

LB 637 Study of Dual Enrollment and Career Academies in Nebraska

Current practice and recommendations for the future

Prepared by Nebraska's Coordinating Commission for
Postsecondary Education

December 2011

Nebraska's
Coordinating Commission
for
Postsecondary Education

CCPE

Nebraska's Coordinating Commission for Postsecondary Education thanks its Advisory Committee and the Nebraska Department of Education for their many contributions to this study.

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Executive summary

There is growing evidence in Nebraska and nationwide that dual enrollment courses – which allow students to earn both high school and college credit – and similar programs are a key strategy in addressing our future educational and economic needs, which are increasing every year.

Most states, seeing the potential benefits of dual enrollment and these other programs, have been proactive in recent years and passed legislation that encourages access and establishes minimum standards. Indeed, Nebraska is now one of only five states with no legislation regarding dual-enrollment programs, along with Alaska, New Hampshire, New York, and Rhode Island. With this in mind, in May 2011, the Nebraska Legislature passed and Gov. Dave Heineman signed into law LB 637, part of which calls on Nebraska’s Coordinating Commission for Postsecondary Education to conduct a study on the need for uniform policies and practices regarding dual-enrollment courses and career academies in Nebraska. The legislation also called for examination of other opportunities for Nebraska high-school students to earn college credit, such as Advanced Placement (AP) and International Baccalaureate (IB) programs.

For this study, the Coordinating Commission consulted with a 15-member advisory committee, examined national practice in these areas, and surveyed Nebraska’s high schools and postsecondary institutions to gauge their involvement and opinions in the areas of dual-enrollment and career academies. At the end of this report, the Coordinating Commission offers a series of recommendations about dual enrollment, career academies, and AP and IB programs in Nebraska.

Why address these issues now?

A recent report from the Georgetown University Center on Education and the Workforce shows that, as the economy slowly recovers, there will be a growing disconnect between the types of jobs employers need to fill and the numbers of Americans who possess the education and training required to fill them. Nebraska is no exception, with a projected 66 percent of jobs requiring postsecondary education by 2018 – the seventh-highest percentage among all states. Within the next six years, that translates to 56,000 new jobs in Nebraska that will require postsecondary education. (Carnevale, Smith, & Strohl, 2010)

Even though progress toward Nebraska’s higher-education goals is generally in the right direction, it is not aggressive enough to meet the state’s long-term needs and goals – including this growing need for a more educated workforce.

Nebraska must address its workforce issue through a comprehensive set of strategies that encourage our young people to graduate high school, advance to postsecondary education, and earn credentials that prepare them to be productive members of the state workforce, live enlightened lives, and be more informed, involved members of their communities. Furthermore, these efforts must target not only high-achieving students – as has been the case traditionally in this country – but our underrepresented

student populations, such as minorities and those from low-income families. Dual enrollment and similar programs should be a part of this effort.

Bridging high school and college

Dual-enrollment – often called “dual-credit” – courses allow high school students to earn both high school and college credit at the same time. Career academies, AP, and IB programs also are part of this broader effort to bridge high school and college.

Career academies – joint initiatives of secondary and post-secondary schools – typically offer a plan of study created for high school students from a “career cluster” area (health, manufacturing, agriculture, etc.) that outlines a pathway for career exploration. The courses within a career academy may be completed for high school credit, dual credit, or college credit only.

In the case of AP and IB programs, there are two key differences between these courses and dual-enrollment courses. First, AP and IB courses are high school courses taught at college rigor, whereas dual-enrollment courses are *college courses*, typically with identical syllabi, assessments and instructor qualifications expected on the college campus. Second, with AP and IB courses, to earn college credit students in most cases must take and perform well on a single, end-of course examination, which colleges and universities can use to decide whether to offer credit for qualified scores related to those AP and IB examinations.

National practice

Dual enrollment

Current research, although not extensive, shows that dual-enrollment programs are growing in popularity and are effective in increasing academic performance and educational attainment. The National Center for Education Statistics, in the first and only national study of dual-enrollment patterns, found that approximately 813,000 high-school students took college-level courses through postsecondary institutions in 2002-03. (Waits, Setzer, & Lewis, 2005) Additionally, there are numerous examples of specific states that have seen a growth in dual-enrollment programs. In Oregon, for example, the number of students enrolled in dual-enrollment courses increased 33 percent between 2005-06 and 2007-08, from 11,855 to 15,707. (Oregon University System, Office of Institutional Research, 2010)

As these programs grow in popularity, they also expand in their focus and objectives. Dual enrollment was once seen exclusively as a way for high-achieving students to gain a head-start on college. Increasingly, though, dual enrollment is viewed as a potential bridge to college for all students, including those traditionally underrepresented in higher education, such as minorities and those from low-income families.

Studies of dual-enrollment programs in Arizona, Florida and California showed that students who participated in such programs subsequently performed better in college than those students who did not. (Hoffman, Vargas, & Santos, 2009) Another national study found that students who earned college

credit through dual-enrollment programs graduated from college sooner than those who did not – 4.25 years compared to 4.65. (U.S. Department of Education, 2004)

In terms of policy, as previously stated, Nebraska is one of only five states with no legislation or regulations addressing dual enrollment. The number of states with no such polices has continued to shrink in recent years; in 2004, there were 12.

Despite this growth, not everyone is an advocate of dual-enrollment programs. Indeed, some educators are highly skeptical of such programs, both nationally and in Nebraska. At the secondary level, critics believe these programs take away from a student’s “high school experience.” At the postsecondary level, skeptics worry about the rigor of dual-enrollment courses when they’re offered at high schools by high school instructors, along with other concerns.

Career academies

It’s estimated there are currently 7,000 career academies nationwide, enrolling more than 1 million students, generally in grades 10 through 12. (Stern, Dayton, & Raby, 2010) Career academies have traditionally been located in urban school districts, but in recent years have expanded to suburban and rural areas, as well.

There is extensive data that proves the effectiveness of career academies in improving students’ academic performance, preparing them for postsecondary education, and boosting their earning potential after high school. In particular, numerous studies show how successful career academies are in encouraging the success of students who otherwise were likely to fall between the cracks – those who, early in high school, earned low grades, had high absenteeism, and demonstrated disciplinary problems.

Furthermore, academies increasingly try to walk the middle ground between focusing on college preparation and career preparation – realizing that in many cases, they are one and the same. As one recent national report states, “Even students who are determined to attend the most selective four-year college can benefit from a career academy, because they can gain a better understanding of academic subjects when these subjects are applied to problems and situations in which the students are interested.” For example, “Students who are interested in health and medicine can enroll in a health academy and gain additional insight into biology and chemistry by using them to perform actual lab tests.” (Stern, Dayton, & Raby, 2010)

Traditionally, career academy legislation nationwide has been included as part of broader legislation regarding career and technical education. There are recent examples, though, of academy-specific legislation in Georgia, South Dakota and Florida.

Advanced Placement

The Advanced Placement program is administered by the College Board, a not-for-profit organization founded in 1900. The College Board also administers the SAT, which, along with the ACT, is widely used as a college entrance exam. In 2011, more than 1.7 million high school students took nearly 3 million AP exams nationwide. High schools offer AP exams, with students having the option of taking the exam at

the conclusion of their AP course, in May. Each AP exam grade consists of a combination of the student's score on the multiple-choice section and the free-response section, with a score of 5 being the highest and 1 the lowest. The fee for taking each AP exam is \$87, which is one reason some parents and students cite for not taking the exam. Another reason students may not take the exam is because they are either unaware they could earn college credit or unsure if a specific college or university will accept AP credit. In many cases, it's difficult to determine if and how a certain postsecondary institution accepts AP credit. Nebraska students take relatively few AP courses, but the numbers are increasing.

To address these concerns, numerous states have not only adopted policies that encourage the widespread offering of AP courses, but the requirement that their public postsecondary institutions accept a student's AP credit if they achieve a minimum exam score.

International Baccalaureate

International Baccalaureate (IB) is a non-profit educational foundation that began in Switzerland in the 1960s. By the late 1970s, private schools in the United States began to offer these programs, drawn to their rigor and internationally-focused curriculum. IB now offers academic programs worldwide for three age levels: Primary Years (3 to 12); Middle Years (11 to 16); and Diploma (16 to 19, or junior and senior years of high school). Like AP, IB students in the Diploma program can take an exam at the conclusion of a course to potentially earn college credit. Far fewer institutions offer credit for IB than AP, although there are examples of postsecondary institutions that offer IB graduates sophomore standing and special scholarships.

Nebraska practice

Current Nebraska practice in the areas of dual enrollment, career academies, AP and IB programs is challenging to gauge, as there is no comprehensive data system to track these efforts, only pockets of data at the institutional level and anecdotal information. To help bridge this gap, the Coordinating Commission administered four separate surveys to measure state involvement and opinions in the areas of dual enrollment and career academies. The Commission surveyed all postsecondary institutions – more than 40, including private career schools – located in Nebraska in regard to dual enrollment, and all six community colleges about their participation in career academies. In conjunction with the Nebraska Department of Education, the Commission also surveyed all of the state's 242 public K-12 school districts about dual enrollment and career academies at their high schools. There are gaps in this data, due primarily to varying degrees of participation among school districts and postsecondary institutions. However, these survey results do offer a useful snapshot of current practice in Nebraska.

Survey results

K-12 dual enrollment survey

For this survey, 126 school district representatives completed the survey (52 percent), with varying response rates to individual questions. Key findings include:

- 5,812 students from responding schools completed dual-enrollment courses during the 2010-11 academic year, an average of 42 students per school.
- Of those students, 31 percent were low income and 26 percent were minorities.
- Schools offered an average of five different dual-enrollment courses.
- 80 percent of dual-enrollment students took these courses at their high school, 52 percent through interactive video, and 30 percent online.
- Most schools (84 percent) determine student eligibility by year in school and/or counselor/teacher recommendation (71 percent), with 47 percent using grade-point average and 40 percent using standardized test scores of some kind.
- Nearly half the responding high schools paid for the students' cost of books and supplies; 32 percent of the schools required the students to pay. Covering the costs of books and tuition are two areas, in particular, that illustrate the wide variance in practice among Nebraska high schools.
- Students from 60 percent of responding schools paid tuition themselves.
- Respondents were asked to describe any issues surrounding dual-enrollment courses at their schools. Much like the funding issue, responses varied widely, but the two most common themes were the cost of such courses for students and the challenge of finding dual-enrollment instructors – typically from their high schools – who meet their partnering postsecondary institutions' faculty qualifications.

K-12 career academy survey

For this survey, 164 district representatives completed the survey (68 percent), with varying response rates to individual questions. Key findings include:

- 59 percent said their district participates in at least one career academy.
- Nearly 6,000 Nebraska high school students at responding schools were enrolled in a career academy during the 2010-11 academic year, an average of 69 students per reporting school.
- Of these students, 2,696 (32 percent) were low-income and 39 percent were minorities.
- Nearly 90 percent of the respondents said their students participated in a “health sciences” career academy.

The majority of the questions dealt with the Nebraska Statewide Career Academy Quality Indicators. These quality indicators, adopted from the National Career Academy Coalition Standards, were approved by the chief instructional officers from all six Nebraska community colleges and the Nebraska State Board of Education in 2010. They were developed in response to the wide variety of career academy practices and policies in the state and are intended to provide statewide uniformity and consistency of program development, while affording the flexibility of local implementation. At this point, these indicators are strictly guidelines, however, with no enforceability.

