JEP | EJOURNAL OF EDUCATION POLICY ESTABLISHED 2000

A Study of Utah's New Century Scholarship (NCS) Program

Authors: Christine Kearl, Deborah Byrnes, and Cathy Maahs-Fladung

Affiliation: Education Director, Office of the Governor; Utah State University

Spring 2013

Abstract

This was a study about the New Century Scholarship (NCS) program offered to Utah high school students at commencement for earning an Associate of Arts (AA) degree by the time they graduate from high school. An Associate of Arts degree is earning 60 college credits toward a specific AA program. The goal of the NCS program was to assist students to bachelor degree completion faster than the traditional time.

This program has been in Utah for 20 years, but no research about the program exists. Annually, the cost to taxpayers is \$2 million dollars. This study was conducted to determine if the New Century Scholarship (NCS) expedites bachelor degree completion and if so what variables on the career pathway assisted toward quicker completion.

The spring of 2012 the Utah Systems of Higher Education (USHE) emailed and mailed surveys to three cohort groups of high school graduates. The response rate was 56%— high enough to generalize results. Descriptive data, statistical analysis, and multiple-regression tests were run on the data. The most significant discovery was the fact that the NCS does expedite bachelor degree completion for both males and females with an average time to completion of 3.57 years. Females did complete their degree earlier than males by half a year. This is less time than the national average of 4.7 years to bachelor degree completion (Complete College America, 2009). This calculation by Complete College America is without an Associate of Arts degree at the time of high school graduation. Another important finding was the rate of completion for NCS recipients with a bachelor degree at 83.2% for the three year cohort group. The variables that were significant in expediting graduation for the NCS scholarship recipients were gender, college major, and college selection.

The multiple-regression analysis identified additional variables that expedited bachelor degree completion. These variables were attending school full-time, enrolling in and attending only one college, and the number of Associate of Arts courses accepted toward bachelor degree completion.

Introduction

The workforce demands of the future will require a more educated populace than exists today. Georgetown University, Center on Education and the Workforce, (Carnevale, Smith, & Strohl, 2010) conducted a study on education and the workforce. The bottom line of their research

indicated that getting a post secondary education certificate or degree matters and career/major selection matters more. They ran an analysis and recommended a profile on each states job projections and educational attainment requirements through to the year 2018. In order to meet these demands Utah has established a goal from the Georgetown research of 66% of the adult population ages 20-64 earning a post-secondary certificate or degree by 2020. The NCS program was successful in expediting graduation and the NCS recipients had a higher than average college graduation rate. The NCS maybe one way Utah and perhaps other states can help students to gain faster access to degree attainment.

Concurrent enrollment programs and the New Century Scholarship (NCS) were first introduced in Utah in the mid-1990s. Concurrent enrollment is a program that allows high school students to simultaneously earn college credit toward a postsecondary diploma, certificate, or degree at an institution of higher education and credit toward a high school diploma. High school students completing an Associate of Arts degree through concurrent enrollment are awarded the New Century Scholarship (NCS). A student with a NCS has 5 years to complete the remaining 2 years for a bachelor degree (Utah Code 53B-8-105). At the time of this study, 75% of the remaining 2 years of tuition was paid for by the scholarship.

Conceptual Framework

The conceptual framework of this study was developed around the ideas, definitions and research of previous scholars studying concurrent enrollment classes and other accelerated high school programs (e.g., Early College High Schools, Advanced Placement, and International Baccalaureate). Previous studies have identified short-term and long-term effects of such programs. Variables such as gender, quality of school counselors, academic ability of students, articulation between secondary education schools and colleges, and life circumstances that influence the career pathways of college students have been explored. While some studies (Adelman, 1999: Swanson 2008) have looked at how accelerated learning programs can increase college retention rates and graduation rates, no studies were found that looked specifically at issues or scholarship programs that may be related to expediting graduation from college with a bachelor's degree. For a comprehensive review of the policy and research literature on these topics see Kearl (2012).

Utah's Policy

For most Utah students, concurrent enrollment courses are college classes taught in the high school by high school teachers that have met hiring requirements for college adjunct faculty. Students register for the classes at both the high school and the college and a college transcript is generated. Course syllabi, textbooks, tests, and requirements are the same at the high school campus as they are on the college/university campus.

Central to this discussion was the question of whether or not the scholarship assists students toward earlier graduation. Research on dual enrollment and accelerated learning programs

suggests that students participating in a rigorous high school experience which includes college credit courses have greater retention, persistence, and graduation rates (Adelman, 1999; Swanson, 2008). Earning college credit in high school assists students with getting a jump start on their college education. NCS students graduate from high school with an Associate of Arts degree paying no tuition and a nominal registration fee.

