Career Education Needs Assessment

Heartland
COMMUNITY COLLEGE

March 1, 2000

By:
Kelly Hall
Chris Griffin
Lucinda McCray Beier
Sharon Mills
Sue Savage
Mark Steward

ASRU
Applied Social Research Unit

Illinois State University

Executive Summary

Introduction

Community colleges have increasing mandated responsibility to provide career education programs that meet the needs of employers and residents in their districts. Each community college district has its own distinct economic and industrial profile and its own workforce needs. Thus, program decisions made by community colleges should be based upon current regional occupation data and information provided by area employers.

In 1999, Heartland Community College (HCC) commissioned the Applied Social Research Unit of Illinois State University to conduct research to inform planning for career education programming. Research goals were to:
- identify current and projected high-demand occupations for HCC's service area;
- articulate the competencies and qualifications required for these occupations;
- explore the extent to which HCC and other area community colleges offer programs to educate area residents to fill these occupations; and
- suggest potential program delivery options associated with high-demand occupations.

Activities undertaken to meet research goals included:
- review of public occupational and wage data;
- review of HCC and other area community college program information;
- interviews with people responsible for recruiting and hiring applicants for high-demand occupations;
- review of best practices and models literature regarding program delivery options; and
- analysis of resulting information to support development of recommendations.

Program recommendations

This report's program recommendations are based on a combination of quantitative and qualitative information gleaned from review of public occupation data, information from Heartland Community College, and interviews with representatives from organizations that employ people in selected high-demand occupations.

The Applied Social Research Unit identified occupations for research consideration using the following criteria:
- *Appropriateness* (e.g., Could Heartland Community College train someone for this occupation?);
- *Extent of demand* (e.g., How many people currently work in this occupation? How fast is this number growing?);
- *Quality of the job* (e.g., How much do workers in this occupation earn? Is there a steady, year-round demand for these workers? Is this a good job?); and
- *Value of the occupation to the community* (e.g., How much money do workers in this occupation contribute to the local economy?).

Selected occupations were further explored through interviews with business representatives who are responsible for recruiting and hiring workers for those occupations. Interviewees provided information including:

- their organization's current and predicted need for people in specified occupations;
- the extent to which it is difficult to hire people for those occupations;
- the skills, education, qualifications, and experience sought in applicants for jobs in those occupations;
- the training needed for those occupations and whether HCC could provide that training; and
- their organization's willingness to partner with HCC on program development or implementation.

Finally, Applied Social Research Unit staff members reviewed HCC's current program offerings and information provided by the Illinois Community College Board to explore the extent to which HCC and other regional community colleges educate people for selected in-demand occupations.

Research conducted for this project indicates the following (prioritized) program recommendations:

1. Develop an on-campus Marketing and Sales Certificate program;
2. Develop an on-campus Supervisors Certification program;
3. Develop a collaborative on-campus Culinary Arts program with complimentary Hospitality and/or Restaurant Management program(s);
4. Develop a Law Enforcement program;
5. Develop a collaborative Automotive Mechanics program;
6. Maintain and monitor Computer, Nursing, Insurance, and Office, Manufacturing, and Maintenance Technology programs;
7. Maintain current programs in Agriculture and Bookkeeping/Accounting; and
8. Investigate programming opportunities in graphic arts, Visual Basic programming, truck driving, and financial management.

Conclusions

Heartland Community College is well positioned to enhance and expand its current career education programs. The district's economy is strong. Employers need workers of all kinds, including large numbers of people to fill well-paid jobs with good benefits and career development prospects. Heartland Community College is already collaborating with area businesses and educational institutions to train workers for these occupations. Heartland's forthcoming move to its permanent campus facility will make it possible to expand course offerings and programs and increase the number of students participating in these opportunities. Research conducted for this report suggests the following conclusions and recommendations to inform future program planning.

Course and program design and delivery:
- Use information in this report to prioritize career education programming decisions.
- Based on on-going communication and collaboration with area employers and educational institutions, develop appropriate options, ranging from examination

preparation and certification to associate's degrees facilitating transfer to four-year colleges or universities.

- To meet the needs of both students and employers, develop a range of delivery options including workshops and short courses; self-study and on-line courses; and conventional classes.
- Integrate classroom instruction and work-based learning in all appropriate career education courses.
- Build on the "Career Paths" model developed by the Bloomington Area Vocational Center to identify and communicate educational and career paths available to students.[1] An on-line resource might help, both to market HCC career education offerings and to help students design programs customized to their own needs.

Communication and data management:
- Enhance ease and speed of evaluating demand for all types of courses and programs by improving course-level student data collection, maintenance, and reporting systems. ("Completer" data does not provide an accurate picture of students' needs and choices.)
- Improve communication about career education programs *via* Heartland Community College's catalogue and Internet cite Site to enhance the "front door" for prospective students.

---

[1] Bloomington Area Vocational Center, *Career Paths, 2000-2001*, (Bloomington, IL, 1999).

Table of Contents

Table of Tables

Introduction

Community colleges have increasing mandated responsibility to provide career education programs that meet the needs of employers and residents in their districts. According to testimony made before Illinois' Human Resources Investment Council in 1998 by Joseph Cipfl, President and CEO of the Illinois Community College Board:

> Community colleges, as the state's primary provider of workforce preparation for adults, must meet many challenges in providing a skilled, educated workforce. In addition, community colleges must serve as an integral partner in the state economic development strategy to help ensure that Illinois has skilled and educated workers. Therefore, the mission of community colleges is to provide educational programs and services that develop a world-class workforce that will assist Illinois to thrive in a competitive marketplace.[2]

Each community college district has its own distinct economic and industrial profile and its own workforce needs. Thus, program decisions made by community colleges should be based upon current regional occupation data and information provided by area employers.

In 1999, Heartland Community College (HCC) commissioned the Applied Social Research Unit of Illinois State University to conduct research to inform planning for career education programming. Research goals were to:

- identify current and projected high-demand occupations for Heartland Community College's service area;
- articulate the competencies and qualifications required for these occupations;
- explore the extent to which Heartland and other area community colleges offer programs to educate area residents to fill these occupations; and
- suggest potential program delivery options associated with high-demand occupations.

Activities undertaken to meet research goals included:

- review of public occupation and wage data;
- review of Heartland Community College and other area community college program information;
- interviews with people responsible for recruiting and hiring applicants for high-demand occupations;
- review of best practice and models literature regarding program delivery options; and
- analysis of resulting information to support development of recommendations.

The next section of this report offers a brief discussion of employment and industry in Heartland Community College's service area and profiles selected in-demand, well-paid occupations. Following this profile are program recommendations and conclusions. Appendix 1 discusses the methods used to meet research goals. Appendix 2 contains a copy of the questionnaire used in telephone interviews. Appendix 3 is a list of organizations that participated in project interviews and indicates those organizations willing to work with

---

[2] Cipfl, J.J., "Testimony On Workforce Coordination," presented at the Illinois Human Resource Investment Council Task Force on Workforce Development System Coordination Meeting, March 1998, [Internet], http://iccb.stat.il.us/hrictest.html, (January 2000).

HCC. Appendix 4 contains five tables with selected characteristics of the occupations discussed in this report—in-demand, high-paying occupations requiring more than secondary but not more an associate's degree.

Service area profile

The Heartland Community College district includes McLean, Livingston, and Logan Counties. The only metropolitan county in the district, McLean County's population is growing rapidly. By contrast, rural Livingston and Logan counties have stable or declining populations. (See Table 1.)

Table 1: County population projections in district

County	Estimated population, 2000	Estimated population, 2020	Percent change
McLean	144,844	165,264	14%
Logan	32,344	33,885	5%
Livingston	39,976	39,014	-2%

Source: Treadway, R. and D.J. Ervin, *Illinois Population Trends 1990 to 2020*, (Springfield, IL: State of Illinois, 1997), [Internet], http://www.socialresearch.ilstu.edu.

Located at the geographical center of its service area, Heartland Community College faces the challenge of offering career education to both urban and rural residents, whose needs for and access to programs may differ markedly.

As a whole, the Heartland Community College district has a healthy, balanced economy, with stable or growing numbers of people employed in all industrial sectors. The largest number of workers is employed in service industries where employment is also projected to grow most rapidly. In addition, demand for workers is increasing in construction, wholesale and retail trade, transportation, financial services, and government employment. By contrast, traditionally dominant industries, including agriculture and manufacturing, are experiencing much slower growth. (See Table 2.)

Table 2: Heartland Community College district employment by industry

Industry	Number employed		Change, 1996-2006	
	1996	2006	Number	Percent
All Industries	107,613	125,144	17,531	16.29
Services, Total	35,005	43,711	8,706	24.87
Wholesale & Retail Trade, Total	23,120	27,217	4,097	17.72
Manufacturing, Total	14,641	15,356	715	4.88
Finance, Insurance, & Real Estate, Total	14,450	16,191	1,741	12.05
Agriculture, Forestry, & Fishing, Total	7,646	7,807	161	2.11
Government, Total	4,861	5,528	667	13.72
Transportation, Communications, & Utilities, Total	4,349	5,065	716	16.46
Construction, Total	3,180	3,904	724	22.77
Mining, Total	362	366	4	1.10

Source: Data compiled by Illinois Occupational Information Coordinating Committee (IOICC), Substate Employment Projections System (SEPS), [Database], from Illinois Department of Employment Security, Economic Information and Analysis Division, [Internet], http://www.ioicc.state.il.us, (1999).

