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An in-depth review of Wyoming Labor Market Information topics.

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Examining Workforce Investment Act Programmatic Outcomes

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Workforce Investment Act participation appears to be very effective in improving the economic lives of participants. For example, 65 percent of Dislocated Workers and 61 percent of Adults experienced at least one positive outcome from participation; many of those experience more than one positive outcome.

The U.S. Department of Labor, Employment and Training Administration (ETA) currently uses employment, job retention, and earnings increase performance measures for programs funded by ETA (U.S. Department of Labor, ETA, 2003). Section 171 of the 1998 Workforce Investment Act (WIA) requires the Secretary of Labor to prepare a five-year research plan for pilot, demonstration, research, evaluation, multi-state, and multi-service initiatives every two years. ETA's research plan provides for the evaluation of existing programs but it also covers applied research, including labor market research. Section 171 requires the continuing evaluation of programs and activities using appropriate methodologies and research designs, especially experimental research designs (U.S. Government Accounting Office, 2004). Unfortunately, experimental research is expensive, time consuming, and often raises legal and ethical issues. This paper addresses the current performance measures used by ETA and provides alternative measures that could improve program outcomes.

A basic limitation with the current ETA performance measurement strategy is the failure to measure outcomes in the context of the surrounding labor market. Without the labor market context, neither the state nor ETA can determine whether changes in wages and retention are effects of WIA participation or simply a reflection of the local economy.

ETA's current evaluation strategy also uses a limited number of outcome measures, preventing a thorough understanding of program outcomes. Research emphasis has been placed on finding new ways to evaluate the current outcomes without determining whether or not those outcomes represent program success. While performance measures can drive program development and management, it is not clear that federally required measures capture relevant information pertinent to employers, workers, or program managers.

To answer a few questions about ETA-prescribed WIA participant performance measures in Wyoming, this paper shows WIA training participants in the context of the Wyoming labor market. This context provides a framework for evaluating labor market outcomes. Furthermore, new outcome measures are investigated as potential enhancements to the strategy already in place.

Literature Review

Several studies report wage and employment increases for disadvantaged adults immediately after completion of an employment and training program. Bloom, et al. (1997) showed significant monthly earnings increases for those who participated in a training program when compared to a control group. Positive effects were greater for those who received on-the-job training, job

search assistance, or technical/occupational training.

Other findings show disadvantaged adult women participants are unemployed for shorter periods of time following training than are other participants (Eberwein, Ham, & LaLonde, 1997). LaLonde (1995) and Couch (1992) found disadvantaged adult women benefited from training services more so than youth or adult men. Finn and Willoughby (1996) demonstrated that being unemployed for fifteen weeks or more prior to Job Training Partnership Act (JTPA) enrollment negatively influenced the odds of being employed upon completion of a training program. Receiving training from a current employer rather than a training provider unfamiliar to the trainee positively influenced employment. Similar findings were reported by Hollenbeck and Anderson (1993) who found that job-specific training programs improved males' employment rate and increased females' wages.

Findings from research on the Wyoming WIA participants were not similar to studies which showed positive economic outcomes for WIA adults. Harris (2002), using a quasi-experimental design and administrative records, found no difference between WIA participants and the control group in the year following training.

Few studies have been conducted on the economic outcomes of Dislocated Workers who complete a WIA (or JTPA) training program. Some evidence suggests the effects are insignificant on both wages and employment rates, even when other group differences were controlled for (Leigh, 1997; Kodrzycki, 1996). Alternatively, Jacobson, LaLonde, and Sullivan (1999) found that Dislocated Workers increased their annual earnings by $20-24 per completed credit hour in community college classes (in U.S. Department of Labor, 2001). Greater earnings were seen for courses completed in health related fields, technical and vocational fields, or math and science fields. Other studies report a positive and significant impact on earnings after training (Benus & Byrnes, 1993; Jacobson, LaLonde, & Sullivan, 1994), but the findings were not generalizable.

Examining only short-term outcome measures, notably wage progression, fails to show the entire picture of WIA outcomes. "The short-run performance measures that are used in its [value added net of social cost] place are either uncorrelated with or negatively correlated with net value added, especially in the long run" (Heckerman, Heinrich, & Smith, 1997, p. 389-394). For example, research conducted on Wyoming community college graduates showed wages did not rise above a comparison group until 9 to 18 months after program completion (Gallagher, 2001). Without longitudinal analysis as a measure, community college education would appear ineffective in increasing graduates' wages. In fact, it simply takes time for the graduates to stabilize in the labor market.

As evident from the data, disadvantaged adults, especially women, tend to fare reasonably well economically compared to control groups in the first year after training. Unfortunately, the long-term consequences are much more dismal.

The United States General Accounting Office (1996) released a report to congressional requesters on the efficacy of JTPA. The report describes a study performed in response to congressional concern about the long-term impact of job training programs. The findings demonstrated that the positive effects of JTPA during the 30 months following training are not permanent. Adult men earned significantly higher wages than the control group one, two, and three years after training, but the effect dissipated by the fourth year. Adult women earned significantly higher wages than the control group every year after training until the fifth year. Both

male and female youths never achieved significantly higher wages than the control group in the five years subsequent to training. If the program has no long-term impact on participants and questionable effect in the short term, is the program attaining its goals?

Both WIA and the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 promote rapid entry into employment. Under WIA, only individuals unable to obtain employment through less intrusive core or intensive services are eligible for job training, meaning that all efforts are made to find an individual employment before the individual qualifies for training. Additionally, WIA participants are required to be economically disadvantaged (U.S. Department of Labor, 2001). With the passage of PRWORA, time-limited benefits and significant work requirements replaced cash benefit entitlements. Instead of receiving government assistance in the form of cash, individuals are required to work. As a result of these policy changes, individuals with few skills or work experience are being placed into entry-level, low-paying jobs because the emphasis is on employment, not employment that pays a living wage. In addition, the monthly income of many families falls after finding work because they do not make high enough wages to replace the lost government subsidies (Friedlander & Hamilton, 1996). Despite the strong economy and the substantial decline in welfare rolls during the latter half of the 1990s, the extent to which low-skill workers and former welfare recipients are able to retain their jobs and advance in them is unknown (U.S. Department of Labor, 2001).

