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## ABSTRACT

A study investigated the demographic characteristics and the educational and employment outcomes of 1,200 injured workers who exited from college between 1993-1996 after attending for vocational preparation. The study also evaluates the appropriateness of using the State Board for Community and Technical College's (SBCTC) Data Linking for Outcomes Assessment system (DLOA) to describe the subset of students. Findings indicate that: (1) during the three years under study, 3,047 injured worker students enrolled in community and technical colleges; (2) as of spring 1996, 1,200 of the 3,047 injured workers (39%) had exited from college after attending for vocational preparation in a certificate or degree program, while the other 1,847 were still enrolled, or exited other programs; (3) the typical exiting vocational student was male (78%), about 40 years old, and had never before attended college (67%); (4) one-quarter of all students under study were Department of Labor and Industries (L&I) clients; (5) 44% of exiting L&I students graduated, while 56% left after taking some college, but before graduating; (6) the overall employment rate for injured workers exiting college was 66%, six to nine months after leaving college; (7) the median hourly wage for L&I graduates was higher (\$10.82/hr) than for other graduates (\$10.65); and (8) the Data Linking for Outcomes System proved useful for identifying subset results. (AS)

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# Educational and Employment Outcomes for Injured Workers after Vocational Training, 1993-96

Washington State Board for Community and Technical Colleges

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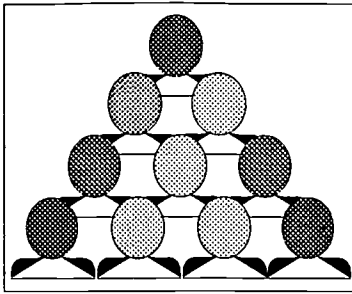
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## Research Report No. 98-6

Washington State Board for Community and Technical  
Colleges; Education Division

# EDUCATIONAL AND EMPLOYMENT OUTCOMES FOR INJURED WORKERS AFTER VOCATIONAL TRAINING, 1993-96

July 1998

## Background

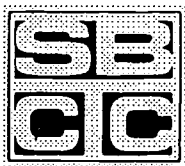
The purposes of this study are twofold:

- To learn about the educational and employment outcomes of a group injured worker students after leaving community and technical colleges between 1993-1996;
- To evaluate the appropriateness of using the State Board for Community and Technical College's (SBCTC) Data Linking for Outcomes Assessment Outcomes system (DLOA) to describe the subset of students.

The study describes the demographic characteristics and educational and employment outcomes for 1,200 injured workers who exited from college between 1993 and 1996 after attending for vocational preparation. All of the students were approved to start formal training by the Department of Labor and Industries (L&I). Injured workers with formal plans are often the most difficult cases for a successful return to work. A 1992 L&I survey for workers who completed a plan found that four to six months after completing a plan, less than half of the claimants were employed (46 percent). Their average wage recovery was a little more than two-thirds (69 percent) of pre-injury wages. DLOA results are compared to the 1992 survey findings and to results for college vocational preparatory students as a whole.

## Key Findings:

- Between 1993 and 1996, 3,047 injured worker students enrolled in community and technical colleges. They represented the majority of the injured workers (58 percent) approved to start a formal plan by Labor and Industries during that period. The other workers typically had plans for on-the-job training, job search, or self-employment.