As of 1996 (the date for which most recent figures are available), people living in the Heartland Community College district were employed within the following general occupational categories:

1. Professional, Paraprofessional, and Technicians 23,933
2. Administrative Support Occupations   22,360
3. Service Occupations   16,823
4. Operators, Fabricators, and Laborers   14,345
5. Marketing and Sales   13,260
6. Precision Production, Craft, and Repair   9,414
7. Executive, Administrative, and Managerial   7,949[3]

These data bear out the perception that workers in the district are primarily employed in white-collar and service occupations.

Within the Heartland Community College district, current unemployment is lowest in McLean County (2.4%), somewhat higher in Livingston County (3.5%), and highest in Logan County (4.3%).[4]   With record low unemployment rates and rapid growth of employment in many industrial sectors, area employers' needs for workers of virtually all kinds are unprecedented. So, where should Heartland Community College focus its energies and resources?

---

[3] Data compiled by Illinois Occupational Information Coordinating Committee (IOICC), Substate Employment Projections System (SEPS), [Database], from Illinois Department of Employment Security, Economic Information and Analysis Division, [Internet], http://www.ioicc.state.il.us, (1999).

[4] Illinois Department of Employment Security (IDES), [Internet], http://lmi.ides.state.il.us/lauscur.htm, (February 2000).   The comparable unemployment rate for the State of Illinois is 4.0 percent.

Program and delivery options

Review of best practices and models

Community college career education program planning should be guided by identification of in-demand occupations requiring appropriate post-secondary training; planning should also be informed by emerging understanding of best practice in program design and delivery. According to recent research, community colleges of the future will:

- operate on a year-round, 24-hour schedule;
- be primary centers for workforce retraining and skills upgrade training;
- offer multiple program entry and exit points;
- provide diagnostic and prescriptive educational and career counseling;
- provide alternative instructional approaches catering to students' individual learning styles and time schedules;
- facilitate students' ability to design their own programs according to personal interests and career goals;
- plan collaboratively with other educational institutions (secondary and post-secondary) to meet the comprehensive range of area educational and training needs;
- collaborate with business and industry to meet employers' skills needs;
- use technology imaginatively to deliver instruction, provide access to information resources, and enhance networking with educational institutions, businesses, and other community organizations; and
- take an active leadership role in the community.[5]

Meeting the demands of the future will require changes in the ways community colleges conceptualize, organize, and deliver services. While community colleges have traditionally been in a better position than four-year colleges and universities to react to changing skills needs, barriers to change remain. These barriers include current institutional cultures, structures, systems, and policies.[6] According to a recent publication, there is:

> . . . need for a new generation of community colleges . . . .This is not to say that we should abandon everything and start over. Rather, it means the end of traditional models as useful concepts in changing educational markets. The presumption that there is a single institution, with distinct, immutable departments within which faculty and staff perform well-defined roles, is a tired idea whose time has passed.[7]

In place of a rigid, degree- and credit-driven program structure, community colleges of the future will offer a range of learning opportunities, from workshops and short courses to

---

[5] See, e.g., Taylor, L.E. and M.L. Maas, *The Community College of the Future*, Maas, Rao, Taylor and Associates, Riverside, CA. (1995) (ERIC Document Reproduction Service No. ED381 191); Dodge, S., "Students Who Design Own Majors Are Often At Cutting Edge," Chronicle of Higher Education, 38, (1992), A31-32.

[6] Stasz, C., et al, "Integrating Academic and Vocational Education: A Review of the Literature, 1987-1992." *Journal of Vocational Education Research*, 19:2, (1994), 25-72.

[7] Carter, P. and R. Alfred, *Breaking Out of the Box: New Colleges For a New Century*. (Ann Arbor, MI: Consortium for Community College Development, 1996), 2.

degree programs facilitating transfer to a four-year college or university. Heartland Community College (HCC) has the advantage of being a comparatively young organization with few barriers created by its own traditions. The forthcoming transition to a permanent campus facility offers a unique opportunity for HCC to develop innovative approaches and programs that meet 21st century community needs.

Embracing a learner-based "learning organization" approach will enhance curriculum development, scheduling, and delivery. Shifting the focus from teaching to learning and from imparting traditional bodies of knowledge to facilitating development of the competencies necessary to meet students' goals will result in programs that can be customized to best address the needs of students and employers.[8] One opportunity for creating a learning college is the idea of building on existing programs.[9] Indeed, the bulk of recommendations contained in this report build on current program titles to limit the time it takes for program implementation.[10]

Curriculum and delivery options should reflect the realities of students' lives, learning styles, and training needs. Students need a range of programs and services—life and job skills, short-term training, certification programs, associate's degrees, day and evening course offerings, work experience linked to classroom curricula, mentoring, and links to services that will enable them to be successful with education and employment. Personal needs may be met by connecting students with appropriate human service providers.[11] Academic needs may be met through innovative program delivery approaches: technology-based, self-paced, and experiential learning are all viable options for both traditional and nontraditional students. As programs become increasingly diversified, students will require advisement and counseling to help them identify learning opportunities that will help them meet their goals in the most appropriate ways.[12] Additionally, a "design-your-own" option, letting students create majors that allow them to combine their interests with career goals, may be the way to both meet student needs and train people for specialized occupations for which there is not enough demand to build programs.[13]

For the community college, demand for career education programs is determined by the skills and qualifications required by the largest employers in the community. Hence, there is a

---

[8] Carter, P. and R. Alfred, *Breaking Out of the Box: New Colleges For a New Century*. (Ann Arbor, MI: Consortium for Community College Development, 1996), 7-14.

[9] O'Banion, T. *Lauching a Learning-Centered College*. [Guide], (Laguna Hills, CA: League for Innovation in the Community College, 1999).

[10] The American Association of Community Colleges recommends limiting the proliferation of program titles to ensure transferability and common understanding of awarded programs. "AACC Policy Statement on the Associate Degree," [Internet], http://www.aacc.nche.edu/about/policystatements/associatedegree.htm, (January 2000). Using current titles and programs limits the need for Illinois Board of Higher Education program approval.

[11] Applied Social Research Unit, *Assessment 2000: Health and Human Services in McLean County: Summary Report*, (January 2000), identified the need for awareness of social service provision within McLean County, a large portion of the HCC district.

[12] Taylor, L.E. and M.L. Maas, *The Community College of the Future*, [Monograph], (Riverside, CA: Tao, Taylor and Associates, 1995). ERIC Document Reproduction Service No. ED 381 191.

[13] Dodge, S., "Students Who Design Own Majors Are Often at Cutting Edge," *Chronicle of Higher Education*, 38, (1992), A31-32.

growing body of literature regarding communication and collaboration between community colleges and employers regarding all aspects of career education program design and implementation. Community colleges must continuously monitor workplace demands not only for job skills (the focus of the recommendations below), but also for other characteristics sought in prospective workers. Employers repeatedly identify the need for employees with a positive attitude, knowledge of the work-world, and personal, computer, reading, and math skills.[14] Additionally, employers recommend that prospective and current workers learn career planning and negotiation skills.[15]

Experts recommend that community colleges and employers collaborate to develop appropriate and effective classroom programs and offer work-based learning opportunities. According to a recent report:

> Two-year colleges in the United States have a long history of providing work-based learning, especially in association with occupation-technical education. Recently, the nation has placed greater priority on strengthening school-to-work transition programs involving work-based learning by linking secondary and postsecondary curriculum.[16]

Internships, mentoring, and job shadowing are all successful means to link work with classroom education.[17] All programs should contain elements of "externship." Programs should extend secondary education or prepare for baccalaureate degree programs when appropriate. Indeed, the Illinois Board of Higher Education launched a P-16 Partnership for Educational Excellence grant initiative under the Higher Education Cooperation Act (HECA) in fiscal year 2000.[18] This initiative exemplifies the trend for funding organizations—both public and private—to require collaboration between educational institutions, employers, and communities.[19]

Community colleges need no longer confine their activities to the geographic boundaries set by State mandates. Due to the capabilities of new technologies, community colleges now

---

[14] Wentling, T.L. and W.S. Barnard, "State Staff Perceptions of Vocational Education Outcomes, Identification and Assessment of Vocational Educational Outcomes," (Urbana, IL: University of Illinois Department of Vocational and Technical Education, 1984); Applied Social Research Unit, "Central Illinois Private Industry Council, 1995 and 1997 Workforce Issues Studies," "Spoon River College, 1997 Needs Assessment," and "McLean County Chamber of Commerce, 1998 Workforce Issues Study," (Normal, IL: Illinois State University).

[15] Several employers identified the need for career planning and negotiation skills in key informant interviews without prompt.

[16] Bragg, D.D. and R.E. Hamm, *Linking College and Work: Exemplary Policies and Practices of Two-Year College Work-Based Learning Programs*, (University of California at Berkeley: National Center for Research in Vocational Education, 1996), 2, [Internet], http://vocserve.berkeley.edu/abstracts/MDS-795/, (February 2000).

[17] Workforce Development Institute of the Illinois Chamber of Commerce, *Workforce Connection*, (Danville, IL, November/December 1999).

