

Board of Governors for Higher Education
Department of Higher Education
State of Connecticut



EMPLOYER SATISFACTION WITH 2003 PUBLIC HIGHER EDUCATION GRADUATES IN CONNECTICUT

REPORT ON PILOT STUDY

Board of Governors for Higher Education

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EXECUTIVE SUMMARY

This report contains the results of a pilot survey of employer satisfaction with Connecticut's public college graduates from the class of 2003 conducted by the Department of Higher Education (DHE) in the spring of 2005. The project was part of a four-state project entitled, "Defining Best Practices for Responsible Accountability Models in Higher Education," funded by the U.S. Department of Education's Fund for the Improvement of Postsecondary Education (FIPSE).

The study found that a total of 9,260 graduates of the class of 2003 from the University of Connecticut (UConn), Connecticut State University (CSU) and the Community Colleges (CC), collectively known as the constituent units, were employed at 4,330 Connecticut companies. This yielded an overall in-state employment rate of 89 percent. A total of 3,007 of these companies then were surveyed about their satisfaction with basic skills, professional skills, personal attributes and job skills of these graduates. In all, 931 of the survey recipients formally contacted DHE after receiving the survey, for a contact rate of 22.6 percent. Of these, 696 surveys were actually completed for an overall response rate of 17 percent. This is significantly higher than the 12-14 percent range generally expected from general, mass-mailing surveys.

Overall satisfaction with public graduates was *very high*. On a scale of 1 to 4, with 4 meaning 'very satisfied' and 1 meaning 'very dissatisfied,' Connecticut employers rated overall satisfaction at 3.45, falling between 'satisfied' and 'very satisfied' (Table 3). The lowest rated area was in Professional Skills at 3.32, which includes such attributes as critical thinking, problem solving and team building. Job Skills were rated an overall 3.43 percent, followed by Basic Skills (3.49) and Personal Attributes (3.58). Although previous studies of workforce competencies in other states have found some deficiencies in Basic Skills and Personal Attributes, this does not appear to be the case for Connecticut's public higher education graduates. The ranking of satisfaction with graduate skills held true by constituent unit, with Professional skills having the lowest average rating (Table 5). Also, there were no significant differences in overall ratings between constituent units, meaning satisfaction appears to be similar regardless of the unit attended. However, employers rated Community Colleges graduates highest on Job Skills and University of Connecticut graduates highest on Basic Skills.

About 44 percent of the employers indicated that the employees in question were working in jobs closely related to their degree program and another 25 percent said the jobs were somewhat related (Table 6).

There were graduates of 26 different academic programs that had 10 or more employers responding. The largest number of responses came from companies employing accounting graduates (44), followed by psychology (40) and nursing (36). However, there were no significant differences between the mean scores on skills by program. For 21 of the 26 programs, preparation in Professional Skills was again rated the lowest (Table 7).

When asked about what factors are most important in hiring, the item marked most often as “very important” was the Interview Process (85% of the employers). No other single factor was marked as “very important” by even 50 percent of the respondents (Table 8). Except for the actual presence of a college degree, college factors (Reputation of College, Courses, Grades or Faculty Recommendations) were far less important than employment factors (Previous Work Experience and Employer Recommendations).

With regard to the number, diversity and quality of applicants, there was more variability and more dissatisfaction. In all three areas, the average mean rating was below 3.00, with the number and diversity of applicants coming in at just 2.86, and the quality of applicant at 2.96. Overall, 22 percent of responding employers were dissatisfied with the diversity of applicants and 24 percent were dissatisfied with the number of applicants. In addition, the differences between industry type were significant for both the number and diversity of applicants. Almost half (475) of employers in the Arts, Entertainment and Recreation industry were *dissatisfied* with the number of applicants. This was followed by the Other Services (29%); Professional, Scientific and Technical Services (28%); Health Care and Social Assistance (26%); Construction (25%); and Manufacturing (25%). (Tables 9-11).

The vast majority (79%) of the respondents indicated that the graduates evaluated in the survey had the necessary skills for promotion in the business. Almost 95 percent indicated that they would hire other graduates from that institution. However, more than half (55%) said they have had no formal contact with the institutions about graduate preparation or program content. There also was a majority of respondents (54.5%) that indicated they would like to set up internship programs with the institution in question.

The pilot study has yielded good news for Connecticut public colleges in terms of overall satisfaction and has provided, for the first time, some useful information for improvement, particularly in the skills areas. In particular, “Professional Skills” such as team building needs to be enhanced by our colleges. These skills tend to improve with workforce experience, so increasing work and/or internship opportunities for students through state-level incentives or other means would be an important area to explore further. While job skills taught in occupational and other programs appear to be very well matched to job requirements, institutions should focus on increasing the number and diversity of graduates, particularly in critical workforce shortage areas. In addition, the low incidence of company contact with institutions about program content is troubling and strategies to address this issue are needed. Lastly, institutions should follow-up with those companies that indicated a desire to explore internship opportunities.

The study also highlights some of the difficulties in tracking graduates into the workforce and surveying employers on workforce success. However, given the importance of workforce development for Connecticut’s economic future, investment in improving tracking systems such as these is critical.

PART I

The first part of this report (pages 3 – 8) contains background information on the study and a detailed description of survey design, sample selection and survey deployment methodology. It speaks to the issues of reliable data sources, student confidentiality, data limitations and other challenges in undertaking a survey of this dimension. For the actual results of the survey phase, turn to *Part II* which begins on page 9. It is important to note that this is the first attempt by DHE to conduct a statewide employer satisfaction survey. Much has been learned from this first experience which we hope will enhance and strengthen future survey endeavors.

BACKGROUND

The impetus for undertaking an employer satisfaction survey for Connecticut can be traced back to the development of its accountability reporting system for higher education. Under legislation passed in 1999, performance measures for the system of higher education and each of its constituent units were adopted in 2000 to gauge performance on six statewide goals, including promoting economic development.¹ While five annual reports have been published to date, DHE has been unable to report on the required measure of employer satisfaction with public college graduates because of a lack of a data system or strategy to obtain such information.² The FIPSE grant partnership, therefore, presented a timely opportunity for DHE to participate in a national effort to identify best practices in employment success efforts and embark on its own pilot survey.

During the first phase of its work under the FIPSE grant, DHE undertook a research study to identify best practices in other states in documenting the workforce success of college graduates.³ The study found that many attempts are underway nationally to obtain a business perspective on the success of college graduates with varying degrees of success. Large-scale, statewide efforts have proven best at linking available employment information data sources such as those maintained by state-level labor departments. However, even as businesses which employ specific graduates have been identified, concerns about the privacy of individual employees in many cases have resulted in more generalized surveys of business satisfaction, rather than detailed assessments of skills and abilities obtained by those employees as a result of their higher education experience. These broad assessments tend to highlight which industries or types of industries have concerns about graduates coming out of higher education, but usually do not illicit enough specific information about what those concerns are to provide meaningful feedback to colleges.

Individual institutions which can more easily obtain permission from graduates to contact employers for information or invite in local business owners for program evaluation, have been more successful in generating detailed information. But these types of surveys and/or focus groups are not without shortcomings. For one, they may be biased by the self-selection of participants. They also may fail to provide comparable data across industries or institutions, making the information of limited use to statewide policy makers. In some cases, process improvement models have generated so much detailed information that they have proven too cumbersome to summarize or even to continue.

In this pilot study, an attempt has been made to combine the broad sampling method of a statewide study with specific information about graduates' skills.

SURVEY DESIGN

Development of Survey Instrument

A draft survey instrument was developed in 2004 incorporating elements of similar instruments used in other states, as well as questions of particular concern to Connecticut. The survey was designed to be brief, but specific in its areas of skill evaluation. It also asked employers to keep specific graduate employees in mind rather than using a general impression of "college graduates" for their responses. Areas evaluated included basic skills, complex processing and interpersonal skills, and job specific skills. Review and comment on the instrument was solicited from DHE's Performance Measures Task Force, the Connecticut Department of Labor (DOL) and the Office of Workforce Competitiveness. Input from these groups was very beneficial in strengthening the design and wording of the questions. They also gave guidance on how to promote and distribute the survey, and provided business contact information for the field test of the survey instrument which took place in April, 2005. A copy of the final survey instrument is provided in Appendix A.