Past evaluations of employment and training programs have demonstrated that many individuals who successfully obtain employment often face additional barriers to retain employment. Recently, more focus has been placed on training that assists individuals in remaining employed (U.S. Department of Labor, 2001). Finding a job is of limited value if the person is unable to keep it. Research on the effectiveness of existing retention strategies is limited and needs to be expanded. This is particularly important due to a strong relationship between employment tenure and earnings, regardless of the type of employment (Glover, 2003).

The logical next question is why continue to fund a program that fails to achieve federal mandated goals that were developed in the absence of empirical statistical knowledge? The simplest answer is that the outcome measures are not capable of reflecting the advantages gained by program participants. Therefore, the research should focus on identifying how WIA participation really affects program participants and how those effects can be quantified rather than how we *think* WIA *should* affect participants. When that is determined, the empirical data can drive ways to enhance the program to maximize the advantages.

A starting place for examining program effects is industry of employment. Industry is strongly related to income. Those who work in Mining or Transportation, Communications, & Public Utilities (TCPU) typically earn significantly more than those who work in Retail Trade. In addition, retention is usually higher in those industries than in the lower-paying industries (Glover, 2003; Mishel, Bernstein, & Schmitt, 1999). Bartik (1997) showed welfare recipients were more successful for longer periods of time when they were placed in health care; educational services; Finance, Insurance & Real Estate (FIRE); and durable goods manufacturing. Unfortunately, the highest demand for WIA trained workers in Wyoming and the U.S. is in Retail Trade.

Another area to investigate is turnover. Many individuals who register for WIA services have difficulty maintaining employment, especially employment with a

single employer. Turnover is associated with lower wages (Jones, 2001). If WIA program completers learn job skills that enhance their ability to maintain employment with one employer, their wages will likely increase as their tenure increases. While lowered turnover rates may not result in immediate wage increases, they generally reflect improved employability of the individual.

Another possibility for outcome measurement is the number of Unemployment Insurance (UI) claims filed. Currently, the outcome measures note whether or not a participant was employed in a quarter but there is no indication of how long they remained employed or how attached they were to their employer.

This study sought to evaluate the federally required outcomes of WIA participants in Wyoming (earnings after training) for eight quarters after program completion. A quasi-experimental design was employed using administrative records in the absence of random selection. It was expected that WIA would have a positive effect on wages in that wages for the WIA group would increase after training. Theoretically relevant variables were statistically controlled so that a more accurate test could be conducted between the WIA participant group and the Comparison group. Statistical controls provide for the mathematical removal or control of competing additional theoretical explanations of outcomes. Such controls are introduced after the fact as opposed to experimental designs that insure comparison and experimental group equivalence through pre-treatment random assignment.

In addition, we suggested the addition of new outcome measures: turnover rate, industry of employment, employment rate, and UI claims filed. We also created a combined *success* variable based on the other suggested outcome measures.

Methods

A broader evaluation of current performance measures was conducted by putting Wyoming WIA training participants in the context of the Wyoming labor market. New outcome measures are investigated as potential enhancements to the strategy already in place.

The study group included Wyoming WIA participants for the Program Year 2001 and 224,217 individuals selected from the Wyoming UI Wage Records file. There were 568 individuals who participated and exited WIA training during the program year, including 217 Adults, 110 Dislocated Workers, and 241 in Youth programs. The Youth groups were removed from the analyses because their outcome measures differ significantly from Adults and Dislocated Workers. The WIA participant file was combined with Wage Records in order to obtain wage and employment information. Turnover, employment industry, UI claims rate, and success were investigated.

The average participant age was 36.1 for Adults and 39.4 for Dislocated Workers (see Table 1). The mean age of individuals in the Comparison group was slightly higher at 40.2. Gender was unknown for 5 (1.5%) of the participants, 185 (56.6%) were men, and 137 (41.9%) were women.

The Comparison group was defined as individuals who had wages in Wyoming

Table 1: Means and Standard Deviations of Age by Participation Group with 2001 Wyoming Workforce Investment Act (WIA) Program Year Termination

Participation Group	N	Mean	Standard Deviation
Adults	217	36.1	10.8
Dislocated Workers	110	39.4	11.0
Comparison Group	224,217	40.2	11.0

during Program Year 2001, were residents of the state (Jones, 2002), and were not participants of WIA in Program Year 2001. The restrictions narrowed the group to approximately 70 percent of all who worked in Wyoming during that time period. All eligible individuals in Wage Records were randomly assigned a *termination quarter* from the third quarter of 2000 (2000Q3) to 2001Q2. Total wages were then computed for the six quarters prior and eight quarters after the termination quarter. Table 2 shows the means and standard deviations of wages by participation status both four and six quarters prior to the termination quarter.

Demographics for the Comparison group were taken from the Wyoming Department of Transportation (DOT) Driver's License file. Wage Records were merged with the DOT file using social security number (SSN) as the matching variable. There were 106,779 (47.6%) women and 117,438 (52.4%) men.

Turnover was defined as the number of exits in employment divided by the number of jobs worked during the defined time period (Glover, 2002). If an individual exited all jobs worked, the turnover rate would be 1.0. Table 3 shows the means and standard deviations of the turnover rates by participation status before and after program exit.

We defined employment industry using the North American Industry Classification System (NAICS, 2004) code of the primary employer in each quarter. Most previous studies used the Standard Industrial

Table 2: Means and Standard Deviations of Wages Prior to Workforce Investment Act (WIA) Training in Wyoming, by Participation Group

		t - 4		t - 6	
Participation Group	N	Mean	Standard Deviation	Mean	Standard Deviation
Adults	217	1,792.3	3,236.3	1,793.1	2,876.1
Dislocated Workers	110	3,747.5	4,205.4	4,013.9	4,910.1
Comparison Group	224,217	5,573.0	8,140.2	5,147.1	7,293.0

t = Termination quarter within WIA Program Year 2001. Therefore, t - 4 = four quarters before program termination, and t - 6 = six quarters before termination.

Table 3: Means and Standard Deviations of Turnover Rate Prior to Workforce Investment Act Training in Wyoming, by Participation Group

		t - 4		t - 6	
Participation Group	N	Mean	Standard Deviation	Mean	Standard Deviation
Adults	217	0.80	0.38	0.77	0.41
Dislocated Workers	110	0.65	0.47	0.62	0.48
Comparison Group	224,217	0.39	0.48	0.43	0.49

t = Termination quarter within WIA Program Year 2001. Therefore, t - 4 = four quarters before program termination, and t - 6 = six quarters before termination.