[18] Sanders, K.R., Illinois Board of Higher Education, "P-16 Partnership/Higher Education Cooperation Act (HECA) Grants," [Memorandum, Internet], http://www.ibhe.state.il.us/, (December 1999).

[19] El-Khawas, E. and L. Knopp, *Campus Trends 1996*, (Washington, DC: American Council on Education), 11; McCarthy, K. and R. Lashman, "Workforce Development: Building Statewide Systems," Investing in People Project Issue Paper No. 2, a joint project of the National Conference of State Legislatures and Jobs for the Future, (Cambridge, MA, 1994).

have the opportunity—indeed, the obligation—to join and/or create global learning, resource, and communication networks.

Program recommendations

The program recommendations offered below are based on a combination of quantitative and qualitative information gleaned from review of public occupation data and Heartland Community College internal data and interviews with 63 representatives organizations that employ people in selected high-demand occupations.

The Applied Social Research Unit identified in-demand, high-earnings occupations for research consideration using the following criteria:

- *Appropriateness* (e.g., Could Heartland Community College train someone for this occupation?);
- *Extent of demand* (e.g., How many people currently work in this occupation? How fast is this number growing?);
- *Quality of the job* (e.g., How much do workers in this occupation earn? Is there a steady, year-round demand for these workers? Is this a good job?); and
- *Value of the occupation to the community* (e.g., How much money do workers in this occupation contribute to the local economy?).

Occupations were selected based on the level of education required for employment, the estimated number of annual job openings; the average wages paid to workers, and the occupation's contribution to the local economy.[20] (See Appendix 1 for a more detailed discussion of research methodology.) Twenty occupations emerged from this analysis for further inquiry. (See Table 3 below and Tables A through E in Appendix 4.)

Selected occupations were further explored through interviews with business representatives who are responsible for recruiting and hiring workers for those occupations. Interviewees provided information including:

- their organization's current and predicted need for people in specified occupations;
- the extent to which it is difficult to hire people for those occupations;
- the skills, education, qualifications, and experience sought in applicants for jobs in those occupations;
- the training needed for those occupations and whether HCC could provide that training; and
- their organization's willingness to partner with HCC on program development or implementation.

---

[20] Data compiled by Illinois Occupational Information Coordinating Committee (IOICC), Substate Employment Projections System (SEPS), [Databse], from Illinois Department of Employment Security, Economic Information and Analysis Division, [Internet], http://www.ioicc.state.il.us, (1999); U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, "1998 Metropolitan Area Occupational Employment and Wage Estimates, Bloomington-Normal, Illinois MSA," [Internet], http://www.bls.gov/oes/msa/oes-1040m.htm, (2000); IOICC (Illinois Occupational Information Coordinating Committee), *Horizons: Bringing Future into Focus*, (Springfield, IL, 1998).

In addition to business representatives, other organizations, such as educational institutions, were interviewed regarding specific issues to inform analyses. (See Appendix 2 for a copy of the questionnaire used for telephone interviews with business representatives. See Appendix 3 for a list of organizations willing to work with HCC.)

Applied Social Research Unit staff members reviewed HCC's current program offerings and information provided by the Illinois Community College Board to explore the extent to which HCC trains people for selected in-demand occupations.

Table 3 provides a summary of information, excluding specific information from interviews, used in developing program recommendations and planning priorities. (See Tables A through E in Appendix 4 for profiles of specific characteristics of occupations discussed in this report.)

Programs discussed as Action Priorities 1-6 below are those for which development of new programs or expansion of HCC's current program offerings is recommended. Programs discussed as Action Priorities 7-8 are those for which maintenance and monitoring are recommended.

Table 3: Selected characteristics of high-paying occupations requiring more than secondary education, but not more than an associate's degree, with 20 or more estimated annual employment openings, 1996 to 2006, Heartland Community College district, sorted by "Economic contribution" to the district

Occupational title	Economic contribution*	Action opportunity	Current HCC programs
Systems Analysts/ Computer Programmers	$3,285,730	Maintain and monitor	Certificate in Computer Technology, programming or network administrator emphases; AA/AS in Computer Technology, Computer Networking Technology, Microcomputer Applications
Marketing & Sales Supervisors	$2,455,110	Expand current offerings	Certificate in Small Business Management; AA/AS in Business
Clerical Supervisors	$2,112,360	Expand current offerings	Certificates in Office Technology and Small Business Management; AA/AS in Business
Registered Nurses	$1,962,060	Maintain and monitor	Certificate in Practical Nursing; ADN in Nursing
Insurance Sales Workers	$1,801,470	Expand current offerings	Certificates in Life & Health Insurance and Small Business Management; AA/AS in Business and Life & Health Insurance
Farmers	$1,726,864	Maintain current program	Numerous related cooperative programs at five area community colleges
Secretaries, except Legal & Medical	$1,485,800	Maintain and monitor	Certificate in Office Technology
Blue Collar Worker Supervisors	$1,450,683	Expand current offerings	Certificate in Small Business Management, Materials & Logistics Management, and Quality Technology; AA/AS/AAS in Business, and Maintenance and Manufacturing Technologies
Maintenance Repairers, General Utility	$1,345,380	Maintain and monitor	AAS in Maintenance Technology
Carpenters	$1,295,250	Develop new program	No programs
Other Sales Representatives	$1,198,460	Expand current offerings	Certificate in Small Business Management; AA/AS in Business
Insurance Adjusters, Examiners, & Investigators	$763,560	Maintain and monitor	Certificates in Life & Health Insurance and Small Business Management; AA/AS in Business and Life & Health Insurance
Food Service & Lodging Managers	$736,320	Develop on-campus program	Cooperative related certificate and AS programs at Lincoln Land Community College
Police Patrol Officers	$718,750	Expand current offerings	AA/AS in Criminal Justice
Health Professions & Paraprofessionals, All Other	$671,580	Maintain and monitor	Certificate in Practical Nursing; ADN in Nursing
Service Supervisors, All Other	$671,500	Expand current offerings	Certificate in Small Business Management; AA/AS in Business
Automotive Mechanics	$620,620	Develop on-campus program	Numerous related cooperative programs at five area community colleges
Bookkeeping, Accounting & Auditing Clerks	$619,060	Maintain current offerings	Cooperative certificate and AAS in Accounting through Illinois Valley Community College
Cooks, Restaurant	$505,400	Develop new program	Cooperative related certificate and AS programs at Lincoln Land Community College
Machine Operators, All Other	$388,710	Maintain and monitor	Certificate in Quality Technology, AAS in Manufacturing Technology

Sources: Data compiled by Illinois Occupational Information Coordinating Committee (IOICC), Substate Employment Projections System (SEPS), [Database], from Illinois Department of Employment Security, Economic Information and Analysis Division, [Internet], http://www.ioicc.state.il.us, (1999); U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, "1998 Metropolitan Area Occupational Employment and Wage Estimates, Bloomington-Normal, Illinois MSA," [Internet], http://www.bls.gov/oes/msa/oes-1040m.htm, (2000).

*"Economic contribution" = Average job openings x Wage, gives an indication of annual occupational contribution to the district

Before introducing program recommendations, it is important to note that this report makes general but not specific recommendations regarding technology-based occupations. There are several reasons for this apparent omission:

1. Many computer- and information systems-related occupations require four-year degrees. Heartland Community College already offers programming for computer- and information systems-related occupations not requiring a four-year degree.
2. Current occupation classification systems separate computer- and information systems-related occupations into numerous narrow categories, rather than a few general categories; thus, no single technical occupation emerged as having enough annual openings to rank as high-demand.
3. Because many technology-related occupations are so new, they have not been classified and tracked by public agencies in ways facilitating comparable identification of employer needs and growth trends.
4. Perhaps most significant for the purposes of this report, virtually all occupations now require development of knowledge and skills of information and communication technologies.

Thus, this report does not suggest that Heartland Community College should not prepare students for high-tech careers. Rather, it recommends that current programs be supported and enhanced to reflect innovations in information and communication technologies and that technology-related skills development be embedded in programs across the curriculum.

Program recommendations are presented as Action Priorities to guide HCC to next steps in career education planning. Action Priorities 1 through 8 are discussed in the next sections of this report. Recommendations include the following:

9. Develop an on-campus Marketing and Sales Certificate program;
10. Develop an on-campus Supervisors Certification program;
11. Develop a collaborative on-campus Culinary Arts program with complimentary Hospitality and/or Restaurant Management program(s);
12. Develop a Law Enforcement program;
13. Develop a collaborative Automotive Mechanics program;
14. Maintain and monitor Computer, Nursing, Insurance, and Office, Manufacturing, and Maintenance Technology programs;
15. Maintain current programs in Agriculture and Bookkeeping/Accounting; and
16. Investigate programming opportunities in graphic arts, Visual Basic programming, truck driving, and financial management.

Action Priority 1
Develop an on-campus Marketing and Sales Certificate program

This report recommends extension of the existing small business management certificate and associate's business programs to serve the needs of the service and manufacturing industries in their marketing and sales functions.

Occupation data indicate current and projected high demand for entry-level, high-paying sales positions within the insurance, manufacturing, and wholesale industries. Next to farmers and secretaries, sales managers make up the greatest number of persons employed in an occupation within the district for which less than an associate's degree is required. "Almost all firms dealing with services and products sold to the public and industry" use sales and service managers.[21] In 1996 about 2,400 people were employed as sales representatives in district industries accounting for about 2% of total employment. Sales representatives can expect to earn annual incomes in the mid-$30,000s.