Survey results show that compliance with these quality indicators varies greatly.

Postsecondary dual enrollment survey

For this survey, all postsecondary institutions located in Nebraska – more than 40 – were surveyed. All six community colleges completed the survey, along with all four University of Nebraska institutions and five of the state’s largest independent institutions: Bellevue University, Creighton University, Clarkson College, Nebraska Wesleyan University, and Hastings College. Key findings include:

- 53 percent said they offered dual-enrollment courses.
- Responses ran the gamut in terms of the number of dual-enrollment courses offered, the number of dual-enrollment credits awarded, and the number of dual-enrollment students enrolled during the 2010-11 academic year. For example, one school offered as many as 76 different dual-enrollment courses, with as many 2,000 dual-enrollment students, while another offered as few as one course for three students. For the most part, community colleges are the most active in dual-enrollment programs.
- The most common dual-enrollment instructor qualifications among colleges are a master’s degree in the content area they’ll be teaching (60 percent), as well as at least 18 credit hours of graduate study in that content area (40 percent).
- 73 percent of responding postsecondary institutions offer dual-enrollment courses at a reduced tuition rate.
- 40 percent of the institutions said students are responsible for paying dual-enrollment tuition.
- 27 percent said dual-enrollment students are responsible for paying for their books and supplies, while 27 percent of the institutions said they pay for these costs.
- Most of their dual-enrollment courses (72 percent) are offered at their partnering high school.
- Institutions use a variety of admission criteria for dual-enrollment students, with the most common being counselor/teacher recommendation and year in school.
- Institutions primarily use high school instructors to teach their dual-enrollment courses, approving those instructors according to each postsecondary institution’s policies. Those policies vary by institution.
- In terms of transferability, 59 percent of responding four-year institutions said they accept dual-enrollment courses as general education credit, 53 percent said they accept these courses as elective credit, while 35 percent said they do not accept dual-enrollment courses as college credit. Among two-year institutions, 91 percent said they accept dual-enrollment courses as general education credit.
- When asked to describe any concerns surrounding dual-enrollment courses at their institution, the most common response was the difficulty in finding qualified high school instructors.

Postsecondary career academy survey

All six Nebraska community colleges responded to this survey. Like the high school career academy survey, the questions focused mainly on the institutions' alignment with the career academy quality indicators they agreed to in 2010.

For the most part, the community colleges responded that they are in compliance with the quality indicators: All six of the community colleges said their career academy has a well-defined mission and goals; all six responded that their career academy focuses on career exploration, career preparation, and early college access – three key elements of career academies; and five of the colleges responded that their career academies' curricula were framed around state or national standards.

There were, however, examples of failing to meet the agreed-upon quality indicators: Two community colleges indicated their career academies do not have advisory boards; only three of the community colleges infuse core academic concepts into career education courses; and two of the community colleges said they do not collect any career academy student achievement data.

Access College Early scholarship program

Another useful means of gauging current Nebraska practice in the area of dual enrollment is the Access College Early (ACE) scholarship program, administered by the Coordinating Commission. Authorized by the Nebraska Legislature in 2007, the ACE program pays tuition and mandatory fees for qualified, low-income high school students to enroll in college courses at participating Nebraska colleges or universities, either through dual-enrollment or early enrollment agreements with these institutions. The ACE program has proven to be very effective. The college-going rates of Nebraska low-income high school seniors who received ACE scholarships in 2007–2008 and 2008–2009 were higher than the college continuation rates of other low-income high school graduates and also higher than the college-going rates of the non-low income graduates of Nebraska's public schools. (See page 27 of the report.)

Nebraska Dual Enrollment Standards

In 2005, the Coordinating Commission published the "Nebraska Dual Enrollment Standards" as part of the *Comprehensive Statewide Plan for Postsecondary Education*. The state constitution and statutes assign the Coordinating Commission the responsibility for comprehensive planning for postsecondary education in Nebraska. The *Comprehensive Plan* serves as the guiding document for this planning.

The Coordinating Commission created and included the dual-enrollment standards in the 2005 revised version of the *Comprehensive Plan* after consulting with representatives from Nebraska high schools and postsecondary institutions. These standards also were informed by national practice at that time and addressed many of the issues still prevalent today: student eligibility; faculty qualifications; curriculum rigor; assessment and student achievement evaluation; and the funding of such programs.

These standards still serve as a helpful resource, despite needing revision to reflect evolved national and state practice. However, these standards were never more than *guidelines* – not required practice – for school districts and postsecondary institutions.

Advanced Placement

The Nebraska Department of Education does not track how many Nebraska students take AP courses, but College Board, which administers AP courses and exams, does release data annually on the number of AP exams taken by Nebraska high school students. Nebraska ranks near the bottom of the country in terms of AP participation. Nebraska currently ranks 49th in the country, with only 12 percent of its high school seniors taking an AP exam. Of those test-takers, 7.4 percent scored a 3 or above, which ranks Nebraska 47th. Also, only a portion of Nebraska students who score a 3 or higher on an AP exam seek to convert that to college credit at a Nebraska public postsecondary institution. According to College Board, in 2011 there were 686 Nebraska high school seniors who sent a total of 1,841 AP exam scores to one of the State Colleges (Chadron, Peru, Wayne) or the University of Nebraska campuses at Lincoln, Omaha or Kearney. It's unknown how many of those students earned college credit for those exams, as acceptance policies vary by institutions and, sometimes, by college or department within those institutions.

Aside from the transferability issue, members of the advisory committee stressed the issue of teacher training when it comes to offering AP courses in Nebraska. College Board encourages AP instructors to attend “summer institutes” to receive training. These institutes can be costly – as much as \$1,000 per teacher – but are seen as valuable by both the high schools and College Board. In addition to the registration fee, school districts must incur the travel costs of sending teachers to such training.

International Baccalaureate

IB programs are not common in Nebraska, nor does there seem to be a movement toward more such programs. Only two Nebraska school districts, Millard and Lincoln, offer IB programs. Central High School in Omaha is in the final stages of the application process and hopes to begin offering IB Diploma courses in fall 2012. Most Nebraska school districts view the cost, as well as the unique curriculum, as deterrents to offering IB programs.

Transfer of credits

The transferability of college credits is a general issue across all of higher education, and the transfer of credits earned through dual enrollment is certainly no exception. Some states, as noted, have chosen to pass legislation that require their postsecondary institutions to accept dual-enrollment and AP credit, at least at some level; Nebraska has not. This report does not call for such legislation, rather it encourages postsecondary institutions to be thoughtful, considerate and cooperative in dealing with this issue, to the betterment of their students, and to work together to develop more uniform and transparent policies on acceptance.

Recommendations

It's clear that Nebraska high schools and postsecondary institutions, like many throughout the country, are utilizing dual enrollment, career academies, and AP and IB programs. It's also clear that Nebraska lags behind other states in terms of policy and statewide standards that address such programs – particularly dual enrollment, for which Nebraska is one of only five states with no explicit state policies or goals outlined in statutes.

This can partly be attributed to the relative newness of these issues. However, Nebraska also prides itself on a long history of placing “local control” ahead of statewide regulation when it comes to most matters of education policy, whether it's on the K-12 or postsecondary level. Indeed, there are advantages to high levels of local control – specifically, the flexibility it allows for innovation, as well as the ability to address specific community needs.

But practices are evolving nationwide, particularly in the areas of dual enrollment and career academies. And data-rich states have demonstrated the usefulness of these initiatives. Nebraska fails to support fully its educational and economic future by leaving the adoption of such practices to a piece-meal approach. The Coordinating Commission fully believes it's possible for Nebraska high schools and postsecondary institutions to maintain their independence and flexibility, while still clustering around a focused set of such practices. In fact, there are examples of dual-enrollment programs and career academies in Nebraska that already align with national common practice. A set of standards, adopted at the state level, could have the effect of raising the performance of those dual-enrollment programs and career academies not currently operating at a high level, with relatively little impact on those already in line with such standards.

Nebraska's inability to assess the quality of its dual-enrollment and career academy programs is one of many challenges faced by the state's legislators, educators, and, most importantly, students. Other related challenges include:

- The state's current inability to track dual enrollment, career academy and AP students through any kind of longitudinal data system and thereby better inform policy decisions;
- A lack of statewide coordination of dual enrollment and career academy activities, leading to differential treatment of students; and
- The statewide disparity in access to dual enrollment, career academies and AP courses, whether it's due to lack of funding, lack of technology or lack of information.

With those points in mind, the Coordinating Commission makes the following recommendations.

Dual enrollment

- The state should aggressively work toward establishing state K-12 and postsecondary data systems that identify current and former dual enrollees and distinguish participants and outcomes by social and demographic characteristics. These data systems should allow the K-12

and postsecondary sectors to share data and monitor the progress of dual enrollees from high school to and through postsecondary education. This data should be reported annually to identified stakeholders and be made readily available to the public.

- The state should strive for all Nebraska high school students and their families to be informed of the availability and benefits of dual enrollment.
- The state should fund a cost study of dual-enrollment programs at both the high school and postsecondary levels.
- Together with the Coordinating Commission and the Nebraska Department of Education, public postsecondary institutions and K-12 representatives should work together to establish target entrance standards for dual-enrollment students.
- Together with the Coordinating Commission and the Nebraska Department of Education, Nebraska public postsecondary institutions should work with state K-12 representatives to establish a set of standard general-education courses that, when taken as dual-enrollment courses, are clearly transferable for general education credit.
- The state should establish a set of minimum standards for all dual-enrollment courses offered through public high schools and postsecondary institutions. These standards should include the following:
 - Dual-enrollment courses should be of the same rigor as comparable college courses. (The Coordinating Commission believes this point is of key importance and necessary to expand postsecondary support for dual enrollment.)
 - Dual-enrollment instructors teaching academic/transferable courses should possess, at minimum, a master's degree and at least 18 hours of graduate-level study in the course content area. Dual-enrollment instructors teaching career and technical education (i.e., vocational) courses should possess, at a minimum, the postsecondary institution's equivalent faculty hiring requirements.
- Once minimum quality standards are established, all Nebraska public postsecondary institutions should be required to accept dual-credit, general education courses from other Nebraska public postsecondary institutions.
- The state should further examine the creation of incentives for high-school instructors to earn content-specific master's degrees, as well as incentives for the state's postsecondary institutions to offer these programs, which are often low-producing in terms of credit hours and graduates. (See page 33 of the report.)
- The state should continue to support access to dual-enrollment courses for underrepresented student populations through increased funding of the Access College Early scholarship program.

- The state needs to examine whether the practice of having high school students pay the cost of dual-enrollment books and supplies violates the state’s Public Elementary and Secondary Student Fee Authorization Act, Sections 79-2, 125 to 79-2, 135.
- The state should consider setting aside funds to pay for at least a portion of students’ dual-enrollment costs, which often includes both tuition and books and supplies.
- The state should consider dual-enrollment needs as part of any long-term technology planning for education, including the Nebraska Virtual High School.
- The Coordinating Commission should update and revise the “Nebraska Dual Enrollment Standards,” as contained in the Commission’s *Comprehensive Statewide Plan for Postsecondary Education*.

