

Overcoming Barriers to Career Education for Special Populations: A Strategic Plan for Nebraska

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Introduction

This report is the product of a research study to examine barriers to success for Special Populations in Nebraska Career Education programs at the secondary and postsecondary levels and to identify opportunities and strategies to overcome these barriers. The Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV) requires Nebraska to continue to focus on the performance of Special Populations in career education. Special Populations, as defined by Perkins IV, include English Language Learners (including migrant students), students with disabilities, economically disadvantaged students (including foster students), single parents/displaced homemakers, and students in programs or training that is non-traditional for their gender.

Members of special population groups identified above (other than those pursuing non-traditional occupations) historically have lower rates of continuing their education and career preparation through postsecondary education programs than the general population. They are less likely to complete postsecondary education programs and meet academic and vocational objectives. Very few females choose to pursue careers in fields non-traditional for their gender, even though most of those fields are higher demand and higher paying than traditionally female fields.

The study analyzed information obtained through available career education data and reports, career plans surveys of high school, community college and Adult Basic Education students, and a process of surveys, focus group meetings and interviews with secondary and postsecondary educators, business professionals, students and former students from special population groups, parents and community leaders across the state (See Appendix A).

The review of existing data and reports provided a factual background for the study in terms of the current education status of students in Special Population groups. Student surveys at both the secondary and postsecondary levels were designed to identify career education barriers and any differences in those barriers among subpopulations of students. Educator interviews and surveys, and community focus group discussions were intended to enhance understanding of those barriers and identify potential strategies for overcoming the barriers.

I. Career Education Status of Special Populations

This section of the report summarizes key findings from the analyses of current data on the status of Special Populations in Nebraska and surveys of public high school and community college students. The analyses are provided in more detail in the companion reports for this project (see Appendix A). Many of the findings are presented by race/ethnicity because very few data are available by economic status. Other Special Population categories included are students in English as a Second Language (ESL) programs, GED programs, and community college support programs for students with educational disadvantages. Gender differences have been examined in terms of career field interests and education program enrollments, especially as they relate to occupations that are non-traditional for that gender.

A. High School Career Education and College Continuation Statistics

Barriers to career education for Special Populations need to be examined in the context of career education for students overall. An essential requirement for almost any career education path is that the student satisfactorily completes high school and continues on to further education or training. Although Nebraska ranks very high nationally in the percent of students who complete high school on time, the state's college continuation rate for graduates is about the same as the national average, with two-thirds of graduates enrolled in a postsecondary institution within one year of graduation. Since many students commence college more than one year after they graduate, the percent of graduates who eventually go to college is substantially higher. Nearly two-thirds of Nebraska first-time freshmen choose four-year institutions instead of community colleges or trade schools, a pattern that is similar to the national one.

Nearly half of Nebraska high school graduates complete a Career and Technical Education (CTE) program. Three-fourths of CTE graduates are enrolled in a postsecondary education or training program within a year of graduation, according to surveys conducted by the Nebraska public schools. Although the higher college continuation rate may reflect a positive impact of the CTE programs, it is also possible that high school students who intend to continue their education enroll in CTE programs at a higher rate than others.

The higher college continuation rate for CTE graduates is accompanied by a higher percentage going to community college than for students overall. One possibility is that students who have decided on a career that requires vocational training are drawn to relevant high school CTE programs and then to a community college program where they can continue the training. However, CTE college continuation statistics are not available by career field or cluster.

Racial/ethnic minority students

Existing Nebraska data show a persistent gap on average between students who are members of racial/ethnic minority groups and white students in ways that have a significant, negative impact on career education.¹ Racial/ethnic minority students are more likely to drop out of school, have lower levels of academic performance and, among those who complete high school, are less likely than others to pursue or complete a postsecondary education program. Among high school graduates, African American and Asian/Pacific Islander students are less likely than others to have completed a Career and Technical Education program.

B. High School Student Survey

Career Plans and Obstacles surveys were administered to 1,389 students, primarily in the 9th and 12th grades, through the cooperation of 14 school districts and several youth programs across the state. The purpose was to examine students' career and postsecondary education interests and plans at both the 9th and 12th grade levels, and to identify obstacles they might face in terms of pursuing their career goals through postsecondary education. The surveys were completed near the end of the 2007-2008 school year. Since the survey sample was not drawn by a scientific method, the specific statistics should be considered with caution.

The education aspirations of most students surveyed were high. More than 70 percent of students in both grades expected to earn a four-year college degree or higher, including more than a third who expected to earn a masters degree or higher.

On average, students gave a moderately positive rating to how well their schooling had prepared them to choose and plan for a career. More than two-thirds of 9th graders and three-fourths of 12th graders had participated in at least one type of career education activity to help them decide on possible career options. However, there was no one activity in which the majority of students in either grade had participated and many students had participated in only one or two types of activity. *Reading career materials*, had the highest participation rate among 9th graders, but only one-fifth had engaged in that activity. Among 12th graders *college/university visit*, *career fair*, and *interest assessment* were the most prevalent activities, with about one-third participating in each. Overall, the career related activity participation rates seem low, especially for 12th graders, given the fact the survey was conducted in the last weeks of school before they were to graduate.

Students in both grades were more likely to prefer talking to their parents over anyone else about which high school classes to take. Friends ranked a distant second in preference, along with teachers and guidance counselors. Students in the 12th grade were more likely to identify a parent as the person(s) most helpful in discussing future career options. However, less than half identified a parent, with the rest of the choices spread evenly over a wide range of other relationships, including siblings, other relatives, teachers, guidance counselors and friends.

¹ In this report, the category *white* refers to white, non-Hispanic; the category *African American* includes African immigrants or refugees.

Economic issues dominated the list that 12th grade students identified as potential problems they faced in going to college. The *cost of tuition and books* was a problem for three-fourths of the students and approximately half the students identified the *need to earn money* and the *cost of food and lodging* as problems. *Lack of information about financial aid*, which was the fourth most prevalent problem, was identified by one-fifth of the students.