Classification (SIC) system to identify industries, however, since then all states have adopted NAICS. Primary employer is defined as the employer that paid the individual the largest proportion of wages in a quarter, regardless of the number of employers. For purposes of our study, living-wage industries are defined as those which pay, on average, wages higher than 130 percent of the federal poverty guideline for a family of four (Harris, 2003). The UI claims rate reflects the number of participants who filed a UI claim at any time during a quarter, not those who actually received UI benefits.

The success measure was a two-category measure that was assigned a value of one to reflect a success. Individuals received a success rating if they met any of the following criteria:

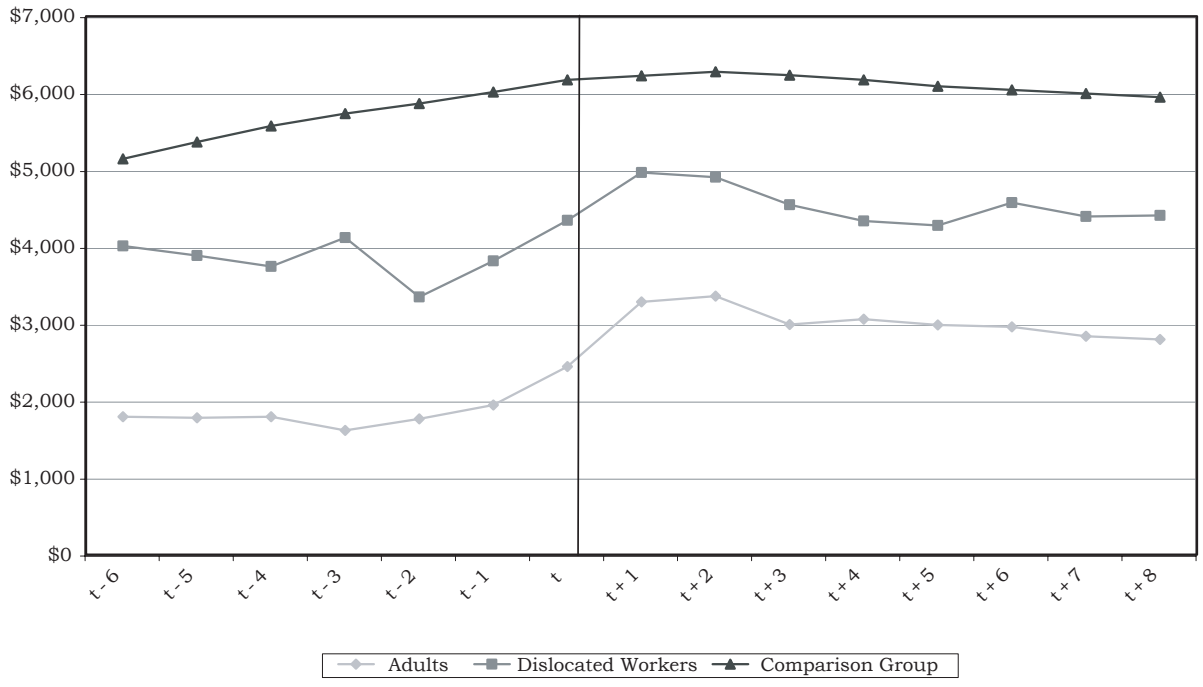
- Enrollment in a Wyoming community college after exit from the WIA program.
- Their earnings increased more than the average Comparison group increase ($800; see Figure 1).
- Their turnover rate decreased by more than the average for the Comparison group (.0009%; see Figure 2, page 7).
- They gained post-program employment in an industry that typically pays a living-wage to employees (Harris, 2003; see Figures 3 and 4, page 8).

Results

Earnings

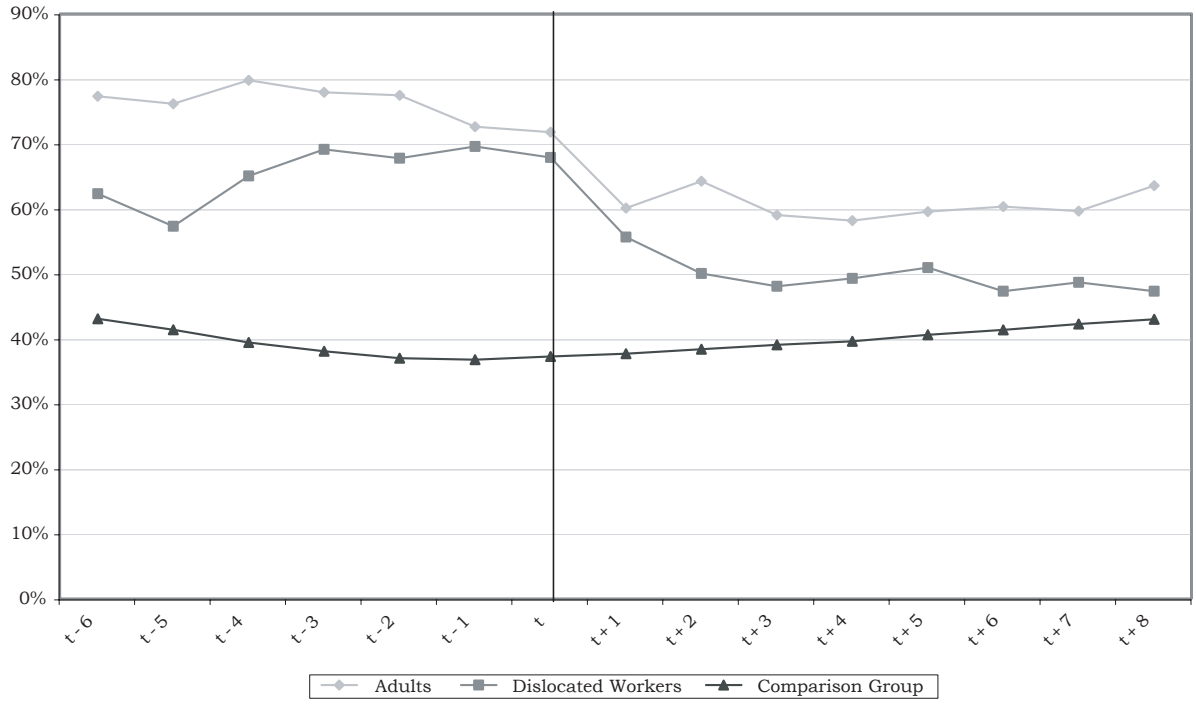
Research on WIA participant outcomes, with the exception of Harris (2002a), demonstrated positive earnings change after training. For this reason it was expected that earnings of WIA participants would increase after the termination quarter. The data

Figure 1: Wyoming Average Quarterly Wages by Workforce Investment Act (WIA) Participation Group



t = Termination quarter within WIA Program Year 2001.