Career academies

- The state should make the Nebraska Career Academy Quality Indicators *requirements*, not just *suggested standards*, for any educational entity participating in a career academy as defined by the state.
- The Nebraska Department of Education should create a position for a Career Academy/Dual Enrollment Specialist. All Nebraska career academies should be required to annually collect and report student data through the Nebraska Student and Staff Records System; the person occupying this position would then be responsible for analyzing this data and reporting the results to identified stakeholders.
- The Nebraska Department of Education should establish a Career Academy flag within the Nebraska Student and Staff Record System that identifies those students who are participating in a Career Academy Program of Study.
- The state should fund a cost study of career academies’ needs at both the high school and postsecondary levels.
- The state should consider career academies as part of any long-term technology planning for education, including the Nebraska Virtual High School.

Advanced Placement

- The state’s public postsecondary institutions should be required to make clearly available on their websites their Advanced Placement credit acceptance and transfer policies.
- The state’s public postsecondary institutions, in conjunction with the Nebraska Department of Education and the Coordinating Commission, should establish a matrix of AP credit transfer policies and make it widely available to students, parents, and counselors.
- If a public postsecondary institution chooses to accept AP credit, such credit should count toward the student’s general education degree requirements, not merely elective credit.
- The state should provide incentives for the state’s postsecondary institutions to offer Advanced Placement summer institutes for training Nebraska high school teachers.

- The state should consider AP programs as part of any long-term technology planning for education, including the Nebraska Virtual High School.
- The state should provide financial assistance for more high schools to serve as proctor sites for AP exams.
- The state should explore the option of providing financial assistance to students wishing to take an AP exam, particularly those from low-income households.
- The Nebraska Department of Education should separate AP courses from other courses labeled as “Honors” courses in the Nebraska Student and Staff Record System.

International Baccalaureate

- The state should encourage the state’s public postsecondary institutions to accept a minimum number of IB credits as a way of keeping high-achieving students in-state.

Introduction

“It has been a game-changer. Kids used to take lots of electives and ‘blow off’ their senior years...Not any more. Now it is fast and furious and very rigorous academically and they are walking out with not just (a) high school diploma but a year of college credit under their belts, and that is true of the vast majority of our seniors.”

– Nebraska high school guidance counselor

“It gives students a jump start on college. If a kid is on the fence about college and can experience success at high school and have college credit earned prior to going they are more likely to go to college.”

– Nebraska high school guidance counselor

The above quotes offer anecdotal support for the effectiveness of dual-enrollment programs, which allow high school students to earn college and high school credit for the same course. There is growing evidence in Nebraska and nationwide that dual enrollment and similar programs are a key strategy in addressing our future educational and economic needs, which are increasing every year.

A recent report from the Georgetown University Center on Education and the Workforce shows that, as the economy slowly recovers, there will be a growing disconnect between the types of jobs employers need to fill and the numbers of Americans who possess the education and training required to fill them. The report, *Help Wanted: Projecting Jobs and Education Requirements Through 2018*, forecasts that by 2018, 63 percent of all jobs will require at least some postsecondary education.

In Nebraska, that need is projected to be even greater, with 66 percent of jobs requiring postsecondary education by 2018 – the seventh-highest percentage among all states. Within the next six years, that translates to 56,000 new jobs in Nebraska that will require postsecondary education. (Carnevale, Smith, & Strohl, 2010)

Even though progress toward Nebraska’s higher-education goals is generally in the right direction, it is not aggressive enough to meet the state’s long-term needs and goals – including this growing need for a more educated workforce. As indicated in the state’s *2011 Higher Education Progress Report*, produced by the Coordinating Commission, data indicates that:

- The college-going rate of Nebraska high school students continues to improve, but is not high enough to place the state among the top 10 nationally;
- Freshmen retention rates have risen only slightly since 2004, and college graduation rates also are only slightly higher. Furthermore, graduation rates are significantly lower for Hispanics, blacks, and Native Americans compared to white and Asian undergraduate students; and

- Nebraska’s needy students – particularly males – are enrolling and succeeding in higher education at much lower rates than their higher-income classmates.

Nebraska must address its workforce issue through a comprehensive set of strategies that encourage our young people to graduate high school, advance to postsecondary education, and earn credentials that prepare them to be productive members of the state workforce, live enlightened lives, and be more informed, involved members of their communities. Furthermore, these efforts must target not only high-achieving students – as has been the case traditionally in this country – but our underrepresented student populations, such as minorities and those from low-income families. Dual-enrollment and similar programs should be a part of this effort.

Dual-enrollment – often called “dual-credit” – courses allow high school students to earn both high school and college credit at the same time. Dual enrollment courses are taught by high school faculty or by full-time or adjunct college or university faculty, either at the high school, at the college or university, or sometimes through online delivery systems. Dual enrollment courses are offered by both public and private institutions, four-year and two-year institutions.

Career academies, Advanced Placement (AP), and International Baccalaureate (IB) programs also are part of this broader effort to bridge high school and college.

Career academies – joint initiatives of secondary and post-secondary schools – typically offer a plan of study created for high school students from a “career cluster” area (health, manufacturing, agriculture, etc.) that outlines a pathway for career exploration. The courses within the career academy may be completed for high school credit, dual credit, or college credit only. Each course typically includes a component that explores the career field associated with that course. This “career exploration” is an important characteristic of career academies that distinguishes them from dual-enrollment courses. A career academy is typically a partnership between a K-12 entity and a postsecondary institution.

In the case of AP and IB programs, there are two key differences between these courses and dual-enrollment courses. First, AP and IB courses are high school courses taught at college rigor, whereas dual-enrollment courses are *college courses*, typically with identical syllabi, assessments and instructor qualifications updated on the college campus. Second, with AP and IB courses, to earn college credit students in most cases must take and perform well on a single, end-of course examination, which colleges and universities can use to decide whether to offer credit for qualified scores related to those AP and IB examinations.¹

¹ The University of Nebraska at Omaha is a notable exception to common national practice in terms of the awarding of dual credit for AP courses. High-school students participating in UNO's dual-enrollment program are strongly encouraged, but not required, to take the end-of-course AP exam to receive credit from UNO, as long as the AP course is offered as part of the UNO dual-enrollment program.

Most states, seeing the potential benefits of dual enrollment and these other programs, have been pro-active in recent years and passed legislation that encourages access and establishes minimum standards. Indeed, Nebraska is now one of only five states with no legislation regarding dual-enrollment programs, along with Alaska, New Hampshire, New York, and Rhode Island.²

With this in mind, in May 2011, the Nebraska Legislature passed and Gov. Dave Heineman signed into law LB 637, part of which calls on Nebraska’s Coordinating Commission for Postsecondary Education to conduct a study on the need for uniform policies and practices regarding dual-enrollment courses and career academies in Nebraska. The legislation also called for examination of other opportunities for Nebraska high-school students to earn college credit, such as AP and IB programs. *(See sidebar on this page for the full portion of LB 637 that calls for the study.)*

LB 637 directs the Coordinating Commission to collaborate with numerous stakeholders in completing this study. To help foster this collaboration – as well as to gain the valuable insight of education leaders from across the state and from all sectors – the Commission formed a 15-member advisory committee. This committee included representatives from public and private high schools; the state’s Educational Service Units; private postsecondary institutions; and the State of Nebraska’s community college, college, and university systems. When seeking nominations and choosing committee members, the Coordinating Commission placed a premium on “hands-on” experience in the areas examined in this study. *(See Appendix I for advisory committee roster)*

From LB 637:

In collaboration with the State Department of Education, public and private postsecondary educational institutions, private, denominational, or parochial secondary schools, educational service units, and school districts, conduct a study regarding the need for uniform policies and practices for dual-enrollment courses and career academies in Nebraska, including transferability of dual enrollment courses and consistency of administration of career academies. The study shall also include a review of any program that provides Nebraska high school students with the opportunity to earn college credit or advanced placement through participation in courses and examinations administered by a not-for-profit organization and of the need for uniform policies and practices related to the acceptance and transferability of such courses and the college credit or advanced placement earned as a result of a student's performance on such examinations. The commission shall report the findings of such study and its recommendations, including recommendations for possible legislation, to the Legislature on or before December 15, 2011. For purposes of this subdivision, dual-enrollment course has the same definition as provided in section 79-1201.01.

² This information comes from the Education Commission of the States, which actually includes Nebraska as among the states with legislation regarding dual enrollment. However, the primary rationale for that decision is Nebraska’s legislation regarding the Access College Early scholarship program, which deals with dual-enrollment courses for low-income students only. The Coordinating Commission does not believe the ACE-related legislation is sufficient enough to include Nebraska among the states with dual-enrollment legislation, as it deals only with the distribution of financial aid to a limited amount of students.

The Coordinating Commission, in addition to consulting with this advisory committee, examined national practice in these areas and surveyed Nebraska's high schools and postsecondary institutions to gauge their involvement and opinions in the areas of dual-enrollment and career academies. (As directed by LB 637, the Commission focused primarily on dual-enrollment programs and career academies for this study, but did examine national and Nebraska practice for AP and IB programs, as well. In particular, LB 637 directed the Commission to focus on credit transfer issues when examining AP and IB programs.)

Finally, the Coordinating Commission, at the end of this report, offers a series of recommendations about dual-enrollment, career academies, and AP and IB programs in Nebraska. Some recommendations urge specific policy, while others call for further study, consideration or collaboration. All of the recommendations, however, share a common goal: To increase the quantity and quality of postsecondary education opportunities for Nebraska's high school students, as well as to increase their participation in these opportunities.

National practice

Dual enrollment

Current research, although not extensive, shows that dual-enrollment programs are growing in popularity and are effective in increasing academic performance and educational attainment. The National Center for Education Statistics (NCES), in the first and only national study of dual-enrollment patterns, found that approximately 813,000 high-school students took college-level courses through postsecondary institutions in 2002-03. (Waits, Setzer, & Lewis, 2005) The NCES study did not differentiate between students who took these courses through dual-enrollment programs and those who took the courses for college credit only, but there are other findings in the report that illustrate the prevalence of dual-enrollment programs:

- Dual enrollees accounted for 1.2 million postsecondary course enrollments in 2002-03;
- During the 2002-03 school year, 71 percent of public high schools offered dual-credit course opportunities to their students;
- Additionally, there are numerous examples of specific states that have seen a growth in dual-enrollment programs. In Kentucky, the number of students enrolled in the state's dual-enrollment program increased from 6,821 in 2000 to 14,123 in 2005. In Virginia, the number of dual-enrollment students rose from 2,000 to 6,700 during a six-year period. In the Philadelphia area, the number of high schools that offered dual-enrollment programs rose from 75 to 112 between 2003 and 2005. (Krueger, 2006) And in Oregon, the number of students enrolled in dual-enrollment courses increased 33 percent between 2005-06 and 2007-08, from 11,855 to 15,707. (Oregon University System, Office of Institutional Research, 2010)

As these programs grow in popularity, they also expand in their focus and objectives. Dual enrollment was once seen exclusively as a way for high-achieving students to gain a head-start on college. Increasingly, though, dual enrollment is viewed as a potential bridge to college for all students, including those traditionally underrepresented in higher education, such as minorities and those from low-income families. This expanded approach is referred to as a "school-wide strategy" for dual enrollment.

