

Evaluation Strategies for Educational Career Pathway Programs: Targeting Underrepresented High-Performing Youth

By

Sandra Eames, Ed.D. , Terrance Tutchings, Ph.D., and Fred Estrello, M.Ed.

**Round Table Discussion
American Evaluators Association Annual Meeting
November 11, 2010 San Antonio, Texas**

Abstract

In the age of teacher accountability, school report cards, and No Child Left Behind, evaluation becomes a piece of the puzzle that assists in shining light on a program's effectiveness through the use of data proven efforts. The purpose of this evaluation study was five fold: accountability, improvements, understanding, and dissemination of effective services for target beneficiaries as well as empowering the program for better sustainability/transportability, the ultimate goal being to increase the access to higher education for underrepresented populations. The evaluation of *Project Jumpstart*^{*} operated at St. Edward's University in Austin, Tx, was designed as a utilization-focused approach to examine the effectiveness of a teacher recruitment program in attracting high-performing underrepresented high school students from the Austin Independent School District to earn a college degree with teacher certification at St. Edward's University through an innovative 2+2+2 pathway in career and technical education.

Introduction

Background

By 2014, it is estimated that over 3.9 million new teachers will be needed due to population growth, teacher retirement, and the high teacher turnover rate (National Center for Educational Statistics, 2003). In recent years community colleges have partnered with higher institutions in an attempt to fill these upcoming and current vacancies with teachers for K-12. Partial fulfillment of this need has been accomplished through an outcrop of community college's two-year paraprofessional, or teaching assistant, programs. These programs attempt to connect students to the field of teaching

^{*} Project Jumpstart was established in 2006 and is sustained through funding from the Sid W. Richardson Foundation in Ft. Worth, Texas.

by preparing them as teaching assistants and encouraging them to go onto a four-year degree program and ultimately teacher certification. Responding to local labor shortages in critical teaching fields, Texas offers a two-year Associate of Arts in Teaching degree delivered in community colleges with articulation to all public-funded universities within the state. Such career pathways in community college programs have had favorable outcomes regarding teacher education around the U.S., especially when they have had articulation agreements in place with four-year institutions (Bragg, 2007).

Considering the overall teacher shortage in America, it is well established that there has historically been a minority teacher shortage (Darling-Hammond, 2000). In 2005, the national average for teachers and students shows that 11% of the current teachers were defined as minority while 40% of the student population was reflected as minority. However, in many urban areas, underserved and minority student populations are higher than the national student average. Within the Austin Independent School District (AISD), school district, the minority student population is much higher than the student average quoted above with the following ethnic breakdown of the 2007-2008 student population: Hispanic 57.05%, White 26.84%, African American 12.73%, and Asian 3.14%. Research suggests students have higher academic, personal, and social performance when taught by teachers of their own ethnic group (Baker, 2004).

An ultimate goal in responsible teacher preparation is to close the achievement and cultural gaps that currently exist in the recruitment and retention of teacher candidates through seamless articulation across secondary and postsecondary career pathways. Although career pathways within industrial and science, technology, engineering, and mathematics (STEM) occupational fields is not a new concept, hybridized models that fuse career and technical programs with an academic career pathway leading beyond a two-year degree to attain a bachelor's degree have been slower to emerge in the professional disciplines, including teacher preparation. Many states, including Texas, Delaware, Illinois, New York, and South Carolina, have established teacher career pathways through significant public funding coupled with long term planning. These "grow-your-own" career pathways have been largely developed to recruit teachers from the P-12 setting to meet widespread shortages in critical teaching fields. Unfortunately, there is little known about the effectiveness about these programs due to a lack of research and dissemination and even less discussion supporting or promoting their benefits in closing the gaps in student achievement and increasing the college graduation rates among underserved students.

Purpose

This paper is designed to generate discussion on the evaluation design and selected findings of an urban career and technical education program, *Project Jumpstart*, that was designed as an innovative 2+2+2 model for establishing a P-16 career pathway for preparing teachers in urban settings. Project Jumpstart was established as a collaborative partnership among the Austin Independent School District (AISD), Austin Community College (ACC), and St. Edward's University (SEU) with the common goal of increasing access for underserved populations and diversifying teacher recruitment and retention within a large urban district.