Figure 2: Wyoming Quarterly Turnover Rate by Workforce Investment Act (WIA) Participation Group



t = Termination quarter within WIA Program Year 2001.

partially supported the hypothesis. As seen in Figure 1 and Table 4 (see pages 6 and 8, respectively), earnings of WIA adults and the Comparison group increased during the study period. Dislocated Workers had no significant change.

When regression analysis was applied to test for group differences in performance, statistically there was no significant difference in wages based on WIA participation. Thus, WIA participants do not experience additional wage progression beyond what the Comparison group also experienced. A possible explanation is that Wyoming's relatively strong economy during this time period could have been driving the increase in wages. The controlled variables all significantly influenced post-training wages eight quarters after program termination (see Table 5, page 9). The corrected model accounted for approximately one-third of the variance associated with wages after training (R^2 = .31).

Turnover

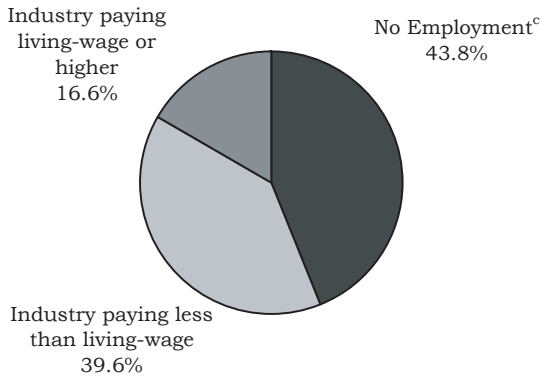
It was hypothesized that the turnover rate would decline for all groups except the Comparison group after program termination. The data supported the hypothesis (see Table 6, page 9). The rates for both WIA Adults and Dislocated Workers significantly differed between the two time periods, while the rate for the Comparison group did not (see Figure 2).

When the regression model was applied (see Table 7, page 10), neither Adults nor Dislocated Workers had a significantly different turnover rate than the Comparison group when all other variables were

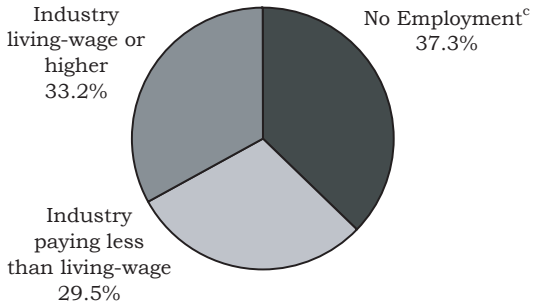
(Text continued on page 9)

Figure 3: Percentage of Adults Working in Wyoming Industries Typically Paying Living-Wages,[a] Before and After Program Exit[b]

Six Quarters Before Exit



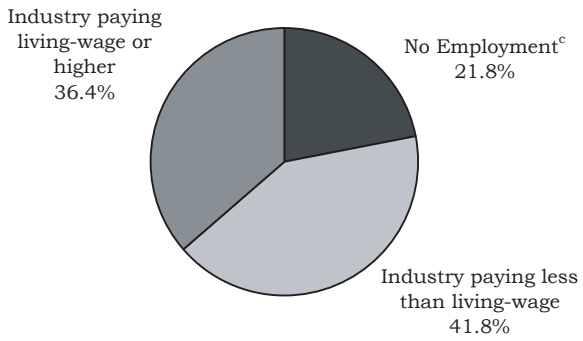
Eight Quarters After Exit



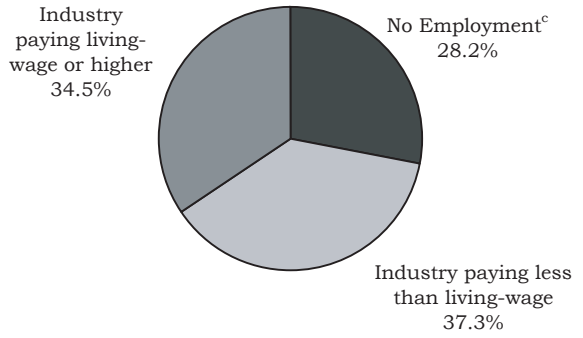
[a]For purposes of our study, living wage is defined as 130 percent or higher of the federal poverty guideline for a family of four.
[b]Program Exit is the quarter in which the participant terminated the Workforce Investment Act (WIA) program. This study included participants whose termination quarter was during WIA Program Year 2001.
[c]Not found in Wyoming Unemployment Insurance Wage Records.

Figure 4: Percentage of Dislocated Workers Working in Wyoming Industries Typically Paying Living-Wages,[a] Before and After Program Exit[b]

Six Quarters Before Exit



Eight Quarters After Exit



[a]For purposes of our study, living wage is defined as 130 percent or higher of the federal poverty guideline for a family of four.
[b]Program Exit is the quarter in which the participant terminated the Workforce Investment Act (WIA) program. This study included participants whose termination quarter was during WIA Program Year 2001.
[c]Not found in Wyoming Unemployment Insurance Wage Records.

Table 4: Summary of T-Test Analysis for Wage Change From Six Quarters Before to Eight Quarters After Workforce Investment Act (WIA) Program Termination[a]

Participation Group	df	t
Adults	216	3.387**
Dislocated Workers	109	0.685
Comparison Group	224,216	45.996***

[a]Includes participants whose termination quarter was during WIA Program Year 2001.
** $p < .01$
***$p < .001$

Table 5: Summary of Hierarchical Regression Analysis for Variables Predicting Wages for Eight Quarters After Workforce Investment Act (WIA) Program Termination, 2001 Program Year Termination

Variable	b	SE b	β
Age	8.33	1.36	0.011***
Gender	-1286.11	29.66	-0.079***
Wages Six Quarters Before Program Termination	0.22	0.00	0.198***
Wages Four Quarters Before Program Termination	0.37	0.00	0.373***
Turnover Six Quarters Before Program Termination	655.22	40.15	0.039***
Turnover Four Quarters Before Program Termination	590.13	40.66	0.035***
Jobs Worked Six Quarters Before Program Termination	-327.82	28.11	-0.026***
Jobs Worked Four Quarters Before Program Termination	-464.52	27.80	-0.035***
WIA Participation	168.05	138.56	0.002

Note. $R^2 = .31$
***p < .0001
N = 224,217

controlled for. The other variables all significantly predicted turnover eight quarters after program termination.