Identifying Survey Population

The first step in identifying the survey population was finding a reliable source of employer information. The Connecticut Business and Industry Association (CBIA) initially offered to include a higher education survey with its mailings or include several satisfaction-related questions on its annual survey of manufacturing companies. However, CBIA was unable to release the necessary contact information for its membership citing proprietary concerns. More importantly, it had no data that could link graduate information to their business information in order to find employers of recent graduates to target for the survey.

Following the model established by Wyoming and Florida, and after several months of negotiation, DHE succeeded in obtaining a data sharing agreement with DOL which maintains the Unemployment Insurance (UI) data base for the state. DOL has been collecting graduate information files from the public higher education institutions, specifically, University of Connecticut, Connecticut State University System and the Community Colleges, for several years and using social security numbers to match records from the graduate files to the UI data base to produce reports on employment and wages for the federal Workforce Investment Act and other state reporting requirements, including the annual higher education accountability report. The agreement provided DHE with access to a file that contained sufficient information on where students who graduated from a Connecticut public college in 2003 were employed in Connecticut.

Confidentiality Issues

Confidentiality issues were foremost in designing the survey. Although the ideal situation which has been utilized in other states such as Wyoming and Florida, would be to give

businesses the names of their graduate employees to use in completing the survey, the institutional members of DHE’s Performance Measures Task Force unanimously agreed that the release of names (or other personal identification information) without the explicit consent of or waiver from the graduate would violate federal confidentiality rules. Instead, DHE utilized a modification of an approach used by several institutions included in the best practices analysis in which employers were given basic information about the institutions and programs the student graduated from, but asked them to identify the recent graduate employees themselves using information in their own personnel files. As an example, the basic information appeared on the survey as follows, with the program identified using the standard Classification of Instructional Program (CIP) code:

Institution	Degree Program	Number of Employee(s)
Western CT State University	Nursing (RN Training)	1

Thus, no personal identifying information was provided on the surveys or in the resulting data base.

Enhancing the Survey Response Rate

One of the other looming concerns after talking with CBIA and DOL about their disappointing experience with responses on business surveys, was how to ensure a respectable (and statistically valid) response rate. DHE, with the encouragement of the Office of Workforce Competitiveness, approached Governor Rell’s Office about obtaining her endorsement. Fortunately, the Governor was very supportive and agreed to sign a “survey invitation” letter which was sent out to all the Chief Executive Officers (CEOs) of the employers included in the sample prior to survey deployment. A copy of the invitation letter is provided on Appendix B. This letter sparked considerable interest in participation, as evidenced by the numerous phone calls and correspondence received by DHE, and may have influenced the strong response rate.

In addition, DHE sought to make submission of the survey as easy as possible by offering three methods of response: (1) Mail: a hard copy with a self-addressed stamped envelope was provided with each survey package; (2) Fax: the three page survey was printed on three sheets of paper (not back to back) so as to facilitate fax returns; and (3) On-line: an online web form of the survey was available on the DHE website. In the end, the hard copy, mail approach proved most effective with four times as many responses received by mail (743 of 931) than through the web (118) and fax (70) combined.

Data Limitations

There were several limitations and concerns with the resulting data files provided to DHE by DOL. First, the UI data base does not include any records for self-employed individuals and for any employed individuals working out-of-state, even if they still reside in Connecticut. This data limitation results in a lower reported employment rate of Connecticut’s 2003 public higher education graduates.

Also, DOL data file contained payroll contact information for each business, which often lead to out-of-state parent companies or payroll processing organizations rather than to the actual in-state company location where the graduate was employed. The survey needed to be delivered to the graduate’s employment location because the person best suited for completing the survey was the employee’s direct supervisor. Upon discovering this limitation, several weeks were

spent using other state sources of business information including various web resources to determine the appropriate contacts and mailing addresses for the employers identified in the data base. The most used sources were the Secretary of the State's Commercial Recording Division Data base (www.concord.sots.ct.gov), Connecticut Governmental Agency websites (www.ct.gov), and various search engines like Google and Yahoo.

Neither the UI nor constituent unit graduate information contained any information regarding the type of position the graduate had obtained. The original DOL database file did not include a North American Industry Classification System Code (NAICS code) for each of the businesses in the data base since this information resides in another location in their data files. This critical information was later added to DHE's file extracts. Since there was no information on the type of job the graduate held, the NAICS code provided the only, even though somewhat limited, indication of whether or not the graduate was employed in the field of his/her major.

In the graduate data files, the Community College file only included graduates of occupational programs which represent approximately 2/3 of the total 2003 graduates. In addition, the original file did not provide the program information for their graduates in the CIP code format. DHE had to request this data separately and merge it with the existing file extract to create a complete and consistent data base for the three public higher education constituent units.

SAMPLE SELECTION AND SURVEY DEPLOYMENT

After merging all available data sources, the final survey sample data base contained 12,628 graduate records. Upon closer examination of the data base, a total of over 2,200 duplicate records were identified, or 17 percent of the file. About 200 of the records were associated with graduates that earned multiple degrees and were eliminated from the file using a fairly complex decision process⁴. Despite the relatively short timeframe between graduation and UI information reported at the end of the 1st quarter of 2004, the remaining duplicates were the result of graduates holding multiple jobs. It was decided to retain those individuals as duplicate records. Although supervisors would be asked to consider individuals when assessing skills of graduate employees, the purpose of the survey was to evaluate the programs and institutions from which they graduated, not the individuals themselves. Having more than one supervisor evaluate the same individual's skills and preparation would, therefore, increase, not decrease the reliability of the data.

After modifying the database for multiple degree graduates, the total number of graduate records dropped to 12,628. The unduplicated count of graduates was 10,398 and the unduplicated count of employed graduates was 9,260 at 4,330 companies with an in-state presence, for an overall employment rate of 89 percent. A separate report on the employment patterns of these graduates, entitled "*Review of Graduate/Employer Data File.*"

Since the survey was designed to elicit employer satisfaction with higher education degree programs, the initial sample mailing list was created by grouping graduates by the four-digit CIP code of the degree awarded. In order to make the initial pilot more manageable, the number of surveys to be mailed was systematically reduced through a four step process. The first step eliminated all companies where an appropriate in-state mailing address could not be found which could be for a number of different reasons including no address in the data base,

address was for payroll servicing agent or out-of-state corporate headquarters, or address was not location specific as in the case of large chain stores like CVS or Walmart. This was a critical first step in developing a tight mailing listing for the survey delivery as one of the primary concerns initially addressed in the design was having local supervisors with direct knowledge of employees' skills complete the surveys. But it also meant that the survey sample would be underrepresented in terms of general employment by large firms (500+ employees).

The second step eliminated roughly 3,700 graduates from teacher education programs. This included eliminating those graduates who appeared to be teachers but whose employer of record was a municipality instead of a local board of education or school. Since graduates of these programs must pass rigorous requirements set by the State Department of Education to obtain and maintain teacher certification, a different survey format was deemed more appropriate for this select group, and may be piloted in the future.

Third, to insure confidentiality of the graduate information, all CIP groups with less than 10 employed graduates per constituent unit (UConn, CSU or CC) were eliminated. For example, if there were 10 or more employed graduates in Finance (CIP – 5208) at UConn but only 5 from CSU, this CIP was retained for UConn graduates but eliminated for CSU.

Lastly, a report showing the number of surveys each business would be asked to complete was reviewed to ensure companies were not being overburdened by having to complete multiple surveys. Theoretically, a company could receive multiple surveys if they hired graduates from more than one unit and/or from multiple programs. Those organizations which were to receive multiple surveys were reviewed regarding the relevancy of the CIP (program area) to the employer's major business field to cull the number of surveys down to a more manageable level.