Project Jumpstart

From 2006 to 2010, the Sid W. Richardson Foundation funded *Project Jumpstart*, an innovative teacher career pathway for urban, underserved secondary students. The project was developed in 2006 and implemented by St. Edward's University, in partnership with Austin Community College (ACC) and the Austin Independent School District (AISD). The career pathway was designed within local efforts in high school redesign and built upon two existing electives, *Ready, Set, Teach! I and II* (RST), offered in AISD. RST coursework is an approved career and technical education program that was developed and disseminated by the Curriculum Center for Family and Consumer Sciences at Texas Tech University in cooperation with the Texas Education Agency. The two courses are recognized as electives on the Texas high school degree plan. Each course counts as one credit hour and takes two semesters to complete over an academic year. In certain parts of the state, the second RST course is offered for dual credit.

The first year of the program (2006-2007) was spent in program planning. Outcomes included forming an advisory board, identifying a broad-based regional collaborative of stakeholders in P-16 education and workforce development, designing outcomes and a long range action plan, and identifying target high schools for the implementation of the career pathway model. As RST courses were already delivered at three high schools, the advisory board working with district administrators agreed that the career pathway would be implemented in conjunction with local high school redesign at three sites, Austin, Akins, and Crockett High Schools. In the spring of 2007, Dr. Pat Forgione, Superintendent AISD, issued pre-contracts to seniors graduating from the program, ensuring their employment as teachers in AISD upon graduation from college with a bachelor's degree and successful completion of teacher certification.

Today, *Project Jumpstart* operates as a regional P-16 collaborative partnership across Austin ISD, a large urban school district in Central Texas, and Del Valle ISD, Eanes ISD, Pflugerville ISD, Hays ISD and Hutto ISD, five suburban school districts in the greater Austin area. In the 2009-2010 academic year, the program served approximately 200 students. The partnership also expanded to include Huston-Tillotson University, a historically Black university in Austin, Texas. In the spring of 2009, the Texas Association of Partners in Education (TAPE) awarded *Project Jumpstart!* the Gold Medal Award for community partnerships in career education. In the spring of 2010, the Area IV Career and Technical Association of Texas awarded *Project Jumpstart!* the "Outstanding Service to Career and Technical".

Evaluation Design

Utilization-Focused Evaluation

The evaluation design for the Jumpstart initiative was viewed as a continuing conceptual process (Stufflebeam & Shinkfield, 2007) based on a utilization-focused approach that program evaluation should make an impact that allows for grounded choices and specific direction (Patton, 1997). A democratic approach was shared between the program managers, advisory committee members, and evaluator, which engaged the stakeholders in an open dialogue at the onset and set the agenda. This method of early inclusion with key leaders helped to generate research questions, created project buy-in, and helped to shape the study. During the design process, Stufflebeam's CIPP model was

viewed as the best fit for the evaluation method. The bedrock for most CIPP evaluations is the ability to remain flexible yet responsible to the program that is being evaluated (Stufflebeam & Shinkfield, 2007).

Research methods for this study were both quantitative and qualitative, which tracks the true form of Daniel Stufflebeam's CIPP model, a utilization-focused model for evaluation. The data-collection process was multifaceted, examining demographic data, attendance data, SAT, TAKS, Exit, and GPA scores as well as conducting interviews, focus groups, and reviewing hard survey data. Students, parents, and teachers, within the RST program as well as principals and guidance counselors at the RST high schools were included in the study.

Throughout this study interim reports have focused on program inputs, process, data review, and assessments of outputs, especially oriented to supporting program development and improvement, which track the fidelity of formative and summative roles (Stufflebeam, 2000). Specific modes of inquiry were formed around the following research questions to guide the evaluation. However, it should be noted that the questions have been refined over the life of the evaluation as findings have unfolded.

- To what extent are teacher recruitment materials successful in recruiting students?
- How effective are local student teacher programs?
- How effective has the RST curriculum/program been on RST student recruitment & retention?
- Are the current student teacher programs (RST) recruiting high performing first generation underserved students?
- To what extent will survey data assist in teacher pipeline initiative?
- To what extent would RST dual credit classes influence recruitment of students?
- To what extent would expanding *Ready, Set, Teach!* reduce minority teacher shortage?
- Are underrepresented high school students filling out Free Application for Federal Student Aid (FAFSA) forms at the same rate as majority groups?

The research questions are presented below in Figure1 as a model for the evaluation scheme in this study.