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- As of spring 1996, 1,200 of the 3,047 injured workers (39 percent) had exited from college after attending for vocational preparation in a certificate or degree program. The other 1,847 were still enrolled in 96-97, or exited other programs.
- The typical exiting student who attended for vocational preparation was male (78 percent), older (just under 40 years median age) and had never before attended college (67 percent). Nearly a quarter (24 percent) of all students with disability exiting from vocational training were L&I clients in this study. Forty-seven (47) percent of injured workers in the study identified themselves as disabled at time of enrollment in college.
- Forty-four (44) percent of the exiting L&I students graduated. Eighty (80) percent of L&I graduates completed certificates and 20 percent degrees, a distinctly different pattern than students as a whole who graduated programs (51 percent degrees, 49 percent certificates).
- Fifty-six (56) percent of the students left after taking some college, but before graduating. The typical student leaving without a certificate or degree enrolled for 52 credits, slightly more than one year.
- The overall employment rate for injured workers exiting college was 66 percent six to nine months after leaving college. This was lower than the average vocational preparatory student employment rate. The percent of wages recovered was 71 percent.
- Employment rates were lower for both L&I graduates (76 percent) and leavers (58 percent) than for students typically (83 percent for graduates and 77 percent for leavers). This finding was the same when students with similar prior levels of education were compared.
- The median hourly wage for L&I graduates adjusted for 1997 dollars was higher (\$10.82/hr) than for graduates (\$10.65). The median wage for L&I students who left before earning a degree was \$10.06/hr compared to \$9.72 for all leavers.
- The Data Linking for Outcomes System (DLOA) proved useful for identifying subset results that were attainable by analyzing a three year exiting span of vocational preparatory students and comparing them to results for students as a whole who exited in this period. DLOA's flexibility was also evident for identifying pre-college median hourly wage for L&I students using their 11<sup>th</sup> quarter pre-college UI data as the quarter most likely to contain pre-injury wages.
- One limitation to using DLOA was for basic skills students attending for work-related reasons for whom there weren't sufficient exiting cohorts in the DLOA to construct a multi-year span. Finally, another limitation was for L&I students attending for skills upgrading. These students were not contained in the DLOA.

## Conclusion

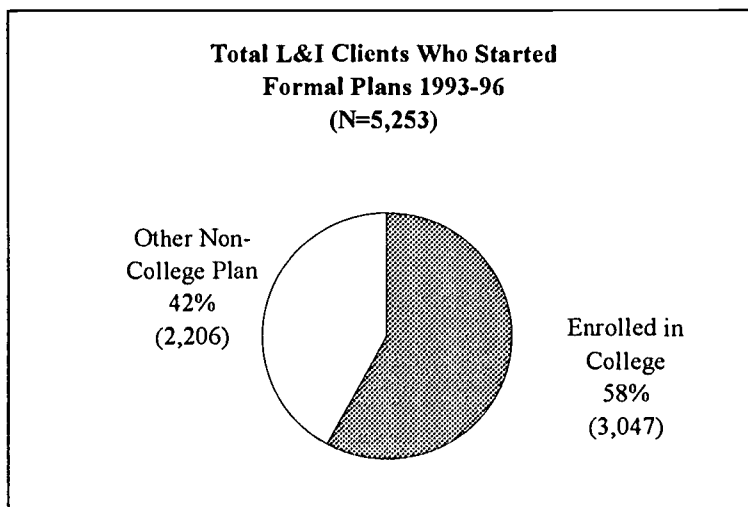
The overall finding of the study is that college training pays. Overall employment (66 percent) was lower than typical for college students completing or leaving vocational training, however, it was higher than the 1992 L&I study. Wage recovery was 71 percent for college vocational preparatory injured worker students, comparable to the 69 percent in the study. College particularly pays for L&I students who graduate. Graduates get higher wages and employment rates as is true for students in general.

Also there was a sizeable portion of disabled students in vocational programs suggesting important coordination in that regards. However, most did not report a disability and may not have gotten any special assistance from colleges.

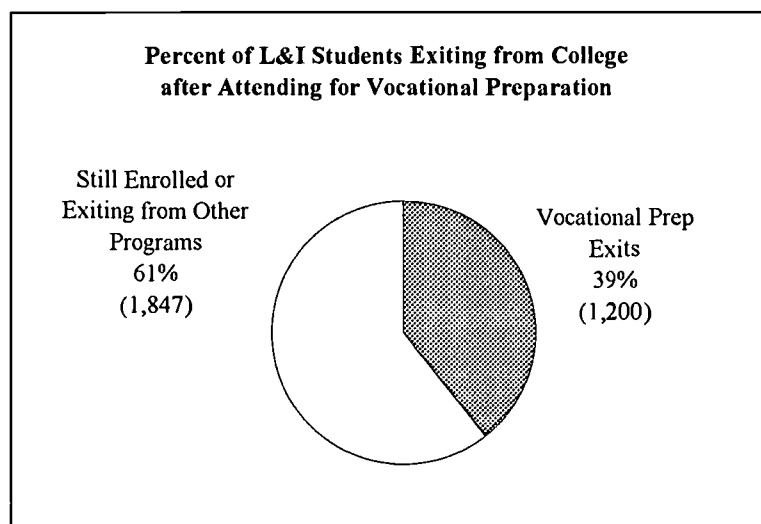
Finally, the DLOA proved useful and flexible for analyzing subset student results due to its multi-year spanning capabilities and data on pre-college earnings that can be applied to different subset populations depending upon when it is most reasonable in their employment histories.