According to human resources professionals interviewed for this project, work experience and product knowledge are more important than educational qualifications for industry sales workers. Hence it is crucial that, while taking courses, students seek appropriate employment to develop product knowledge. Heartland Community College could help link students with employers without necessarily developing formal work-based learning arrangements.

Persons with both a certificate and industry experience will be more competitive for positions in industry sales and sales supervision than persons with only work experience. Marketing, sales, and service supervisors all have lucrative employment opportunities within the district. (See Action Priority 2 below.)

About 175 annual openings are expected in entry-level and supervisory positions in marketing and sales occupations, making these workers the most in-demand in the district. Both small and large employers interviewed for this project recommended including a focus on telephone and in-person customer service in training programs. Additionally, they indicated that basic computer skills are needed for communication, data entry and database management. To meet local needs, the certificate program should include core courses in general marketing, computer applications, and customer service; and elective classes enabling specialization in automotive repair services, food, insurance, and industrial sales. Retail and merchandising sales courses could also be offered to meet the demand for retail salespeople.

Despite the low pay of entry-level sales jobs, there are many retail, cashier, and telemarketing sales positions available in the district (about 250 per year), and throughout the State and country. These positions offer several career path opportunities for which students may be more competitive with a certificate in marketing and sales. For example, Kroger—an Ohio-based food store chain—recruits between 60 and 80 manager trainees per year for its outlets throughout the nation. Speedway—an Ohio-based convenience store chain—annually hires 10,000 to 15,000 entry-level cashiers nationwide. Employees such as cashiers, working in entry-level positions in large companies, have the potential to move into management and are

---

[21] IOICC (Illinois Occupational Information Coordinating Committee), *Horizons: Bringing Future into Focus*, (Springfield, IL, 1998).

offered tuition reimbursement and other benefits. A Speedway representative indicated that the key to developing a successful career path from entry-level sales is to understand and negotiate for higher-paying positions. These positions require supervisory skills, the next priority addressed.

Action Priority 2
Develop an on-campus Supervisors Certification program
Supervisors are needed throughout the district for marketing and sales, clerical, and service workers. There are about 150 annual openings for supervisors in district organizations. These positions are filled from within companies; thus, coursework should cater to persons who are currently employed.

Since no one employer or industry employs the bulk of marketing, clerical, blue collar, and service supervisors, the program should be applicable across major industries. Leadership skills and knowledge of the industry are the key skills needed for supervisors. Additionally, general accounting, marketing, and personnel management skills are sought in hiring supervisors. Heartland Community College currently offers accounting, marketing, and personnel management courses under the Small Business Management certificate and Business Administration Associate's degree programs. However, a Small Business Management certificate may not be appropriate for potential supervisors who will work for large employers. Additionally, a two-year degree may be more than is needed to become qualified for many supervisory jobs. The purpose of the proposed Supervisors Certification program would be to offer a certificate for general supervision responsibilities regardless of industry.

The supervision track is a natural career path for every occupation. One medium-sized employer and union representative interviewed for this project expressed a need for construction workers to understand opportunities beyond entry-level jobs within the construction industry. There may be a need for supervisors within industries not identified by review of labor force data.

Action Priority 3
Develop a collaborative Construction and Building Technology program
Because of the amount of new construction in Heartland Community College's service area, carpenters are in demand. Carpenters currently obtain training and certification through apprenticeship programs administered by Carpenter's Local No. 63. Five years of experience and a journeyman's test are required to become a master carpenter. Carpenters are self-employed as contractors or work for contractors.

While many skills are acquired on the job, interviewees representing the union and large employers of carpenters indicated a continued need for courses in blueprint reading and framing, and certification coursework for journeymen who want to upgrade their skills. Contractors voiced a specific need for framing skills, but also seek trimming and stair-building skills.

The union and employers in the construction industry would be willing to work with HCC to develop a program tailored specifically for local needs. The HCC construction program should extend and compliment current programming offered by the Bloomington Area Vocational School (BAVC). It is with these partners—BAVC, local employers, and union representatives—that construction programming should be developed, potentially using facilities at BAVC for cost-efficient program implementation.

These collaborators can work with HCC to address specific needs of the construction industry now and in the future—not just for carpentry, but for other related occupations. A host of occupations with specific skills are needed in the industry—masons, plumbers, electricians, heating and cooling specialists, insulators, drywall hangers, plasterers, painters, cabinetmakers and trimmers, floor specialists such as ceramic tilers, carpet layers, and roofers. Opportunities exist in these occupations for persons with strong skills and a good work record.

There are also opportunities to move into sales and supervision positions in the construction industry. Interviewees indicate that contractors need supervisors and manufacturers seek salespeople to distribute their products. For example, Alside, an Ohio-based siding manufacturer, employs 70 operations managers in the U.S. Warehouse Equipment of Illinois is also constantly recruiting for sales management positions. Mobility across the region and to different parts of the U.S. may be necessary for some workers in a seasonal job market. The seasonal nature of many construction occupations should be considered when developing programming.

Four regional community colleges currently offer programs in carpentry—Parkland, Lincoln Land, Joliet, and Illinois Central. All area programs offer certificates and associate's degrees. Despite the competition, there is an estimated HCC district need for 33 carpenters annually between 1996 and 2006—enough to justify programming, considering that this figure for annual employment demand does not account for other construction occupations that may fit within a construction program. With continued population growth expectations in the central and southern parts of the district and carpenters' high incomes ($39,250), HCC would be justified in developing a carpentry and related building occupations program.

Action Priority 4
Develop a collaborative on-campus Culinary Arts program with complimentary Hospitality and/or Restaurant Management program(s)

The Bloomington-Normal metropolitan area ranks 15th in the nation, "on the list of towns with the most frequent restaurant patrons."[22] Occupational data and billboard and newspaper advertising for cooks and restaurant managers confirm the local need for training to fill positions supporting an "eating-out" community.

---

[22] Pantagraph Online, "Twin City Guide," [Internet], http://www.pantagraph.com/cityguide/famous.html, (January 2000).

While the estimated number of annual openings for higher-paid restaurant cooks and food service and lodging managers is about 50, an estimated 300 jobs are filled annually throughout the district's food service industry.[23] Area employers confirm these high figures. While the pay offered the large number of entry-level workers is only slightly above the Federal minimum wage, the mean annual wage for trained restaurant cooks is $18,050 and $28,320 for food and lodging managers—livable wages.

Is there a shortage of trained people to fill local jobs? According to its recruiter, Steak and Shake has difficulty hiring for the approximately 300 management positions that will be available across the nation in the next two years. Requirements for the job include a high school education, "quickness," leadership, communication and training skills, task-orientation, and integrity.

Confirming local demand, the Bloomington Area Vocational Center (BAVC) maintains a waiting list of requests for services provided to customers through its culinary arts program. At one time, there was discussion about a cooperative program between the BAVC and HCC. The BAVC culinary program has expressed continued interest in developing a cooperative program with HCC and may be willing to provide facilities. Heartland Community College could provide extensions to BAVC programs enabling students to transition from food preparation workers to restaurant cooks and then to food service managers.

Area restaurants such as Jumer's, Central Station, and Biaggi's have all expressed interest in working with HCC to develop programs that would serve their specific needs. A representative from Jumer's mentioned the need for students to chose specialties within the culinary arts. According to Illinois Community College Board (ICCB)-Modified Classification of Instructional Programs (CIP), culinary arts specialties include the following categories: baker or pastry chef and assistant, bartending, operations or dining room manager, and meat-cutter. Related occupations in the food and lodging service industry include banquet and convention planning—an "emerging" occupation according to the Bureau of Labor Statistics. Central Station Café is interested in helping develop a program for banquet planning and is willing to supply its head chef to teach culinary classes. All training should include sanitation licensing certification.

While HCC offers a cooperative district program through Lincoln Land Community College in Springfield, local demand would justify development of an on-campus program. Biaggi's is currently working with the University of Illinois Culinary Department and would be interested in extending that relationship to HCC. This report recommends development of a collaborative program between the BAVC, local employers, and HCC.

---

[23] Annual employment openings for all restaurant jobs were compiled and summed from Illinois Occupational Information Coordinating Committee (IOICC), Substate Employment Projections System (SEPS), [Database], from Illinois Department of Employment Security, Economic Information and Analysis Division, [Internet], http://www.ioicc.state.il.us, (1999).

Action Priority 5
Develop a Law Enforcement program

Opportunities for corrections and police officers, as well as security and loss prevention personnel, justify creating a certificate program extending the current transfer program HCC offers in criminal justice. The Department of Corrections will be hiring 1,000 corrections officers over the next year. It is estimated that 23 new police officers are hired in the district annually. Local for-profit security employers have unmet employment needs.

Since postsecondary education is not required to enter the field of law enforcement, a certificate program would offer an advantage to students in entry-level positions.[24] For entry-level positions, employers seek personal profiles and scores on standardized tests. Offering a certificate program is a good way to help students understand employer's requirements while preparing students for entry into the field and further study toward an associate's degree.