Figure1. *A Model for Utilization- focused Evaluation of the Effectiveness of a Career Pathway Program*

Date	Evaluation Question	Program Objectives	Methods	Data Sources
Fall 2007 – Summer 2008	To what extent are teacher recruitment materials successful in recruiting students?	Design and create teacher recruitment materials	SEU marketing department administered a survey – feedback created t-shirts, pen	RST surveys, focusgroups, interviews, multiple site

			& pencil sets, brochures, etc.	visits
Fall 2007	How effective are local student teacher programs?	Implement first year of the action plan	Steering Committee	Meeting agendas and minutes
Spring 2008	How effective has the RST curriculum/program been on RST student recruitment & retention?	Develop a course for high school career exploration in education and teaching	RST curriculum was revised during the Summer of 2008 by RST teachers, AISD C&I dept. and ACC	RST student surveys & RST parent surveys. Meeting agendas and minutes
Summer 2007 – Summer 2008	Are the current student teacher programs (RST) recruiting high performing first generation minority students?	Utilize formative and summative assessment measures	AISD application approved by research dept. Surveys Fall of 2007 and Spring of 2008. AISD Demographic data was analyzed.	AISD department of program evaluation partner with SEU
Summer 2008	To what extent will survey data assist in teacher pipeline initiative?	Continue dissemination efforts	Results of above data disseminated to stakeholders	Surveys, focus groups, AISD, and meeting attendance
Fall 2007 – Summer 2008	To what extent would RST dual credit classes influence recruitment of students?	Evaluate project and revise as needed to ensure success	Recommendations were delivered to steering committee & SEU faculty	Surveys analyzed and reported findings
Spring 2009	To what extent would expanding Jumpstart reduce minority teacher shortage?	Convene planning to ensure sustainability	Explore partnership w/ local industries, universities, and additional districts	Identify key staff in each agency

Data Sources & Analysis

For this study, the selection of an available, also referred to as accessible, population was used as the sampling procedure (Gay, 2000). The *Project Jumpstart* initiative relied on a number of different data sources throughout the evaluation process. Initial sources included the U.S. Census Bureau, *Travis County Immigrant Assessment*, Austin Independent School District (AISD), student surveys, parent surveys as well as focus groups with principals, teachers, guidance counselors, and college faculty and administrators. A reciprocal partnership was forged with AISD and data sharing agreements are in place, which has benefited all partners. Over the past three years, rounds of surveys administered to the Jumpstart Advisory Committee contributed to the direction of the program. In sum, all stakeholders were included in the formative stages of the program's evaluation.

The first year of program implementation was used for planning the *Jumpstart* program, which included identifying 3 high schools in a large urban district. During the second year of *Jumpstart*, data was gathered using surveys and focus groups, which again included 3 high schools, 48 AISD-RST students and parents, three high school principals, three counselors and three AISD-RST teachers. The first sample consisted of 48 (*N*) students (the last sample consisted of 69 (*N*) students) enrolled in the 11th and 12th grade AISD-RST classes. Forty-four of the students enrolled in RST classes within the AISD school district were females and 4 were males. In addition to the students, 48 parents were also given surveys in both English and Spanish. Multiple focus groups and in-depth interviews were conducted with the three AISD-RST principals, teachers, and guidance counselors from the three original AISD-RST schools. These surveys and focus groups were administered twice a school year, in the fall and at the end of the spring semester.

A collaborative mix of data collection methods and sources were used during the data synthesis procedure. Using analyses comparing participant to non-participants became the pivotal centerpiece of the Jumpstart evaluation. It should also be mentioned that the data sets were analyzed using the mean averages as well as t-tests to evaluate the differences of means between the two groups. The groups again were the AISD-RST students compared to the same grade level of students not enrolled in RST. Furthermore, some of the data collected was based on the 2007-2009 SAT, TAKS, attendance and GPA scores of RST students compared to the general student population. Overall, some of the findings listed are not statistically significant because of the small sample size (2009 AISD-RST students *n*=69). Nonetheless, qualitatively, the numbers reflect successes in some areas as well as areas that need improvement.

Selected Findings

Results from the surveys and quantitative test scores are too lengthy to discuss within the scope of this paper; however, some of the pertinent findings from the implementation years (2007-2010) of Jumpstart are included below.

Over three-fourths of the Jumpstart students represent first generation college-seeking students.

Eighty-one percent of the RST parents who responded to the survey did not have

a college degree. Survey results in 2010 showed that parents of RST students held the following level of education: 26% some college; 33% some high school; 22% high school or GED, and 19% masters/doctorate.

