together, and where the students learn best by doing. Slavin (2000) also suggested that at the elementary school level, the students have transitioned to a new developmental stage, from a preoperational thought to a stage of concrete operations, and at this stage, the students are developing memory and cognitive skills, including metacognitive skills, meaning the ability to think about their own thinking and to learn how to learn.

Here are several examples: by integrating mathematics with multiple intelligences, the lesson looks like this. The objective is for the students to estimate the number of bottle caps, a total of 23 bottle caps, for each peg required for making their personal tambourine. This activity is in sequence and would take several days to complete.

First, the students would gather bottle caps at home or ask their neighbors (bodily/kinesthetic intelligence and interpersonal intelligence) and for ivy plant vines (naturalist intelligence), where the author would have some samples for the students to show their

parents/responsible adults or neighbors what the students' need, which would be used to decorate their tambourines.

Second, the classroom aide or a parent would straighten and pierce a hole through the bottle caps, while the teacher would ask students to form groups (interpersonal intelligence). The students would brainstorm, using a six-inch circular paper plate and estimating the number of bottle cap, a total of 23 bottle caps, is required for making a tambourine, including the design for the tambourine as to "How far apart would each peg be and how many bottle caps would be to each peg accommodating the entire amount of bottle caps?" This is logical/mathematical intelligence.

Third, the students would practice singing, with their completed tambourines.

Finally, after the activity, the students would write a journal describing their experience of the entire process in making their tambourines (intrapersonal intelligence).

By integrating English with multiple intelligences, the lesson would look like this. The objective is for the students to retell their walk around the neighborhood. The activities for this lesson are in sequence and would take several days to complete.

First, the teaching strategy is to take the class for a walk around the neighborhood (naturalist intelligence and bodily/kinesthetic intelligence), and while the author points and reads the names on signs and posters (spatial intelligence), the advanced students would take pictures of the signs and posters (bodily/kinesthetic intelligence). Midway of the walk, the author would ask the class this question, "How are the addresses of each home different from those on the other side of the street?" This is logical/mathematical intelligence. And at certain locations, the students would talk to the homeowners about having some small pine cones from the homeowners' pine trees or talk to the homeowners about acquiring some ivy vines around the homeowners' front yard (naturalist intelligence and (interpersonal intelligence).

Secondly, the author's "fun" activity is for the class to sing farewell song (musical intelligence) and later, the author would show the pictures before the class ends for the day and have the students retell their walk around the neighborhood (spatial intelligence and linguistic intelligence).

By integrating science with multiple intelligences, the lesson would look like this. The objective is for the students demonstrate their understanding about musical notes. This activity is in sequence and it would take several days to complete.

First, the students would ask their neighbors, friends, and relatives for several small pine cones (interpersonal intelligence and naturalist intelligence).

Second, each student would collect seven, clean coke or root beer bottles and bring to class (bodily/kinesthetic intelligence).

Third, the students would form into groups and make the tiny mallets.

Fourth, the students would measure the proper amount of water at the proper height to each bottle (logical/mathematical intelligence and spatial intelligence).

Fifth, the author would tune his bottles (do, re, mi, fa, so, la, ti) and the students would match the author's tuning and match their voices with the notes from the bottles (musical intelligence). The author would play a simple musical selection such as "Oh Susanna."

Finally, the students would write in their journal, reflecting on their experience in this activity (linguistic intelligence and intrapersonal intelligence).

By integrating reading with multiple intelligences, the lesson will look like this. The objective is for the students to follow instructions, which are posted on the classroom activity wall. The activity would take a few days to complete.

First, the instructions are for each of the group table to select and start one of the musical scales, expect for “Fa,” “La,” and “Ti” and proceed on their own. On the classroom wall, the title of the activity is Musical Scales, with do, re, mi, fa, so, la, ti.

The “do” note would be for the students to go (bodily/kinesthetic intelligence) to the library and locate (spatial intelligence) a story that has a female deer (naturalist intelligence) and write (linguistic intelligence) five sentences report on the story and give reasons why they enjoyed or did not enjoy the story (intrapersonal intelligence).