The final list of survey recipients included 3,007 companies, with 700 or 23 percent receiving more than one survey. Of those 700 businesses, only 13 received more than 5 surveys, while only 3 received more than 10 surveys. A total of 5,013 graduates were employed among the 3,007 companies. Excluding those with multiple jobs, 4,425 unduplicated employed graduates were represented in the final survey sample.

The Governor's survey invitation letter (Appendix B) was mailed out on May 16, 2005 to the 3,007 company CEOs. A total of 80, or just under 3 percent, were returned as undeliverable. About a week later, a total of 4,111 actual surveys were mailed out to this group's human resource directors. Of the 4,111 surveys mailed, 89 or just over 2 percent were physically returned as undeliverable. In hindsight, sending the survey packets directly to the human resource office may have caused some confusion for larger companies and, therefore, the survey distribution process should be re-examined for future surveys.

As found in the pilot, many companies contacted DHE to indicate that they wanted to participate but could not identify the individual graduate(s) and therefore, could not complete the survey. In some cases, a re-explanation that the purpose of the survey is to assess preparation provided by a college program, not the job performance of an individual, encouraged employers to go back and attempt to identify the employee(s) or ask employees themselves to self-identify as public institution graduates from 2003. While this additional

“coaching” may have added to the overall number of responses, the lack of individual student information clearly was a major impediment to a more robust response rate.

After the June 17th deadline, a follow-up reminder was sent to the majority of organizations which had not yet responded. The deadline for submission was extended to July 6th. Before the reminders were sent, a list of the organizations that had not completed the survey was assessed regarding the likelihood that a reminder notification would prompt the organization to complete the survey. Many of the large chain retail establishments with multiple locations as well as some restaurants were not sent reminders because direct supervisors were not likely to be found. A copy of the reminder letter is provided in Appendix C. Throughout this period, responses continued to trickle in primarily via mail. The data base was officially locked on July 29, 2005, at which point the data analysis process commenced.

PART II

SURVEY RESULTS

Response Rate

In all, 931 survey responses were collected from 735 employers for a contact rate of 22.6 percent. Of these, only 696 fully completed the survey, for a completion rate of 17 percent. This completion rate is significantly higher than expected from a general, mass-mailing survey or even from a targeted survey (12-14 percent) – and many of the comments indicated that businesses were pleased both by the intent of the survey and its format. The 235 incomplete survey contacts also may be utilized in the future for additional information, and the overall rate of contact indicates that if a better employee identification model could be utilized (such as getting a release from graduates to use their names in contacting employers), future surveys could yield even more impressive responses from the business community. In short, the combination of the Governor’s endorsement and invitation letter, multiple survey response methods, and survey reminder follow-up appears to be a sound model for future survey attempts.

As shown in Tables 1 and 2 below, the distribution of survey respondents was representative of the companies in the original mailing sample when compared by size and industry of company. The percentage of responses by company size is nearly identical to the makeup of the mailing file, with good representation from every group of businesses. Looking by industry group, several were poorly represented in the original mailing list (less than 1% of the surveys mailed), and two varied noticeably in their response rates: ‘Health Care and Social Assistance’ is somewhat over-represented in the responses, while ‘Accommodation and Food Services’ is somewhat under-represented.

TABLE 1
REPRESENTATION OF COMPANIES IN STUDY BY SIZE

Size of Company	1-9 Employees	10-49 Employees	50-99 Employees	100-499 Employees	500+ Employees	Missing Information
Surveys Mailed	22.6%	35.9%	13.9%	20.0%	7.0%	0.7%
Surveys Completed	18.6%	36.8%	15.5%	19.4%	9.3%	0.4%

TABLE 2
REPRESENTATION OF COMPANIES IN STUDY BY INDUSTRY

Industry Field	Surveys Mailed*	Surveys Completed*
Agriculture, Forestry, Fishing & Hunting	0.2%	0.3%
Utilities	0.2%	0.0%
Construction	3.1%	2.2%
Manufacturing	6.6%	6.8%
Wholesale Trade	3.5%	2.6%
Retail Trade	8.2%	8.2%
Transportation & Warehousing	0.6%	1.2%
Information	2.9%	3.3%
Finance & Insurance	4.8%	7.6%
Real Estate, Rental & Leasing	1.4%	0.7%
Professional, Scientific & Technical Services	11.6%	13.4%
Management	0.8%	0.0%
Administrative & Management Services	4.1%	3.2%
Educational Services	3.1%	3.2%
Health Care & Social Assistance	16.8%	24.1%
Arts, Entertainment & Recreation	3.0%	2.6%
Accommodation & Food Services	10.2%	3.9%
Other Services, Not Public Administration	4.1%	4.2%
Public Administration	3.6%	3.6%
*Missing Information	11.2%	9.2%

* Unduplicated by company name. Some companies received multiple surveys which may or may not have been completed by the same supervisor.

Overall Satisfaction Rate

To simplify an analysis of overall responses, a mean score for satisfaction with graduates' basic skills was calculated as the average of all the basic skills rating areas (Reading, Math, Written Communication, Computer Applications, Oral Communication Skills and Other), and a mean score for Professional Skills was calculated (Critical Thinking, Problem Solving, Creativity, Leadership/Team Building and Project Management). These two measures, along with satisfaction ratings for Personal Attributes and Job Skills were averaged to get an Overall Satisfaction rating for the graduates' skills.

TABLE 3
AVERAGE OF RESPONSES ON SKILL PREPARATION

	Basic Skills	Professional Skills	Personal Attributes	Job Skills	Overall Satisfaction with Skills
Mean*	3.49	3.32	3.58	3.43	3.45

* Missing or 'Can't Judge' responses were not included in calculation or means.

Based on the original response scale of 1-4 (1= very dissatisfied, 2= dissatisfied, 3= satisfied, 4= very satisfied) these means ratings fall between 'satisfied' and 'very satisfied' (Table 3). The lowest rated area was Professional Skills, which was still rated generally satisfactory. As cited in the Best Practices Analysis that prefigured this study, previous studies of workforce competencies have found primarily basic skills and personal attributes to be lacking in employees. This does not appear to be the case for Connecticut's Public Higher Education Graduates.

Looking at the response frequencies, among those who answered the questions, over 90 percent indicated that they were 'satisfied' or 'very satisfied' with 10 of the 11 skill areas evaluated, with the exception being Leadership/Team Building skills, where just under 89 percent were satisfied or very satisfied with graduates' skills. In fact, the total of 'dissatisfied' and 'very dissatisfied' responses was greatest on every area under Professional Skills as compared to all other skill areas rated. The next lowest rating on a skill was for Writing, under Basic Skills, with 6.4 percent of respondents saying they were 'dissatisfied' or 'very dissatisfied'. In all areas except Professional Skills, the category with the greatest response frequency was 'very satisfied' (Table 4).

This ranking of satisfaction with graduates' skills held true when evaluated by constituent unit as well, with Professional Skills having the lowest average rating for each unit (Table 5). A more detailed breakdown similar to Table 4 for each constituent unit can be found in Appendix D.