Percentage of Jumpstart students that participate in free or reduced lunch and who will need financial aid to pay for college.

Fifty percent of the RST students who responded to Project Jumpstart's 2009 survey reported participating in the free or reduced lunch program at school. Eighty percent of all RST students will need financial aid to pay for college.

Jumpstart students reflect the ethnic, racial, and linguistic diversity within the school districts and region.

The demographics of the RST students participating in 2009-2010 were 52% Hispanic, 22% African American, 20% White and 6% Asian/Other. This ethnic background is representative of the general student population at the participating school districts.

Jumpstart has experienced dramatic program growth and visibility, tripling its size since inception and expanding program outreach in the greater Austin region.

The program has grown from 48 (11th and 12th grade) students in three high schools within one urban school district to approximately 200 students, across seven high schools in six urban/suburban school districts. The program earned statewide recognition from the Texas Association of Partners in Education for community partnerships in career education in 2009. In 2010, the program again earned recognition by the Area IV Career and Technical Association of Texas.

Jumpstart is increasingly viewed by students and teachers as a professional career pathway, a vehicle to college for a licensed degree, with co-curricular and pre-professional activities.

One hundred sixty six (88%) of the RST students visited the St. Edward's University college campus during the fall 2008 semester. As of spring 2009, 5 graduating seniors have been admitted to St. Edward's University from AISD with others applying and being accepted to other universities in the state and region. As a result of the program, all participating high schools operate a local chapter of Texas Association of Future Educators (TAFE) on their respective campuses. In the spring of 2009, over 75 RST students and teachers attended the state TAFE conference for leadership and professional development.

Jumpstart students are more likely to enroll in postsecondary education after high school than their AISD peers in the years 2007 and 2009.

Regarding the 2007 AISD-RST high school graduates, the following is a snapshot of what happened to them beyond high school: 28 graduates, 22 (78.6%) enrolled in post-

secondary schooling in 2007; 17 at Austin Community College, 5 at a four-year institution, and 6 that have not been located by the AISD research offices. Of the 48 students, 11 were in the 11th grade and 37 were seniors. In summary, 78.6 percent of the targeted 2007 RST high school graduates went onto post-secondary schooling, which was higher than the reported national average of 67.2 percent and the reported AISD (2006) average of 63 percent. Fifty-six percent of those RST graduates who went onto post-secondary transitioned into a two-year college, 16 percentage points higher than the district average which is 40 percent. Unfortunately, postsecondary enrollment rates are only available for AISD Jumpstart/RST graduates and not the other partnering districts, a more detailed discussion on this issue can be found in the “limitations” section of this paper.

In 2009, 22 (88%) of the AISD-RST high school graduates went onto postsecondary education (an increase of 36 percentage points from 2008 AISD-RST students). The Austin Independent School district-wide postsecondary enrollment rates for the class of 2009 was 60 percent (down 3 percentage points from 2008)¹.

Jumpstart students are more likely to enroll in four-year institutions than two-year community colleges.

In 2009, out of the 88 percent who transitioned onto postsecondary, 40 percent of the AISD-RST 2009 graduates went to a community college and 48 percent went to a four-year university, an increase of 30.2 percentage points for the four-year group and a 19.3 percent decrease in the community college group (from 2007 group).² These shifts in a higher number of graduates transitioning into a four-year college are very favorable in that, students who transition directly into a four-year college are more likely to attain a bachelors degree than students who enroll directly in a community college.³ Nonetheless, in reporting this data, we must remain cautious in attributing the increase in RST graduates transitioning to postsecondary to the efforts of the Jumpstart project because of the small sample size.

Unexplained loss in AISD-RST postsecondary enrollment rates for 2008.