Industry

Figure 3 (see page 8) shows the percentage of Adults employed in living-wage industries before and after program exit. Six quarters before program termination, 43.8 percent were not employed in a Wyoming UI covered job, 39.6 percent were employed in low-paying industries, and 16.6 percent were employed in living-wage industries. Eight quarters after exit, 37.3 percent were not employed by a UI covered job, 29.5 percent were in low-paying industries, and the remaining 33.2 percent were in living-wage industries. Table 8 (see page 10) shows the detailed change by industry.

Figure 4 (see page 8) shows the same breakdown for Dislocated Workers. Before exit, 21.8 percent were not found in UI covered jobs, 41.8 percent were in low-paying industries, and 36.4 percent were in living-wage industries. After program termination the percentages were similar (37.3% were in low-paying industries, 34.5% were in living-wage industries, and 28.2% were not found).

Table 6: Summary of T-Test Analysis for Turnover Change From Six Quarters Before to Eight Quarters After Workforce Investment Act (WIA) Program Termination[a]

Participation Group	df	t
Adults	216	3.366**
Dislocated Workers	109	2.316*
Comparison Group	224,216	.749

[a]Includes participants whose termination quarter was during WIA Program Year 2001.
* p < .05
**p < .01

UI Claims Rate

As seen in Figure 5 and Table 9 (see pages 11 and 12, respectively), 3.2 percent of Adult WIA participants and 3.6 percent of Dislocated Workers filed a UI claim six quarters before program exit. This compares to only 0.5 percent of the Comparison group. One quarter before exit, 8.8 percent of Adult participants and 15.5 percent of Dislocated Workers filed claims. At four and eight quarters after exit, the Adult percentage had

(Text continued on page 11)

Table 7: Summary of Hierarchical Regression Analysis for Variables Predicting Turnover for Eight Quarters After Workforce Investment Act (WIA) Program Termination[a]

Variable	b	SE b	b
Age	0.00	0.00	0.053***
Gender	0.02	0.00	0.020***
Wages Six Quarters Before Termination	0.00	0.00	0.047***
Wages Four Quarters Before Termination	0.00	0.00	0.041***
Turnover Six Quarters Before Termination	0.15	0.00	0.149***
Turnover Four Quarters Before Termination	0.17	0.00	0.169***
Jobs worked Six Quarters Before Termination	0.01	0.00	0.012***
Jobs worked Four Quarters Before Termination	0.01	0.00	0.015***
WIA participation	0.01	0.01	0.002

[a]Includes participants whose termination quarter was during WIA Program Year 2001.

Note. $R^2 = .13$

***$p < .0001$

N = 224,217

Table 8: Industry Distribution by Participation Group Six Quarters Before and Eight Quarters After Workforce Investment Act (WIA) Program Exit

	Adults						Dislocated Workers					
	t - 6		t + 8		Change		t - 6		t + 8		Change	
Industry	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Agriculture	1	0.5	0	0.0	-1.0	-100.0	0	0.0	1	0.9	1.0	100.0
Mining	7	3.2	5	2.3	-2.0	-28.6	7	6.4	7	6.4	0.0	0.0
Utilities	0	0.0	0	0.0	0.0	0.0	0	0.0	1.0	0.9	1.0	100.0
Construction	20	9.2	10	4.6	-10.0	-50.0	10	9.1	13	11.8	3.0	30.0
Manufacturing	6	2.8	5	2.3	-1.0	-16.7	5	4.5	10	9.1	5.0	100.0
Wholesale Trade	2	0.9	5	2.3	3.0	150.0	0	0.0	1	0.9	1.0	100.0
Retail Trade	20	9.2	19	8.8	-1.0	-5.0	12	10.9	13	11.8	1.0	8.3
Transportation & Warehousing	1	0.5	20	9.2	19.0	1,900.0	13	11.8	7	6.4	-6.0	-46.2
Information	3	1.4	5	2.3	2.0	66.7	1	0.9	4	3.6	3.0	300.0
Finance & Insurance	0	0.0	1	0.5	1.0	100.0	0	0.0	0	0.0	0.0	0.0
Real Estate & Rental & Leasing	0	0.0	4	1.8	4.0	400.0	1	0.9	1	0.9	0.0	0.0
Professional & Technical Services	2	0.9	2	0.9	0.0	0.0	2	1.8	0	0.0	-2.0	-100.0
Administrative & Waste Services	18	8.3	8	3.7	-10.0	-55.6	3	2.7	3	2.7	0.0	0.0
Educational Services	4	1.8	7	3.2	3.0	75.0	0	0.0	4	3.6	4.0	400.0
Health Care & Social Assistance	9	4.1	20	9.2	11.0	122.2	6	5.5	5	4.5	-1.0	-16.7
Arts, Entertainment, & Recreation	0	0.0	1	0.5	1.0	100.0	0	0.0	0	0.0	0.0	0.0
Accommodation & Food Services	17	7.8	8	3.7	-9.0	-52.9	6	5.5	4	3.6	-2.0	-33.3
Other Services	1	0.5	6	2.8	5.0	500.0	3	2.7	2	1.8	-1.0	-33.3
Government	6	2.8	9	4.1	3.0	50.0	6	5.5	3	2.7	-3.0	-50.0
No Employment	95	43.8	81	37.3	-14.0	-14.7	24	21.8	31	28.2	7.0	29.2
No Industry Information	5	2.3	1	0.5	-4.0	-80.0	11	10.0	0	0.0	-11.0	-100.0
Total	**217**	**100.0**	**217**	**100.0**	**0.0**	**0.0**	**110**	**100.0**	**110**	**100.0**	**0.0**	**0.0**

t = Termination quarter within WIA Program Year 2001. Therefore, t - 6 = six quarters before program termination and t + 8 = eight quarters after termination.

fallen to 3.7 percent and 3.2 percent respectively. The Dislocated Workers percentage was steady at 2.7 percent for both four and eight quarters after exit.

Employment Rate

Figure 6 and Table 10 (see pages 12 and 13, respectively) show the number and percentage of individuals who were employed in Wyoming before and after WIA participation. Six quarters before exit, 20 percent fewer Adult participants were employed than Comparison group members. By eight quarters after exit, only 8 percent fewer Adult participants were employed.