There also are isolated studies that show dual enrollment's effectiveness in preparing students to not only to stay in school and complete college, but to complete college at a faster rate. Studies of dual-enrollment programs in Arizona, Florida and California showed that students who participated in such programs subsequently performed better in college than those students who did not. (Hoffman, Vargas, & Santos, 2009) Another national study found that students who earned college credit through dual-enrollment programs graduated from college sooner than those who did not – 4.25 years compared to 4.65. (U.S. Department of Education, 2004) A 2008 study found that students who participated in dual enrollment and showed other signs of "academic momentum" were more likely to complete a degree in

less than the average length of time, which was established as 4.56 calendar years for that study. (Swanson, 2008) Dual enrollment's positive effect on college completion time is perhaps the weakest research-supported argument for such programs at this point, with only a few studies that support this claim. The body of research on this topic will certainly grow in the coming years, however, as more states implement dual-enrollment programs and track student achievement data from high school through college.

There is evidence that dual-enrollment programs still tend to reach mainly high-achieving students, however, and not the underrepresented groups that also can benefit. According to NCES, schools with the highest minority enrollment are the least likely to offer dual-enrollment courses – 58 percent, compared to 78 percent of schools with lower minority populations. (National Center for Education Statistics, 2005) There also is a study, released in December 2011, that shows dual-enrollment programs could be more effective when students take dual-enrollment courses at colleges rather than their high schools. (Speroni, 2011)

In terms of policy, as previously stated, Nebraska is one of only five states with no legislation or state regulations addressing dual enrollment. (*We do have voluntary guidelines, however, adopted by the Coordinating Commission; see Appendix VI*) The number of states with no such policies has continued to shrink in recent years; in 2004, there were 12.

There is wide variance in what states legislate regarding dual enrollment. However, state policies typically fall into one of ten categories, as outlined by the U.S. Department of Education, Office of Vocational and Adult Education: (Karp, Bailey, Hughes, & Fermin, 2004)

- *Target student population* – Are only high-achieving students targeted for such programs? What about low-income students or minorities?
- *Student admissions requirements* – What criteria is used to allow students to take dual-enrollment courses? Year in high school? Grade-point average? Their score on a standardized test?
- *Location* – Where are dual-enrollment courses offered? At the high school only? At a combination of locations and through various delivery methods?
- *Student mix* – Are dual-enrollment and non-dual-enrollment students allowed to take the same class?
- *Instructor* – What are the required qualifications for dual-enrollment instructors?
- *Course content* – Are there requirements that ensure dual-enrollment courses are taught at college rigor?
- *Method of earning credit* – How do dual-enrollment students earn college credit? Are postsecondary institutions required to accept dual-enrollment credit?
- *Program intensity* – Are dual-enrollment programs offered at varying degrees of intensity, depending on the needs and ability of the student?

- *Funding* – Who pays the student’s tuition or the cost of books and supplies? How are school districts and postsecondary institutions compensated for offering dual-enrollment programs?
- *Mandatory nature of policy* – Are postsecondary institutions and school districts required to offer some form of dual enrollment? Are they required to adhere to a set of minimum standards for dual-enrollment programs?

Of the 45 states that legislate dual enrollment in some way:

- 17 require public school districts and postsecondary institutions to offer students some form of dual-enrollment opportunity.
- 29 have statewide policies of some kind regarding instructor qualifications and the rigor of dual-enrollment courses.
- 14 require their public postsecondary institutions to accept dual-enrollment credits, either for general education or elective credit.
- 22 leave it up to the students/parents to pay dual-enrollment tuition, while six require the school district to pay and three require the postsecondary institution to pay.

Not everyone is an advocate of dual-enrollment programs. Indeed, some educators are highly skeptical of such programs, both nationally and in Nebraska. At the secondary level, critics believe these programs take away from a student’s “high school experience.” At the postsecondary level, skeptics worry about the rigor of dual-enrollment courses when they’re offered at high schools by high school instructors, along with other concerns.

Career academies

As previously stated, career academies typically offer a plan of study created for high school students from a “career cluster” area that outlines a pathway for career exploration. Edison High School in Philadelphia started the first career academy in 1969, in conjunction with Philadelphia Electric Co. Since then, career academies have grown steadily nationwide. It’s estimated there are currently 7,000 career academies nationwide, enrolling more than 1 million students, generally in grades 10 through 12. (Stern, Dayton, & Raby, 2010) Career academies have traditionally been located in urban school districts, but in recent years have expanded to suburban and rural areas, as well.

There is extensive data that proves the effectiveness of career academies in improving students’ academic performance, preparing them for postsecondary education, and boosting their earning potential after high school. In particular, there are numerous studies that show how successful career academies are in encouraging the success of students who otherwise were likely to fall between the cracks – those who, early in high school, earned low grades, had high absenteeism, and demonstrated disciplinary problems.

Much of this evidence originates from California, which has been measuring the effectiveness of its career academies for more than 30 years. A 1997 study found that high school dropout rates among career academy students were 7 or 8 percent over a three-year period – about half the rate of California’s general student population. (Dayton, 1997) Furthermore, another study found that California career academy students from the same time period were just as likely as students on the “academic track” to enroll in four-year colleges after graduation. (Maxwell & Rubin, 1997) (The state-funded career academies examined in this study were required to recruit students deemed not likely to graduate from high school based on their early performance and behavior. Career academies have traditionally catered to these students, but there is now a national movement among career academies to emphasize college readiness in tandem with career and technical education, therefore expanding the pool of potential students.)

As stated in a 2010 report from the Career Academy Support Network, academies now increasingly try to walk the middle ground between focusing on college preparation and career preparation – realizing that in many cases, they are one and the same. As the report states, “Even students who are determined to attend the most selective four-year college can benefit from a career academy, because they can gain a better understanding of academic subjects when these subjects are applied to problems and situations in which the students are interested.” For example, “Students who are interested in health and medicine can enroll in a health academy and gain additional insight into biology and chemistry by using them to perform actual lab tests.” (Stern, Dayton & Raby, 2010)

Although there is more performance data on career academies than dual-enrollment programs, there are fewer examples of state policy. Traditionally, career academy legislation nationwide has been included as part of broader legislation regarding career and technical education. There are recent examples, though, of academy-specific legislation.

In 2011, the Georgia legislature established clear definitions and guidelines for career academies in order for them to be eligible for state funding. Among other things, the legislation calls for clearer involvement of business and industry, increased focus on reporting of student achievement data, and required integration of dual-enrollment opportunities into academies that previously stressed only career and technical education (2011 Ga. Laws SB 161). In 2009, South Dakota passed legislation that further strengthened the blending of career and academic courses in state-approved career academies (2009 S.D. Laws HB 1044). And in 2007, Florida passed into law the State Career and Professional Education Act, part of which specifically addressed career academies (2007 Fla. Laws SB 1232).

Advanced Placement

The Advanced Placement program is administered by the College Board, a not-for-profit organization founded in 1900. The College Board also administers the SAT.

In 2011, more than 1.7 million high school students took nearly 3 million AP exams nationwide. High schools offer AP exams, with students having the option of taking the exam at the conclusion of their AP course, in May. Each AP exam grade consists of a combination of the student’s score on the multiple-choice section and the free-response section, with a score of 5 being the highest and 1 the lowest. The

fee for taking each AP exam is \$87, which is one reason some parents and students cite for not taking the exam. Another reason students may not take the exam is because they are either unaware that they could earn college credit or unsure if a specific college or university will accept AP credit. In many cases, it's difficult to determine if and how a certain postsecondary institution accepts AP credit.

To address these concerns, numerous states have not only adopted policies that encourage the widespread offering of AP courses, but the requirement that their public postsecondary institutions accept a student's AP credit if they achieve a minimum exam score.

Indiana now requires its public postsecondary institutions to accept AP credit toward a student's degree requirements if the student scores at least a 3 on the AP exam (2010 Ind. Acts HB 1135). Florida requires the same of its public institutions, going as far as providing a matrix that tells students and educators exactly which college courses they'll earn credit for with scores of 3, 4 or 5 (www.fldoe.org/articulation/pdf/ACC-CBE.pdf). Similarly, since 2009 Ohio dictates that all of its public postsecondary institutions accept AP credit from Ohio students when they score at least a 3; this policy gives the state's colleges and universities the freedom to decide the number of credits and how they're applied, but does say the credits should count toward the general education curriculum when possible (http://regents.ohio.gov/actions/documents/Directive_2008-10.pdf).

International Baccalaureate

International Baccalaureate (IB) is a non-profit educational foundation that began in Switzerland in the 1960s. By the late 1970s, private schools in the United States began to offer these programs, drawn to their rigor and internationally-focused curriculum. IB now offers academic programs worldwide for three age levels: Primary Years (3 to 12); Middle Years (11 to 16); and Diploma (16 to 19, or junior and senior years of high school). Like AP, IB students in the Diploma program can take an exam at the conclusion of a course to potentially earn college credit. Far fewer institutions offer credit for IB than AP, although there are examples of postsecondary institutions that offer IB graduates sophomore standing and special scholarships.

The United States offers more IB programs than any other country, with 743 Diploma programs, 444 Middle Years programs, and 296 Primary Years programs. As with AP programs, cost can be a prohibitive factor, both for students and schools. IB charges roughly \$10,000 a year per school, \$141 per student, and \$96 per exam. (Lewin, 2010) A number of states have enacted policies to encourage the establishment of IB programs, including easing the financial burden for schools and students. Ten states offer subsidies to offset the cost of IB exams, while 11 states offer financial incentives for schools to implement IB programs. Additionally, 17 states have passed legislation that encourages or requires their public postsecondary institutions to accept IB credit.

Nebraska practice

Current Nebraska practice in the areas of dual enrollment, career academies, AP and IB programs is challenging to gauge, as there is no comprehensive data system to track these efforts, only pockets of data at the institutional level and anecdotal information. (The Nebraska Department of Education does plan on collecting some basic dual-enrollment data beginning with the 2011-12 school year. As part of the Nebraska Student and Staff Record System, the Department will now know whether a student took a course that was eligible for dual credit and whether that student chose to take that course for dual credit or high school credit only.)

To help bridge this gap, the Coordinating Commission administered four separate surveys to measure state involvement and opinions in the areas of dual enrollment and career academies. The Commission surveyed all postsecondary institutions – more than 40, including private career schools – located in Nebraska in regard to dual enrollment, and all six community colleges about their participation in career academies. (Community colleges are almost exclusively the postsecondary institutions that administer career academies in Nebraska, although there are indications that more of the state’s four-year institutions are exploring the option, as well.) In conjunction with the Nebraska Department of Education, the Commission also surveyed all of the state’s 242 public K-12 school districts about dual enrollment and career academies at their high schools. There are gaps in this data, due primarily to varying degrees of participation among school districts and postsecondary institutions. This stems, at least in part, from a lack of a state longitudinal data system, which can make it difficult to identify a school district’s or postsecondary institution’s contact person for data requests. However, these survey results do offer a useful snapshot of current practice in Nebraska.