Racial/ethnic minority students

Surveys of 9th and 12th grade high school students revealed that American Indian and Hispanic students were more likely than others to limit their education aspirations to a high school diploma or GED. White students were more likely than racial/ethnic minority students to have a parent or sibling who had attended college, a factor considered to be important in facilitating access to postsecondary education. Among minority students, Hispanics were least likely to have a family member who had attended college.

The majority of students in each racial/ethnic group reported that their parents were *very supportive* of their going to college. Parental support was highest among white and African American students and lowest among American Indian and Hispanic students.

The same economic-related issues comprised the top four college access problems for each racial/ethnic group. Although there were substantial differences among the groups in the prevalence of these economic problems, there was no clear pattern. White and Asian students were a little more likely than others to consider the *cost of tuition and books* to be a problem. Hispanic and African American students were less likely than others to consider the *cost of lodging and food* to be a problem. These students, perhaps, are more likely to live at home while attending college. African American students and American Indian boys were less likely than others to consider the *need to earn money* a problem. African American and American Indian girls were much more likely than other students to consider *lack of information about financial aid* to be a problem. White students were much less likely than others to identify *lack of transportation* to be a problem.

There were a number of potential obstacles which affected less than 20 percent of girls or boys, but were more problematic for certain groups of students. The following problems affected at least 20 percent of the specified group(s):

- *lack of transportation* – African American boys, American Indian Boys
- *distance* – American Indian girls
- *lack of interest* – American Indian boys, American Indian girls
- *poor grades* – American Indian girls, Hispanic boys
- *don't know what to study* – Hispanic girls, American Indian girls, Asian girls and boys total
- *lack of information about college choices* – Hispanic girls
- *lack of information about how to apply or register* – Hispanic girls

There were only small differences among 12th grade students in different racial/ethnic groups in whom they identified as the person(s) most helpful in discussing future career options. All groups were most likely to identify a parent, with at least one-third of the students giving that response. However, racial/ethnic minority students were less likely than whites to identify a parent as being the most helpful. Hispanic and African American students were more likely than others to identify a guidance counselor, and American Indian students were more likely to identify other relatives (not parent or sibling) or “the family” in general as being most helpful in discussing their future career options.

English as a Second Language students

The percent of survey students participating in an ESL program was low, with just seven percent of 9th graders and four percent of 12th graders. Although Hispanic students comprised more than two-thirds of the ESL students in both grades, less than one-fifth of the Hispanic students were participating in an ESL program. .

Educational aspirations for ESL students were somewhat lower than for the total group of surveyed students. They were more than twice as likely as other students to expect a high school diploma to be their highest level of education. Their postsecondary plans reflect those lowered expectations, with work only or military plans after high school more prevalent than for other students. Among those who planned to attend a postsecondary institution, ESL students were much less likely than others to expect to start at a four-year college or university, preferring institutions that take two years or less.

ESL students were less likely than others to have family members who had attended college, and had lower levels of parental support for going to college, especially among 12th graders. ESL students were less likely than other 12th graders to have ever visited a college campus, met with a recruiter at school, or took a career-related course at a college.

Students in ESL programs participated in most career education activities at substantially lower rates than other students. The only activities in which ESL students were more likely than others to engage were *workstudy/apprentice/employment* in a potential career field and, for 12th graders, *taking a specific career-related course*. The importance of various factors in the choice of a career varied considerably between the group of ESL students and 12th grade students overall. Although *interesting to me* was the most important factor for students in each group, it was substantially less important to ESL students. The other leading factors – *matches my skills, pay/benefits, work environment, and people I’d work with* – all were less important among ESL students. Factors that were more important to ESL students than to others were *my family’s support, scholarship availability, cost of education and opportunity to travel*.

The biggest potential problem in going to college was *cost of tuition and books* for ESL students and other 12th graders alike. Nearly one-third of ESL students indicated that *language* was a problem for them in going to college. They also were a little more likely than others to indicate that *lack of information about college choices, don’t know what to study, lack of family support and discrimination* were potential problems in going to college.

Special Education students

Educational aspirations were lower for Special Education students than for others at the 9th grade level, and they were twice as likely as others to expect their highest level to be a GED or high school diploma. Lower still, were the aspirations of 12th grade Special Education students, with more than half expecting to earn no more than a high school diploma, compared to only one-tenth of total 12th grade students surveyed. However, more 12th grade Special Education students planned to attend a postsecondary institution than those who aspired to a vocational license or college degree. In particular, they planned to attend a Training Institute at a much higher rate than students overall. Quite possibly they intended to pursue programs that don't award a vocational license, diploma or degree.

Special Education students in the 12th grade less likely than total students to have a family member who had attended college, but there were no differences at the 9th grade level. Parental support for going to college was lower for Special Education students than for others at both grade levels. Among 12th graders, Special Education students were less likely than others to have ever visited a college campus, met with a recruiter at school, or took a career-related course at a college.

Career education activity profiles were fairly similar between 9th grade students overall and those in Special Education. However, 12th grade Special Education students were less likely than other 12th graders to have participated in any career related activity, and just slightly more likely than their 9th grade counterparts. They also were less likely than total 12th graders to have read career materials or had a college/university visit to help decide on possible career options.

Among 9th graders, there was little difference between Special Education students and others in how often they thought about their future careers. Twelfth grade Special Education students gave slightly lower ratings than others on how well their school had prepared them to choose and plan for a career.

The importance of various factors in the choice of a career varied somewhat between the group of Special Education students and 12th grade students overall. Although *interesting to me* was important to the most students in each group, it was substantially less important to Special Education students. The other leading factors – *matches my skills, pay/benefits, work environment, people I'd work with* and *availability of jobs* – were of similar importance. Factors that were more important to Special Education students than to others were *my family's support* and *location of jobs*.

The biggest potential problems in going to college were economic ones (*cost of tuition and books, cost of lodging and food, and need to earn money*) for Special Education students and other 12th graders alike. One-tenth of Special Education students indicated that *physical disabilities* posed a potential problem in going to college. They also were more likely than others to indicate that *lack of transportation, poor grades, lack of information about college choices, and don't know what to study* were potential problems.