In 2008, the AISD-RST student postsecondary enrollment rates dropped from 78.6 percent to 52 percent. The 26.6 percentage point drop between 2007 and 2008 has

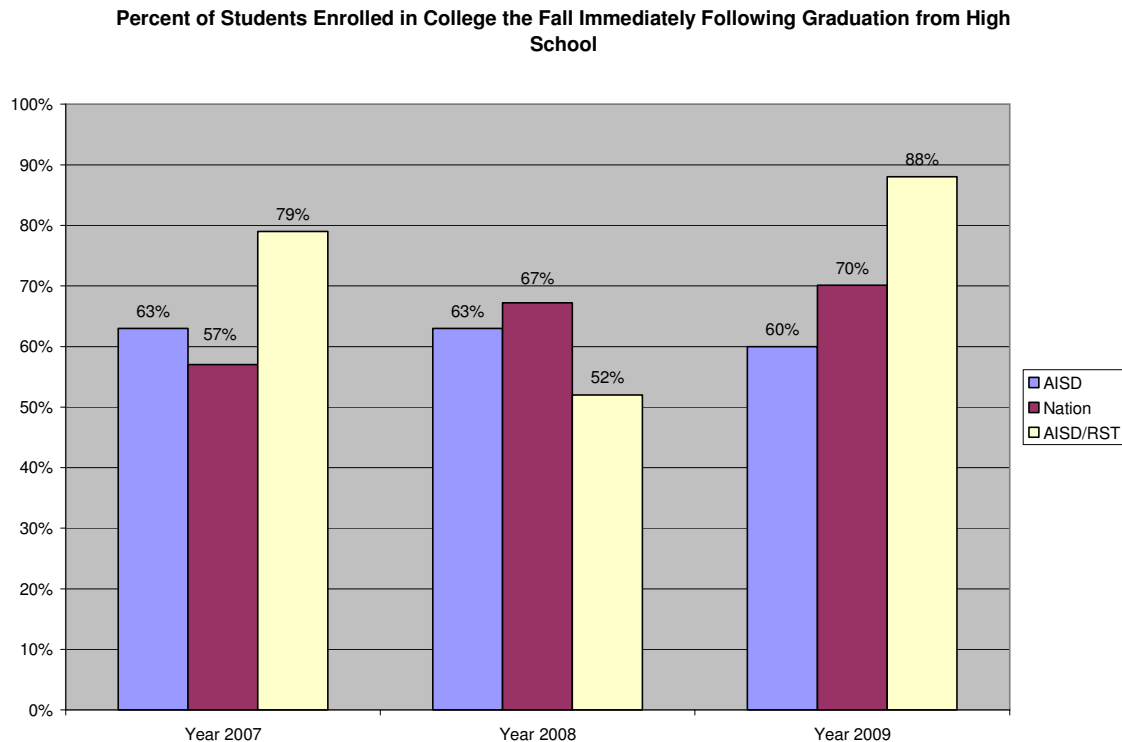
¹ AISD Department of Evaluation office provided the reported data on postsecondary rates to the evaluator via a request on May, 2010. The Bureau of Labor Statistics provided data on nation 2009 postsecondary rates. Postsecondary enrollment summary report: Classes of 2002-2008 by Marshall Garland. AISD Pub. No. 08.58.

² Source: National Student Clearing House data files for Austin ISD as of April 30, 2010. Note: The total includes students who were enrolled at any time during the first year after high school graduation

³ Orr, M. T., Bailey, T., Hughes, K. L., Karp, M. M. and Kienzl, G. S. (2004). The National Academy Foundation's Career Academies: Shaping Postsecondary Transitions. Institute on Education and the Economy, Teachers College, Columbia University.

yet to be explained but further research is underway to attempt to explain this loss in enrollment rates (see figure 2).

Figure 2. Comparison of AISD, the Nation and AISD-RST postsecondary enrollment rates.



Limitations

It is unfortunate but this paper will only include enrollment rates for postsecondary on AISD-RST students and not for the other partner schools despite efforts that were made every year since the inception of this program to obtain that data. The partner school districts are smaller and do not have research offices in place to track students through the National Student Clearinghouse as AISD does. It has been well recognized that there are difficulties throughout the education system regarding tracking students into postsecondary. Most recently, a grant from the Bill Gates Foundation was awarded to the University of Texas Dallas Education Research Center (UTD-ERC) that will help to expand the National Clearinghouse's Student Tracker for high schools system. Once in place this grant will address the urgent need within the education community for a standardized method for measuring the actual educational outcomes of students once they finish high school. Currently, there is no universally accepted way to determine the postsecondary attainment of high school students. As a result, U.S. policy makers and educators are unable to uniformly assess the performance of the nation's

secondary school system and make information-based decisions on policy and program improvements.⁴

Conclusions

Education researchers and evaluators have long been faced with sorting out the controversy surrounding the academic gaps and equity in the recruitment, matriculation, and retention among underserved and first-generation college students. Undoubtedly some of these gaps are proven to be a result of low teacher expectations and cultural differences between teachers and students. A plethora of recent research studies reflect as a predictor of student success the need for underserved students to be prepared in classrooms with teachers who represent the diversity within the student population and larger community in society as it stands today.