## Analysis of Findings

**Percent of L&I Claimants With formal Plans Enrolled in Community and Technical Colleges:** Between 1993 and 1996, 3,047 injured worker students enrolled in community and technical colleges. They represented the majority of the injured workers (58 percent) approved to start a formal plan by Labor and Industries during the period. In addition to going to college, other plan strategies include on-the-job training and job placement services, or were self-employed.

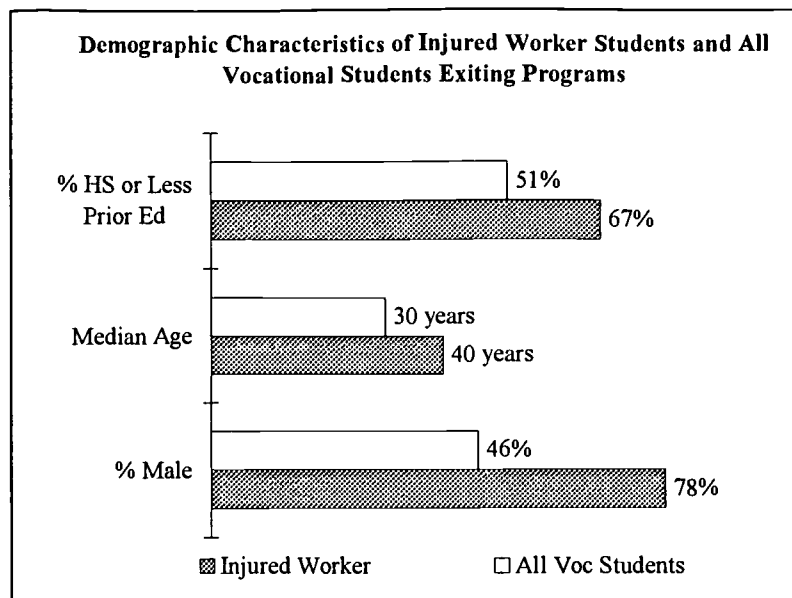


**Percent of L&I Students Exiting from Colleges after Attending for Vocational Preparation:** As of spring 1996, 1,200 of the 3,047 L&I students (39 percent) exited from college after attending for vocational preparation. A multi-year span of exiting vocational students was used to identify this group. The other 1,847 L&I college-going workers were still enrolled in colleges, or left college after shorter skills upgrading or basic skills related to work and were not identifiable in the DLOA for a multi-year span sufficient to provide an exiting cohort.

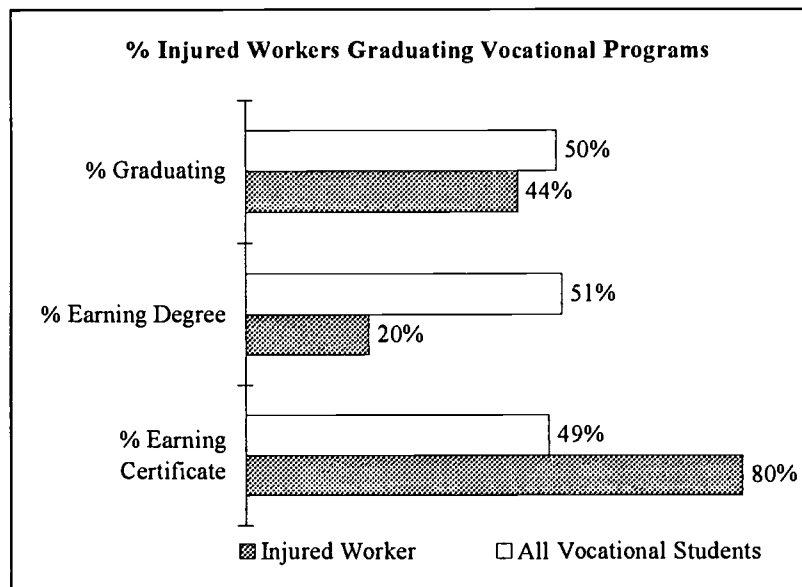


**Demographic Characteristics of Injured Worker Students:** The typical injured worker student in the study was male, older and attending college for the first time.