C. Community College Enrollment, Completion and Program Statistics

The postsecondary career education focus of this study was on Nebraska's six community colleges: Central, Metropolitan, Mid-Plains, Northeast, Southeast and Western Nebraska. These colleges receive federal Perkins grant funds and report the status of Career and Technical Education program concentrators.

One-third of Nebraska first-time freshmen are enrolled in community colleges. Community college students tend to be enrolled part-time and take substantially longer to complete their programs than the designated time frame. Six out of ten Nebraska community college students were enrolled part-time in the Fall of 2006. However, only one-fourth of first-time enrolled freshmen were part-time students.

Nearly three-fourths of recent community college awards were Associate Degrees, with the rest diplomas and certificates. The awards are also identified by level based on the designated time frame for completing the program: Level 1 (less than one year), Level 2 (at least one year, less than two), and Level 3 (two years). Among Nebraska community college students who were first-time, full-time freshmen in 2003, only one-third graduated within 150 percent of the designated time frame, the standard used to compare graduation rates across institutions.

Metropolitan Community College data illustrate that low graduation rates reflect the long time it takes many students at community colleges to earn their awards. Among those who received Associate Degrees in the 2006-07 program year, less than 40 percent received them within the 150 percent time frame (three years). More than one-third, took five years or longer to earn the Associate Degree. Likewise, over half of those earning certificates and diplomas took more than two years to obtain them. Overall, for those receiving an Associate Degree, it took a median average of 3.6 years.

The long time frame for earning community college awards, with a high percent attending part-time, some stopping and starting multiple times, and some transferring to other institutions makes it difficult to identify the percent of students who eventually complete a postsecondary career education program. Graduation rates only tell us the percent of first-time, full-time freshmen who completed programs in a fairly short time frame at that institution.

Gender differences

Nebraska community college award statistics for 2006-07 reveal strong gender differences in both the levels of awards and program areas. Altogether, women received slightly more awards than men, but the gender differences were especially large for African American, Asian and American Indian graduates. More than two-thirds of the awards for each gender were at Level 3 (Associate Degrees). However, men who graduated were much more likely than women to earn Level 1 awards, while women were much more likely than men to earn Level 2 awards. These

gender patterns reflect differences in the award levels for career fields traditionally pursued by men and women: e.g., more Level 1 awards in the skilled trades, more Level 2 awards in nursing.

The differences between men and women in program awards are strong and, in most cases, apply across racial/ethnic groups. Nearly 60 percent of the awards earned by men are in the IMES field, compared to only three percent of the awards for women. This 20 to 1 IMES disparity means that most other fields are predominately female. Women are eight times more likely than men to earn awards in Health Sciences, three times more likely to earn awards in Human Services, and twice as likely as men to earn awards in Liberal Arts and Sciences. White and Asian /Pacific Islander women are twice as likely as their male counterparts to earn awards in Business.

Gender disparities in community college awards are even more evident when looking at awards at the level of specific programs; in particular, awards in the IMES area. The IMES awards reveal the minimal extent to which women pursue career paths in this area, exceeding 15 percent of awards only in Architectural Drafting/CAD and Truck/Bus/Commercial Vehicle Operations. Among the other 21 IMES programs with 10 or more graduates, women reached or exceeded 10 percent of the awards in only five programs.

Racial/ethnic minority students

The racial/ethnic profiles of first-time freshmen enrolled at Nebraska community colleges in 2006, reflect the communities they serve. At each college, at least three fourths of these freshmen were white, non-Hispanic. Hispanic students were the most numerous of all minority freshmen groups and numbered 60 or more at every college except Mid-Plains. The percent of freshmen who were Hispanic was highest at Western Nebraska Community College (18%). Nearly two-thirds of African American freshmen attending community colleges were enrolled at Metropolitan Community College. Southeast Community College was the only other one with more than 20 African American freshmen. Asian/Pacific Islander freshmen were few in number and primarily attended Metropolitan and Southeast community colleges. American Indian freshmen also were very few in number, with the largest group attending Metropolitan Community College.

Racial/ethnic minority students were more likely than white students to be enrolled part-time as first-time freshmen, but that differences was not there among total enrollments. They also had lower community college graduation rates (in 150% of designated time) and received a lower percentage of their awards at the Associate Degree level than did white students, although the majority of their awards were at that level.

The strong differences between men and women in program awards described above generally applied across racial/ethnic groups. However, within gender groups there were some racial/ethnic differences. Among men, there were strong racial/ethnic differences in career field choices. White and Hispanic male graduates, who had fairly similar program award patterns, were three times more likely to earn awards in Industrial, Manufacturing and Engineering Systems (IMES) fields than African American or Asian/Pacific Islander men, and twice as likely

as American Indian men. Male graduates from non-Hispanic minority groups were more likely than white and Hispanic men to earn awards in Business, Health Sciences and Liberal Arts and Sciences.

Racial/ethnic differences in program awards among female graduates were smaller, with less distinct patterns. White women were more likely than others to earn a degree in Business. White and Hispanic women were less likely than others to earn awards in Liberal Arts and Sciences. Hispanic and African American women were more likely than others to earn awards in Health Sciences.

D. Community College Student Survey

A project survey of more than 200 Nebraska community college students provided information about their career education interests, plans and barriers. Students at each of the six community colleges were recruited to complete the online survey. In order to include a substantial number of students in the Special Population categories, students were recruited by faculty and staff through programs such as TRIO, Veterans Upward Bound, Student Support Services, and Single Parent/Homemaker that support disadvantaged college students. College students from the general population who were not served by a support program were also recruited. In addition to those enrolled in academic credit programs, students were also recruited from the colleges' Adult Basic Education GED and ESL programs, and transitional credit ESL programs. Since the respondents were not identified through a scientific, representative sampling process, the specific results should be considered with caution.

The numbers of students in each of the four groups (Support Program, General Population, GED and ESL) were too small for results to be further broken out by race/ethnicity. The analyses of career interests and program awards by gender were conducted by combining the Support Program and General Population groups and the GED and ESL groups.

