On October 14, 1993, the North Carolina State Board of Community Colleges adopted a new mission and goals statement reemphasizing workforce preparedness and literacy. This renewed focus has made it more important that measures of successful workplace training be developed. Two measures of workforce outcomes are employment rates and median salary of program completers. Employment data for a cohort of 15,817 1990-91 program completers revealed that 92% of the students in the cohort were employed during the third quarter of 1991 and their median earnings, adjusted for inflation, were $3,830. One year later, 97% of the program completers were employed in the third quarter of 1992. These former students had median earnings of $4,279. Employment figures by program type indicate that technical graduates have consistently had the highest employment rate (97% in 1992), followed by vocational graduates (96%), general education graduates (96%), and college transfer graduates (95%). (KP)
Employment of Community College Completers. Research Brief

Bob Vanderheyden

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EMPLOYMENT OF COMMUNITY COLLEGE COMPLETERS

On October 14, 1993, the North Carolina State Board of Community Colleges adopted a new mission and goals statement reemphasizing community college efforts on workforce preparedness and literacy in support of a “Sterling Silver” workforce for the state of North Carolina. While workforce preparedness and literacy have always been an inherent part of the mission of community colleges in North Carolina, the new system mission statement emphasizes these aspects of the mission.

This renewed focus has made it more important that measures for workforce outcomes be developed. Two measures of successful workforce training are employment rates and median salary of program completers.

As the result of many years of work by the North Carolina State Occupational Information Coordinating Committee, new data regarding employment of current and former North Carolina community college students are now available for analysis. These data collection efforts parallel similar efforts in the state of Florida. The data are derived from matching student identifiers with the North Carolina Unemployment Insurance (UI) file maintained by the North Carolina Employment Security Commission (ESC).

The data available include eight quarters of earnings, ESC information such as filing and registration dates and employer names and addresses. In addition, cross matches can be made with other federal and state governmental agencies participating in the project, including North Carolina Division of Employment and Training, Department of Public Instruction, Department of Labor, Department of Social Services, and Vocational Rehabilitation Services and the United States Department of Defense.

What follows is a preliminary attempt to gain insight into the employment and income patterns of completers of North Carolina community college programs.

Methodology:

The data used for this brief come from the collaborative efforts mentioned above. The students in the cohort studied completed their program during the 1990-91 academic year. The specific data elements used are:

1. Quarterly earnings for the most recent eight quarters\(^1\) that were available in mid-March of 1993.
2. Dates of the students’ most recent contacts with the Employment Security Commission.

The reasons for these contacts are as follows:

a. Registered for job placement services,
b. Filed for unemployment benefits, or
c. Received an unemployment check.

\( ^1 \) The fourth quarter of 1990 through the third quarter of 1992.
For the purposes of this paper, measures for each quarter are calculated independently of the other seven quarters. This methodology parallels traditional calculations of employment measures.

Traditionally, (un)employment rates are derived through a special survey conducted by the U. S. Department of Labor or its equivalent at the state level (i.e., North Carolina Labor Market Information Division of the ESC). Such surveys have a high cost. Therefore, surveying to establish the same measure for community college completers is not cost effective. However, using the newly achieved matching capability, a parallel employment ratio can be calculated from the data available.

Due to the nature of the data collected, people who were self-employed, employed as an unpaid worker in a family owned business, or employed by the railroad are not included in the analysis. The data on these people are not available since Unemployment Insurance is not paid on earnings for these people. Also excluded are persons who were unemployed and seeking employment, but who did not file for assistance or benefits through the North Carolina ESC.

In this analysis, a person is designated as employed in a quarter if an individual had earnings reflected in the UI reports during that quarter, or was positively matched with Department of Defense personnel files. The person is designated as not employed (in the quarter), but is part of the population in the analysis, if:

1. that person had no earnings for the single quarter in question, and
2. that person contacted the ESC for services in the previous quarter or later and the person was not positively matched with the Department of Defense files.

This methodology will occasionally designate an individual as not employed for the quarter when, in fact, the individual was not seeking employment during the quarter. This increases the proportion of persons who are not employed. This results in an employment ratio which is a conservative estimate of the actual employment ratio.

Results:

The 1990-91 academic year ended in May of 1991. Therefore, employment status was determined for the fiscal quarters occurring after May of 1991. Of the 15,817 program completers during the 1990-91 academic year, employment status could be determined for over 12,000 completers per quarter. For any given quarter, this represents between 77 and 81 percent of all completers.