In contrast, the percentage of employed Dislocated Workers six quarters before program exit was higher than the percentage of employed Comparison group members. At eight quarters after exit, Dislocated Workers were still employed more often than Comparison group members, but the difference was only 1.2 percent.

Success

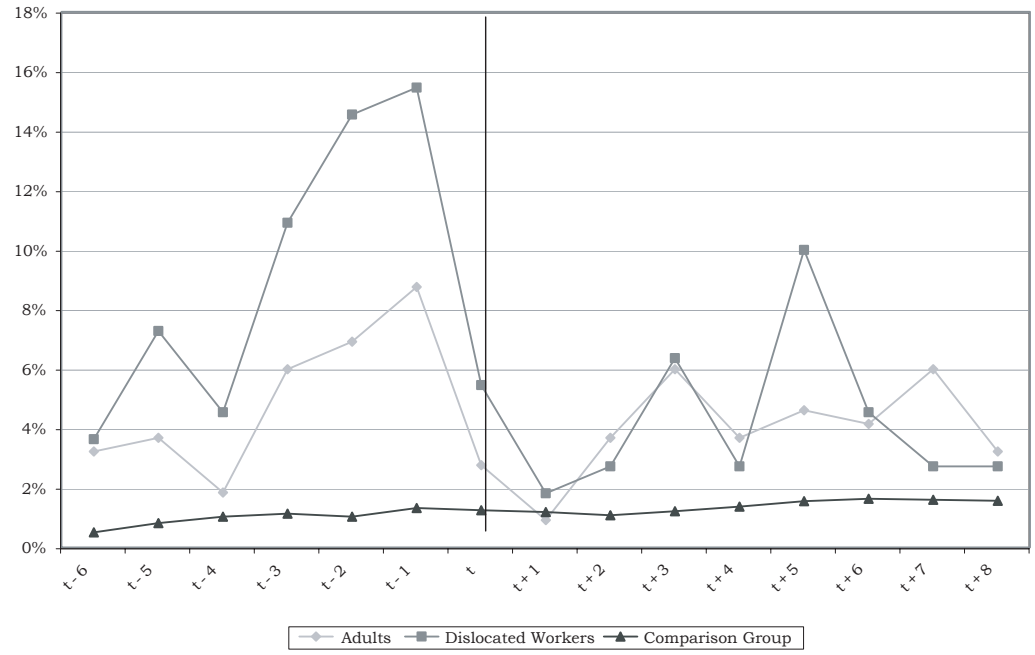
Table 11 (see page 14) shows the number and percentage of WIA participants who experienced a positive outcome after program completion. Over 60 percent either enrolled in a community college, increased their earnings more than the average for Wyoming workers, decreased their turnover rate, or obtained employment in an industry that pays a living-wage. Many of the participants had more than one positive outcome.

Discussion / Suggested Measures for ETA Outcomes

Study findings were mixed. Other studies which showed short-term earnings gains were

(Text continued on page 13)

Figure 5: Percentage of Individuals Who Filed an Unemployment Insurance Claim in Wyoming by Workforce Investment Act (WIA) Participation Group



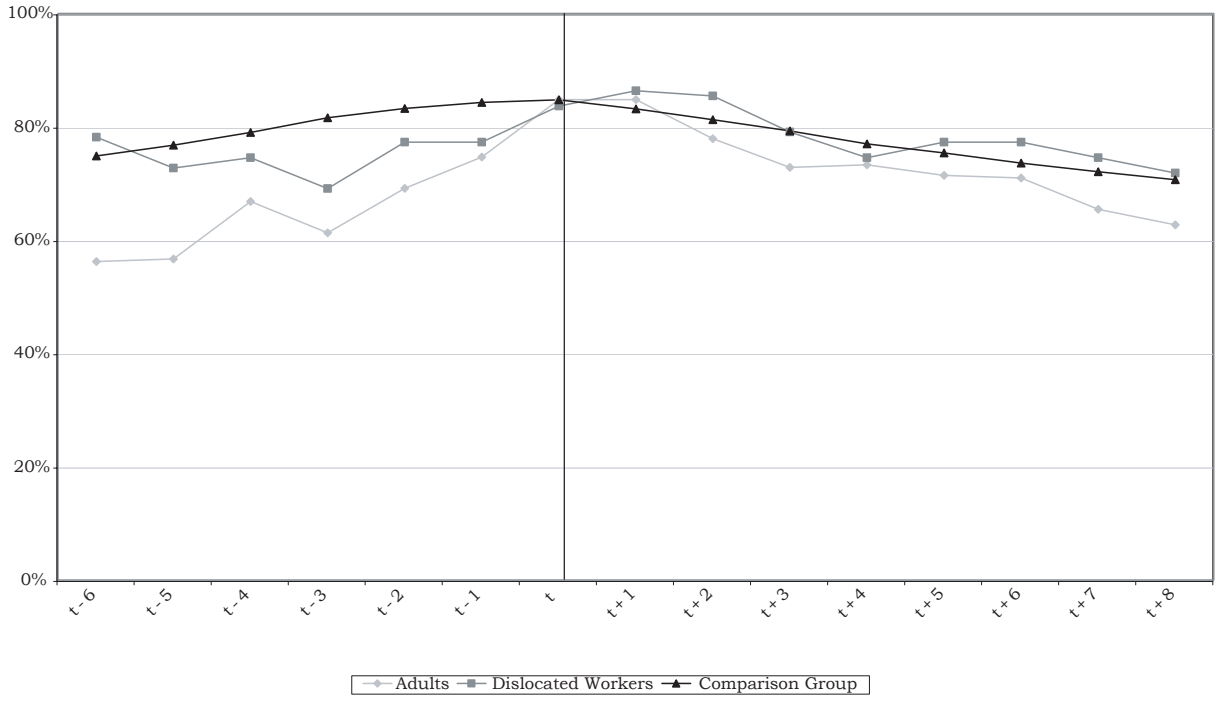
t = Termination quarter within WIA Program Year 2001.