TABLE 4
RESPONSE FREQUENCIES ON SKILL PREPARATION

Skill Area	Skill Rated	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied	No Response or Can't Judge
Basic	Reading	11 1.7%	4 0.6%	240 36.1%	410 61.7%	31
	Math	9 1.6%	7 1.2%	223 38.7%	337 58.5%	120
	Writing	13 2.0%	29 4.4%	294 45.0%	318 48.6%	42
	Computer Applications	12 1.9%	12 1.9%	229 36.8%	369 59.3%	74
	Oral Communications	11 1.6%	21 3.1%	31 45.5%	340 49.8%	13
	Other	10 1.5%	24 3.6%	283 42.9%	342 51.9%	37
Professional	Critical Thinking	14 2.1%	36 5.5%	311 47.2%	298 45.2%	37
	Problem Solving	14 2.1%	42 6.3%	296 44.2%	318 47.5%	26
	Creativity	12 1.9%	33 5.3%	288 45.9%	294 46.9%	69
	Leadership/Team Building	15 2.6%	53 9.3%	295 51.8%	207 36.3%	126
	Project Management	9 1.7%	31 5.9%	286 54.2%	202 38.3%	168
Personal	Personal Attributes	15 2.3%	14 2.1%	201 30.5%	428 65.0%	38
Job Specific	Job Skills	8 1.3%	21 3.5%	277 45.9%	298 49.3%	92

Calculation of percentages excludes missing or 'Can't Judge' responses.

TABLE 5
AVERAGE OF RESPONSES ON SKILL PREPARATION
BY UNIT

	N*	Basic Skills	Professional Skills	Personal Attributes	Job Skills	Overall Satisfaction
Community Colleges	194	3.44	3.31	3.62	3.52	3.47
CT State Universities	271	3.48	3.28	3.53	3.40	3.42
University of CT	231	3.55	3.32	3.58	3.43	3.48

* Total Number of Respondents — not all responded on each question.

An analysis of variance indicated there was no significant difference in ratings based on unit, although there were several apparent trends. Employers rated Community College graduates higher than other units on Job Skills, possibly due to the fact that only graduates of occupational programs (programs which train for specific jobs) were included in the initial sample. Employers rated University of Connecticut graduates highest in Basic Skills; not surprising as UConn included the most graduate-level students in their data and is the most selective in their undergraduate admissions while the Community Colleges have no degree programs beyond the Associate Level. As noted above, Professional Skills was the lowest ranked area for all graduates, regardless of unit. Overall satisfaction ratings were fairly consistent across all the units.

Among all employers responding, 44 percent said that the employees in question were working in jobs closely related to their degree program (Table 6). A total of 25 percent said the jobs were somewhat related to the degree of the graduate employees, 24 percent said jobs were not related, and seven percent could not judge. Among all three groups, Professional Skills preparation was rated lowest on average, as it was for the overall sample.

TABLE 6
AVERAGE OF RESPONSES ON SKILL PREPARATION
BY RELATIONSHIP OF DEGREE TO JOB

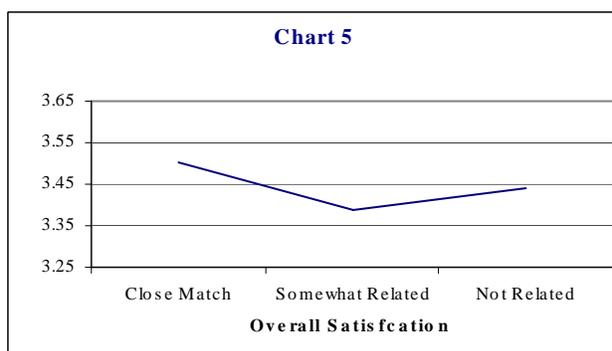
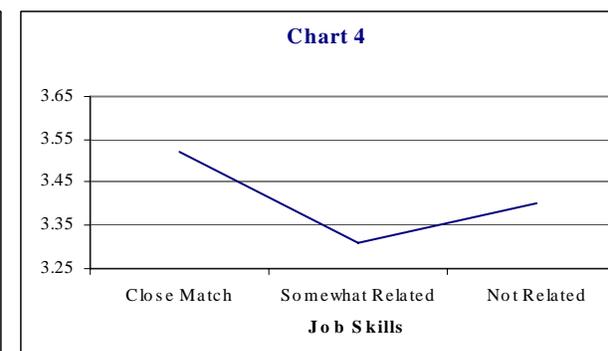
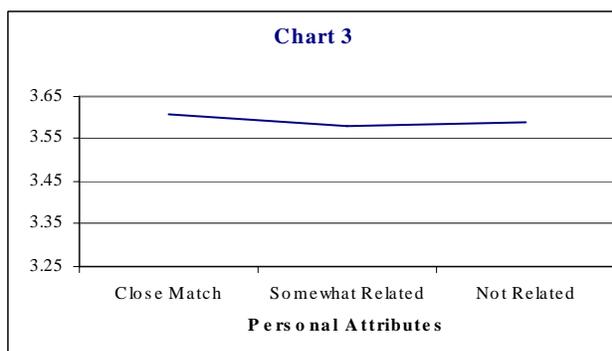
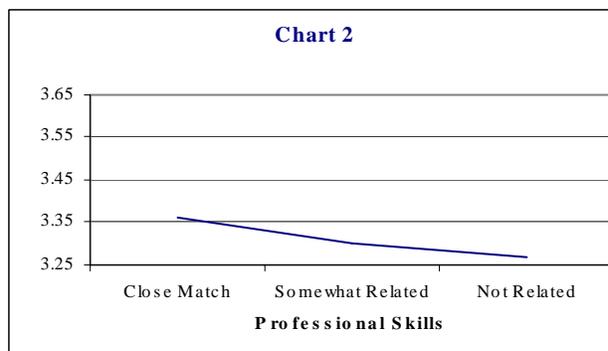
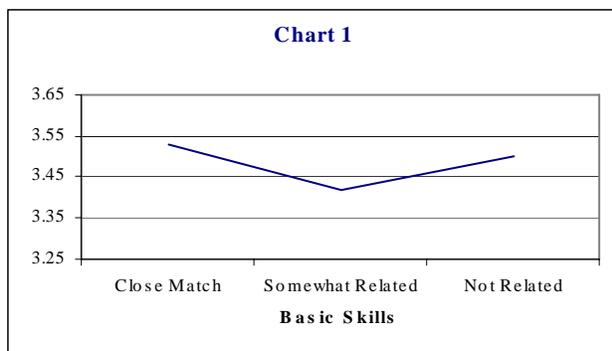
	N*	%	Basic Skills	Professional Skills	Personal Attributes	Job Skills	Overall Satisfaction
Closely Related	304	43.7%	3.53	3.36	3.61	3.52	3.50
Somewhat Related	176	25.3%	3.42	3.30	3.58	3.31	3.39
Not Related	149	21.4%	3.50	3.27	3.59	3.40	3.44
No Response or Unknown	67	9.6%					

* Total Number of Respondents — not all responded on each question.

A one-way analysis of variance was performed to determine if the relationship of the graduate's degree to their job affected how employers rated their skill preparation. Only Job Skills (Chart 4) showed significant differences among the three groups (significance = .002), although Overall Satisfaction also approached significance (significance = .06). This finding would

support the evaluation of the survey as a valid assessment tool, as it shows Jobs Skills ratings as correlated to the relationship of graduates' training to their jobs, while Basic, Professional and Personal Skills are common to all the jobs represented. As the charts below show, however, the skills of those in fields 'closely related' to their jobs were rated highest on average in every area, although the differences are not significant.

CHARTS 1-5
RELATIONSHIP OF DEGREE TO JOB
EFFECT ON MEAN OF SKILL PREPARATION RATINGS



There were graduates of 26 programs that had 10 or more employers respond (Table 7). Only these programs were used in the analysis of program differences. There were no significant differences between the means on the skills areas by program area. For 21 of the 26 programs, preparation in Professional Skills was again rated the lowest. In the remaining 5 programs,

Communications, Economics, History, Business and Business Management & Administration Services, Job Skills were lowest.