Additional discussion is warranted from the survey findings regarding the need to assist students in filling out college applications and ensuring that all RST students take a college entrance exam by their senior year. The fall survey (2009) found that 44% of 12th graders had applied to college/completed the Free Application for Federal Student Aid (FAFSA)/taken SAT and out of those 12% had been accepted to college. The spring surveys (May, 2010) found 74.7% applied to college/completed FAFSA/taken SAT and 60.4% had been accepted. These findings support an earlier hypothesis that students are waiting until late in the spring semester to apply for college, complete the FAFSA/take the SAT exam, which may be too late to get into many four-year institutions. The Department of Program Evaluation at AISD has reported similar findings, as those reported above, on their 2007 Senior Exit surveys and post-graduation tracking efforts.

More specifically, AISD is finding that Hispanic graduates are less likely than members of other ethnic groups to complete the FAFSA and are less likely than members of other ethnic groups to take the SAT college admission test during their senior year (Garland, 2008). Project Jumpstart's evaluation findings support those reported by AISD. This is cause for concern since the demographics reflect that Hispanic students populate 52% of the overall RST classes and for AISD-RST students the number is higher at 57%. Thus while Hispanics comprise the majority in the RST classes, only 18% of those RST seniors who responded to the fall 2010 survey have completed the entire college application process. More questions need to be asked and more case management work is needed for this target population if the current minority teacher gap is to be closed or at the very least minimized.

Author's Note

A preliminary version of this paper that reported on the 2007-2008 *Project Jumpstart* findings and results were presented at the 2009 American Educational Research Association (AERA) conference in San Diego, CA. The authors of the original version of this paper were Drs. Karen Embry-Jenlink and Sandra Eames.

⁴ UTD-ERC Assists in Creating First Nationwide Research & Reporting System Connecting High Schools to Postsecondary Outcomes. Found online at: <http://www.utdallas.edu/research/tsp-erc/newsletters/tsp-newsletter-03-2010.html>

References

- Baker, R.L. (2004). NCLB Imperils Minority Hiring, *Education Week*, 24, 12.
- Bragg, D. D. (2007). Teacher Pipelines: Career pathways extending from high school to Community College to University. *Community College Review*, 35(1), 25-29.
- Darling-Hammond, L. (2000). *Solving the dilemmas of teacher supply, demand, and standards: How we can ensure a competent, caring, and qualified teacher for every child*. New York: National Commission on Teaching and America's Future.
- Garland, M. W. (2008). *What were the post-graduation employment outcomes of members of the AISD class of 2006?* Department of Program Evaluation AISD. Pub. No. 07.52. Retrieved November 5, 2008, from <http://www.austin.isd.tenet.edu/>
- Gay, L. (2000). *Educational research: Competencies for analysis and application* (6th ed.). Upper Saddle River, NJ: Prentice-Hall.
- Orr, M. T., Bailey, T., Hughes, K. L., Karp, M. M. and Kienzl, G. S. (2004). The National Academy Foundation's Career Academies: Shaping Postsecondary Transitions. Institute on Education and the Economy, Teachers College, Columbia University.
- Patton, M. Q. (1997). *Utilization-focused evaluation* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Stufflebeam, D. L. (2000). The CIPP model for evaluation. In D. L. Stufflebeam, G. F. Madaus, & T. Kellaghan, (Eds.), *Evaluation models* (2nd ed.). (Chapter 16). Boston, MA: Kluwer Academic Publishers.
- Stufflebeam, D. L., & Shinkfield, A. J. (2007). *Evaluation theory, models, and applications*. San Francisco, CA: Josey Bass Publishers.
- U.S. Department of Education, National Center for Education Statistics (NCES). (2003). *Condition of Education*. Found in, *NEA Addresses Top Five Teaching Trends and Outlines: Portrait of American Teacher*. Retrieved February 6, 2008, from http://www.educationnews.org/Commentaries/National_Teacher_Day.htm
- U.S. Department of Labor Statistics. (2010). College enrollment and work activity of 2009 high school graduates. Retrieved September, 6 2010, from <http://www.bls.gov/news.release/hsgec.nr0.htm>