Support Program and General Population students

The educational aspirations of Support Program students was as high as for the General Population group, with about 60 percent in both groups expecting to earn eventually a four-year degree or higher. This is a little lower than the 72 percent of high school seniors surveyed who expected to earn at least a four year degree. However, more than half of the seniors were planning to attend a four-year institution after high school graduation.

More than two-thirds of the students in each group were working at least part-time, on average about 30 hours a week. Among workers, median wages for Support Program students was \$8.00 per hour, a little less than the \$8.63 and hour for the General Population group. Although their employment patterns were similar, Support Program students wanted to be working more hours and General Population students wanted fewer hours.

Support Program students were more likely to get financial aid than those in the General Population group, with nearly three-fourths receiving Pell Grants, compared to one-fourth of General Population students. Half of the Support Program students had student loans, twice the rate of the General Population group. Support from family was relatively low, with one-fourth of General Population students and one-tenth of the Support Program students receiving that assistance. Among both groups, a little more than one-third of the students had scholarships, and one-tenth were getting assistance from Employment First.

More than half in the General Population group had a parent who had attended college, compared to only two-fifths of the students in the Support Program group. Approximately 80 percent of students in both groups reported that their parents were very supportive of them going to college.

The student survey presented a list of potential problems for going to college and asked the respondents to check those that applied to them and to list any other problems. College access problems related to the costs of education and basic living needs were the most prevalent among each of the groups, though the percentages with cost problems varied. More than three-fourths of Support Program students had a problem with the cost of tuition and books, compared to less than two-thirds of General Population students. The majority of Support Program students identified the cost of food and other basic expenses and the cost of housing as problems, compared to about one-third of those in the General Population group. Students in the Support Program group also were much more likely than the General Population students to have problems with lack of affordable transportation and distance, with about one-third identifying each of those problems.

College access problems due to lack of information about college choices, programs, procedures or financial aid were substantially less prevalent than cost-related problems, but were issues for a number of students. Support Program students were less likely than those in the General Population group to identify problems with lack of information.

Students were asked specific questions about the issues of transportation, computer access and, for parents, child care. Nearly half of the Support Program students reported problems with transportation, more than three times the rate for General Population students. One reason might be that most of the Support Program students were attending colleges in non-metropolitan areas, where public transportation options are limited. Problems for students who drove a car were primarily the costs of gas and maintenance, with a few having problems with insurance and licenses. For students who did not drive a car, the principle problems were unreliability, poor bus service and the cost of bus tickets.

The two groups of students were similar in their computer and internet access. Three-fourths of the students in each group accessed the internet from computers at home and nearly two-thirds used access at the college. More than one-fourth in each group had a laptop with wireless internet access. Support Program students were a little more likely than those in the General Population group to access the computer at a library, the home of a friend or family member, or

at work. Problems with computer/internet access were similar for the two groups, affecting about one-fifth of the students. Problems were much more prevalent for those who did not have a computer at home or a laptop, with nearly half of those students reporting problems.

For students without a home computer or laptop, the primary computer access problem was inadequate computer skills. Other problems included difficulty in finding an available computer, the hours the library was open, and costs of getting to where a computer was available, including paying for childcare. For students with a home computer or laptop, the primary computer access problem was the cost of the internet. Other problems included unreliable internet connections, computer break downs, inadequate computer skills, and computer compatibility issues with assignments.

Nearly half of the Support Program students were parents of children under age 18, including one third who were single parents, reflecting the recruitment of students from the Single-Parent/Homemaker programs. Less than one-fourth of General Population students were parents of dependent age children, and one-tenth were single parents. Among those with children under age 12, about one-third in each group reported having child care problems. The principle child care problem that students reported was the cost. Other problems included the hours that care was available, difficulties making arrangements at certain times (e.g., on snow days, when a child was sick, when the family member was not available), lack of care options for special needs children, and lack of trust in providers.

Career education activity rates were much higher for Support Program students, with more than three-fourths reporting that they had participated in one or more activity, compared to only half of General Population students. More than half of Support Program students participated in three or more types of career education activities, a rate that was twice that of General Population students. At least one-third of the Support Program students participated in each of the top five activities: *skills assessment*, *interest assessment*, *read career materials*, *college/university visit* and *career fair*. These participation rates were generally twice that of the General Population group.

Most of the students rated their high school near the mid-range on a six point scale on how well it had prepared them to choose and plan for a career. General Population students, who had lower career education activity participation rates, gave slightly higher ratings to their high schools (3.4), than Support Program students (3.1). One interpretation of these results is that the community college support programs include a substantial career education/exploration component.

Students were asked to identify important considerations in their choice of a career from a list of 16 factors. The majority of students in each group identified *interesting to me*, *pay/benefits*, *availability of jobs*, *work environment*, *matches my skills*, and *job security* as being important. However, higher percentages of Support Program students than General Population students identified those factors as important considerations, and in addition, the majority of those in the

Support Program group identified *flexible schedule, education requirements, and people I'd work with* as important.

When asked to identify those who had been helpful to them in identifying and pursuing education and/or career opportunities, students in both groups were most likely to identify parents and friends than education professionals. Support Program students were more likely than General Population students to identify college support programs, instructors and counselors as being helpful.

GED and ESL students

GED and ESL students were included in the community college student surveys even though most were not enrolled for academic credit, because they represent students who potentially have substantial career education barriers. Most of the GED students had dropped out of high school or otherwise failed to graduate. The ESL students had diverse education backgrounds. Some had a U.S.A. high school diploma or GED, and others had graduated high school in another country, including some who were college educated. Some in the ESL group were currently working on a GED.

GED and ESL students had very different educational aspirations. The majority of ESL students expected to earn a four-year degree or higher, similar to the students in the two academic credit groups. In contrast, only one-third of the GED students expected to reach that level, while two-fifths expected their highest level of education to be a GED.

ESL students were much more likely to be working than the others, with less than one-fifth unemployed and the majority working full-time. Nearly half of the GED students were unemployed and only one-third were working full-time. Students in both groups wanted to be working more. ESL students' average earnings of \$10 an hour were substantially higher than the \$8 an hour for GED students.