Table 9: Number and Percent of Individuals Who Filed an Unemployment Insurance Claim Before and After Program Exit by Participation Group

Termination Quarter	Adults		Dislocated Workers		Comparison Group	
	Number	Percent	Number	Percent	Number	Percent
t - 6	7	3.2	4	3.6	1,130	0.5
t - 5	8	3.7	8	7.3	1,841	0.8
t - 4	4	1.8	5	4.5	2,317	1.0
t - 3	13	6.0	12	10.9	2,545	1.1
t - 2	15	6.9	16	14.5	2,313	1.0
t - 1	19	8.8	17	15.5	2,968	1.3
t	6	2.8	6	5.5	2,798	1.2
t + 1	2	0.9	2	1.8	2,668	1.2
t + 2	8	3.7	3	2.7	2,431	1.1
t + 3	13	6.0	7	6.4	2,727	1.2
t + 4	8	3.7	3	2.7	3,080	1.4
t + 5	10	4.6	11	10.0	3,483	1.6
t + 6	9	4.1	5	4.5	3,666	1.6
t + 7	13	6.0	3	2.7	3,587	1.6
t + 8	7	3.2	3	2.7	3,518	1.6

t = Termination quarter within WIA Program Year 2001. Therefore, t - 1 = one quarter before program termination, and t + 1 = one quarter after termination.

Figure 6: Percentage of Individuals Employed Quarterly by Wyoming Workforce Investment Act (WIA) Participation Group



t = Termination quarter within WIA Program Year 2001.

replicated because wages of both WIA program segments increased after termination from the program. However, their wages did not increase more than the statistical control group.

While WIA participants initially showed a rather large increase in earnings after program termination (see Figure 1, page 6); those high earnings started to decline after the second quarter. This could occur if participants stayed with their On-the-Job Training employer for two quarters after program termination and then needed to look for new employment, or if participants faced retention barriers, such as childcare issues. Contrary to expectations, changes in turnover rates cannot be predicted by WIA participation either, even though turnover does significantly decrease after program exit for both participant groups used in the study (see Figure 2, page 7).

The industry measure revealed interesting results. The industrial distribution of Adult participants changed considerably after training (see Figure 3, page 8. The percentage of individuals employed in low-paying industries decreased. Alternatively, employment in living-wage industries increased. The implications of this are very positive. WIA participation for Adults appears to result in a shift from no or low-paying employment to employment in higher-paying industries.

Dislocated Workers did not fare as well as Adult participants in the industry measure. More Dislocated Workers were employed six quarters before program termination than eight quarters post-program (see Figure 4, page 8). Employment in living-wage industries declined. However, employment in low-paying industries also declined. It is possible that Dislocated Workers are leaving the state for employment elsewhere, becoming employed in non-UI covered jobs, or becoming self-employed. Enrollment in a community college or university without concurrently working a UI covered job would

Table 10: Number and Percent of Individuals Who Were Employed Before and After Program Exit by Participation Status

Termination Quarter	Adults		Dislocated Workers		Comparison Group	
	Number	Percent	Number	Percent	Number	Percent
t - 6	122	56.2	86	78.2	167,920	74.9
t - 5	123	56.7	80	72.7	172,160	76.8
t - 4	145	66.8	82	74.5	177,221	79.0
t - 3	133	61.3	76	69.1	183,006	81.6
t - 2	150	69.1	85	77.3	186,656	83.2
t - 1	162	74.7	85	77.3	189,088	84.3
t	184	84.8	92	83.6	190,104	84.8
t + 1	184	84.8	95	86.4	186,549	83.2
t + 2	169	77.9	94	85.5	182,257	81.3
t + 3	158	72.8	87	79.1	177,789	79.3
t + 4	159	73.3	82	74.5	172,703	77.0
t + 5	155	71.4	85	77.3	169,075	75.4
t + 6	154	71.0	85	77.3	165,032	73.6
t + 7	142	65.4	82	74.5	161,679	72.1
t + 8	136	62.7	79	71.8	158,470	70.6

t = Termination quarter within WIA Program Year 2001. Therefore, t - 1 = one quarter before program termination, and t + 1 = one quarter after termination.

also remove them from Wage Records. Outside influences likely affect Dislocated Workers' outcomes. For instance, Dislocated Workers tend to be firmly established in a job before they become eligible for the WIA program. After program completion they are encouraged to find employment in an area in which they have no experience. They face competition from applicants with more relevant experience for jobs that often pay less than what they originally earned. Frustration with these situations could lead to discouragement and an eventual withdrawal from the labor market. This hypothesis could be tested using longitudinal and inter-state data.

The proportion of Adults who filed for UI benefits remained fairly constant before and after program exit (see Figure 5, page 11). However, the rate for Dislocated Workers dropped rather sharply meaning they filed for UI benefits less often post-program than before training. This adds further support to the idea that those workers are either leaving the state for employment opportunities elsewhere, or are becoming discouraged and withdrawing from the labor market.

Before program termination, the WIA participation groups were less likely to be employed than the Comparison group (see Figure 6, page 12). After program termination, there is no noticeable difference between the groups. The WIA program appears to be allowing participants to become indistinguishable from the average Wyoming worker, and that is an important accomplishment. As previously discussed, after program completion the employment rate for Adults increased. This was not the case for either Dislocated Workers or the Comparison group, both of which showed decreases in the percentage of individuals employed in Wyoming.

Findings in the success measure are most interesting. WIA participation appears to be very effective in improving the economic lives of participants. For example, 65 percent of Dislocated Workers experienced at least one positive outcome from participation; many of those experienced more than one positive outcome. The same is true for Adults. Except for Adults who enrolled in a Wyoming community college, who tended to withdraw from the labor market during their education, very few participants had only one positive outcome. The majority of Adults with a successful outcome increased their wages, decreased their turnover rate, and gained employment in a living-wage industry. In essence, they epitomize the unwritten goals of the WIA program.

Limitations

Wyoming has the smallest population in the nation. Because of the small size, findings are not generalizable to other states. In addition, it is impossible to perform detailed analyses, such as the effects of different kinds of training, because the

Table 11: Workforce Investment Act (WIA) Participants[a] Who Had a Successful[b] Outcome

Participation Group	Number	Percentage
Adults	132	60.8
Dislocated Workers	72	65.5
Total	**204**	**62.4**

[a]Includes participants whose termination quarter was during WIA Program Year 2001.
[b]Individuals received a success rating if they met any of the following criteria: (1) enrolled in a Wyoming community college after exit from the WIA program, (2) their earnings increased more than the average Comparison group increase ($800), (3) their turnover rate decreased by more than the average for the Comparison group (.0009%), or, (4) gained post-program employment in an industry that typically pays a living-wage to employees (Harris, 2003).

sample size is too small. A remedy is to combine data for several states, primarily bordering states, so that a regional picture of WIA training could be built. That kind of analysis would be fairly easy to complete for Alaska, Nebraska, New Mexico, South Dakota, and Wyoming because the available wage records and demographic data are comparable for those states.