One local representative expressed interest in developing a training program for security officers through HCC. Recommended is collaboration with this employer and establishing an advisory group with representatives of law enforcement and security personnel employers.[25]

Action Priority 6
Develop a collaborative Automotive Mechanics program

While HCC currently has cooperative agreements with other area community colleges, area demand for skilled auto mechanics appears strong enough to justify development of a local program. There are about 20 district openings per year for qualified auto mechanics.

A representative of a local car dealership indicated a shortage of 25,000 automotive technicians in the country, estimating that this shortage will increase to 65,000 by 2003. Given these statistics, a career in automotive mechanics is an excellent opportunity for students wishing to enter a mechanical field. In addition, due to the need to keep up with technology, there is an ongoing local need for skills upgrade training. Certified mechanics go through 20 to 30 hours of specialized training annually to maintain their skills.

There is growing need for specialization within the field, particularly in transmissions, engines, and fuel injection systems. All industry representatives interviewed for this project indicated a problem with hiring for specialized auto mechanic occupations. An interviewee from Sam Leman's said that the most promising specialization is electronic transmissions systems. A firm specializing in transmissions systems is concerned about having to pay out-of-district tuition for training. Courses needed include electrical wiring diagramming, electrical circuitry, and hydraulics. Specific tool skills required include using electrical meters such as oscilloscopes and ohmmeters. Technical reading and comprehension is necessary for troubleshooting.

---

[24] IOICC quantitative information indicates that an associate's degree is needed to become a police officer. Interviews with police and correctional officer recruiters revealed that an associate's degree is not necessary to enter law enforcement positions.
[25] Contact Jackie Woodruff at Burns Security, (309) 663-7308.

In addition, there appears to be a need for training in brand-specific systems. Parkland College in Champaign, IL has a Ford Asset program that certifies individuals as Ford Technicians. All manufacturers are requiring certification for automotive dealers. Costs for these programs are high and increasing. The Parkland Ford Asset program costs about $6,000 per student. Universal Technical Institute in Glendale Heights, Illinois offers automotive repair training and helps get students into "graduate" level, brand-specific training. Coursework lasts 45 weeks and costs $15,100. Students exit the program with about $1,000 worth of tools necessary in the trade and can seek more specialized training in brand-specific programs, some of which offer tuition reimbursement.[26]

Local Representatives expressed a need to bring an affordable program to the local area. Without a local program, students living in the HCC district have to drive daily for two years to Parkland College for training. The most viable option presented for starting a program was one focusing on maintenance and light repairs for Chrysler, Chevrolet, and Honda since these brands of autos were noted as the ones serviced the most.[27] A partnership between BVAC, employers, and HCC would best serve the community. The program should, at a minimum, fit ASE (Automotive Service Excellence) standards.[28]

In addition to local demand for auto mechanics, interviewees indicate that there is a need in the auto industry for service advising and sales staff. Service advisors interact with customers at the front end of repair requests. Both advisors and sales professionals require training in sales and customer service. This report recommends development of both an automotive mechanics program and a marketing and sales certificate program that would satisfy this expressed need in the automotive industry. (See Action Priority 1 above.)

Action Priority 7
Maintain and monitor Computer, Nursing, Insurance, and Office, Manufacturing, and Maintenance Technology programs

Given continued demand for high-paying computer, nursing, clerical, production, maintenance, and insurance-related occupations, this report recommends maintaining and monitoring, and possibly expanding Heartland Community College's current programs for these occupations. Internal review of course-level enrollment trends and advice from employer partners will reveal if expansion should be considered.

Computer-related programs

By far, the largest single district employer of people in computer-related occupations is State Farm Insurance Companies with its huge network of servers and array of mainframe programs.

---

[26] Universal Technical Institute, 601 Regency Drive, Glendale Heights, IL, (800) 441-4248.

[27] A representative from NAPA Auto Parts, a popular wholesale parts store, supplied this information.

[28] National Institute for Automotive Service Excellence "is a national, nonprofit organization dedicated to improving the quality of automotive repair through voluntary testing and certification of automotive repair technicians." For more information, contact Ronald Weiner, 13505 Dulles Technology Drive, Suite 2, Herndon, VA 20171, (703) 713-3800, [Internet], http://www.yearbooknews.com/html/NatlIASE.html.

This study estimates a district employment demand for about 55 computer programmers and systems analysts per year. This demand does not include all computing occupations for which there are no reliable occupational data from which to estimate very narrow specialties in which there are few openings. General programmers and analysts make good wages since demand has historically outweighed supply. A glut in the market of any specialty would drive wages down. Therefore, this report recommends continued collaboration with a representative from State Farm to guide and alter specifically defined, computer-related occupational programming as appropriate. An additional opportunity may exist with InfoTech of Illinois State University. InfoTech trains mainframe programmers for large companies throughout the State (including State Farm) and is interested in discussing opportunities with HCC.

Nursing

Representatives from the two local hospitals and a high school counselor confirm the continued need for nursing graduates at every level of training. The current nursing program at HCC is an ideal example of the "seamless" training offered within the community for career enhancement within a field. Students can become Certified Nursing Assistants through the Bloomington Area Vocational Center, continue their training at HCC through Licensed Practical and Registered Nurse training, and then continue their education at Mennonite College of Nursing at Illinois State University.

The highest demand within the nursing field is for registered nurses—either ADN or BSN degree qualified. BroMenn Healthcare would like to continue partnering with HCC to offer a clinical site for students. OSF St. Joseph Medical Center is currently sponsoring students at Richland Community College. There may be opportunities to partner with both health care providers and other community colleges, using HECA funding opportunities available through the State, to expand nursing to fill the needs of healthcare sub-specialties for which there is not enough demand for every college to develop programming. These specialties are too numerous to list here. Interviewees identified a current need for surgical technicians and a lack of demand for Physical or Occupational Therapy Assistants in the district. CPR certification is needed for most healthcare occupations. Interviewees asked whether HCC offers CPR certification.

Local healthcare professionals identified the need for nurses to be better groomed for the work-world. They indicate that nurses need better job readiness, career readiness, and negotiation skills. One interviewee speculated that some people do not enter healthcare professions because of the need for extensive training and certification. This barrier suggests an opportunity to help retain students by offering aid with difficult coursework and life issues that may confront students.

Insurance

This report recommends continuation and possible expansion of current life and health insurance programming with attention paid to Illinois State University's Katie Insurance School offerings. According to one interviewee, life and health insurance courses could be improved by incorporating customer service and telephone training issues in coursework. One employer complimented the LOMA (Life Office Management Association) certification program at HCC.

Office technology

Representatives of major employers in the district interviewed for this project praised HCC's office technology program. One employer recommended better counseling for students interested in filling the approximately 70 positions open annually in the HCC district. Counseling might include fostering understanding of career paths to supervisory positions. (See Action Priority 2 above.)

Persons skilled at organization, communication, typing, and computer software packages such as Microsoft Word, and Windows 95, NT, and 98 are needed for local Administrative Assistant positions. Employers complimented the computer software applications component of HCC's office technology program. Advice from employers about possible program enhancements included the need for telephone and customer service training. Advice from employers may reflect the need for both marketing and sales and supervision programs recommended under Action Priorities 1 and 2 of this report.

Manufacturing and maintenance technology

With recent workforce reductions at two large manufacturing companies within the district, it is likely that the occupational data used to support development of this report do not reflect the current or future demand for manufacturing, quality, and maintenance technologies.[29]Therefore, this report recommends continued monitoring of local manufacturing employment and internal course-level data for enrollments. Internal analysis will reveal the need to either discontinue or reshape manufacturing-focused programs to meet local market needs.

Interviewees identified manufacturing skills or qualifications for which HCC might provide training including OSHA forklift certification, industrial safety, machine operation, gauge reading and interpretation skills, and basic computer knowledge. One employer is willing to partner with HCC in the area of labor management resolution by offering to let classes view a grievance process.[30]

Action Priority 8
Maintain current programs in Agriculture and Bookkeeping/Accounting

While there is enough demand to consider on-campus programming for farmers and bookkeepers, factors exist making full development of these programs a lower priority than Action Priorities 1 through 7 above. Opportunities may exist for short-courses, collaboration with other educational institutions, and corporate education.

Agriculture

The need for farmers continues in the district and throughout the State. There are approximately 74 job openings for farmers each year. "Farmers" is among the 50 occupations

---

[29] In 1999 and 2000 Mitsubishi Motor Manufacturing of America, Inc. and The Eureka Company both laid off many employees who may seek training at HCC. See McKinney, K. "Eureka Co. Plant Will Close," *The Pantagraph*, (Bloomington-Normal, Illinois, 3 August 1999).

[30] Dan Bermeister of Nestle-Beich Fund Raising Candies is willing to partner with HCC and let classes witness a grievance process.

expected to have the largest number of job openings each year in Illinois due to the rising average age of farmers and the continued increase in Illinois agricultural production.[31]. Nonetheless, while there is continued demand, the need is for people skilled in large and mechanized farming techniques, not for the skills needed to run a small farm. The skills in greatest demand require training already offered through other HCC programs including agricultural business management, industrial processing, and a transfer sequence through Illinois State University.

HCC offers agricultural programs through cooperative agreement with other community colleges in the region and through coursework at Illinois State University. Additionally, the Farm Bureau and University of Illinois Extension have long track records of providing educational opportunities for area farmers. Given these factors, this report recommends maintaining current programming in agriculture and developing partnerships with the Farm Bureau and University of Illinois Extension to deliver short-term, community-based courses.