Approximately half of the GED and ESL students had a parent or sibling who had attended collage, rates substantially lower than for students in the academic credit groups (see discussion above). However, three-fourths of the GED and ESL students reported that their parents were very supportive of them going to college, a level of support similar to that of academic credit groups.

Both the GED and ESL groups were less likely than the academic credit groups to identify the various economic factors as problems in going to college (see discussion above). This may reflect the fact that Adult Basic Education classes are free. A little more than half of the students in both groups said the cost of tuition and books was a problem, the only economic factor identified by a majority of either group. One fourth of GED students identified poor grades and academic skills as problems in going to college, rates much higher than for the other groups. They also were more likely to say they had a problem with not knowing what to study. Language was reported to be a problem in going to college for close to half the ESL students.

Less than half of the GED and ESL students had participated in any type of career education activity. Their participation rates are a little lower than for the General Population students and much lower than for the Support Program students (see discussion above). Very few of the ESL and GED students had participated in at least three types of career education activity.

GED and ESL students were less likely than those in the academic credit groups to attach importance to a variety of possible considerations in the choice of a career (see discussion above). Only three factors were important considerations for the majority of GED students (*interesting to me, pay/benefits, and my family's support*), and none for a majority of ESL students. The very limited range of factors that were important career considerations for ESL and GED students, as compared to the range of important considerations for other students, suggests that perhaps these students believed that their career choices were fairly limited, and that they couldn't afford to be too discriminating about non-essential characteristics of their employment.

When asked to identify those who had been helpful to them in identifying and pursuing education and/or career opportunities, GED students were most likely to identify friends, parents and other family members. ESL students were most likely to identify parents, college instructors and high school teachers.

Gender differences

Students' occupational career goals were coded into six broad career clusters based on the Nebraska Career Education Model. The results were examined by gender because there are strong gender differences in some career areas and several of the student groups were predominately female. Since the numbers in some groups were too small to divide by gender, the Support Program and General Population groups were combined and the GED and ESL groups were combined for this analysis.

Overall, three of the six career clusters showed strong gender differences: females were twice as likely as males to be pursuing careers in Health Sciences or Human Services. One-third of male students identified careers in the Industrial, Manufacturing and Engineering Systems (IMES) field, a rate more than six times that for females. These findings are consistent with the gender statistics on the program areas for community college awards in Nebraska, described earlier in this report. Although the gender differences applied to both groupings, the differences were a little less for the GED/ESL group than for the academic credit group.

Among females, differences were relatively small between the two student groups in their career pursuits at the broad cluster level. Male students in the ESL/GED transition group were much less likely to be pursuing Communications and Information Systems careers and much more likely to be pursuing Health Sciences careers than males in the academic credit group.

II. Strategies for Overcoming Barriers to Career Education

This examination of career education barriers for Special Populations revealed systemic issues with the delivery of career education to students overall. In general, public schools provide very limited opportunities for career exploration in terms of breadth and hands-on experiences. The career interests of boys and girls change little between 9th and 12th grades and reflect the widespread gender imbalances in occupations in our society. Parents are the primary sources of guidance and support for career and college planning, but in today's dynamic occupational environment, few parents are likely to have the knowledge of potential occupations that career guidance professionals possess. Furthermore, the complex processes involved in college selection, application and financing can be daunting to both students and parents alike.

This strategic plan is based on the underlying objectives that all students should have some level of postsecondary education to prepare them for good career opportunities and that high schools should prepare the students to be ready to continue their education. Some of those who provided input for this project believe that not every student is suited for college, and that their career preparation needs more attention. That viewpoint generally reflects a perception of college education as a two- or four-year degree or higher. This plan takes a broader view that includes postsecondary programs of less than two years under the definition of "college." This still leaves an open question as to the minimum level of college preparation that all students should achieve in order to earn a high school diploma, which is an issue beyond the scope of this project.

One of the most significant barriers to career education for Special Populations is the high level of school dropouts. Although strategies for reducing school dropout rates are beyond the scope of this project, the career education strategies proposed here should play an important role. Students who can see a positive career future for themselves will have an incentive to stay in school. Another major barrier for many students is the cost of postsecondary education. Again, this project does not address strategies to make college more affordable. However, under this strategic plan, schools would provide more guidance to students and parents in developing and implementing financial plans for postsecondary education.

In proposing an enhanced role for schools in college and career planning, this strategic plan does not suggest that schools supplant the parental role. Rather, this plan proposes strategies for additional ways schools can partner with parents in delivering career exploration and planning opportunities. Schools will need additional, substantial support from employers, community organizations, postsecondary institutions and government agencies in order to provide a stronger and on-going career readiness curriculum. The following broad strategies are intended to provide guidance on ways strengthen career education for all students in the public schools. Not every student is expected to have a chosen career field by the time they graduate, and many students are likely to change majors in college and switch careers during their working years. The objectives of this strategic plan are to ensure that all students have knowledge of a broad range of career options, have opportunities to realistically evaluate their interest level and suitability for these careers, and can develop and successfully implement a postsecondary education plan to pursue their career goals.

A. Make college and career readiness an integral part of the elementary and secondary school curriculum by providing structured, on-going career guidance programs for students and parents.

For most students and parents, school programs for career and college planning are supplemented by available resources such as websites (e.g., Nebraska Career Connections), youth programs (e.g., Boys & Clubs, Girls Inc.), organizations (e.g., Education Quest), and postsecondary institution services. However, many students fall through the cracks because their parents are not aware of the resources, lack the means to access them, or they see them as irrelevant. Furthermore, these resources are often accessed late in the process, limiting the opportunities for planning. Special Population students are most likely to suffer from inadequate access to resources or encouragement needed to identify and pursue college and career options.

- Incorporate career awareness and exploration into the academic curriculum, beginning in elementary school.
 - Highlight connections between academic coursework and skills needed for various career fields.
 - Make career exploration programs as broad as possible, with many opportunities for hands-on experiences.
 - Expand career education opportunities through after school and summer programs.
 - Emphasize for all students the career areas that align with the state's economic development and labor force priorities, including those that are high-skill, high-wage and high-demand
 - Design programs to breakdown career stereotypes by gender, race/ethnicity and disability status, beginning in elementary school.
 - Work with students and parents to ensure that each student participates in a wide range of career exploration activities, both within and outside of school.