Forty-seven (47) percent of the injured worker students in the study identified themselves as disabled at time of enrollment and they comprised nearly a quarter of all students with disability exiting from vocational training were injured worker students in the study.



**Percent of Injured Worker Students Graduating:** Injured worker students were less likely than vocational students as a whole to graduate (44 percent compared to 50 percent). Of those graduating, they were also more likely to earn a certificate (80 percent) than a degree (earned by 51 percent of vocational graduates as a whole). The typical injured worker student leaving without a degree or certificate enrolled for 52 credits, slightly more than one year.

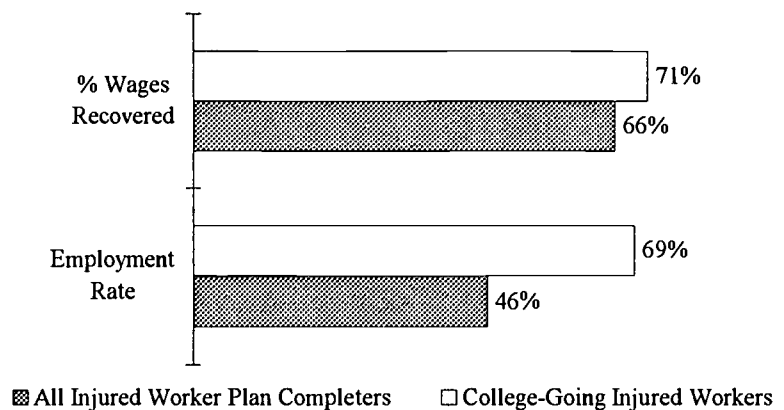


### Overall Employment and Wage Recovery Rates For College-Going L&I Claimants:

The overall rate of employment six to nine months after leaving college was 66 percent for injured worker students who attended for vocational preparation. The percent of wages recovered was 71 percent. Wage recovery was based upon median hourly wages three quarters after college and 11 quarters before. A 1992 survey conducted by L&I of all of its injured worker claimants who had completed a formal return-to-work plan found that less than half (46 percent) were working

four to six months after their plan completion and the average wage recovery was 69 percent. The L&I survey respondents included claimants who had attended college as part of their plan as well as those who did not.

Employment Rate and Percent of Wages Recovered by College-Going Injured Workers Versus 1992 Study of All Injured Workers Who Completed Formal Plans



### Employment Rates and Median Hourly Wages for L&I Graduates and Leavers Compared to Vocational Preparatory Students as a Whole:

Employment rates for L&I students six to nine months after college were less than employment rates for all vocational students, both for graduates and students who had some college, but left before earning a degree or certificate. Wage rates adjusted to 1997 dollars were higher, however, for both L&I graduates and leavers. Graduates had substantially higher employment rates and higher wage rates as was true for students in general.

	% Employed	Median Hourly Wage
L&I Graduate	76%	\$10.82
L&I Leaver	58%	\$10.06
All Vocational Graduates	83%	\$10.65
All Vocational Leavers	76%	\$9.72

**Use of the Data Linking for Outcomes System:** Overall the DLOA proved useful and flexible. Areas in which it demonstrated this were:

- Putting together a multi-year exiting cohort span for L&I students;
- Estimating pre-college earnings for L&I students by identifying a likely pre-injury earnings quarter.

The system was limited in these areas:

- For basic skills students for whom a multi-year span was not available;
- Outcomes data or students who indicated their purpose for attending was upgrading their skills.

## **Conclusion**

The overall finding of the study is that college training pays for the L&I injured workers by increasing employment with the same wage recovery compared to the 1992 L&I study. The payoff is higher for L&I students who graduate as is true for students in general.

Also there was a sizeable portion of disabled students in vocational programs suggesting important coordination in that regards. However, most did not report a disability and are not getting any special assistance from colleges.

Finally, the DLOA proved useful and flexible for analyzing subset student results due to its multi-year spanning capabilities and data on pre-college earnings that can be applied to different subset populations depending upon when it is most reasonable in their employment histories.





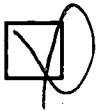
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