TABLE 7
AVERAGE OF RESPONSES ON SKILL PREPARATION
BY PROGRAM AREA

	N*	Basic Skills	Professional Skills	Personal Attributes	Job Skills	Overall Satisfaction
Liberal Arts & Sciences	24	3.63	3.14	3.83	3.67	3.64
Dental Assistant	19	3.58	3.48	3.76	3.72	3.63
Library Science	11	3.77	3.52	3.55	3.70	3.62
MIS	15	3.62	3.41	3.79	3.50	3.60
Criminal Justice & Correction	12	3.52	3.34	3.90	3.58	3.56
Social Work	27	3.54	3.47	3.70	3.58	3.55
Political Science	16	3.64	3.38	3.60	3.59	3.54
Sociology	26	3.64	3.38	3.60	3.59	3.54
Art	12	3.53	3.31	3.73	3.58	3.53
English Language & Literature	17	3.52	3.39	3.71	3.46	3.53
Business Administration & Management	28	3.48	3.44	3.64	3.50	3.52
Administrative Assistant/Secretarial	15	3.52	3.34	3.71	3.57	3.51
Economics	21	3.53	3.50	3.60	3.47	3.49
Industrial Production Technology	11	3.36	3.31	3.80	3.50	3.48
Business Marketing & Marketing Management	13	3.51	3.32	3.62	3.42	3.47
Child Care & Guidance Worker	25	3.44	3.39	3.58	3.48	3.47
Nursing	36	3.56	3.27	3.54	3.45	3.47
Individual & Family Development	18	3.60	3.26	3.63	3.29	3.46
Business Management & Administrative Services	19	3.48	3.29	3.53	3.27	3.41
Communications	29	3.51	3.41	3.41	3.32	3.41
Alcohol/Drug Counselor	14	3.21	3.20	3.50	3.42	3.31
Accounting	44	3.42	3.14	3.33	3.33	3.30
Business	18	3.39	3.30	3.17	3.13	3.28
History	12	3.30	3.03	3.55	3.00	3.27
Psychology	40	3.41	3.06	3.38	3.17	3.24
Law	11	3.19	3.02	3.36	3.27	3.21

* Total Number of Respondents — not all responded on each question.

FUTURE EMPLOYMENT NEEDS

Looking at the questions about what is important to companies when they are evaluating candidates for the positions referred to in this survey, the item most often marked ‘very important’ was ‘results of the interview process’. No other single factor was marked ‘very important’ by even 50 percent of the respondents. Except for the actual presence of a college degree, collegiate factors (Reputation of College, Courses, Grades or Faculty Recommendations) were far less important to hiring than were employment factors (Previous Work Experience and Employer Recommendations). And while Company Tests and Licensing Exams can be important for positions that require them, it appears that more than half of the positions do not use or do not need them.

TABLE 8
RESPONSE FREQUENCIES ON ITEMS OF IMPORTANCE TO FILLING POSITIONS
ALL RESPONDENTS

	Not Important	Somewhat Important	Important	Very Important	No Responses or Can't Judge
College Degree	103 15.2%	98 14.5%	177 26.1%	300 44.2%	18
Reputation of College	173 25.9%	189 28.3%	230 34.4%	76 11.4%	28
Courses	168 26.5%	152 24.0%	202 31.9%	112 17.7%	62
Grades	152 24.3%	132 21.1%	226 36.1%	116 18.5%	70
Recommendations of Faculty	189 31.0%	129 21.1%	182 29.8%	110 18.0%	86
Previous Work Experience	36 5.4%	109 16.2%	246 36.6%	281 41.8%	24
Recommendations of Employer	59 9.1%	90 14.0%	230 35.7%	266 41.2%	51
Company Tests	137 32.5%	40 9.5%	127 30.2%	117 27.8%	275
Licensing or Certification Exams	152 32.1%	57 12.0%	102 21.5%	163 34.4%	222
Interview	8 1.2%	6 0.9%	88 13.2%	564 84.7%	30

These findings are consistent with those found in the best practices analysis that led up to this pilot survey. The results of interviews, and the unquantifiable qualities they represent, were the most important hiring factor in several studies. Using certification rates for analyzing graduate success was deemed valid, but applied to only a limited number of programs. And, despite employers' continuing requests for colleges to do more to prepare graduates for the workplace, information that colleges could supply on graduates' preparedness, such as actual courses taken and grades earned, are ignored in favor of using the presence of a degree as a stand-in for more detailed information on an individual's level of preparation. This again puts the burden on the colleges to determine what workplace skills need to be upgraded in various programs. Besides degree completion and interview results, employers tend to prefer to rely on work experience and employer recommendations to gauge potential workforce success.

The next section of the survey focused on how well the state is doing in supplying businesses with applicants they need for positions that require post-secondary degrees (Table 9). This section was analyzed using only those 14 industries with 10 or more respondents to the survey.

TABLE 9
AVERAGE OF RESPONSES
INDUSTRIES WITH 10 OR MORE RESPONDENTS

Industry	Number of Applicants	Diversity of Applicants	Quality of Applicants
Construction	2.75	2.64	2.75
Manufacturing	2.95	3.00	3.00
Wholesale Trade	3.00	2.92	3.14
Retail Trade	2.79	2.95	2.88
Information	3.17	2.95	3.06
Finance & Insurance	3.05	3.00	3.02
Professional, Scientific & Tech Services	2.75	2.85	2.95
Admin & Waste Management Services	2.88	2.93	2.87
Educational Services	3.17	2.72	3.05
Health Care & Social Assistance	2.78	2.82	2.95
Arts, Entertainment & Recreation	2.40	2.43	2.60
Accommodation & Food Services	3.11	3.24	3.17
Other Services, Not Public Administration	2.71	2.61	2.96
Public Administration	3.00	2.76	2.91
Total	2.86	2.86	2.96

* Missing or 'Can't Judge' responses not included in calculation of means.

In Table 9, there is a good deal more variability in responses, and more dissatisfaction, than in responses on questions of skills. Again, with the original response scale of 1-4 (1= very dissatisfied, 2= dissatisfied, 3= satisfied, 4= very satisfied), these means ratings fall primarily in the 'dissatisfied' to 'satisfied' range. The differences between industry groups are significant for both 'Number of Applicants' (significance = .02) and 'Diversity of Applicants' (significance = .04).

Overall, the Accommodation and Food Services industry is most satisfied, while the Arts, Entertainment and Recreation industry is the least satisfied of those industries with 10 or more respondents.

TABLE 10
RESPONSE FREQUENCIES ON SATISFACTION WITH DIVERSITY OF APPLICANTS
INDUSTRIES WITH 10 OR MORE RESPONDENTS

Industry	Satisfaction with Number of Applicants			
	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied
Construction	0 0.0%	3 25.0%	9 75.0%	0 0.0%
Manufacturing	2 4.5%	9 20.5%	22 50.0%	11 25.0%
Wholesale Trade	0 0.0%	1 8.3%	10 83.3%	1 8.3%
Retail Trade	0 0.0%	11 28.2%	25 64.1%	3 7.7%
Information	0 0.0%	2 11.1%	11 61.1%	5 27.8%
Finance & Insurance	0 0.0%	7 16.7%	26 61.9%	9 21.4%
Professional, Scientific & Technical Services	4 5.3%	17 22.7%	48 64.0%	6 8.0%
Administrative & Waste Management Services	0 0.0%	4 25.0%	10 62.5%	2 12.5%
Educational Services	0 0.0%	3 16.7%	9 50.0%	6 33.3%
Health Care & Social Assistance	12 8.1%	26 17.6%	92 62.2%	18 12.2%
Arts, Entertainment & Recreation	2 13.3%	5 33.3%	8 53.3%	0 0.0%
Accommodation & Food Services	1 5.6%	1 5.6%	11 61.1%	5 27.8%
Other Services, Except Public Administration	2 8.3%	5 20.8%	15 62.5%	2 8.3%
Public Administration	1 4.3%	4 17.4%	12 52.2%	6 26.1%

Percentages exclude blank and 'Can't Judge' responses.

More than 1/3 of the respondents in the fields of Construction, Educational Services, Arts, Entertainment & Recreation, Other Services, and Public Administration were dissatisfied or

very dissatisfied with the Diversity of the applicants for the positions filled by these graduates (Table 10). In the Arts, Entertainment & Recreation field, almost half (46.6%) were not satisfied with the Number of Applicants available (Table 11).