- Establish district-level career guidance programs with dedicated staff, including career development specialists and school guidance counselors, to ensure that every student is on an appropriate path to college and career readiness.
 - Ensure that every student participates in skill and interest assessments at appropriate times.
 - Provide guidance to the students and parents on the identification of possible career options.
 - Incorporate career exploration and planning strategies into the Personal Learning Plans for all students.
 - Incorporate postsecondary education strategies into the Personal Learning Plans for all students.
 - Provide guidance to the students and parents on identifying and selecting postsecondary institutions, and on the processes for applications and registration.
 - Provide guidance and encouragement to parents, starting in elementary school, on developing and implementing financial strategies for postsecondary education.

- Provide guidance and assistance to upper-level secondary school students and their parents on strategies to finance postsecondary education, including scholarship searches and application, financial aid and student loan applications, and opportunities for community service, work-study, internships, and apprenticeships.
- Utilize information technology as much as possible to access existing career and college planning resources such as Nebraska Career Connections, Careerlink and Education Quest.
- Work with community partners such as youth development organizations, youth mentoring programs, Community Learning Centers, higher education institutions, local government agencies, and civic groups to increase support for students and parents in career education and planning.
 - Increase after school and summer programs for career education activities.
 - Identify students who need additional adult support and connect them to programs and mentors who can assist them and their families in the processes for career and college planning.
 - Work with community agencies and organizations to ensure that all students and parents can access available career and college planning resources, including students and parents with limited English proficiency.

B. Increase reliance on Community Colleges for delivering career education classes to secondary school students.

Career education classes in a specific field can provide opportunities for both career exploration and college credits. Most secondary schools cannot begin to provide introductory courses for all the career fields that students will eventually choose. Less than half of Nebraska high school graduates have completed the coursework for a Career and Technical Education concentration, and few have earned college-level credit. Increased reliance on Community Colleges to provide specific career education classes would increase the offerings available to students and possibly free up secondary school resources for more in-depth career exploration and guidance programs.

- Develop an appropriate dual-credit curriculum across a range of career fields, specific to each community college, with instruction provided primarily by community college instructors.
- Develop a funding plan that would allow students to take a specified number of dual-credit hours without a tuition fee.
- Provide opportunities for students to take dual-credit classes on a college campus after school or in summer programs.
- Provide distant-learning opportunities for dual-credit classes for students in areas that are remote from a community college campus.

C. Provide a broad range of extended learning opportunities (ELOs) for secondary and postsecondary students.

Extended Learning Opportunities provide guided work-based experiences for students at various levels. ELOs include job-shadowing, internships, apprenticeships, cooperative education, work-based mentoring, service learning and school-based enterprises. They serve various functions depending on the particular program: reality-based views of occupations, workforce experience, career field preparation, college credits and income.

Many high school students and most community college students work at least part-time to earn money to help support themselves and, in some cases, a family. Although any employment has workforce readiness value, few students are working at jobs related to their chosen career path or potential career options. Although many ELOs will not provide compensation, they can provide important workforce readiness and career field experiences that will help the student obtain paid employment in a chosen career field later on.

- Expand the existing Nebraska Work-Based Learning Program to reach more schools and students.
- Establish partnerships with community employers to develop and promote a wide range of ELOs for secondary, postsecondary and Adult Basic Education students.
- Require high school students to successfully complete a minimum number of ELO hours for graduation.
- Require high school students to successfully complete at least one ELO experience for an occupation that is non-traditional for their gender.
- Develop ELO paths that lead to paid employment opportunities for secondary and postsecondary students who need financial assistance.
- Provide paid ELO opportunities for postsecondary work-study students.
- Incorporate job interview skills, resume writing and appropriate workplace behavior into career education at both the secondary and postsecondary levels.

D. Expand the availability and scope of student support programs for postsecondary education readiness and success.

College student support programs such as TRIO appear to have a positive impact on student success. The federally funded TRIO programs support low-income and first-generation college students at both the secondary and postsecondary levels. Upward Bound is the TRIO program for high school students. In Nebraska there were nine Upward Bound awards for FY 2008-09 projects that served approximately 535 students. Bridge to Success, which operates in the Omaha Public School district, is another example of a college readiness support program. It served approximately 355 OPS students and their families in the 2007-08 school year. Other students receive some college readiness support through youth programs such as Boys and Girls Clubs and Girls Inc., and mentoring programs such as

TeamMates. However, the number of students served is quite low given the fact that one third of Nebraska high school graduates – approximately 7,000 graduates each year – do not continue on to college without one year, and thousands more leave school each year without graduating. Schools and communities need to develop strategies for providing college readiness support for many more students who are in need.

- Conduct a gap analysis of existing college readiness support programs to identify students groups that are underserved.
- Work with existing programs in Nebraska to develop strategies to increase the number of college readiness programs and students served across the state.
- Engage school and community partners to identify and implement a range of options to reach students who need additional support to stay in school and successfully complete a postsecondary education program, including:
 - group programs for college support such as Upward Bound and Bridge to Success,
 - mentoring programs, and
 - youth organization programs.
- Ensure that parents of students who need college support are involved in the program as much as possible.
- Provide support programs and materials in the languages of immigrant families, and address cultural barriers to postsecondary education.
- Increase the availability of support programs at the postsecondary level as needed to provide continued support to students for college success and career readiness.

E. Incorporate career exploration and planning into GED and ESL Adult Basic Education Programs.

Most Adult Basic Education students are enrolled in the program to gain the skills or credentials to improve their employment opportunities. However, these programs generally provide limited opportunities for career exploration or guidance. Some college-based programs refer students to the career guidance programs but students are not required to use those services.