The database does not indicate whether employment is part or full time. It is likely that many students found in the files work part-time prior to completion and become full-time only after completion. From student records, it can be established that sixty-eight percent of all 1990-91 curriculum students worked while enrolled in their program. Over a third (37 percent) of these students worked part-time. Consequently, a significant migration from part-time to full-time employment should have occurred from the fiscal quarters falling in the 1990-91 academic year to the like quarters of the following year.

As would be expected, the differences in median income between each of the three quarters of the 1990-91 academic year and the corresponding quarters of the following year are relatively large (see Table 2). The ESC only keeps the most recent eight quarters of earnings data. Therefore, earnings prior to training (for the 1990-91 completers) are not available to compare with post training earnings. Pre-enrollment earnings will be discussed in another paper.

\[2\] Which are the fourth quarter of 1990, and the first and second quarters of 1991.
The third quarter of 1991 (July 1 through Sept. 30, 1991) is the first fiscal quarter in which all of the students in the cohort had completed their programs, though some students completed in each quarter of the academic year. Ninety-two percent of the students in the cohort were employed during the third quarter of 1991 and their median earnings, adjusted for inflation, were $3,830.

One year later, 97 percent of the program completers (for whom data are available) were employed in the third quarter of 1992 (see Table 1). These former students had median earnings of $4,279, which was a $449 increase over the adjusted third quarter earnings of the previous year.

The employment ratios are even more impressive when considering the labor market conditions during the national economic recession experienced during the years examined.

If the data collection project continues to be funded, future data collection activities will include an annual survey of employers to determine whether or not program completers are employed in an occupation relevant to their training and to document employer satisfaction.

### TABLE 1

**PROPORTION OF 1990-91 COMPLETERS EMPLOYED BY PROGRAM TYPE AND YEAR-QUARTER OF EMPLOYMENT**

<table>
<thead>
<tr>
<th>Year-Quarter</th>
<th>College Transfer</th>
<th>General Education</th>
<th>Technical</th>
<th>Vocational</th>
<th>Total Completers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
<td>#</td>
</tr>
<tr>
<td>91-3rd</td>
<td>951</td>
<td>91</td>
<td>162</td>
<td>93</td>
<td>7,684</td>
</tr>
<tr>
<td>91-4th</td>
<td>824</td>
<td>88</td>
<td>150</td>
<td>91</td>
<td>7,725</td>
</tr>
<tr>
<td>92-1st</td>
<td>806</td>
<td>89</td>
<td>144</td>
<td>90</td>
<td>7,547</td>
</tr>
<tr>
<td>92-2nd</td>
<td>885</td>
<td>89</td>
<td>157</td>
<td>91</td>
<td>7,721</td>
</tr>
<tr>
<td>92-3rd</td>
<td>881</td>
<td>95</td>
<td>152</td>
<td>96</td>
<td>7,585</td>
</tr>
</tbody>
</table>

3 A three percent annual rate of inflation was used as the adjustment when comparing earnings between years.
# TABLE 2

**MEDIAN QUARTERLY EARNINGS OF 1990-91 COMPLETERS BY YEAR-QUARTER (in dollars)**

<table>
<thead>
<tr>
<th>Year-Quarter(^4)</th>
<th>Number of Completers</th>
<th>Median Earnings</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990- Fourth</td>
<td>9,759</td>
<td>$2,820</td>
<td></td>
</tr>
<tr>
<td>1991- Fourth</td>
<td>11,901</td>
<td>$4,026</td>
<td>$1,206</td>
</tr>
<tr>
<td>1991- First</td>
<td>9,596</td>
<td>$2,932</td>
<td></td>
</tr>
<tr>
<td>1992- First</td>
<td>11,631</td>
<td>$3,979</td>
<td>$1,047</td>
</tr>
<tr>
<td>1991- Second</td>
<td>10,459</td>
<td>$3,053</td>
<td></td>
</tr>
<tr>
<td>1992- Second</td>
<td>11,976</td>
<td>$4,079</td>
<td>$1,026</td>
</tr>
<tr>
<td>1991- Third</td>
<td>10,765</td>
<td>$3,830</td>
<td></td>
</tr>
<tr>
<td>1992- Third</td>
<td>11,808</td>
<td>$4,279</td>
<td>$449</td>
</tr>
</tbody>
</table>

\(^4\) An annual inflation rate of three percent was used to adjust earnings in the first year.

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