Following is a summary of the results from each of the surveys. *(Full results are available in Appendix III, which is located online at the Coordinating Commission’s website: www.ccpe.state.ne.us)*

K-12 dual enrollment survey

For this survey, 126 school district representatives completed the survey (52 percent), with varying response rates to individual questions. Key findings include:

- 5,812 students from responding schools completed dual-enrollment courses during the 2010-11 academic year, an average of 42 students per school.
- Of those students, 31 percent were low income and 26 percent were minorities.
- Schools offered an average of five different dual-enrollment courses.
- 80 percent of dual-enrollment students took these courses at their high school, 52 percent through interactive video, and 30 percent online.

- Most schools (84 percent) determine student eligibility by year in school and/or counselor/teacher recommendation (71 percent), with 47 percent using grade-point average and 40 percent using ASSET or COMPASS test scores.³
- Nearly half the responding high schools paid for the students' cost of books and supplies; 32 percent of the schools required the students to pay. Covering the costs of books and tuition are two areas, in particular, that illustrate the wide variance in practice among Nebraska high schools.
- Students from 60 percent of responding schools paid tuition themselves.
- Two of the survey's open-ended questions asked schools to further explain their funding policies for books and tuition. Responses included:
 - "If needed for (high school) graduation, the school pays; if wanted for personal growth, the student pays."
 - "Students pay the tuition. If they receive an A or B in the class our school refunds half of the tuition."
 - "If the student is considered a High Ability Learner, the district pays, otherwise the student pays tuition."
 - "School would pay if no other funding available for student."
- Finally, respondents were asked to describe any issues surrounding dual-enrollment courses at their school. Much like the funding issue, responses varied widely but the two most common themes were the cost of such courses for students and the challenge of finding dual-enrollment instructors – typically from their high schools – who meet their partnering postsecondary institution's faculty qualifications.

K-12 career academy survey

For this survey, 164 district representatives completed the survey (68 percent), with varying response rates to individual questions. Key findings include:

- 59 percent said their district participates in at least one career academy.
- Nearly 6,000 Nebraska high school students were enrolled in a career academy during the 2010-11 academic year, an average of 69 students per reporting school.
- Of these students, 2,696 (32 percent) were low-income and 39 percent were minorities.
- Nearly 90 percent of the respondents said their students participated in a "health sciences" career academy.

³ ASSET and COMPASS are a series of short placement tests covering the areas of reading, writing and math.

The majority of the questions dealt with the Nebraska Statewide Career Academy Quality Indicators. (See Appendix V) These quality indicators, adopted from the National Career Academy Coalition Standards, were approved by the chief instructional officers from all six Nebraska community colleges and the Nebraska State Board of Education in 2010. They were developed in response to the wide variety of career academy practices and policies in the state and are intended to provide statewide uniformity and consistency of program development, while affording the flexibility of local implementation. At this point, these indicators are strictly guidelines, however, with no enforceability.

Survey results show that compliance with these quality indicators varies greatly.

Postsecondary dual enrollment survey

For this survey, all postsecondary institutions located in Nebraska – more than 40, including private career schools – were surveyed. All six community colleges completed the survey, along with all four University of Nebraska institutions and five of the state’s largest independent institutions: Bellevue University, Creighton University, Clarkson College, Nebraska Wesleyan University, and Hastings College. Key findings include:

- 53 percent said they offered dual-enrollment courses.
- Responses ran the gamut in terms of the number of dual-enrollment courses offered, the number of dual-enrollment credits awarded, and the number of dual-enrollment students enrolled during the 2010-11 academic year. For example, one school offered as many as 76 different dual-enrollment courses, with as many 2,000 dual-enrollment students, while another offered as few as one course for three students. For the most part, community colleges are the most active in dual-enrollment programs.
- The most common dual-enrollment instructor qualifications among colleges are a master’s degree in the content area they’ll be teaching (60 percent), as well as at least 18 credit hours of graduate study in that content area (40 percent).
- 73 percent of responding institutions offer dual-enrollment courses at a reduced tuition rate.
- 40 percent of the institutions said students are responsible for paying dual-enrollment tuition.
- 27 percent said dual-enrollment students are responsible for paying for their books and supplies, while 27 percent of the institutions said they pay for these costs.
- Respondents offer almost exclusively general education courses through their dual-enrollment programs. (Advisory committee members offered information that conflicts with this survey finding; multiple members indicated that Nebraska postsecondary institutions offer many courses that would not fall under “general education,” i.e., career and technical education courses offered through career academies.)
- Most of their dual-enrollment courses (72 percent) are offered at their partnering high schools.

- Institutions use a variety of admission criteria for dual-enrollment students, with the most common being counselor/teacher recommendation and year in school.
- Institutions primarily use high school instructors to teach their dual-enrollment courses, approving those instructors according to each postsecondary institution’s policies. Those policies vary by institution.
- In terms of transferability, 59 percent of responding four-year institutions said they accept dual-enrollment courses as general education credit, 53 percent said they accept these courses as elective credit, while 35 percent said they do not accept dual-enrollment courses as college credit. Among two-year institutions, 91 percent said they accept dual-enrollment courses as general education credit.
- When asked to describe any concerns surrounding dual-enrollment courses at their institution, the most common response was the difficulty in finding qualified high school instructors.

Postsecondary career academy survey

All six Nebraska community colleges responded to this survey. Like the high school career academy survey, the questions focused mainly on the institutions’ alignment with the career academy quality indicators they agreed to in 2010.

For the most part, the community colleges responded that they are in compliance with the quality indicators.

- All six of the community colleges said their career academy has a well-defined mission and goals.
- All six responded that their career academy focuses on career exploration, career preparation, and early college access – three key elements of career academies.
- All of the community colleges indicated their career academies have “visible support” from area business and industry leadership.
- Five of the colleges responded that their career academies’ curricula were framed around state or national standards.
- They all said their career academies offered a “work-based learning component,” such as internships or job shadowing.

There were, however, examples of non-compliance with the agreed-upon quality indicators: Two community colleges indicated their career academies do not have advisory boards; only two community colleges indicated that business and industry representatives served on their advisory boards; only three of the community colleges infuse core academic concepts into career education courses; and two of the community colleges said they do not collect any career academy student achievement data.

Access College Early scholarship program

Another useful means of gauging current Nebraska practice in the area of dual enrollment is the Access College Early (ACE) scholarship program, administered by the Coordinating Commission. Authorized by the Nebraska Legislature in 2007, the ACE program pays tuition and mandatory fees for qualified, low-income high school students to enroll in college courses at participating Nebraska colleges or universities, either through dual-enrollment or early enrollment agreements with these institutions. To qualify for the ACE Scholarship, students must either be eligible to receive assistance under a variety of federal government programs or the student and his or her family must have experienced a recent hardship. The student also must be a legal resident of the United States. Several recent national studies indicate that dual enrollment students remain in high school, graduate from high school, attend college, and persist in college at higher rates than those students who do not take dual enrollment courses. All those points remain true even if you adjust for socioeconomic status.

In 2009, the Coordinating Commission started conducting research to determine how many of the state's high school seniors who receive ACE scholarships continue on to college, compared to other low-income and non-low-income graduates of Nebraska's public high schools. Following is a summary of the findings of this research.

The college-going rates of Nebraska low-income high school seniors who received ACE scholarships in 2007–2008 and 2008–2009 were higher than the college continuation rates of other low-income high school graduates and also higher than the college-going rates of the non-low income graduates of Nebraska's public schools.

All 14 of the seniors at nonpublic (private) high schools who received ACE scholarships in 2008–2009 continued on to college. Of the 438 public high school seniors who received ACE scholarships in 2008–2009, 80.6 percent enrolled in college sometime during the 2009–2010 academic year, ending May 31, 2010.

While females accounted for 72 percent of the public high school seniors who received ACE scholarships in 2008–2009 and males accounted for only 28 percent of the recipients, the college-going rates of the male and female scholarship recipients were almost equal: 81.0 percent for the females and 79.7 percent for the males. This is an important finding because male high school graduates generally go on to college at lower rates than their female classmates.

Another important finding is that the overall college continuation rate for the public high school seniors who received ACE scholarships in 2008–2009 was 30 percentage points higher than the college-going rates for other low-income graduates of Nebraska's public schools. Furthermore, the ACE scholarship recipients had an overall college continuation rate that was five percentage points higher than the non-low-income students who graduated from Nebraska's public high schools in 2008–2009.

So, while lacking extensive data on dual-enrollment programs in general, Nebraska can certainly point to the success of the ACE scholarship program as a sign of the potential for such programs.

Nebraska Dual Enrollment Standards

In 2005, the Coordinating Commission published the “Nebraska Dual Enrollment Standards” as part of the *Comprehensive Statewide Plan for Postsecondary Education*. The state constitution and statutes assign the Coordinating Commission the responsibility for comprehensive planning for postsecondary education in Nebraska. The *Comprehensive Plan* serves as the guiding document for this planning.

The Coordinating Commission created and included the dual-enrollment standards in the 2005 revised version of the *Comprehensive Plan* after consulting with representatives from Nebraska high schools and postsecondary institutions. These standards also were informed by national practice at that time and addressed many of the issues still prevalent today: student eligibility; faculty qualifications; curriculum rigor; assessment and student achievement evaluation; and the funding of such programs.

These standards still serve as a helpful resource, despite needing revision to reflect evolved national and state practice. However, these standards were never more than *guidelines* – not required practice – for school districts and postsecondary institutions.

Advanced Placement

The Nebraska Department of Education does not track how many Nebraska students take AP courses, but College Board, which administers AP courses and exams, does release data annually on the number of AP exams taken by Nebraska high school students. In May 2011, the number of AP test-takers in Nebraska increased by 11.2 percent, to 4,631 students, compared to 7.6 percent growth nationally. Furthermore, Nebraska high schools saw an 8 percent increase in students who scored a 3 or higher in 2011, from 2,856 to 3,085. (Rodriguez, 2011) (Nationally, a score of 3 is often the minimum score considered for college credit by postsecondary institutions) However, even with these gains, Nebraska still ranks near the bottom of the country in terms of AP participation. Nebraska ranks 49th in the country, with only 12 percent of its high school seniors taking an AP exam. Of those test-takers, 7.4 percent scored a 3 or above, which ranks Nebraska 47th.

Only a portion of Nebraska students who score a 3 or higher on an AP exam seek to convert that to college credit at a Nebraska public postsecondary institution. According to College Board, in 2011 there were 686 Nebraska high school seniors who sent a total of 1,841 AP exam scores to one of the State Colleges (Chadron, Peru, Wayne) or the University of Nebraska campuses at Lincoln, Omaha or Kearney. It’s unknown how many of those students earned college credit for those exams, as acceptance policies vary by institutions and, sometimes, by college or department within those institutions.

LB 637 was specific about what this study should consider in terms of potential AP policies. Such policy recommendations, it said, should address “the need for uniform policies and practices related to the acceptance and transferability of such courses and the college credit or advanced placement earned as a result of a student’s performance on such examinations.” However, the Coordinating Commission

believes it's also beneficial to highlight other issues related to AP in Nebraska, which in turn could help inform future policy. Nebraska currently has no statewide policy addressing Advanced Placement, either at the K-12 or postsecondary levels.