TABLE 11
RESPONSE FREQUENCIES ON SATISFACTION WITH NUMBER OF APPLICANTS
INDUSTRIES WITH 10 OR MORE RESPONDENTS

Industry	Satisfaction with Diversity of Applicants			
	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied
Construction	0 0.0%	4 36.4%	7 63.6%	0 0.0%
Manufacturing	2 4.7%	5 11.6%	27 62.8%	9 20.9%
Wholesale Trade	0 0.0%	2 15.4%	10 76.9%	1 7.7%
Retail Trade	0 0.0%	5 13.2%	30 78.9%	3 7.9%
Information	0 0.0%	3 15.8%	14 73.7%	2 10.5%
Finance & Insurance	0 0.0%	7 17.1%	27 65.9%	7 17.1%
Professional, Scientific & Tech Services	4 5.4%	7 9.5%	59 79.7%	4 5.4%
Admin & Waste Management Services	0 0.0%	3 20.0%	10 66.7%	2 13.3%
Educational Services	1 5.6%	5 27.8%	10 55.6%	2 11.1%
Health Care & Social Assistance	9 6.2%	25 17.1%	96 65.8%	16 11.0%
Art, Entertainment & Recreation	1 7.1%	6 42.9%	7 50.0%	0 0.0%
Accommodation & Food Services	0 0.0%	1 5.9%	11 64.7%	5 29.4%
Other Services, Except Public Administration	2 8.7%	7 30.4%	12 52.2%	2 8.7%
Public Administration	2 9.5%	5 23.8%	10 47.6%	4 19.0%

Percentage exclude blank and 'Can't Judge' responses.

The final section of the survey had to do with future employment needs (Table 12). The vast majority of the business contacts (79.1%) indicate that the graduates evaluated in this survey had the skills necessary for promotion in the business. There was also nearly unanimous agreement that they would hire other graduates from the institution the current employees were from (94.3%). In this section of the survey, those checking ‘not applicable’ are included in the analysis, because it is an indication that the respondent has no need for a particular item in their future employment plans. Few businesses indicated a need for in-house training services from the state’s higher education institutions (70.6% not applicable) and one-third had not sought contact with institutions on issues of graduate preparation or program content (32.6% not applicable). However, on the same question of contact, more than half (55%) said ‘no,’ they had not had formal contact with the institutions about graduate preparation or program content, and about 31 percent of those indicated that they would like to be involved in such planning.

Interestingly, although 94 percent said they would hire graduates from the same institution in the future, only 51.8 percent said they had hired graduates from the institution from other program areas in the past. It is possible that, having brought their attention to the origins and competencies of their graduate employees with this survey, they would be more likely to hire again in the future. There also was a majority of respondents (54.5%) who indicated that they would like to set up internship programs with the institution in question.

TABLE 12
FREQUENCY RESPONSES TO QUESTIONS ON FUTURE EMPLOYMENT NEEDS
ALL RESPONDENTS

	No	Yes	Not Applicable
Skills for Promotion	8.2%	79.1%	12.7%
Hire More from Institution	0.7%	94.3%	4.9%
Institution Responsive In-House	7.6%	21.8%	70.6%
Contact with Institution	55.1%	12.3%	32.6%
Hired Graduates in Other Areas	33.8%	51.8%	14.5%
Internship with Institution	26.4%	54.5%	19.1%

Percentages do not include missing responses.

Attachment E contains response frequencies for all questions.

CONCLUSIONS

At the conclusion of the report on Best Practices in Documenting Workforce Success, five recommendations were made to further the development of a comprehensive model of workforce success. Among those suggestions was the development of an automated employment/education tracking system at the state level, and the creation and validation of a survey of employer satisfaction that would be more specific in its focus than had been

previously available. This pilot study was undertaken to address those suggestions.

The results of the pilot survey have yielded good news for Connecticut public colleges in terms of overall satisfaction. While studies done in other states have found basic skills lacking, this does not appear to be true of Connecticut's public higher education graduates.

The vast majority of respondents indicated that the graduates evaluated had the requisite skills for promotion. In addition, almost 95 percent indicated that they would hire other graduates from that institution. The survey has illuminated some areas for improvement, as well. In particular, higher order "Professional Skills" need to be enhanced in program curriculums. These skills are difficult to assess with any kind of standardized test, but do improve with experience. This factor is consistent with the finding that work experience and recommendations are important to employers in the hiring process and with many of the comments on the utility of internships. Incentives and other conduits for increasing students' work experiences should be nurtured and expanded at the state level.

While job skills taught in occupational and other programs appears to be very well matched to job requirements, colleges need to focus on increasing the number and diversity of graduates, particularly in critical workforce shortage areas. In addition, the low incidence of company contact with our institutions is somewhat troubling and strategies to address this should be examined. Both of these issues are areas that could be addressed at the state level.

In addition, the response rate of 17 percent to the survey itself, along with the additional contacts made by the non-responders, indicates that this kind of information gathering can serve as a valuable link between the higher education and business communities.

The deployment of the survey has highlighted both the need for and the difficulties in automating a data system that will allow the tracking of graduates into the workforce. The design of the survey provided the opportunity to examine Basic, Professional, Personal and Job Skills separately and did elicit more useful information for program improvement than has been found in previous studies. However, not being able to identify the actual graduate by name or other identifier was a significant barrier for many employers who would have liked to respond. In the future, the state should consider obtaining waivers from graduates, as is done in other states.

In addition, inconsistent data, incompatibility of field definitions, and lack of automated file transfer made the information cumbersome to use. Several weeks were required to extract, error check, data enter, merge, and reconcile the employment, graduate, and business contact information prior to being able to create a workable mailing list for the survey. One conclusion of this pilot is that a significant effort must be made to clean up available data files and provide automated links between them.

In all, an investment in improving tracking systems would be worthwhile, given the importance of workforce development to Connecticut's economic future.

END NOTES

1. See Connecticut General Statutes Section 10a-6a-6b.
2. Copies of the annual accountability reports entitled *Higher Education Counts* can be found on the Department of Higher Education's website at www.ctdhe.org.
3. This study can be viewed on the Department's website at www.ctdhe.org/info/Reports2004.htm.
4. In cases where a graduate had more than one degree, an initial attempt was made to determine which degree was more relevant to the job skills being assessed. This was made difficult by the fact that the employment data base did not include information on the employee's job, only the major business field of the company (NAIC). In a few cases graduates were assigned to one CIP category based on this assessment. In the remaining cases, where no determination of relevancy could be made, graduates were assigned to one CIP category based first on which was the more specialized degree code and second on having as many CIP categories with 10 or more graduates to survey as possible. If neither degree appeared more specialized, nor either CIP group would be excluded due to having fewer than 10 graduates, graduates were randomly assigned to one of their degree areas for survey purposes.



STATE OF CONNECTICUT

Department of Higher Education

May 24, 2005

Dear Human Resources Director:

On May 16, 2005, Governor M. Jodi Rell sent your company a letter asking you to participate in a pilot study of business satisfaction with college graduates from Connecticut's public higher education institutions. A copy of that letter is enclosed for your information.

Through a joint data sharing arrangement, we have been able to identify the number of **2003** public college graduates from particular degree programs who are or were recently employed by your company. The number of graduates, institution and degree program are listed on the attached survey. Based on these program graduates, you are asked to complete a brief, **confidential** satisfaction survey or forward the survey to the appropriate manager who could answer the questions. Because of confidentiality rules, we are not able to provide you with the names of the graduates, so it may be helpful for you to ask your employees if they graduated from a Connecticut public college in 2003 and, if so, from what degree program before completing the survey. Please keep in mind that we are not trying to evaluate the individual(s), but rather the preparation and training the individuals come in with.

The information collected in the survey will be used to perform aggregate data analysis on how well our colleges and universities are meeting business needs and to improve program content and outcomes.