Bookkeeping/Accounting
All sized firms seek bookkeepers and accounting and auditing technicians, making bookkeeping and accounting an attractive employment opportunity for persons seeking stable, and often flexible employment. Based on information from interviews, small- to medium-sized firms have between 1 and 20 bookkeepers that need to understand basic receivable, payable, and financial statement entries. Employers of bookkeepers express the need for employees to have experience with computer software packages such as "Quickbooks" and to have good communication skills, since bookkeepers are often the liaison between clients and more senior accountants.

HCC currently provides short courses in Quickbooks and offers an accounting certificate through cooperative agreement with Illinois Valley Community College. Despite the large number of district residents currently employed in bookkeeping and accounting and the likelihood that there will continue to be a substantial need for these workers in the coming years, the number of annual openings is declining. For this reason, it is recommended HCC not start an on-campus bookkeeping/accounting program. Rather, there may be an opportunity to offer an on-line or self-study course for students wishing to become bookkeepers.

---

[31] IOICC (Illinois Occupational Information Coordinating Committee), *Horizons: Bringing Future into Focus*, (Springfield, IL, 1998), 180.

Other Program Opportunities

In addition to the Action Priorities above, research revealed the following opportunities for potential Heartland Community College programming:

- A representative from R.R. Donnelly thinks Pontiac High School would be an excellent location for a course in graphic arts.
- Several interviewees indicated that Visual Basic programming skills are increasingly necessary for occupations requiring any personal computing skills.
- Truck drivers are in constant demand. With high wages and short-term (about 8-weeks) training for entry to get CDL (Commercial Drivers License) certification with HAZMAT (Hazardous Materials) endorsement, interviewees suggested HCC develop a local course similar to those offered by Illinois Central, Parkland, and Lincoln Land Community Colleges.
- Financial management is a lucrative in-demand occupation that typically requires at least a bachelor's degree. With high turnover, employers are increasingly seeking workers who are motivated and willing to pass Series 7 licensing. There may be an opportunity to offer a series of short courses in financial management leading to licensing or to further education at HCC or a four-year institution.

Conclusions and recommendations

Heartland Community College is well positioned to enhance and expand its current career education programs. The district's economy is strong. Employers need workers of all kinds, including large numbers of people to fill well-paid jobs with good benefits and career development prospects. Heartland Community College is already collaborating with area businesses and educational institutions to train workers for these occupations. Heartland's forthcoming move to its permanent campus facility will make it possible to expand course offerings and programs and increase the number of students participating in these opportunities. Research conducted for this report suggests the following conclusions and recommendations to inform future program planning.

Course and program design and delivery:

- Use information in this report to prioritize career education programming decisions.
- Based on on-going communication and collaboration with area employers and educational institutions, develop appropriate options, ranging from examination preparation and certification to associate's degrees facilitating transfer to four-year degree programs.
- To meet the needs of both students and employers, develop a range of delivery options including workshops and short courses; self-study and on-line courses; and conventional classes.
- Integrate classroom instruction and work-based learning in all appropriate career education courses.
- Build on the "Career Paths" model developed by the Bloomington Area Vocational Center to identify and communicate educational and career paths available to students.[32] An on-line resource might help, both to market HCC career education offerings and to help students design programs customized to their own needs.

Communication and data management:

- Enhance ease and speed of evaluating demand for all types of courses and programs by improving course-level student data collection, maintenance, and reporting systems. ("Completer" data does not provide an accurate picture of students' needs and choices.)
- Improve communication about career education programs *via* Heartland Community College's catalogue and Internet site to enhance the "front door" for prospective students.

---

[32] Bloomington Area Vocational Center, *Career Paths, 2000-2001*, (Bloomington, IL, 1999).

Appendix 1: Research Methodology

Public data
To help Heartland Community College (HCC) plan optimally for career education programming, occupations were chosen for this study that were high in demand, had good earnings potential, and were within the education scope of HCC's programs. To meet those goals, occupations were selected that:
- Require more than secondary but not more than an associate's degree for entry;
- Are estimated to have at least 20 job openings per year within the district between 1996 and 2006; and
- Have an annual mean wage of at least $16, 640 or about $8.00 per hour.[33]

Twenty occupations were met these criteria.   For occupations meeting criteria, and "economic contribution" factor was computed by multiplying the total number of estimated annual employment openings (due to both growth and replacement/retirement) by the annual median wage of the occupation.[34] This "economic contribution" indicated each occupation's overall annual contribution to the district's economy. This contribution factor was then used as one indication of the priotiy that HCC should make in their actions for program change and development. (See Table 5 in Appendix 4.)

Key informant interviews
Interviews were conducted both formally and informally.   A total of 63 interviewees representing area employers, unions, educational institutions, and economic development organizations provided information about their needs.   Interviews were conducted by telephone and in person. Appendix 3 provides a list of organizations interviewed and an indication of whether or not they are willing to work with HCC in some capacity.

A questionnaire was developed for formal telephone interviews. (See Appendix 2.) A cross-section of organizations perceived as knowledgeable about selected in-demand occupations was selected for interviewing. Several potential informants who were unable to participate in a telephone interview were sent a questionnaire for completion. A few informants provided

---

[33] The hourly wage of $8.00 was selected based on the minimum wage required to support a two-earner, two-child household. From "The Self-Sufficiency Standard for Illinois: How Much Money Does it Take for Families to Survive?," McLean County 1996, [Brochure from Normal Town Meeting on Welfare to Work, November 1999], standard conceived and developed by Dr. Diana Pearce, former director of Women and Poverty Project of Wider Opportunities for Women, Inc., (Chicago).

[34] Data compiled by Illinois Occupational Information Coordinating Committee (IOICC), Substate Employment Projections System (SEPS), [Database], data from Illinois Department of Employment Security, Economic Information and Analysis Division, [Internet], http://www.ioicc.state.il.us, (1999); U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, "1998 Metropolitan Area Occupational Employment and Wage Estimates, Bloomington-Normal, Illinois MSA," [Internet], http://www.bls.gov/oes/msa/oes-1040m.htm, (2000); IOICC (Illinois Occupational Information Coordinating Committee), *Horizons: Bringing Future into Focus*, (Springfield, IL, 1998).

internal reports including information about their company's needs in place of the questionnaire. Informal interviews were conducted with employers at two job fairs.[35]

Telephone and face-to-face interviews requested specific occupational information such as future demand and skills, licenses, and training needed for entry into occupations. Organizations were asked if they were willing to partner with HCC and, if so, in what capacity.

Existing program analysis

Selected occupations were compared to current programming offered at Heartland Community College using information in current course guides and handbooks.

Competitive analysis

Sources of training for selected occupations were examined to understand opportunities for collaboration and possible sources of competition for HCC programming.

Potential program analysis

Information from interviews and literature provided bases for recommending potential programming, alternative delivery systems, and partnering options in addition to providing insight into barriers to employer and student participation in programs.

---

[35] Workforce Diversity Career Fair, Bone Student Center, (Normal, IL: Bone Student Center of Illinois State University, 26 October 1999); Corporate and Manufacturing Days, Illinois Employment and Training Center, (Bloomington, IL, 15-17 November 1999).

Appendix 2: Questionnaire

Heartland
COMMUNITY COLLEGE

<u>INSTRUCTIONS</u>
"Hello, my name is **[name]** with the Applied Social Research Unit of Illinois State University. I am calling to ask a few questions for Heartland Community College about jobs in the area. We are trying to get an idea of employers' needs so Heartland can train people to meet your organization's needs. Can you spend a few moments now to help me understand your company's requirements for **[Job]**? (If "no," fill out recall data at bottom. If "yes," then continue (repeat if necessary)) Is it you or someone else at **[name of organization]** who knows about hiring for [specific occupation]?"

SURVEY INFORMATION

Date: _____

1. Organizational Data
a.   Organizational Name:_____
b.   Address:_____
c.   Phone Number: _____

2. Job Title: _____

3. Participant's Name: "First, let me confirm that you

are…"_____

4. Participants' Title: "What is your job at…" _____

5.   "Based on our information, there seems to be a need for **[No. of openings][Job].**"

    "What are your thoughts about these

    numbers?"_____

6.   How many individuals per year does **[Organization]** hire as **[Job]?**

    _____

7. Do you have problems hiring people for this position? (If "yes", then ask: Could you

    describe some of these difficulties?)

    _____

8. What do you look for in your **[Job]** applicants in terms of education and experience?

(Prompts—skills, licenses, certificates, specialized training)_____

     a. Skills required?

     _____

     b. Specific licenses or certificates required? _____

     c. Specialized training?

     _____

     d. Anything else?

     _____

9. Does your organization provide training for **[Job]**? _____

10. Could Heartland Community College help to train people to fill your openings for

[Job]? _____

11. How do you think Heartland Community College can provide this training? (Prompts—

short-term/intensive, daytime/nighttime, alternative delivery methods)

_____

12. Do you think that there are things that keep people from working as **[Job]**?

_____

13. What are they (if yes to

12)?_____

14. Would you consider being a partner with Heartland Community College to improve

training options for **[Job]**? _____ (If yes); How can you see working with

Heartland Community College?