Aside from the transferability issue, members of the advisory committee stressed the issue of teacher training when it comes to offering AP courses in Nebraska. College Board encourages AP instructors to attend "summer institutes" to receive training. These institutes can be costly – as much as \$1,000 per teacher – but are seen as valuable by both the high schools and College Board. In addition to the registration fee, school districts must incur the travel costs of sending teachers to such training.

International Baccalaureate

IB programs are not common in Nebraska, nor does there seem to be a movement toward more such programs. Only two Nebraska school districts, Millard and Lincoln, offer IB programs. Both offer the Diploma program, which can potentially serve as a dual-enrollment program for high school juniors and seniors. Millard typically has 80-100 students enrolled in its Diploma Program, with 36 Diploma candidates in the class of 2011. Lincoln had 120 IB students in fall 2011, including 20 Diploma candidates.

Central High School in Omaha is in the final stages of the application process and hopes to begin offering IB Diploma courses in fall 2012.

Most Nebraska school districts view the cost, as well as the unique curriculum, as deterrents to offering IB programs.

Transfer of credits

The transferability of college credits is a general issue across all of higher education, and the transfer of credits earned during high school is certainly no exception. Some states, as noted, have chosen to pass legislation that require their postsecondary institutions to accept dual-enrollment and AP credit, at least at some level; Nebraska has not. This report does not call for such legislation; rather it encourages postsecondary institutions to be thoughtful, considerate and cooperative in dealing with this issue, to the betterment of their students, and to work together to develop more uniform and transparent policies on acceptance.

Recommendations

It's clear that Nebraska high schools and postsecondary institutions, like many throughout the country, are utilizing dual enrollment, career academies, and AP and IB programs. It's also clear that Nebraska lags behind other states in terms of policy and statewide standards that address dual enrollment, career academies, and AP and IB programs – particularly dual enrollment, for which Nebraska is one of only five states with no explicit state policies or goals outlined in statutes.

This can partly be attributed to the relative newness of policies that address dual enrollment, career academies, and AP and IB programs. However, Nebraska also prides itself on a long history of placing “local control” ahead of statewide regulation when it comes to most matters of education policy, whether it's on the K-12 or postsecondary level. There are advantages to high levels of local control – specifically, the flexibility it allows for innovation, as well as the ability to cater to specific community needs.

But there are evolving common practices nationwide, particularly in the areas of dual enrollment and career academies. Nebraska fails to support fully its educational and economic future by leaving the adoption of such practices to a piece-meal approach. The Coordinating Commission believes it's possible for Nebraska high schools and postsecondary institutions to maintain their independence and flexibility, while still clustering around a focused set of such practices. In fact, there are examples of dual-enrollment programs and career academies in Nebraska that already align with national practice. A set of standards, adopted at the state level, could have the effect of raising the performance of those dual-enrollment programs and career academies not currently operating at a high level, with relatively little impact on those already in line with such standards.

As one member of this study's advisory committee put it, it's time Nebraska moved toward a “culture of standards.” Such a culture of standards should, first and foremost, work to ensure the *quality* of dual-enrollment programs and career academies, particularly in the areas of curriculum rigor and instructor qualifications in the case of dual enrollment. Simply put, quality must be the foundation on which future policies are built.

Nebraska's inability to assess the quality of its dual-enrollment and career academy programs is one of many challenges faced by the state's legislators, educators, and, most importantly, students. Other related challenges include:

- The state's current inability to track dual enrollment, career academy and AP students through any kind of longitudinal data system and thereby better inform policy decisions;
- A lack of statewide coordination of dual enrollment and career academy activities, leading to differential treatment of students; and

- The statewide disparity in access to dual enrollment, career academies and AP courses, whether it's due to lack of funding, lack of technology or lack of information.

With those points in mind, the Coordinating Commission makes the following recommendations.

Dual enrollment

- *The state should aggressively work toward establishing state K-12 and postsecondary data systems that identify current and former dual enrollees and distinguish participants and outcomes by social and demographic characteristics. These data systems should allow the K-12 and postsecondary sectors to share data and monitor the progress of dual enrollees from high school to and through postsecondary education. This data should be reported annually to identified stakeholders and be made readily available to the public.* This process has begun in Nebraska but is proceeding at a much slower rate than most other states, many of whom can already determine the effectiveness of their dual-enrollment programs by tracking students from high school through college. It's believed dual enrollment programs are effective in Nebraska, but until a longitudinal data system is in place, it will be impossible to know for certain.
- *The state should fund a cost study of dual-enrollment programs at both the high school and postsecondary levels.* Determining the true cost of such programs could help inform future policy regarding potential state funding.
- *The state should strive for all Nebraska high school students and their families to be informed of the availability and benefits of dual enrollment.* As part of this goal, the state should support a statewide public information campaign that highlights dual-enrollment opportunities. Furthermore, a separate public information campaign should specifically target the state's underrepresented students, many of whom would be the first in their families to attend college. One high-school guidance counselor on the advisory committee noted that these students often lack even a basic understanding of college – much less dual enrollment. Any public information campaign should utilize online delivery methods and other forms of technology, which would allow students to access the information when and where they choose.
- *Together with the Coordinating Commission and the Nebraska Department of Education, Nebraska public postsecondary institutions should work with state K-12 representatives to establish a set of standard general-education courses that, when taken as dual-enrollment courses, are clearly transferable for general education credit.* These entities should create a matrix that clearly outlines how these courses transfer. This matrix should be made easily available to high school students and their parents.

- *The state should establish a set of minimum standards for all dual-enrollment courses offered through public high schools and postsecondary institutions. These standards should include the following:*
 - Dual enrollment courses should be of the same rigor as comparable college courses. (The Coordinating Commission believes this point is of key importance and necessary to expand postsecondary support for dual enrollment.)
 - Dual-enrollment instructors teaching academic/transferable courses must possess, at minimum, a master’s degree and at least 18 hours of graduate-level study in the course content area. Dual-enrollment instructors teaching career and technical education (i.e., vocational) courses should possess, at a minimum, the postsecondary institution’s equivalent faculty hiring requirements.
- *Together with the Coordinating Commission and the Nebraska Department of Education, Public postsecondary institutions and K-12 representatives should work together to establish target entrance standards for dual-enrollment students. Such standards should include some form of formal assessment, i.e., COMPASS, ASSET or ACT, and not rely solely on a student’s year in school and/or a teacher/counselor recommendation. By requiring some form of assessment, this process also could serve as an early indicator that a student would require additional support in order to succeed.*
- *Once minimum quality standards are established, all Nebraska public postsecondary institutions should be required to accept dual-credit, general education courses from other Nebraska public postsecondary institutions. These courses should be accepted as general education courses, not electives.*
- *The state should further examine the creation of incentives for high-school instructors to earn content-specific master’s degrees, as well as incentives for the state’s postsecondary institutions to offer these programs, which are often low-producing in terms of credit hours and graduates. It’s often a challenge for high school instructors to access a content-specific master’s program, depending on their geographic location, area of study and monetary resources. It’s also a challenge for postsecondary institutions to allocate the resources necessary to create cohort student groups of these teachers. One way legislators could potentially address this issue is by renewing funding for and making modifications to the Enhancing Excellence in Teaching Program, which was created in 2009 and provided loan forgiveness for teachers seeking master’s degrees. In 2011, the Legislature suspended funding for the program through 2012-13.*
- *The state should continue to support access to dual-enrollment courses for underrepresented student populations through increased funding of the Access College Early scholarship program. However, as student demand for ACE scholarships continues to rise – and would certainly increase even more as the result of a statewide dual-enrollment public information campaign – the ACE application process must move from its current manual process to an automated*

process. The state should consider appropriating funds in the Coordinating Commission's budget for this purpose.

- *The state needs to examine the practice of having high school students pay the cost of dual-enrollment books and supplies.* All public high schools must comply with the provisions of the Public Elementary and Secondary Student Fee Authorization Act, Sections 79-2, 125 to 79-2, 135, (RRS). The Act requires that all K-12 education must be free in public schools. However, students may be charged tuition by the college for college credit. If dual enrollment arrangements between schools and postsecondary institutions make it impossible or difficult for a student to take a course as a high school course only and without cost for college books and supplies, such arrangements might be considered a violation of the Act.
- *The state should consider setting aside funds to pay for at least a portion of students' dual-enrollment costs, which often includes both tuition and books and supplies.* This would be separate from the ACE scholarship program, as there are students who do not qualify as low income but still find it difficult to pay for dual-enrollment courses. K-12 representatives who responded to the survey for this study repeatedly cited cost as a prohibiting factor for many students who want to take dual-enrollment courses. (Unlike college students, high school dual-enrollment students are not eligible for federal financial aid, such as the Pell Grant.) In contrast, students in Minnesota and Iowa pay nothing for dual-enrollment courses.
- *The state should consider dual-enrollment needs as part of any long-term technology planning for education, including the Nebraska Virtual High School.* It's often challenging for the state's rural students to access dual-enrollment courses due to a lack of postsecondary institutions within a reasonable a distance, as well as a lack of suitable Internet access in many cases.
- *The Coordinating Commission should update and revise the "Nebraska Dual Enrollment Standards," as contained in the Commission's Comprehensive Statewide Plan for Postsecondary Education.* The standards would still serve only as guidelines, but would better reflect current practice. The Commission would further revise the standards as necessary to reflect any future state legislation regarding dual enrollment.

Career academies

- *The state should make the Nebraska Career Academy Quality Indicators requirements, not just suggested standards, for any educational entity participating in a career academy as defined by the state.* The state's community colleges and Department of Education have already agreed to these standards, which address all major facets of career academies. Requiring compliance to these standards would create a quality baseline for academies statewide. This also would establish Nebraska as a national leader in career academy policy.
- *The Nebraska Department of Education should establish the position of Career Academy/Dual Enrollment Specialist.* All Nebraska career academies would be required to annually collect and report student data through the Nebraska Student and Staff Record System; the person

occupying this position would then be responsible for analyzing this data and reporting the results to identified stakeholders. This person also could facilitate statewide professional development for dual-enrollment and career academy administrators and help market these programs and their benefits to stakeholders statewide.

- *The Nebraska Department of Education should establish a Career Academy flag within the Nebraska Student and Staff Record System that identifies those students who are participating in a Career Academy Program of Study.* The Nebraska Department of Education, in collaboration with Partnerships for Innovation, will establish the criteria for determining a Career Academy student.
- *The state should fund a cost study of career academies' needs at both the high school and postsecondary levels.* Determining the true cost of career academies could help inform future policy regarding potential state funding.
- *The state should consider career academies as part of any long-term technology planning for education, including the Nebraska Virtual High School.* It's often challenging for the state's rural-based career academies to access career exploration opportunities, which are vital in offering a fully-formed academy.