All responses will be strictly confidential and no individual employee or company information or responses will be published or distributed. For your convenience, the survey is available in several formats for completion by June 17, 2005. The enclosed hard copy survey can be completed and mailed in the self-addressed, stamped envelope or faxed to 860-947-1310, or you may complete the survey on the following website:

<http://empsurvey.ctdhe.org>.

I am extremely excited about the information we will glean from this pilot study to better meet your needs. However, this can only be accomplished through your willingness to participate. Thank you in advance for your help and cooperation.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Valerie F. Lewis", written over a red vertical line.

Valerie F. Lewis
Commissioner

Enclosures
VFL:lml



State of Connecticut Employer Survey Spring 2005

The State of Connecticut is in the process of assessing how well our public higher education graduates are meeting the needs of Connecticut's employers. Your assistance in completing this survey will help us create and maintain programs that are of the highest quality. We would appreciate your taking the time to answer the following questions as accurately as possible or to forward the survey to someone in your organization who can complete it by June 17, 2005.

If you have any questions, please call Lynne Little at (860)947-1848. When you have completed the survey, please return it in the enclosed stamped, addressed envelope or fax to (860)947-1310.

Responses are strictly confidential. The information collected in the survey will be used to perform aggregate data analysis on how well Connecticut's public colleges are preparing graduates for the workforce. No individual information or responses will be published or distributed. From our information, we know that one or more of your current (or recent) employees graduated in **2003** from one of our colleges. Provided below is the name of the college and the program, along with the number of your employees that graduated with this credential. This information is intended to assist you with responding to the questions in the survey about how satisfied you are with the preparation of graduates from this institution. Please keep in mind that we are not trying to evaluate the individual(s), but rather the preparation and training the individual(s) come in with.

Institution	Degree Program	Number of Employees
-------------	----------------	---------------------

In case we have any follow-up questions, please fill in the following information. This will not be included in our final data.

Name of person completing survey: _____

Title of person completing survey: _____

Phone number: _____

Email address: _____

Mailing address: _____

Survey ID:

1. To the best of your knowledge, was the degree program listed above related to the job for which the employee(s) were hired?

- In most cases, education closely matches job requirements
- Education and job somewhat related
- No, employed in different field
- Unknown

2. In the areas listed below, please rate the employee(s) skills preparation for the position(s) you hired them for.

	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied	Can't Judge
Basic Skills					
Reading	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Math	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Written Communication	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Common Computer Applications (and other technology)	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Oral Communication Skills	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Other (Listening, comprehension)	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Professional Skills					
Critical Thinking	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Problem Solving	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Creativity	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Leadership/Team Building	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Project Management	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Personal Attributes (Punctuality, Honesty, etc.)	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Job Skills (Based on knowledge specific to a position. Examples: Nurse – aseptic techniques; Programmer – coding; Early Childhood Educator – methods of child guidance)	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>

If you answered “Very Dissatisfied” or “Dissatisfied” for satisfaction with **Job Skills** above, please indicate which specific skill(s) you felt could be stronger prior to employment:

Survey ID:

3. In filling this position(s), how important were the following for the candidates:

	Not Important	Somewhat Important	Important	Very Important	Unknown
College degree (2 or 4 year)	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Reputation of the college	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Courses listed on college transcript	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Grades listed on college transcript	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Recommendations from faculty	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Previous work experience	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Recommendations from previous employer	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Results of tests administered by your company	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Results of Licensing or certification exams	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Candidate's attitude/presentation at interview	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>

4. In filling positions like these how satisfied are you with:

	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied	Can't Judge
Number of applicants who applied for the position	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Diversity of applicants who applied for the position	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>
Quality of applicants (based on the criteria you selected above)	<input type="checkbox"/>	-	<input checked="" type="radio"/>	-	<input type="radio"/>

5. In thinking about future employment needs:

	Yes	No	N/A
Do these graduates/employees have the skills/credentials for promotion in your business?	<input type="checkbox"/>	-	<input checked="" type="radio"/>
Would you hire more graduates from this institution?	<input type="checkbox"/>	-	<input checked="" type="radio"/>
Has this institution been responsive to your in-house training needs?	<input type="checkbox"/>	-	<input checked="" type="radio"/>
Have you had any formal contact with this institution to discuss graduate preparation and/or program content?	<input type="checkbox"/>	-	<input checked="" type="radio"/>
If not, would you like an opportunity to do so?	<input type="checkbox"/>	-	<input checked="" type="radio"/>
Have you hired graduates from this institution in other program areas in the past?	<input type="checkbox"/>	-	<input checked="" type="radio"/>
Would you be interested in internship programs with this institution (having students get employment experience with your business prior to graduation)?	<input type="checkbox"/>	-	<input checked="" type="radio"/>

6. Comments: _____

If you would like a copy of the final results, please check here.

Thank you for your assistance in this survey.

Survey ID:

STATE OF CONNECTICUT
EXECUTIVE CHAMBERSM. JODI RELL
GOVERNOR

April 22, 2005

Dear Connecticut Business Owner/Employer:

Developing Connecticut's next generation of skilled talent is a top priority of my Administration and is essential to the economic vitality of the state. To that end, it is critically important that Connecticut's colleges and universities are responsive to the needs of business and industry to the fullest extent possible and are producing graduates with the skills necessary to drive our economy forward. In order for this to happen, however, I need your help.

I have asked my agencies to undertake a pilot study of business satisfaction with college graduates from the University of Connecticut, Connecticut State University and the Community Colleges. Through a joint data sharing arrangement, we are now able to match our graduates with Connecticut employment records. Soon your company will receive a letter which includes a survey about graduates from particular programs who are or were recently employed by your company. You will be asked to complete a brief, confidential satisfaction survey about the graduates of these programs or to forward the survey to someone in your company who could answer the questions. The results of the pilot study will be used to:

1. tell us how well our colleges and universities are meeting business needs;
2. identify strengths and weaknesses in the quality and skills of graduates of our programs; and
3. improve program content and outcomes by developing a more formal feedback mechanism.

I am extremely excited about this opportunity to better serve your needs. This can only happen, however, with your willingness to participate. For your information, this project is being funded through a grant from the U.S. Department of Education. If you would like to learn more about the project, please contact:

Valerie Lewis, Commissioner
Department of Higher Education
61 Woodland Street
Hartford, CT 06105
860-947-1801
vlewis@ctdhe.org

Thank you in advance for your help and cooperation.

Sincerely yours,

Handwritten signature of M. Jodi Rell.

M. Jodi Rell
Governor

STATE CAPITOL, HARTFORD, CONNECTICUT 06106
TEL: (860) 566-4840, FAX: (860) 524-7396
www.ct.gov/governor



STATE OF CONNECTICUT
Department of Higher Education

June 27, 2005

«Company»

«Line1»

«Line2»

«Line3»

ATTN: Chief Executive Officer

Dear Chief Executive Officer:

RE: SURVEY COMPLETION REMINDER

It's not too late to respond to our pilot study of business satisfaction! You may remember that on May 16, 2005, Governor M. Jodi Rell sent your company a letter asking you to participate in a pilot study of business satisfaction with college graduates from Connecticut's public higher education institutions. The actual survey(s) was mailed to your attention on May 24, 2005.

We really need your response to get a better understanding of your future business needs and to improve our college programs. We also need to know how to change this survey in the future to ensure even better response rates. Please remember that we are not asking you to evaluate the individual(s), but rather how well our colleges prepare and train them. If you didn't respond to the survey because you couldn't identify the individuals please consider asking your employees (perhaps by e-mail) if they graduated from a Connecticut public college in 2003. That way, you could route the survey to the appropriate supervisor or division. If this is not possible, I would ask that you consider responding to Questions 2, 3, 4 and 5 based on your general knowledge of our colleges and indicate in the comment section (Question 6) that you were unable to identify the individuals. Also, please use the comment section to tell us about how well you think our colleges are doing and where we could do better to meet your needs. These general knowledge responses will be analyzed separately in the study. Any information you can provide us would be greatly appreciated.