Theoretically, early graduation from college allows students to exit the system sooner with a degree and become gainfully employed, thus supporting the current tax base and contributing back to society. The student benefits from early graduation and the state benefits from early graduation.

Purpose of the Study

The purpose of this study was to follow up with a three year consecutive cohort group of NCS graduates and document their career pathways and time to college completion. This was a statewide study of all Utah high school students from 2004-2006 who graduated from high school with an Associate of Arts degree and qualified for the NCS. This study describes the career pathway, college major, college choice, high school counseling, and other life circumstances of students receiving the NCS.

Methods

In the spring of 2012 the primary researcher with the assistance of the Utah System of Higher Education sent 613 surveys to graduates from the three cohort groups of high school graduates earning the NCS. NCS recipients were contacted by email with a URL to an electronic survey that was to be completed anonymously. Since some email addresses were out of date, follow up postcards with the URL to the survey were sent out to increase the number of participants.

Findings

The demographic information from the respondents revealed that the sample consisted of 52.2% male and 47.8% female, with 94.8% Caucasian, 2.6% Asian, 1.9% Hispanic, and 0.7% Pacific Islander. This reflects a similar demographic population as reported by the USHE database on total NCS recipients from 1999-2011. Of the responses, 27.14% said they attended Brigham Young University, 26.22% attended the University of Utah, 20.43% attended Utah State University, 9.45% attended Utah Valley University, 7.01% attended Southern Utah University, and 5.18% attended Weber State University. The remaining respondents said they attended Dixie State College, Snow College, and Westminster. At the time of this study 83.2% of NCS recipient respondents reported they had completed at a minimum of a bachelor's degree, 13.8% had completed a master's degree, and 3% had completed a doctorate.

Students were asked to identify their college majors. The college major with the highest number of responses was science, technology engineering and math (STEM; 30.2%), followed by

business (19.8%), social science (17.9%), health related majors (11.6%), education (11.2%), and art (6.3%). Three percent of the respondents marked agriculture or natural resources.

The average time to college graduation for NCS graduates (after adjustments were made for students who served religious missions) was 3.57 years. An independent sample t test indicated that the relationship between gender and years to graduation was statistically significant (p=.000, df=265, t=3.789). Notably, females completed their degree earlier than men. The mean for males was 3.83, and for females 3.31.

The choice of college major made a difference (Chi-square [18, N=268] = 29.312, p=.045). NCS recipient's average time to completion ranged from 2.8 years in agriculture and natural resources to the longest amount of time for STEM related majors of 3.9 years. Students were able to complete degrees in agriculture, art, education, social science, and business in 3.5 years or less. Students in health and STEM took slightly longer, but on average completed before 4 years. There were differences in gender when it came to major selection. More males selected majors in business and STEM, while females out numbered males in arts, education and social science. Males taking longer to graduate may be partially explained by there being more male STEM majors.

NCS recipients' college selection made a difference (Chi-square [10, N=327]=31.84, p<.001). The institutions taking the least amount of time to completion of a bachelor's degree listed in ascending order by means were Westminster (2.78 years), Utah State University (3.48), Southern Utah University (3.52), Weber State University (3.58), and Brigham Young University (3.59). The institutions taking the most time to completion were the University of Utah (3.7) and Utah Valley University (4.0).

Students were asked to check all higher education campuses they attended. Eighty percent of students attended one institute of higher education, 17.9% attended two, and 2.1% attended three or more. There was a trend for years to graduation to increase with the number of colleges attended. Students attending one college completed in 3.5 years, but a student attending more than one college tended to take longer to complete their degrees. For females 84.4% of females attended one college, while 75.7% of males attended one college. As shown in the following three multiple regression tables this variable was more important for female students. Variables in this study that were not significant were quality of high school counseling as rated by student; GPA, and life circumstances defined separately as work, travel, family, finances, humanitarian or religious service, military service and health. Other variables not significant in this study were individual student GPA, high school counseling, changing college major, additional course work required, choosing to take additional course work, or participation in Advanced Placement or International Baccalaureate courses.

Multiple-Regression Results

Seven variables were entered into the regression equation. They were gender, attending more than one college, full or part-time status, attending summer school, Associate of Arts course acceptance, Advanced Placement courses taken, and International Baccalaureate courses taken.

In order to determine what variables most influenced timing to bachelor degree completion three multiple-regressions were run, one for all participants in the study (N=268), one for males (N=140), and one for females (N=128).