Advanced Placement

- *The state's public postsecondary institutions should be required to make clearly available on their websites their Advanced Placement credit acceptance and transfer policies.* Furthermore, the online location of these policies should be reported to the Coordinating Commission, which in turn should create a clearinghouse of these policies on its website.
- *The state's public postsecondary institutions, in conjunction with the Nebraska Department of Education and the Coordinating Commission, should establish a matrix of AP credit transfer policies.* This matrix, published online, should make it clear to students and parents the transferability of AP credit, including which postsecondary courses and at which public postsecondary institutions AP credit could be applied. Currently this information varies by institution in terms of accessibility, with no central collection point. (It is possible to search AP transfer policies by institution on the College Board website, but not by state.)
- *If a public postsecondary institution chooses to accept AP credit, such credit should count toward the student's general education degree requirements, not merely elective credit.* Nationally, many groups have identified college completion time as a major issue, with part of the issue, they believe, being the excess number of credits many students earn before graduating – typically in the form of electives that do not count toward their major area of study. Nebraska's P-16 Committee also has identified shortening degree completion time as a goal for the state.

- *The state should provide incentives for the state’s postsecondary institutions to offer Advanced Placement summer institutes for training Nebraska high school teachers.*
- *The state should consider AP programs as part of any long-term technology planning for education, including the Nebraska Virtual High School. It’s often challenging for the state’s rural-based high schools to provide AP programs, often due to a limited number of available instructors.*
- *The state should provide financial assistance for more high schools to serve as proctor sites for AP exams. This would increase the accessibility of AP exams for students to take AP exams, which could lead to them earning college credit.*
- *The state should explore the option of providing financial assistance to students wishing to take an AP exam, particularly those from low-income households. One way to do this would be through better utilization of the AP Test Fee and Incentive Program, administered by the U.S. Department of Education. This program provides funding to states to help low-income students pay for AP exam fees. Nebraska is currently underutilizing this program, receiving only \$19,500 in 2011, compared to \$87,000 for Kansas and \$60,000 for Iowa.*
- *The Nebraska Department of Education should separate AP courses from other courses labeled as “Honors” courses in the Nebraska Student and Staff Record System. These two categories are currently grouped together. By separating them, the state could identify the number of AP courses taken by students.*

International Baccalaureate

- *The state should encourage the state’s public postsecondary institutions to accept a minimum number of IB credits as a way of keeping high-achieving students in-state.*

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Appendix I: Advisory committee roster

Matt Blomstedt, Executive Director, Nebraska Educational Service Unit Coordinating Council

Marian Borgmann-Ingwersen, Director of Honors Academy, Nebraska Wesleyan University

Connie Eichhorn, Director of Secondary Partnerships, Metropolitan Community College

Marge Harouff, retired, formerly 43 years with Nebraska Department of Education

Dennis Headrick, Vice President for Instruction, Southeast Community College

Rich Katt, Director of Career Education, Nebraska Department of Education

Gaye Lannan, Counselor, Omaha Benson High School

Jon Lopez, Superintendent, Beatrice Public Schools

Cheryl Kreikemeier, Counselor, Wisner-Pilger High School, Wisner

Marty Mahler, Executive Director, Nebraska P-16 Initiative

Kelly Malone, Dual Enrollment Coordinator, University of Nebraska at Omaha

Doris Rempe, Counselor, Grand Island Catholic High School

Korinne Tande, Vice Chancellor for Student Affairs, Marketing, Enrollment and Public Information, Nebraska State College System

Erika Volker, Director, Partnerships for Innovation

Barb Waller, Coordinator of Career and Technical Education Programs, Millard Public Schools

Appendix II: Additional resources

Dual enrollment

- National Alliance of Concurrent Enrollment Partnerships – www.nacep.org
- Concurrent Courses Initiative (Community College Research Center) – www.concurrentcourses.org
- Education Commission of the States – www.ecs.org
- Jobs for the Future – www.jff.org

Career academies

- Career Academy Support Network – www.casn.berkeley.edu
- National Career Academy Coalition – www.ncacinc.com
- Partnerships for Innovation – www.partnershipsforinnovation.org

Advanced Placement

- The College Board – www.apcentral.collegeboard.com

International Baccalaureate

- International Baccalaureate – www.ibo.org

Appendix III: Full summary survey results available on the Coordinating Commission’s website: www.ccpe.state.ne.us, under “Data Collections, Reports, Presentations”

Appendix IV: *Help Wanted: Projecting Jobs and Education Requirements Through 2018*

A new, highly detailed forecast shows that as the economy struggles to recover, and jobs slowly return, there will be a growing disconnect between the types of jobs employers need to fill and numbers of Americans who have the education and training to fill those jobs.

A report, *Help Wanted: Projecting Jobs and Education Requirements Through 2018*, by the Georgetown University Center on Education and the Workforce, forecasts that by 2018, 63 percent of all jobs will require at least some postsecondary education. Employers will need 22 million new workers with postsecondary degrees – and the report shows that we will fall short by three million workers without a dramatic change in course. This translates into a deficit of 300,000 college graduates every year between now and 2018.

“America needs more workers with college degrees, certificates and industry certifications,” said Anthony P. Carnevale, the Center’s director. “If we don’t address this need now, millions of jobs could go offshore.”

The Center’s study is the first to help Americans connect the dots between employment opportunity and specific education and training choices. The report projects job creation and education requirements through most of the next decade, showing job growth by industry and occupation nationally, and with state-by-state forecasts.

Randi Weigarten, President of the American Federation of Teachers, put it simply: “The bottom line is: we are under-investing in education. This report shows that the demand for well-educated Americans isn’t being met by our current investments.”

“We’re sending more students to college than ever before, but only about half them will ever earn a degree,” said Hilary Pennington, Director of Education, Postsecondary Success & Special Initiatives of the Bill & Melinda Gates Foundation. “This report shows why it is critical that we create the kinds of supports and incentives that help students earn the credentials that employers value.”

Nebraska’s data is on the following pages. The full report is available online at <http://cew.georgetown.edu>.

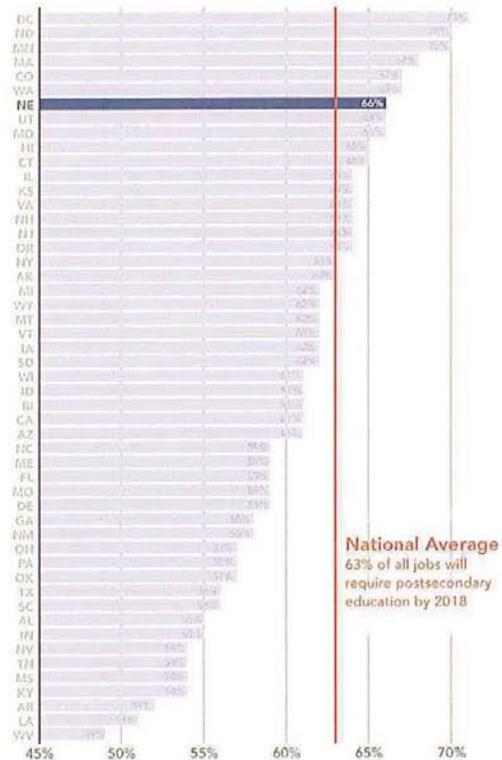
Nebraska

- Between 2008 and 2018, new jobs in Nebraska requiring postsecondary education and training will grow by 56,000 while jobs for high school graduates and dropouts will grow by 25,000.
- Between 2008 and 2018, Nebraska will create 321,000 job vacancies both from new jobs and from job openings due to retirement.
- 207,000 of these job vacancies will be for those with postsecondary credentials, 89,000 for high school graduates and 25,000 for high school dropouts.
- Nebraska ranks 17th in terms of the proportion of its 2018 jobs that will require a Bachelor's degree, and is 36th in jobs for high school dropouts.
- 66% of all jobs in Nebraska (715,000 jobs) will require some postsecondary training beyond high school in 2018.

Job vacancies arise from two sources: There are brand new positions created as an occupation grows, and there are pre-existing jobs that people leave behind when they retire, or move into other occupations.

NEBRASKA'S RANK IN JOBS FORECASTED FOR 2018, BY EDUCATION LEVEL.		
Education level	2018 Jobs	Rank
High school dropouts	87,000	36
High school graduates	307,000	36
Some college, no degree	127,000	7
Associate's degree	274,000	10
Bachelor's degree	225,000	17
Graduate degree	89,000	26

Percentage of jobs in 2018 that will require a postsecondary education, by state.



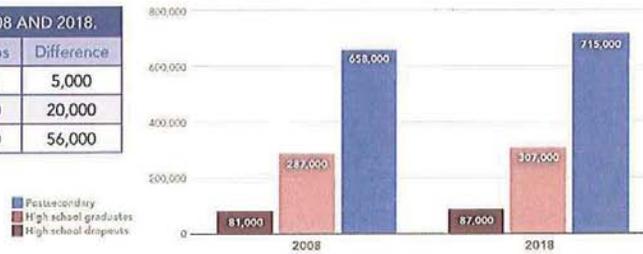
By 2018, **66%** of jobs in Nebraska will require postsecondary education.

This is **3** percentage points above the national average of **63%**.

Nebraska ranks **7th** in postsecondary education intensity for 2018.

NEBRASKA

Education level	2008 Jobs	2018 Jobs	Difference
High school dropouts	81,000	87,000	5,000
High school graduates	287,000	307,000	20,000
Postsecondary	658,000	715,000	56,000



OCCUPATIONS		High school dropouts	High school graduates	Some college	Associate's degree	Bachelor's degree	Graduate degree	Total
Managerial and Professional Office	Management	1	12	6	11	17	6	54
	Business operations specialty	0	5	3	8	10	3	29
	Financial specialists	0	1	3	3	13	2	21
	Legal	-	0	0	0	0	3	5
STEM	Computer and mathematical science	-	1	4	5	13	4	27
	Architects and technicians	-	0	1	1	1	0	3
	Engineers and technicians	0	1	1	1	5	1	9
	Life and physical scientists	0	1	0	0	2	2	5
	Social scientists	-	-	0	0	2	3	4
Community Services and Arts	Community and social services	0	1	1	2	7	6	18
	Arts, design, entertainment, sports, and media	0	2	2	4	7	1	17
Education	Education	1	3	3	6	27	25	66
Healthcare	Healthcare practitioners	1	3	15	8	20	17	64
	Healthcare support	1	12	5	14	2	1	36
Food and Personal Services	Food preparation and serving	17	37	8	21	6	1	90
	Building and grounds cleaning and maintenance	9	18	3	9	3	0	42
	Personal care	1	10	4	9	3	1	28
	Protective services	1	3	1	7	4	0	17
Sales and Office Support	Sales	4	33	13	35	35	5	126
	Office and administrative support	5	50	23	63	32	4	177
Blue Collar	Farming, fishing and forestry	2	4	1	2	1	0	11
	Construction and extraction	7	21	5	12	4	0	50
	Installation, maintenance, and equipment repair	3	15	12	12	3	0	45
	Production	19	33	7	17	4	1	81
	Transportation and material moving	12	40	5	22	4	2	86
TOTAL**		87	307	127	274	225	89	1,110

*Zero does not necessarily mean no jobs. Since jobs are rounded to the nearest thousand, zero means less than 500 jobs.

**Total jobs are a snapshot of the economy that shows where jobs are located by education type. They differ from job vacancies because total jobs are filled by people currently working in these positions who may not be leaving in the short-term to create a job opening.

Appendix V: Nebraska Career Academy Quality Indicators

Nebraska Statewide Career Academy Quality Indicators for Local Implementation

The *Nebraska Career Academy Quality Indicators*, adopted in 2008 from the National Career Academy Coalition Standards, are intended to provide statewide uniformity and consistency of program development while affording the flexibility of local implementation. As the state and local programs evolve so shall this document. The Quality Indicators have been approved by the Chief Instructional Officers of the Nebraska Community Colleges and the Nebraska State School Board of Education in 2010.