“Re” note is for an activity done outside the classroom; the students would place construction paper on the ground (bodily/kinesthetic intelligence) and place several treasured items on the construction paper and let the sun do the work. The students, however, would record (spatial intelligence, linguistic intelligence, and logical/mathematical intelligence) the times the students checked the paper and at the end of several days, the students would describe the sun painting to the class (spatial intelligence) along with a brief three sentences paragraph beneath the sun painting.

“Mi” note is for students to write in their journals about themselves (intrapersonal intelligence).

“Fa” note is done with the entire class on the playground and where the students would run a straight-line (bodily/kinesthetic intelligence) for three seconds, for third grade, and measured (spatial intelligence, linguistic intelligence, and logical/mathematical intelligence). A future lesson from this activity would be for the students to come up with the average.

“So” note is to go to the library (bodily/kinesthetic intelligence) and locate (spatial intelligence) a book about people sewing either in an industrial capacity or regular people in the story and later write (linguistic intelligence) a five sentences report on the story and give reasons (intrapersonal intelligence) if they enjoyed or did not enjoyed the story.

"La" note is done in the classroom with the students performing a choral reading of "Lavender's Blue (Dilly Dilly). This is a linguistic intelligence.

"Te" note is done by transforming the classroom into a tea garden and each table with various teas and for the students to select a tea and jam for snack, while listening to the "Sound of Music."

Assessments

Observation, dialogue, documentation and Concept Attainment Model are key components in collecting information and examining the information to check if the students are reaching their objectives, and where multiple intelligences are enhancing students' learning abilities that mirror's real life experiences.

In observation, for example, the author is able to observe the students' ability such as running with friends at the playground or swinging on the monkey bars and traits such as helping another students getting up after the student fell or attempting to cut in line at the lunch line. Thus, the students demonstrated their ability that comes naturally with little effort of teaching required, except for the student trying to cut in front of the line. And in that case, the author would go to the student and inform the student that his/her behavior was inappropriate and walk back to the end of the line, where the author would pay close attention and make sure the student stays in the back of the line, which would also serve as a deterrent to other students from copying the student's inappropriate behavior.

In addition, by observing the strengths of the students, the author would consider a student teaching model strategy (in one-to-one partnership) where the students would assist students having learning difficulties, such as in logical/mathematical intelligence and linguistic intelligence. Another supporting role is having the students become a member of the classroom thinking club, which consisted of checkers and chess contests that would address their

logical/mathematical intelligence. Another fun game would be the daily comic strip where students can create and read their own fun statements and this fun game would address the students' linguistic intelligence.

In dialogue the author is able to receive information for understanding the students' learning process. By asking questions, the students are reflecting their knowledge on the subject matter. Also, the dialogue is an avenue of learning about the students' academic strengths and weaknesses that would signal where the author might make in possible changes to benefit the students.

Another supportive tool in the assessment process is self-assessment, where there is dialogue between teacher and students. This process involves students in critical thinking and problem-solving tasks, where elementary students develop metacognitive awareness that would promote positive perceptions of themselves as learners (Bingham, Holbrook, & Meyers, 2010).

In documentation it supports the author's decisions about the classroom environment and provides the means on where and how the students are performing in the classroom. One example is the daily journal, in which the student would write (linguistic intelligence) about the activities they experience and reflect on their learning performances (intrapersonal intelligence).

Finally, the Concept Attainment Model (Joyce, Weil, & Calhoun, 2009) is used to determine if important ideas introduced earlier have been mastered, and where the students' would learn a new concept from the present activity. For example, in the integrating English with multiple intelligences lesson, the students, who completed their assignments, would sketch the neighborhood and place the signs and posters at proper location (spatial intelligence).