- Work with career development facilitators to integrate career exploration and planning into the ABE curriculum for both GED and ESL students.
- Work with students to establish individual career plans to guide them toward further postsecondary education and employment.
- Connect ABE students to Extended Learning Opportunities through community employer ELO partnerships.
- Work with community organizations to connect ABE students to mentors as needed to facilitate career planning and education.

III. Implementation

A. Establish career readiness measures for school district programs and for student outcomes.

Establish guidelines to assess school districts' career readiness programs.

The implementation of this career education strategic plan requires some reasonable methods to assess progress in enhancing school districts' career readiness programs. All public school districts provide some level of career education and guidance, but there are no guidelines to assess the comprehensiveness of those programs. An initial step in the implementation of the strategic plan is the development of criteria for minimal and optimal levels of school programming and services in the areas of career exploration, college and career guidance, postsecondary credit opportunities and extended learning opportunities. The criteria should address such issues as

- the expansiveness of programs and services in terms of grade levels,
- the scope of programs in terms of career clusters,
- the intensiveness of programs in terms of student involvement and requirements,
- the extent of parental involvement,
- access to mentors for students who need them,
- the level of student exposure to careers that align with the state's economic and labor force development priorities,
- the level of student exposure to careers that are non-traditional for their gender, and
- disparities in any of the student measures outlined below based on economic status, race/ethnicity, gender, English language proficiency, or disability.

Identify student career readiness outcome measures.

Ultimately, the success of the strategic plan rests on improvements in the career readiness of Nebraska high school graduates. Career readiness is more difficult to define and evaluate than college readiness. The most readily available measures are based on students' participation in various career education activities, programs and courses, and many school districts already track this information.

One potential tool for student outcome measures is the NCE career clusters model. For each of the sixteen clusters (or six fields), students can be given scores based on the successful completion of exploration activities that go beyond reading printed materials or relevant website pages. Scores could be given for both breadth (percent of clusters) and depth (levels of active engagement) of career exploration. While this approach measures student exposure to career options rather outcomes, the activities should require the assessment of desired student outcomes. Scores could also be given for student's exploration of careers that are aligned with the state's economic and labor force development priorities that are high-skill, high-wage and high-demand, and for those that are non-traditional for their gender. These career exploration assessments could begin in middle school, with criteria for minimal and optimal levels of career exploration.

Another student outcome measure could be based on the development of the student's Personal Learning Plan at various grade levels. Career options and postsecondary plans should reflect the results of appropriate skill and interest assessments and the student's career and college exploration activities. Other outcome measures to be considered are college and financial aid application and interview skills, job interview and resume writing skills, knowledge of appropriate workplace behavior, and the successful completion of workplace-based extended learning opportunities. Again, the activities through which students gain those skills should include student outcome criteria for successful completion.

Postsecondary student career readiness measures need to go beyond the current measures of retention, completion and placement. One measure could be based on the development of Personal Learning Plans that reflect the student's strategies for completing the postsecondary program and obtaining employment in the chosen field. Postsecondary students should also demonstrate skills for job searching, resume building and interviews, as well as knowledge of appropriate workplace behavior. The career choices of students should be assessed in terms of their alignment with the state's economic and labor force development priorities, and whether they are non-traditional for the student's gender. These outcome measures also could be applied to students in Adult Basic Education programs.

B. Conduct a review and make recommendations for increasing dual-credit career education courses.

The objective is to ensure all high school students have access to dual-credit courses in a variety of career fields. The review should address such issues as:

- any needed public policy changes,
- access for students in areas remote from college campuses offering dual-credit courses,
- tuition costs and waivers for low-income students, and
- evaluation of student outcomes.

C. Conduct a review and make recommendations for incorporating career exploration and planning into Adult Basic Education Programs for GED and ESL students.

The objective is to enhance career opportunities for ABE students. The review should address such issues as:

- essential career education components that should be incorporated into ABE for GED and ESL students,
- integration of the career education components into the curriculum,
- program access to career development specialists, and
- evaluation of student outcomes.

D. Design and implement pilot projects to strengthen K-12 and Adult Basic Education career education programs.

The pilot projects should be designed to address one or more of the principal strategies described in this plan, incorporating, as appropriate, the results of Steps A to C above:

- Make college and career readiness an integral part of the elementary and secondary school curriculum by providing structured, on-going career guidance programs for students and parents (Strategy A).
- Increase reliance on Community Colleges for delivering career education classes to secondary school students (Strategy B).
- Provide a broad range of extended learning opportunities (ELOs) for secondary and postsecondary students (Strategy C).
- Expand the availability and scope of student support programs for postsecondary education readiness and success (Strategy D).
- Incorporate career exploration and planning into Adult Basic Education Programs for GED and ESL students (Strategy E).

Pilot projects could be implemented by individual school districts, coalitions of school districts, ESU's, postsecondary institutions and/or community organizations in cooperation with a public school district. The pilot projects should serve students in a diversity of communities in terms of size and geographic location. The participating school districts should provide baseline measurements for the current levels of career readiness programs and student outcomes as established under Step 1 above. Evaluation criteria should include progress in program and student outcome measures that are applicable for the project design.

Appendix A Methodologies

This strategic plan for overcoming barriers to career education for Special Populations was developed with data and input from a variety of sources, using several methodologies. The primary research and analyses summarized in Section I of this strategic plan report are described in more detail in three companion reports, available upon request from the Nebraska Department of Education, Nebraska Career Education Division:

- *Career Education Status of Special Populations in Nebraska Public Secondary Schools and Community Colleges, 2009*
- *Career Education Plans and Obstacles: A Survey of 9th and 12th Grade Nebraska High School Students, 2009*
- *Career Education Plans and Obstacles: A Survey of Nebraska Community College Students, 2009.*

Career education status of special populations' data analysis

The study examined existing data and information relevant to the career education status of special populations that were available through various state, college and national sources. These sources included:

Nebraska Department of Education: CTE Consolidated Annual Reports (CAR), secondary and postsecondary schools: 2003-04, 2004-05, 2005-06, 2006-07;

Nebraska's Coordinating Commission for Postsecondary Education:

Factual Look at Higher Education, 2007

2008 Progress Report

Nebraska community college first-time freshmen enrollment data, Fall 2006

Metropolitan Community College: data on years to graduate, 2007 graduates

Nebraska Community Colleges: IPEDS 2007-08 reports

National Center for Education Statistics: IPEDS data file 2006-06 reports

U.S. Department of Labor Statistics: National college continuation rates, USDL 07-0604, April 26, 2007

High school student Career Plans and Obstacles survey

In the spring of 2008, twenty-five high schools were invited to participate in this study by distributing surveys to 9th and 12th grade students. They were also asked to provide information on the district's career education programs, and to respond to a survey on barriers to career education. The schools were selected to provide diversity in terms of geographic location (at least one school from each ESU), size (range of student membership, 162 to 46,000) and race/ethnicity. Fourteen of the schools agreed to distribute the student surveys. The other schools declined primarily because of lack of time before the school year ended. Six of the participating schools also provided input on their career education programs and barriers to career education.