All participants. When the regression was calculated for the entire population three variables were significant in predicting college graduation timing. They were: (a) gender (t=3.228, p=.001), (b) attending school full time (t=2.912, p=.004), and (c) Associate of Arts course acceptance (t=3.994, p=.000). The regression equation explained approximately 13% of the variation in college graduation timing (R²=.132). Although only 13% of the variation in college graduation timing is explained, the equation was none the less significant at the p<.01 level (F=6.764, P=.000, df=266; see Table 1).

Males. When the regression was calculated for males only one variable was significant in predicting college graduation timing, Associate of Arts course acceptance (t=3.472, p=.009). The regression equation explained approximately 12% of the variation in college graduation timing (R^2 =.120). Although only 12% of the variation in college graduation timing was explained, the equation was significant at the p<.01 level (F=3.010, p=.009, df=138; see Table 2).

Females. When regressions were calculated for females, three variables were significant in predicting college graduation timing: (a) attending only one college (t=2.592, p=.011), (b) attending school full time (t=3.258, p=.001), and (c) Associate of Arts course acceptance (t=2.682, p=.008). The regression equation explained 20% of the variation in college graduation timing (R²=.204). The regression explained more variation for females than for males. Like the results for males, the regression was significant at the p<.01 level (F=5.173, P=.000, df=127; see Table 3).

Table 1

Regression Analysis Summary for the Entire Population in the Study

Variable	В	SE	Beta	t	Sig.
Years to graduation	3.67	1.552		2.367	.019
(constant)					
Gender	440	.136	191	-3.228	.001**
Attending one college	.238	.140	.101	1.706	.089
Attending full time	.497	.171	.171	2.912	.004**
Summer school	.041	.065	.037	.628	.531
AA course acceptance	.245	.061	.234	3.994	.000**
AP courses	.191	.140	.080	1.363	.174
IB program	535	.767	040	698	.486

p = .000.

df=266.

 $R^2 = .132$.

F=6.764.

^{**}p<.01.

Table 2

Regression Analysis Summary for the Male Students in the Study

Variable	В	SE	Beta	t	Sig.
Male (constant)	2.569	2.166		.724	.470
Attending one college	.039	.181	.018	.215	.830
Attending full time	.259	.226	.098	1.149	.253
Summer school	079	.094	071	836	.405
AA course acceptance	.275	.079	.290	3.472	.001**
AP courses	.370	.204	.150	1.815	.072
IB program	.567	1.090	.043	.520	.604

 $R^2 = .120$.

Df=138.

p = .009.

F=3.010.

***p* <.01.

Table 3

Regression Analysis Summary for the Female Students in the Study

Variable	В	SE	Beta	t	Sig.
Female (constant)	3.599	2.136		1.685	.09
Attending one college	.552	.213	.216	2.592	.011*
Attending full time	.837	.257	.275	3.258	.001**
Summer school	.135	.087	.129	1.549	.124
AA course acceptance	.256	.096	.222	2.682	.008**
AP courses	.081	.187	.036	.430	.668
IB program	-1.365	1.053	107	-1.296	.197

 $R^2 = .204$.

df=127.

p=.000.

F=5.173

**p*<.05.

***p*<.01.

Summary Regression Results

The three regression analyses provided important information for this research. Each regression revealed significant variables for their respective populations.

Associate of Arts Course Acceptance. Associate of Arts course acceptance was an important predictor of college graduation timing in all three analyses. Ninety percent of NCS students reported that all or almost all high school concurrent enrollment courses taken for their Associate

of Arts degree were accepted toward their bachelor degree.

In the regression analysis for all respondents Associate of Arts course acceptance was one of three significant predictors of college graduation timing (p=.000). In fact, it was the most important predictor (β =.234). For males Associate of Arts course acceptance was the only significant predictor (β =.290, p=.001). Finally, for females it was one of three important predictors (β =.222, p=.008).

Attending full or part time. Attending college full time was a significant predictor. Attending college full time was significant for all respondent's as well as in the regression for female respondents (all respondents: β =171, p=.004); (female respondents: β =.275, p=.001).

Gender. Gender was an important predictor of college graduation timing. The regression analysis for all respondents indicated that gender was a significant predictor of college graduation timing (β =-.191, p=.001). The investigation revealed a different pattern for both genders. Females in this study graduated on average with a bachelor's degree in 3.3 years, and male graduated on average in 3.8.

Attending only one college. Attending only one college was a predictor of college graduation timing for females (β =.216, p=.011). Females attending only one college tended to graduate earlier than those attending more than one college.

Policy Implications

The following are policy implications from this NCS study. These policy recommendations may be important for states seeking to expedite bachelor degree completion.