Higher-Order Thinking

After a period of time, the students would reach a plateau where they have discovered and become competent and demonstrated their proficiency in the basic concept (Lazear, 2004) of

multiple intelligences. The author is satisfied with the classroom environment that fostered and enhanced the students' learning abilities. At this particular point, however, the author is designing another level of multiple intelligences before the students' learning styles are stagnated and the students' become bored in the classroom.

Lazear (2004) further indicated that a higher-order thinking process would be the next level for the students, and by designing a classroom environment conducive to refine the students' learning abilities, the author would take into consideration the continued implementation of multiple intelligences. From the STAR, the area where the author is able to concentrate is in mathematics since the students that took the test in the eighth grade did poorly. For example, mathematics is done by having the class interact with nature by growing dried beans (naturalist intelligence). Next, the students would form into groups where they would create a joyful musical song about the neighborhood tour (musical intelligence), and the students would document their feelings and thoughts about the neighborhood tour by writing in their journals (intrapersonal intelligence and spatial intelligence). In addition, since many of the students have their origins outside of the United States, it would be an ideal time for the students to be part of the school assembly and dance their traditional dance that would convey work and celebration (bodily/kinesthetic intelligence), and with an ongoing problem of schoolyard bullies, this is not only a school problem but nationwide, the students would form into groups and discuss possible methods of avoiding schoolyard bullies (interpersonal intelligence), where the students have the opportunity to speak out freely about their experiences as they encounter schoolyard bullies and what possible actions they would take to avoid these types of situations (linguistic intelligence). In addition, in the planting of dried beans, the thinking process changes from concrete to word problems such as "By applying three seeds per cup and we have 20 cups and if half of the total are exposed to sunlight and the other half is in the shade, which group of seeds will come up first?" This is the logical/mathematical intelligence.

Reflection

By utilizing the concept of reflection and by combining the concept of multiple intelligences, the students would learn effectively and the teachers would solidify their personal teaching practices. Phan (2009) indicated that reflective thinking practice and achievement goals are important factors contributing to the prediction of students' academic success. Another item of importance to effective teaching is for the teachers having confidence in their ability to promote student learning, which was related to student achievement in a RAND corporation study (Hawkins, 2009).

This is also a key component to effective student learning, and where the teachers would improve personal teaching practices, which is through reflective practice. It is a method that facilitates improvement in performance (Osterman and Kottkamp (2004). York-Barr, Sommers, Ghere, and Montie (2006) described the reflective teacher as: a person who stays on focused on education's main purpose, which is student learning and development, a person who assumes responsibility for his/her own learning, a person who demonstrates awareness of self and others, and a person developing the thinking skills for effective inquiry. Reflective practice also provides directions for the teachers in a different role, in which the teachers become facilitators, persons keeping discussion moving until there is a solution, and where the teachers are considered change agents.

Reflective teachers commonly use direct observation to look at their behavior and learn about their own practice, and the use of videotapes is a tool for best practices. York-Barr et al. (2006) suggested that videotaping is a means as an objective record of what actually took place in a specific instructional context, where the purpose of using this method is to specifically examine and reflect on instructional practice, and not to evaluate. In essence, the teachers

increase their understanding of reflecting on the video, and where teachers become more aware of habits and mannerisms that teachers are now trying to change.

Videotaping is able to address some of the issues. For example, teachers would be able to discover how they are reacting with their students. This would also give the teachers the opportunity to reflect on how to improve their teaching and how to make their lessons more interesting

Conclusions

With an increase of students of diverse cultures in the California classrooms, teachers have been teaching traditional teaching methods and the results have contributed to the disappointing test scores in California. By integrating subject contents as language arts, English, mathematics, science, and reading with multiple intelligences, the lessons would be interesting and foster student learning. Teachers have several assessment tools that would help identify students' strengths and weaknesses where teachers can accommodate appropriate lessons for effective students' learning. And combining reflective practices with multiple intelligences, the students would be competent in their learning styles and increase their testing scores.

References

Armstrong, T. (2000). *Multiple intelligences in the classroom* (2nd ed.). Alexandria, VA: ASCD.