The following public school districts participated in the student surveys:

Gordon-Rushville	McCool Junction	Santee
Grand Island	Newman Grove	South Sioux City
Hitchcock County	Omaha (Benson High)	Southern District #1
Johnson County	Omaha Nation	Winnebago
Lincoln (Lincoln High)	Ralston	

In order to increase outreach to special populations, high school age students were recruited through various youth programs including Bridge to Success, a college readiness program that works with Omaha Public School students, Girls Inc. in Omaha, Girl Scouts in Omaha, and the Upward Bound program for Southeast Community College and Western Nebraska Community College.

The 9th and 12th grade versions of the survey forms differed slightly. The few 10th grade students who responded were analyzed with the 9th grade survey, and the few 11th grade student responses were analyzed with the 12th grade survey. Altogether, there were 1,389 surveys completed, including 825 at the 9th grade level, and 564 at the 12th grade level.

The purpose of the survey was to examine students' career and postsecondary education interests and plans at both the 9th and 12th grade levels, and to identify obstacles they might face in terms of pursuing their career goals through postsecondary education. Since the survey sample was not drawn by a scientific method, the specific statistics should be considered with caution.

Community college student Career Plans and Obstacles survey

The project worked with the faculty and staff members of the six Nebraska Community Colleges to recruit special population students, as well as students from the general population, to complete the online survey. For this report, the student categories included three special population groups (GED, ESL and Support Program) and a general population group.

GED programs, offered through Adult Basic Education, are non-credit and free for students seeking a high school equivalency certificate. Survey participants included those who dropped out of high school, those who completed 12th grade but did not meet the requirements for a high school diploma, students who were home schooled and those who graduated high school in another country. A few of the GED students were enrolled in for-credit classes at the same time. Several GED students who were also in the ESL program were classified as ESL. Nearly all (97%) of the 65 GED students surveyed were from Metropolitan Community College.

ESL program students were either enrolled in free, Adult Basic Education non-credit ESL classes or fee-based, credit ESL classes that did not apply towards the academic requirements of award programs. Half of the ESL program respondents had earned college credits. Nearly all (89%) of the 37 ESL students surveyed were from Metropolitan Community College.

Support Program students were enrolled in credit classes and supported by a variety of programs across the different colleges: TRIO, Veterans Upward Bound, Single-Parent/ Displaced Homemaker, and Student Support Services. The particular requirements for participation in these programs vary, but generally speaking, students in these programs have one or more educational disadvantages or special needs. The 58 Support Program students surveyed were from Central, Northeast, Southeast and Western Nebraska Community Colleges.

General population students were those enrolled in credit classes who were not participating in any of the student support programs. They were recruited in various ways by faculty and staff, including invitations posted in computer labs, learning centers, and outreach to classes or other student groups in the general population of students. The 57 general population students surveyed were from Metropolitan, Northeast and Southeast Community Colleges.

Strategies for overcoming barriers to career education—input sources

The student surveys and data review provided some information on the existence of barriers to career education for different groups. Further information was sought from educators, college age youth and community leaders on the nature of those barriers and strategies to address them. The primary methods were surveys and community focus group meetings.

A survey on barriers to career education asked respondents to identify underlying reasons and possible strategies for the following general barriers:

- lack of future orientation
- inadequate preparation for college,
- career indecision or limited interests,
- uncertainty about career education options and procedures,
- inadequate financial resources, and
- limited access to employment opportunities in chosen career field

Administrators, guidance counselors and CTE instructors from each of the public high schools in the state were invited to respond to the online survey. In addition, community college faculty and staff, and many community organization staff members were invited to respond to the survey. Altogether 220 Barriers to Career Education surveys were completed.

Public high school administrators were invited to complete a survey on increasing girls' participation in career education programs that are non-traditional for their gender. The survey asked open-ended questions about strategies to increase girls' interest and participation in non-traditional career choices, and what resources were needed to implement those strategies. There were 29 non-traditional career education surveys completed.

The project held small focus group meetings across the state with community organizations staff members, educators, parents and students in Adult Basic Education GED and ESL classes. The discussions followed the same format as the Barriers to Career Education survey described above.

The focus group meeting dates, locations, host organizations, and numbers of participants were as follows:

Date (2008)	Location	Host Organization	Number of Participants
July 9	Omaha	Girls Inc. (north)	8
July 10	Omaha	Girls Inc. (south)	4
July 25	North Platte	NAF Multicultural	7
July 28	Scottsbluff	Guadalupe Center	4
August 7	Omaha	Metropolitan Community College, ESL class	5
August 8	Omaha	Metropolitan Community College, GED class	14
September 18	Lincoln	Community Services Initiative, Youth Group	17
October 8	Norfolk	Ponca Tribe of Nebraska	15

Many community organizations in addition to the host organizations, as well as individual stakeholders participated in the focus group meetings.

These community focus group meetings were in the service areas of all the Nebraska community colleges except for Central Community College. A recent project sponsored by that college had engaged community organizations, parents and students on ways to increase college continuation and success for students from immigrant families. This career education project met with the leaders of the immigrant student project on July 24, 2008 at the Grand Island campus to discuss ways to evaluate the impact of the project to make recommendations for other communities.