Career Academy: A plan of study created for high school students from a Career Cluster area which outlines a pathway for career exploration. The course(s), within the plan of study, may be for high school credit, dual credit or college credit. Each course will include a component that explores the career field associated with that course. This plan of study may lead to employment or continued education. The academy is typically a partnership between a K-12 entity and a post-secondary institution. *(developed by Nebraska Community Colleges Chief Instructional Officers)*

1. Defined Mission and Goals: The career academy has a written definition of its mission and goals. These are available to the administrators, teachers, students, parents, advisory board and others involved in the academy. Criteria include:

- Well-defined mission and goals, focusing on careers and college, raising student aspirations and increasing student achievement
- Clearly identified student and stakeholder code of conduct
- Impact of the Career Academy on local, regional and/or state economies through high wage, high skill, high demand and/or high interest career pathways

2. Leadership: The academy has a leadership structure that incorporates the views of stakeholders. Criteria include:

- Representation on advisory board from aspects of the industry and stakeholders to include, but not limited to: faculty, administrators, counselors, advisors, parents, students, at both secondary and postsecondary levels
- Holding of regular advisory meetings
- Evidence of a healthy partnership between the school and the community
- Opportunity for student input

3. Academy Structure: An academy has a well-defined structure within the high school or consortium, reflecting its status as a small learning community. Criteria include:

- Recruitment and selection process for students, with appropriate exit procedures
- Recognized space, physical and/or virtual, in a school or business setting
- Participation in student organizations and competitions where available
- Identified career or industry cluster(s)/field(s)
- Supportive atmosphere

4. Host District and High School: Career academies exist in a variety of consortia, district and high school contexts which are important determinants of an academy's success. Criteria include:

- Support from the local Board of Education and the superintendent
- Support from the principal and high school administration
- Support from the local high school teaching faculty, counselors, and postsecondary faculty
- Visible and contractual support from partnering postsecondary and business/industry leadership
- Funding, facilities, equipment and materials available

5. Faculty and Staff: Teacher selection, leadership, credentialing and cooperation are critical to an academy's success. Criteria include:

- Identified leader (teacher leader, team leader, coordinator, directors, etc.)
 - Credentialed teachers in their field and by partnering institution(s) who are committed to the mission and goals
 - Supportive counselors and non-academy teachers
- Nebraska Statewide Career Academy Quality Indicators for Local Implementation

6. Professional Development: Provide professional development time, leadership and support. Criteria include:

- Common planning time for academy staff, either face-to-face or by electronic means such as telephone and/or online
- Professional development for secondary and postsecondary Career Academy teacher
- Orientation for parents, students and other district employees not directly involved in the Career Academy

7. Curriculum & Instruction: The curriculum and instruction within an academy meets or exceeds external standards and college entrance requirements, while differing from a regular high school by focusing learning around a career cluster/field. Criteria include:

- Sequenced, integrated and relevant curriculum framed around state or national standards which incorporates academics and career education when applicable
- Shared learning environment where students learn from and instruct one another with faculty, business/industry, and the community
- Provide "real-world" work experiences using problem and project-based teaching strategies
- Rigorous learning meeting college requirements
- Integration of 21st Century learning and skills in all areas of the curriculum
- Course delivery methods such as, but not limited to, face-to-face, distance learning, blended, team-taught, online, or other possible distance delivery means.
- Utilize Personal Learning Plans that highlight multiple entrance and exit points along the career pathway which include certificates, 2-year, 4-year and professional degree options

8. Business, Postsecondary Education & Community Involvement: A career academy links high school to its host community and involves members of the business, postsecondary education and the civic community. Criteria include:

- Address the needs of the local and regional economy

- Utilize multiple methods to engage the business and civic communities
- Provide a work- based learning component that may include internships, job shadowing (virtual or face-to-face), entrepreneurship, etc.
- Provide post-secondary college courses which could be approved by the high school/district as a dual credit course for high school credit
- Provide opportunities for high school courses to be evaluated for possible post-secondary articulated credit
- Create experiential components such as field trips, mentoring, and guest speakers (virtual or face-to-face)

9. Student Assessment: Collect and report student proficiency data. *Criteria include:*

- Collection and analysis of student achievement data including assessment of both academic and technical knowledge and skills
- Use of multiple measurements which include items such as student attendance, retention, credits, grade point averages, state test scores, graduation rates, authentic assessment and college going rates
- Accurate and transparent reporting of Career Academy data to stakeholders

10. Cycle of Improvement: An academy will engage in a regular, well-defined, objective self-examination. *Criteria include:*

- Systemic and planned assessment of the academy’s mission and program conducted by students, parents, academy faculty and staff, partnering organizations and stakeholders
- Systematic review of the academy’s design and implementation
- Planned refinements for the academy which include timetables and measurable outcomes based on data to address strengths and weaknesses

Appendix VI: Nebraska Dual Enrollment Standards

(From the Comprehensive Statewide Plan for Postsecondary Education, 5-8 through 5-11)

Defining Dual Enrollment

Dual enrollment programs are intended to meet the needs of academically advanced students, to provide enrichment for students who have special, academic, or vocational needs, or to provide technical education. Dual enrollment courses will articulate with degree programs at postsecondary institutions. Academic courses will articulate with baccalaureate degree programs or associate degree programs, diplomas, and certificates. Vocational or technical courses will articulate into applied associate degree programs, diplomas, or certificates.

In this document, dual enrollment programs are often referred to as “dual-credit programs” or “programs.” Students enrolled in such programs are referred to as “dual-credit students.” Dual enrollment programs and dual-credit students are distinguished from concurrent enrollment programs and concurrent enrolled students in the following definitions:

Dual-credit students: High school students who take a course for both college and high school credit. High schools count these students in their average daily attendance.

Concurrent enrolled students: High school students who take college courses for college credit only (no high school credit), while remaining enrolled in high school and counted in their school’s average daily attendance.

Standards

The following minimum standards apply specifically to dual enrollment programs developed and maintained by school districts and cooperating colleges and universities.

Students

- 1) Student eligibility for the program is determined by participating high school and college/university officials; however, eligible students will typically:
 - a) Be juniors or seniors; and
 - b) Meet the prerequisites of the course or otherwise demonstrate the ability to achieve success in the course; or
 - c) Be formally identified as high ability or gifted students by the school participating in the dual enrollment program.

Students will complete a dual enrollment application signed by a high school official.

- 2) The college/university has the following recommended academic guidelines to increase students’ opportunity for academic success. Eligible students will typically:

- a) Have attained a GPA of 3.0 or better; or

- b) Earned an ACT composite score of at least 20 or an equivalent score on another valid assessment; or
- c) Earned an ACT sub-score of at least 20 or equivalent on another valid assessment relevant to the offered dual enrollment course or courses; or
- d) Rank in the upper one-half of their high school class; or
- e) Demonstrate through some alternative means the capacity for academic success in the desired course or courses. (Examples include student portfolios, letters of recommendations, and student performances/exhibitions.)

The preceding student eligibility guidelines may be waived in special circumstances by the appropriate secondary or postsecondary officials.

- 3) Participating students are admitted and registered by the appropriate postsecondary institution with mutual consent of the district and college/university.
- 4) Eligible students are provided appropriate course materials, including policies, college procedures, course outline/syllabus, and assessment materials if not specified in the course outline.
- 5) Eligible students receive guidance regarding their program responsibilities, weighted credit options, if any, and specific grading practices.
- 6) Institutions provide participating students information clearly describing institutional procedures for academic credit transfer. Institutions are encouraged to provide the Coordinating Commission for Postsecondary Education with information or Web site links describing institutional credit transfer policies and procedures so that the Commission can maintain a Nebraska dual enrollment Web site.

Faculty

- 1) Instructors meet approved requirements for teaching at the department/college level. Minimally, instructors for academic courses hold a master's degree. Instructors meet district teaching requirements for program participation. All faculty have the mutual support of the district and college/university participating in the dual enrollment program.
- 2) High school and postsecondary faculty receive appropriate orientation and training (e.g., curriculum, assessment, policies, and procedures) for participation in the program.
- 3) Collaboration between high school and postsecondary faculty is encouraged and faculty development is available where appropriate.
- 4) Collaboration between high school and postsecondary faculty is encouraged and faculty development is available where appropriate.
- 5) High school and postsecondary faculty maintain contact throughout the program. In some instances, this contact is facilitated by technology.

The preceding faculty guidelines may be waived in special circumstances by the appropriate secondary and postsecondary officials.

Curriculum

- 1) Courses must reflect college-level experiences and rigor as well as district and state standards and practices.
- 2) Course outlines or syllabi (including at minimum a description of content, teaching strategies, performance measures, grading standards, resource materials, objectives/outcomes, and course calendar) utilized in the program meet district(s), state, and college/university standards.
- 3) Courses in this program are of the highest quality and intended to challenge eligible students while preparing them for transition to postsecondary education.

Assessment

- 1) Assessment policies and procedures are consistent with district and college/university practice.
- 2) To assure the academic rigor of courses for which college credit will be awarded, universities or colleges participating in dual enrollment programs will include valid student and faculty assessment measures that are consistent with the typical assessment measures of such university or college.
- 3) Ideally, curricula should progress logically and neatly with greater complexity and depth as students pass from secondary to postsecondary education.

Therefore, jointly developed assessment policies and procedures of K-12 schools and postsecondary education institutions should be designed to align dual enrollment curricula with state course content standards. Additional statewide cooperative work is needed to accomplish this objective.

Evaluation

- 1) The district(s) and college/university review the program on an annual basis.
- 2) Program participants are tracked following graduation through postsecondary experiences when possible. Tracking elements may include district(s) data (e.g., class rank, GPA, ACT where available, AP exam where available and appropriate, and course outcomes and grade) and postsecondary data (e.g., GPA, major, number of hours completed, and enhancements, if appropriate to program).
- 3) Data sharing occurs consistent with the policies of the district(s) and college/university.

Instructional Context and Resources

The instructional context and appropriate resources are determined by district(s) and college/university officials.

School districts and postsecondary education institutions should work together to ensure broad access to dual enrollment courses for all students, irrespective of the students' financial resources. Postsecondary education institutions are encouraged to offer tuition remissions or find other means of support for eligible students qualifying for free or reduced lunches or otherwise demonstrating financial need.

School districts that receive state aid related in part to significant numbers of students challenged by poverty or English language limitations should consider using such aid or finding other means of support to fund the tuition expenses of eligible students who would not otherwise be able to enroll in dual enrollment courses.

All public high schools must comply with the provisions of the Public Elementary and Secondary Student Fee Authorization Act, Sections 79-2,125 to 79-2,135, (RRS). The Act requires that all K-12 education must be free in the public schools. However, students may be charged tuition by the college for college credit. If dual enrollment arrangements between schools and colleges make it impossible or very difficult for a student to take a course as a high school course only and without cost for college tuition, such arrangements might be considered a violation of the Student Fee Authorization Act and Article VII, Section I of the Nebraska Constitution, on which the Act is based.

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in Nebraska higher education.*