Graduation Rates. Learning that the college graduation rate of this 3-year cohort group of NCS recipients was 83.2% was encouraging information. The NCS graduation rate is 3-4 times higher than other Utah higher education institution cohort groups. At a time when bachelor degree rates are stagnant or declining, this is a program with a high graduation rate.

Finances/tuition. When NCS recipients were asked about life circumstances that prolonged degree completion only 20 (7.4%) checked that is was due to financial issues. These students did qualify for the scholarship, which at that time paid 75% of the remaining 2 years of tuition. This is a significant savings on college education for these students. Many students mentioned receiving additional financial aid. The NCS scholarship coupled with grants, loans and other scholarships allowed over 90% of the NCS recipients in this study to go to college without the worry of financial issues.

College Selection. The choice of college to attend in Utah may accelerate bachelor degree completion by as much as 1.5 years. With the exception of Dixie College and Utah Valley University where NCS recipients took the traditional 4 years. All other 4-year institutions of higher education had accelerated graduation rates for NCS recipients.

Full-time Attendance of Students. Attending school full time was significant for male and female students in terms of expediting graduation. In the descriptive statistics 85.1% of the students in this NCS survey attended college full time. The scholarship allows or motivates students to go full time by lessening the need to work long hours in order to pay for tuition. There is also a built-in incentive with the scholarship to complete one's degree quickly. The scholarship expires after 5 years.

Associate of Arts Course Acceptance. Ninety percent of study participants reported that all or almost all Associate of Arts courses were accepted by the colleges they attended toward their bachelor's degree. This was a significant variable for total population, male students, and female students. The Associate of Arts degree jump start along with the scholarship may have been the tipping point for NCS recipients in obtaining their bachelor's degree earlier than the traditional time (Adelman, 2006; Swanson, 2008).

STEM. A concern facing our nation is the need for more STEM graduates. Almost one in three NCS recipients in the study graduated in STEM related majors. Investing more in programs such as the NCS could be an investment in more STEM graduates.

Lack of Diversity. Unfortunately, a limitation in this study was the ethnicity populations were too small to analyze. Utah does have an increasingly diverse population. Many of the inner city schools in the Salt Lake City area are minority majority. Latino students, especially, are underrepresented among NCS recipients. Efforts need to be made to advise more minorities about the opportunities available in programs such as the NCS. While the students who received the NCS were very grateful, 31% remarked that better counseling at the high school level would improve the program. Improving counseling about the program, particularly as it relates to underrepresented populations in college, low SES students, and potentially first in family to graduate from college is highly recommended.

These policy recommendations could improve access to the program, expand enrollment and equip future NCS recipients with information beneficial to participating. Like many states Utah is seeking to increase the percentage of students graduating from college. Businesses and industries will locate to Utah if the educated workforce exists. The future of our states economic development opportunity is in attracting and retaining business and building the quality of the workforce. An educated workforce will determine if businesses will locate to Utah.

Utah is embarking on a significant education goal of having 66% of all adults in Utah, ages 20-64 with a post-secondary certificate or degree. The focus of educators and legislators in the state needs to be centered on policy that moves the needle closer to accomplishing this goal. The NCS scholarship program has merit in assisting policy makers toward reaching the 66% goal.

Conclusion

In conclusion, NCS program does expedite college completion. It is also worth noting that the NCS program respondents in this study had a very high graduation rate of 83.2%. Variables that were associated with expedited bachelor degree completion are gender, college major, college selection, attending school full time, attending only one college, and Associate of Arts course acceptance toward bachelor degree programs. If policy makers are looking for a program that expedites and increases college completion rates, they may want to focus on the NCS program and scholarships similar to the NCS.

References

- Adelman, C. (1999). Answers in the toolbox: Academic intensity, attendance patterns, and bachelor's degree attainment. Washington, DC: U.S. Department of Education.
- Adelman, C. (2006). The tool box revisited: Paths to degree completion from high school through college. Washington, DC: U.S. Department of Education.
- Carnevale, A.P., Smith, N., & Strohl, J. (2010). *Help wanted projections of jobs and education requirements through 2018*. Washington, DC: Georgetown University, Center on Education and the Workforce.
- Complete College America. (2009). *Time is the enemy: The surprising truth about why today's college students aren't graduating and what needs to change.* Washington DC: Author.
- Kearl, C. (2012). A study of Utah's New Century Scholarship (NCS) Program. Retrieved from ProQuest Digital Dissertations. (AAT 3551500)
- Swanson, J. (2008). An analysis of the impact of high school dual enrollment course participation on post-secondary academic success, persistence and degree completion. Iowa City, IA: University of Iowa, College of Education.
- Utah Code, Section 53B-8-105, Utah State Legislature. (2012). State system of higher education tuition wavier and scholarship new century scholarships-high school requirements.