_____

15. Are there jobs in your organization for which you have trouble finding people?

_____

_

16. Is there a job that you foresee having trouble finding people for in the next five years?

_____

17. Is it OK if I call you at a future date if we need to know more about **[Job]**?

_____

18. Is there anything else that you would like to add about **[Job]**?

_____

Notes:

This concludes our survey. Thank you for your help.

Appendix 3: List of organizations contacted

	Organization name	Participant's name*	Phone number	Work with HCC?
1	AFNI, Anderson Financial Network, Inc.	Michelle Steffen	828-1777	Yes
2	Alside			
3	B/N Public Transit System			
4	Biaggi's	Clay Baxter	661-8322	Yes
5	Bloomington Area Vocational Center	Judy Speers	829-8671	Yes
6	Bloomington High School			
7	Brady & Associates Construction and Development	Phil	663-5301	Yes
8	BridgeStone Firestone	Jerry Holly	451-2304	Yes
9	BroMenn Healthcare	Jill Schafer	222-0986	Yes
10	Burns International Security Service	Jackie Woodruff	663-7308	Yes
11	Carpenter's Local #63	Don Alsman	828-0081	Yes
12	Central Station Café	Steff	828-2323	Yes
13	Chestnut Health Systems			
14	Clay Dooley Auto Service		662-2886	Yes
15	Country Companies Insurance	Tyler Beard	821-5160	Yes
16	Creative Systems	Kevin Shiefing	862-2983	Yes
17	Dennison Corporation	Steve Bound	663-1331	Yes
18	Economic Development Council	Rick Nolan	829-6344	Yes
19	Express Personnel Services			
20	GATX Logistics, Inc.		888-2500	Yes
21	Giovanni Metals, Inc.			
22	Gleeson, Sklar, Sawyers & Compata, LLP			
23	Green View Landscaping Co.	Dave Sipe	452-9402	Yes
24	Gutthoff & Company	Kathy Allen	662-4356	Yes
25	Heritage Machine and Welding	Dave	828-0400	Yes
26	Illinois Agri News	Daniel Grant	828-1432	Yes
27	Illinois Department of Corrections			
28	Illinois State University	Human Resouces	438-2111	Yes
29	InfoTech of Illinois State University	Charles Geigner	438-5013	Yes
30	JB Communications	Jessica Brown	662-1185	Yes
31	John Hancock Financial Services			
32	John Morris & Associates, CPA	John Morris	663-6789	Yes
33	Jumer's Chateau	Lewis Pardal	662-2525	Yes
34	Kraft, Inc.			
35	Kroger Food Stores	Greg Daniels	(317) 579-8405	Yes
36	Lawrence Travis, CPA		862-1171	Yes
37	McLean County			
38	MidState Transmission Service	Jerry	452-5595	Yes
39	NAPA Auto Parts			
40	Ned Kelly's Steak House	Denny Larson	663-7100	Yes

41	Nestle-Beich Fund Raising Candies	Dan Bermeister	829-1031	Yes
42	Normal Police Department	Wanda, HR	454-9518	Yes
43	Nussbaum Trucking, Inc.			
44	OSF St. Joseph Medical Center			
45	Pheasant Ridge Landscaping	Becky	365-8271	Yes
46	Pinkerton Security and Investigation Services			
47	Premier Manufacturing Support Services, LP			
48	Prenzler Group Builders	Jim Allen	828-5026	Yes
49	Pro-Clean			
50	R.R. Donnelly and Sons	Jason Phelps	(815) 844-5181	Yes
51	Ryder Student Transportation Services			
52	Sam Leman	John	827-0987	Yes
53	ServiceMaster Commercial Service			
54	Speedway SuperAmerica, LLC			
55	State Farm Insurance Companies	Several HR representatives	766-2300	Yes
56	Steak n' Shake, Inc.	Matthew Ewertowski	862-6743	Yes
57	Target	Steve Skiba	454-5648	Yes
58	Vuteq Corporation	Amber Walder	452-9933	Yes
59	Wackenhut			
60	Warehouse Equipment, Inc.			
61	WebSoft Corporation	Jerry Jacobs	821-1070	Yes
62	Wherry Machine & Welding, Inc.		828-5423	Yes
63	Willamette Industries	Ed Riehl	735-1221	Yes

*The participant's name is provided only for organizations indicating a willingness to work with HCC.

Appendix 4: Tables of selected occupations

Table A: Selected characteristics of high-paying occupations requiring more than secondary education, but not more than an associate's degree, with 20 or more estimated annual employment openings, 1996 to 2006, Heartland Community College district, sorted by "2006: Estimated number employed"

Occupational title	1996		2006		Change 1996 - 2006	
	Number employed	Percent of total area employment	Estimated number employed	Percent of total area employment	Numeric change	Percent change
Farmers	4,046	3.5	4,030	3.0	-16	-0.4
Secretaries, except Legal and Medical	3,390	2.9	3,479	2.6	89	2.6
Marketing & Sales Supervisors	1,771	1.5	2,117	1.6	346	19.5
Registered Nurses	1,645	1.4	1,945	1.5	300	18.2
Insurance Sales Workers	1,569	1.4	1,804	1.3	235	15.0
Bookkeeping, Accounting & Auditing Clerks	1,844	1.6	1,795	1.3	-49	-2.6
Systems Analysts/Computer Programmers	1,096	1.0	1,634	1.2	538	91.0
Maintenance Repairers, General Utility	1,325	1.1	1,563	1.2	238	18.0
Clerical Supervisors	1,264	1.1	1,553	1.2	290	22.9
Blue Collar Worker Supervisors	1,228	1.1	1,340	1.0	112	9.1
Carpenters	1,029	0.9	1,173	0.9	144	14.0
Other Sales Representatives	802	0.7	917	0.7	115	14.4
Automotive Mechanics	664	0.6	715	0.5	51	7.6
Cooks, Restaurant	539	0.5	689	0.5	150	27.7
Service Supervisors, All Other	553	0.5	676	0.5	123	22.2
Insurance Adjusters, Examiners, & Investigators	513	0.4	655	0.5	142	27.7
Food Service & Lodging Managers	376	0.3	553	0.4	177	47.0
Health Professions & Paraprofessionals, All Other	417	0.4	548	0.4	132	31.6
Police Patrol Officers	363	0.3	473	0.4	109	30.0
Machine Operators, All Other	228	0.2	393	0.3	164	72.1
TOTAL	24,662	21	28,052	20.9	3,390	

Sources: Data compiled by Illinois Occupational Information Coordinating Committee (IOICC), Substate Employment Projections System (SEPS), [Database], from Illinois Department of Employment Security, Economic Information and Analysis Division, [Internet], http://www.ioicc.state.il.us, (1999); U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, "1998 Metropolitan Area Occupational Employment and Wage Estimates, Bloomington-Normal, Illinois MSA," [Internet], http://www.bls.gov/oes/msa/oes-1040m.htm, (2000).

Table B: Selected characteristics of high-paying occupations requiring more than secondary education, but not more than an associate's degree, with 20 or more estimated annual employment openings, 1996 to 2006, Heartland Community College district, sorted by "Annual job openings: Total number"

Occupational title	Annual job openings			Training/experience	Wage	Action Opportunity
	Total number	Number due to growth	Percent due to growth			
Farmers	74	-2	0.0	>12 mos. OJT	$23,336	Maintain current program
Systems Analysts/Computer Programmers	73	54	0.4	Varies, Work experience to BS	$45,010	Maintain and monitor
Secretaries, except Legal & Medical	68	9	0.1	Postsecondary vocational	$21,850	Maintain and monitor
Marketing & Sales Supervisors	63	35	0.4	Work experience	$38,970	Expand current offerings
Clerical Supervisors	58	29	0.3	Associate's	$36,420	Expand current offerings
Registered Nurses	53	23	0.3	Associate's	$37,020	Maintain and monitor
Insurance Sales Workers	53	23	0.3	>12 mos. OJT	$33,990	Expand current offerings
Maintenance Repairers, General Utility	51	24	0.3	>12 mos. OJT	$26,380	Maintain and monitor
Blue Collar Worker Supervisors	39	11	0.2	Work experience	$37,197	Expand current offerings
Carpenters	33	14	0.3	>12 mos. OJT	$39,250	Develop new program
Other Sales Representatives	31	12	0.3	1-12 mos. OJT	$38,660	Expand current offerings
Cooks, Restaurant	28	15	0.3	Postsecondary vocational	$18,050	Develop new program
Food Service & Lodging Managers	26	18	0.4	Postsecondary vocational	$28,320	Develop on-campus program
Bookkeeping, Accounting & Auditing Clerks	26	-5	-0.2	1-12 mos. OJT	$23,810	Maintain current offerings
Service Supervisors, All Other	25	12	0.3	Work experience	$26,860	Expand current offerings
Police Patrol Officers	23	11	0.3	1-12 mos. OJT	$31,250	Expand current offerings
Automotive Mechanics	22	5	0.2	Postsecondary vocational	$28,210	Develop on-campus program
Insurance Adjusters, Examiners, & Investigators	21	14	0.4	>12 mos. OJT	$36,360	Maintain and monitor
Health Professions & Paraprofessionals, All Other	21	13	0.4	Associate's	$31,980	Maintain and monitor
Machine Operators, All Other	21	16	0.4	1-12 mos. OJT	$18,510	Maintain and monitor
TOTAL	809	331				
AVERAGE			0.3		$31,072	

Sources: Data compiled by Illinois Occupational Information Coordinating Committee (IOICC), Substate Employment Projections System (SEPS), [Database], from Illinois Department of Employment Security, Economic Information and Analysis Division, [Internet], http://www.ioicc.state.il.us, (1999); U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, "1998 Metropolitan Area Occupational Employment and Wage Estimates, Bloomington-Normal, Illinois MSA," [Internet], http://www.bls.gov/oes/msa/oes-1040m.htm, (2000).