You can mail or fax your response(s) to 860-947-1310. You also may complete the survey(s) on the following website: <http://empsurvey.ctdhe.org> using the survey login ID(s) («Login»). Each ID is a unique survey. If you have questions, please call Lynne Little at 860-947-1848. We would appreciate a response by **July 6th**.

The information collected in these surveys will be used to perform aggregate data analysis on how well our colleges and universities are meeting business needs and to improve program content and outcomes.

Thank you in advance for your time and consideration of this important study.

Sincerely yours,

Valerie F. Lewis
Commissioner

**UNIVERSITY OF CONNECTICUT
RESPONSE FREQUENCIES ON SKILL PREPARATION**

Skill Area	Skill Rated	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied
Basic	Reading	3 1.3%	1 0.4%	72 32.0%	149 66.2%
	Math	2 1.0%	4 2.1%	68 35.4%	118 61.5%
	Writing	5 2.2%	7 3.1%	92 41.1%	120 53.6%
	Computer Applications	3 1.4%	3 1.4%	69 32.4%	138 64.8%
	Oral Communications	3 1.3%	7 3.1%	96 42.3%	121 53.3%
	Other	3 1.4%	4 1.8%	86 39.3%	126 57.5%
Professional	Critical Thinking	3 1.4%	8 3.7%	99 45.4%	108 49.5%
	Problem Solving	3 1.4%	11 5.0%	92 41.6%	115 52.0%
	Creativity	2 1.0%	8 3.8%	96 45.7%	104 49.5%
	Leadership/Team Building	5 2.6%	14 7.3%	105 54.7%	68 35.4%
	Project Management	2 1.1%	7 3.8%	108 58.7%	67 36.4%
Personal	Personal Attributes	6 2.8%	3 1.4%	58 27.0%	148 68.8%
Job Specific	Job Skills	4 2.0%	7 3.6%	93 47.2%	93 47.2%

Calculation of percentages excludes missing or 'Can't Judge' responses.

**CONNECTICUT STATE UNIVERSITY
RESPONSE FREQUENCIES ON SKILL PREPARATION**

Skill Area	Skill Rated	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied
Basic	Reading	4 1.6%	2 0.8%	95 37.0%	156 60.7%
	Math	4 1.8%	2 0.9%	89 39.9%	128 57.4%
	Writing	4 1.6%	13 5.2%	111 44.2%	123 49.0%
	Computer Applications	4 1.6%	4 1.6%	93 38.1%	143 58.6%
	Oral Communications	4 1.5%	5 1.9%	128 48.1%	129 48.5%
	Other	4 1.6%	12 4.7%	117 45.7%	123 48.0%
Professional	Critical Thinking	5 1.9%	17 6.5%	133 50.8%	107 40.8%
	Problem Solving	5 1.9%	21 8.0%	121 46.0%	116 44.1%
	Creativity	5 2.0%	16 6.4%	117 46.6%	113 45.0%
	Leadership/Team Building	7 3.2%	25 11.3%	117 52.7%	73 32.9%
	Project Management	5 2.4%	17 8.2%	108 52.2%	77 37.2%
Personal	Personal Attributes	6 2.3%	7 2.7%	91 35.0%	156 60.0%
Job Specific	Job Skills	3 1.3%	8 3.4%	118 49.8%	108 45.6%

Calculation of percentages excludes missing or 'Can't Judge' responses.

**COMMUNITY COLLEGES
RESPONSE FREQUENCIES ON SKILL PREPARATION**

Skill Area	Skill Rated	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied
Basic	Reading	4 2.2%	1 0.5%	73 39.9%	105 57.4%
	Math	3 1.9%	1 0.6%	66 41.0%	91 56.5%
	Writing	4 2.2%	9 5.0%	91 50.8%	75 41.9%
	Computer Applications	5 3.0%	5 3.0%	67 40.6%	88 53.3%
	Oral Communications	4 2.1%	9 4.7%	87 45.8%	90 47.4%
	Other	3 1.6%	8 4.3%	80 43.5%	93 50.5%
Professional	Critical Thinking	6 3.4%	11 6.1%	79 44.1%	83 46.4%
	Problem Solving	6 3.2%	10 5.4%	83 44.6%	87 46.8%
	Creativity	5 3.0%	9 5.4%	75 45.2%	77 46.4%
	Leadership/Team Building	3 1.9%	14 9.0%	73 46.8%	66 42.3%
	Project Management	2 1.5%	7 5.1%	70 51.1%	58 42.3%
Personal	Personal Attributes	3 1.6%	4 2.2%	52 28.4%	124 67.8%
Job Specific	Job Skills	1 0.6%	6 3.5%	66 38.8%	97 57.1%

Calculation of percentages excludes missing or 'Can't Judge' responses.

RESPONSE FREQUENCIES – ALL QUESTIONS**TOTAL N = 696****1. To the best of your knowledge, was the degree program listed above related to the job for which the employee(s) were hired?**

304 In most cases, education closely matches job requirements

176 Education and job somewhat related

149 No, employed in different field

14 Unknown

Left blank = 53

2. In the areas listed below, please rate the employee(s) skills preparation for the position(s) you hired them for.

Basic Skills	blank	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied	Can't Judge
Reading	5	11	4	240	410	26
Math	8	9	7	223	337	112
Written Communication	8	13	29	294	318	34
Common Computer Applications (and other Technology)	8	12	12	229	369	66
Oral Communication Skills	5	11	21	311	340	8
Other (Listening, comprehension)	21	10	24	283	342	16
Professional Skills						
Critical Thinking	3	14	36	311	298	34
Problem Solving	5	14	42	296	318	21
Creativity	8	12	33	288	294	61
Leadership/Team Building	16	15	53	295	207	110
Project Management	18	9	31	286	202	150
Personal Attributes (Punctuality, Honesty, etc)	18	15	14	201	428	20
Job Skills (Based on knowledge specific to a position. Examples: Nurse – aseptic techniques; Programmer – coding; Early Childhood Educator – methods of child guidance)						
	24	8	21	277	298	68

If you answered “Very Dissatisfied” or “Dissatisfied” for satisfaction with **Job Skills** above, please indicate which specific skill(s) you felt could be stronger prior to employment:

3. In filling this position(s), how important were the following for the candidates:

	blank	Not Important	Somewhat Important	Important	Very Important	Unknown
College degree (2 or 4 year)	5	103	98	177	300	13
Reputation of the college	7	173	189	230	76	21
Courses listed on college transcript	7	168	152	202	112	55
Grades listed on college transcript	8	152	132	226	116	62
Recommendations from faculty	8	189	129	182	110	78
Previous work experience	6	36	109	246	281	18
Recommendations from previous employer	9	59	90	230	266	42
Results of tests administered by your company	36	137	40	127	117	239
Results of Licensing or certification exams	29	152	57	102	163	193
Candidate's attitude/presentation at interview	9	8	6	88	564	21

4. In filling positions like these how satisfied are you with:

	blank	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied	Can't Judge
Number of applicants who applied for the position	13	25	109	356	76	115
Diversity of applicants who applied for the position	14	23	99	371	63	126
Quality of applicants (based on the criteria you selected above)	15	11	87	400	86	97

5. In thinking about future employment needs:

	blank	Yes	No	N/A
Do these graduates/employees have the skills/credentials for promotion in your business?	11	56	87	542
Would you hire more graduates from this institution?	7	5	34	650
Has this institution been responsive to your in-house training needs?	9	52	485	150
Have you had any formal contact with this institution to discuss graduate preparation and/or program content?	14	376	222	84
If not, would you like an opportunity to do so?	131	241	163	161
Have you hired graduates from this institution in other program areas in the past?	12	231	99	354
Would you be interested in internship programs with this institution (having students get employment experience with your business prior to graduation)?	17	179	130	370

If you would like a copy of the final results, please check here. **278**