Bingham, G., Holbrook, T., & Meyers, L. E. (2010, February), Using self-assessments in elementary classrooms. *Phi Delta Kappan*, 91(5), 59-62.

Blake, S. (2008, April). A nation at risk and the blind men. *Phi Delta Kappan*, 89(8), 601-602. Retrieved from http://proquest.umi.com.proxy1.ncu.edu

California Standardized Testing and Reporting (STAR), *California Standards Test Scores – 2005: Fresno Unified District* Retrieved from http://star.cde.ca.gov

California Standardized Testing and Reporting (STAR), *California Standards Test Scores – 2010: Fresno Unified District* Retrieved from http://star.cde.ca.gov

Gardner, H. (2006). *Multiple Intelligences: New Horizons*. New York, NY: Basic Books.

Gray, K. C., & Waggoner, J. E. (2002, Summer). Multiple intelligences meet Bloom's taxonomy. *Kappa Delta Pi Record*, 38(4), 184-188). Retrieved from http://proquest.umi,com.proxy1.ncu.edu

Hardman, M.L, & Dawson, W. (2008, Winter). The impact of federal public on curriculum and instruction for students with disabilities in the general classroom. *Preventing School Failure*, 52(2), 5-12. Retrieved from http://proquest.umi.com.proxy1.ncu.edu

Hawkins, V. J. (2009). Barriers to implementing differentiation: Lack of confidence, efficacy and perseverance. *New England Reading Association Journal*, 44(2), 11-19. Retrieved from http://proquest.umi.com.proxy1.ncu.edu

Joyce, B., Weil, M., Calhoun, E. (2009). *Models of teaching* (8th ed.). Boston, MA: Pearson Education, Inc.

Lazear, D. (2003). *Eight ways of teaching: The artistry of teaching multiple intelligences* (4th ed.). Glenview, IL: Pearson Education, Inc.

_____ (2004). *Higher-Order Thinking the Multiple Intelligences Way*. Chicago, IL: Zephyr.

Montague, A. (2004, August 16). Students' expression, creating a "whole" child is accomplished through the arts. *The Charleston Gazette*, 5A.

Ornstein, A. C., & Hunkins, F. P. (2009). *Curriculum: Foundations, principles, and issues* (5th ed.). San Francisco, CA: Allyn and Bacon.

Osterman, K. F., & Kottkamp, R. B. (2004). *Reflective practice for educators: Professional development to improve student learning* (2nd ed.). Thousand Oaks, CA: Corwin Press.

Phan, H. P. (2009, May). Exploring students' reflective thinking practice, deep processing strategies, effort, and achievement goal orientations. *Educational Psychology*, 29(3), 297. Retrieved from http://proquest.umi.com.proxy1.ncu.edu

Quaid, L. (2009). Obama puts $3.5B toward fixing failing schools. *USA TODAY*. Retrieved from http://usatoday.printhis.clickability.com

Ravitch, D., & Cortese, A. (2009, September). Why we're behind: What top nations teach their students but we don't. *The Education Digest*, 75(1), 35-39. Retrieved from http://proquest.umi.com.proxy1.ncu.edu

Sanders, A. (2008, October). Left behind: Low-income students under the no child left behind act. *Journal of Law and Education*, 37(4), 589-597. Retrieved from http://proquest.umi.com.proxy1.ncu.edu

Slavin, R. E. (2000). *Educational Psychology: Theory and Practice* (6th ed.). Boston: MA, Allyn and Bacon.

Sturz, D. L., & Kleiner, B. H. (2005). Effective management of cultural diversity in a classroom setting. *Equal Opportunities International*, 24(5/6), 57-65. Retrieved from http://proquest.umi.com.proxy1.ncu.edu

Teaching Today (n.d.). *Curriculum Integration.* Retrieved from http://teachingtoday.glencoe.com

York-Barr, J., Sommers, W. A., Ghere, G. S., & Montie, J. (2006). *Reflective practice to Improve schools: An action guide for educators* (2nd ed.). Thousand Oaks, CA: Corwin.