Table C: Selected characteristics of high-paying occupations requiring more than secondary education, but not more than an associate's degree, with 20 or more estimated annual employment openings, 1996 to 2006, Heartland Community College district, sorted by Wage

Occupational title	Annual job openings			Training/experience	Wage	Action Opportunity
	Total number	Number due to growth	Percent due to growth			
Systems Analysts/Computer Programmers	73	54	0.4	Varies, Work experience to BS	$45,010	Maintain and monitor
Carpenters	33	14	0.3	>12 mos. OJT	$39,250	Develop new program
Marketing & Sales Supervisors	63	35	0.4	Work experience	$38,970	Expand current offerings
Other Sales Representatives	31	12	0.3	1-12 mos. OJT	$38,660	Expand current offerings
Blue Collar Worker Supervisors	39	11	0.2	Work experience	$37,197	Expand current offerings
Registered Nurses	53	23	0.3	Associate's	$37,020	Maintain and monitor
Clerical Supervisors	58	29	0.3	Associate's	$36,420	Expand current offerings
Insurance Adjusters, Examiners, & Investigators	21	14	0.4	>12 mos. OJT	$36,360	Maintain and monitor
Insurance Sales Workers	53	23	0.3	>12 mos. OJT	$33,990	Expand current offerings
Health Professions & Paraprofessionals, All Other	21	13	0.4	Associate's	$31,980	Maintain and monitor
Police Patrol Officers	23	11	0.3	1-12 mos. OJT	$31,250	Expand current offerings
Food Service & Lodging Managers	26	18	0.4	Postsecondary vocational	$28,320	Develop on-campus program
Automotive Mechanics	22	5	0.2	Postsecondary vocational	$28,210	Develop on-campus program
Service Supervisors, All Other	25	12	0.3	Work experience	$26,860	Expand current offerings
Maintenance Repairers, General Utility	51	24	0.3	>12 mos. OJT	$26,380	Maintain and monitor
Bookkeeping, Accounting & Auditing Clerks	26	-5	-0.2	1-12 mos. OJT	$23,810	Maintain current offerings
Farmers	74	-2	0.0	>12 mos. OJT	$23,336	Maintain current program
Secretaries, except Legal & Medical	68	9	0.1	Postsecondary vocational	$21,850	Maintain and monitor
Machine Operators, All Other	21	16	0.4	1-12 mos. OJT	$18,510	Maintain and monitor
Cooks, Restaurant	28	15	0.3	Postsecondary vocational	$18,050	Develop new program
TOTAL	809	331				
AVERAGE			0.3		$31,072	

Sources: Data compiled by Illinois Occupational Information Coordinating Committee (IOICC), Substate Employment Projections System (SEPS), [Database], from Illinois Department of Employment Security, Economic Information and Analysis Division, [Internet], http://www.ioicc.state.il.us, (1999); U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, "1998 Metropolitan Area Occupational Employment and Wage Estimates, Bloomington-Normal, Illinois MSA," [Internet], http://www.bls.gov/oes/msa/oes-1040m.htm, (2000).

Table D: Selected characteristics of high-paying occupations requiring more than secondary education, but not more than an associate's degree, with 20 or more estimated annual employment openings, 1996 to 2006, Heartland Community College district, sorted by "Training/experience"

Occupational title	Annual job openings			Training/experience	Wage	Action opportunity
	Total number	Number due to growth	Percent due to growth			
Systems Analysts/Computer Programmers	73	54	0.4	Varies, Work experience to BS	$45,010	Maintain and monitor
Clerical Supervisors	58	29	0.3	Associate's	$36,420	Expand current offerings
Registered Nurses	53	23	0.3	Associate's	$37,020	Maintain and monitor
Health Professions & Paraprofessionals, All Other	21	13	0.4	Associate's	$31,980	Maintain and monitor
Secretaries, except Legal & Medical	68	9	0.1	Postsecondary vocational	$21,850	Maintain and monitor
Cooks, Restaurant	28	15	0.3	Postsecondary vocational	$18,050	Develop new program
Food Service & Lodging Managers	26	18	0.4	Postsecondary vocational	$28,320	Develop on-campus program
Automotive Mechanics	22	5	0.2	Postsecondary vocational	$28,210	Develop on-campus program
Marketing & Sales Supervisors	63	35	0.4	Work experience	$38,970	Expand current offerings
Blue Collar Worker Supervisors	39	11	0.2	Work experience	$37,197	Expand current offerings
Service Supervisors, All Other	25	12	0.3	Work experience	$26,860	Expand current offerings
Farmers	74	-2	0.0	>12 mos. OJT	$23,336	Maintain current program
Insurance Sales Workers	53	23	0.3	>12 mos. OJT	$33,990	Expand current offerings
Maintenance Repairers, General Utility	51	24	0.3	>12 mos. OJT	$26,380	Maintain and monitor
Carpenters	33	14	0.3	>12 mos. OJT	$39,250	Develop new program
Insurance Adjusters, Examiners, & Investigators	21	14	0.4	>12 mos. OJT	$36,360	Maintain and monitor
Other Sales Representatives	31	12	0.3	1-12 mos. OJT	$38,660	Expand current offerings
Police Patrol Officers	23	11	0.3	1-12 mos. OJT	$31,250	Expand current offerings
Bookkeeping, Accounting & Auditing Clerks	26	-5	-0.2	1-12 mos. OJT	$23,810	Maintain current offerings
Machine Operators, All Other	21	16	0.4	1-12 mos. OJT	$18,510	Maintain and monitor
TOTAL	809	331				
AVERAGE			0.3		$31,072	

Sources: Data compiled by Illinois Occupational Information Coordinating Committee (IOICC), Substate Employment Projections System (SEPS), [Database], from Illinois Department of Employment Security, Economic Information and Analysis Division, [Internet], http://www.ioicc.state.il.us, (1999); U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, "1998 Metropolitan Area Occupational Employment and Wage Estimates, Bloomington-Normal, Illinois MSA," [Internet], http://www.bls.gov/oes/msa/oes-1040m.htm, (2000).

Table E: Selected characteristics of high-paying occupations requiring more than secondary education, but not more than an associate's degree, with 20 or more estimated annual employment openings, 1996 to 2006, Heartland Community College district, sorted by "Economic Contribution"

Occupational title	Annual job openings			Training/experience	Wage	Economic contribution*	Action opportunity
	Total number	Number due to growth	Percent due to growth				
Systems Analysts/Computer Programmers	73	54	0.4	Varies, Work experience to BS	$45,010	$3,285,730	Maintain and monitor
Marketing & Sales Supervisors	63	35	0.4	Work experience	$38,970	$2,455,110	Expand current offerings
Clerical Supervisors	58	29	0.3	Associate's	$36,420	$2,112,360	Expand current offerings
Registered Nurses	53	23	0.3	Associate's	$37,020	$1,962,060	Maintain and monitor
Insurance Sales Workers	53	23	0.3	>12 mos. OJT	$33,990	$1,801,470	Expand current offerings
Farmers	74	-2	0.0	>12 mos. OJT	$23,336	$1,726,864	Maintain current program
Secretaries, except Legal & Medical	68	9	0.1	Postsecondary vocational	$21,850	$1,485,800	Maintain and monitor
Blue Collar Worker Supervisors	39	11	0.2	Work experience	$37,197	$1,450,683	Expand current offerings
Maintenance Repairers, General Utility	51	24	0.3	>12 mos. OJT	$26,380	$1,345,380	Maintain and monitor
Carpenters	33	14	0.3	>12 mos. OJT	$39,250	$1,295,250	Develop new program
Other Sales Representatives	31	12	0.3	1-12 mos. OJT	$38,660	$1,198,460	Expand current offerings
Insurance Adjusters, Examiners, & Investigators	21	14	0.4	>12 mos. OJT	$36,360	$763,560	Maintain and monitor
Food Service & Lodging Managers	26	18	0.4	Postsecondary vocational	$28,320	$736,320	Develop on-campus program
Police Patrol Officers	23	11	0.3	1-12 mos. OJT	$31,250	$718,750	Expand current offerings
Health Professions & Paraprofessionals, All Other	21	13	0.4	Associate's	$31,980	$671,580	Maintain and monitor
Service Supervisors, All Other	25	12	0.3	Work experience	$26,860	$671,500	Expand current offerings
Automotive Mechanics	22	5	0.2	Postsecondary vocational	$28,210	$620,620	Develop on-campus program
Bookkeeping, Accounting & Auditing Clerks	26	-5	-0.2	1-12 mos. OJT	$23,810	$619,060	Maintain current offerings
Cooks, Restaurant	28	15	0.3	Postsecondary vocational	$18,050	$505,400	Develop new program
Machine Operators, All Other	21	16	0.4	1-12 mos. OJT	$18,510	$388,710	Maintain and monitor
TOTAL	809	331					
AVERAGE			0.3		$31,072		

*"Economic contribution" = Average job openings x Wage