Another limitation is the lack of qualitative program knowledge of WIA. Because the analysts are not case managers, there is no firm understanding of common participant issues that affect the outcomes. For instance, if transportation availability is a common obstacle, the number of training opportunities is limited and outcomes could be affected. In order to give broader coverage to those types of issues, a stronger relationship needs to be developed between research and program staff.

Finally, there are limitations inherent in a quasi-experimental design. It is impossible to completely match the control group to the WIA participant group on only the simple demographic and economic variables available in administrative databases. There are likely many other important variables that were not controlled for because of limitations in the administrative databases. Also, there are some issues that can only be addressed in longitudinal analysis.

Summary

While the capacity to conduct true experimental design and replication is limited, this study offers a powerful alternative analysis. By comparing labor market experience between WIA participants and a comparable segment of Wyoming's workforce, it was determined that WIA participants basically became indistinguishable from the rest of Wyoming's workforce, an arguably favorable outcome. However, the Wyoming study shows that no program effect exists for wages or turnover, at least in the 24 months following program completion. In the absence of a strong economy, participants may have failed to become indistinguishable. Training programs likely have difficulty showing success in economically challenged environments. Additionally, the federally mandated outcome measures fail to reflect all of the successes of program completers. ETA should consider changing the focus of WIA program evaluation to measures that capture relevant information pertinent to employers, workers, and program managers.

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A Comparison of Employment and Enrollment Outcomes Based on Temporary Assistance for Needy Families Eligibility in Casper College's Adult Basic Education/General Educational Development Program

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TANF eligible participants progressing in their educational level but with fewer than 12 hours of program participation experience employment and enrollment difficulties at a higher rate than participants who are not TANF eligible. A smaller percentage of TANF eligible participants experienced negative outcomes after GED completion than TANF ineligible participants.

The Casper College ABE/GED Center provides instruction in Adult Basic Education (ABE), General Educational Development (GED), English as a Second Language (ESL), U.S. citizenship, employability skills, and educational assessment services to individuals 16 and older who are out of school. The overall objective of these services is to help improve academic functioning and increase employability skills. The typical goal of Casper College ABE/GED participants is to earn their GED certificate.

The Casper College ABE/GED program's primary funding source originates from the Adult Education and Family Literacy Act within the Workforce Investment Act (Adult Education and Family Literacy Act, 1998). Outcome reporting for this funding source follows National Reporting System (NRS) guidelines (National Reporting System, 2001). The U.S. Department of Education uses the outcome results provided by the NRS to justify federal investment in adult education programs. The core outcome measures focus on employment acquisition and retention, educational gain, placement in postsecondary education or training, and receipt of a secondary diploma or GED.

The other major funding source for the Casper College ABE/GED program is a grant from Temporary Assistance for Needy Families (TANF) Education and Training for Self-Sufficiency (ETSS; Personal Responsibility and Work Opportunity Reconciliation Act, 1996). Funding from this source targets families who earn less than 185 percent of the federal poverty guideline ($34,040 for a family of four in 2003; U.S. Department of Health and Human Services, 2003). An ETSS grant provides funding to the Casper College ABE/GED program for extended hours, additional sites, and support to accommodate this targeted population. The performance goals of TANF are closely aligned with the Adult Education and Family Literacy Act (1998).

Study Purpose

Past research indicates that high school graduates have substantially lower unemployment rates than those with only some high school education (Cantu, 2003). According to the Bureau of Labor Statistics, the 2003 unemployment rate for persons 25 years and older with less than a high school diploma or GED was 8.8 percent

compared to 5.5 percent for persons with a high school diploma or GED, 4.8 percent for persons with some college, and 3.1 percent for persons with a Bachelor's degree or higher (2003). Completion of a GED also increases the probability of employment for those without a high school diploma (Tyler, n.d.). The data provide evidence that educational attainment is strongly associated with employment. In addition to increased employment, another indicator of program success is whether participants become enrolled in postsecondary education subsequent to ABE/GED involvement.

The purpose of this study is to determine whether Casper College ABE/GED participants who are eligible for TANF have employment and postsecondary enrollment outcomes similar to those who are not eligible for TANF at various levels of program progression, including the completion of a GED.

Desired Outcome from the Study

The desired outcome of this study was two-fold. The Casper College ABE/GED Center needed to determine program outcomes for stakeholders and to use the information gained from the study to evaluate program strengths and difficulties, which will enhance efforts to retain participants, refine instructional methodologies, and establish future performance goals.

Study Methods

In the past, ABE/GED staff relied upon telephone interviews to determine program outcomes for Casper College ABE/GED participants. Unfortunately, telephone interviews have historically resulted in low response rates, which prevent accurate outcome evaluations.

To better gauge whether the program has reached desired outcome goals, Casper College ABE/GED administrators contracted with Research & Planning (R&P) to merge ABE/GED participant data with Wage Records employment data and Casper College postsecondary enrollment data to determine the employment and postsecondary enrollment outcomes of the 581 ABE/GED participants from program year 2001-2002. Postsecondary data available to R&P contain all students enrolled in postsecondary education at Casper College. Wage Records data represent a census of nearly all persons employed in the state (Gosar, 1995).

The following outcome categories for TANF eligible and TANF ineligible participants were developed by Casper College's ABE/GED co-directors and staff:

- *Employment Difficulty and No Enrollment (negative outcome).*

Includes participants who did not obtain employment in the year after program exit or worked fewer quarters in the year after program exit than in the year prior to program participation and were not enrolled in postsecondary education at Casper College during the two semesters after program exit.

- *Employment Stability/Increase or Enrollment (positive outcome).*

Includes participants who either: (1) maintained employment stability (i.e., worked the same number of quarters before and after program participation), (2) worked more quarters in the year after program exit than in the year prior to program enrollment, or (3) were enrolled in postsecondary education at Casper College during the two semesters after program exit.

Table: Employment and Enrollment Outcomes for Casper College ABE/GED Participants Based on Temporary Assistance for Needy Families (TANF) Eligibility and Progression, Program Year 2001-2002

ABE/GED Participants by Program Progression	TANF Eligibility: Eligible	Column %	Cumulative %	Ineligible	Column %	Cumulative %	Total	Column %	Cumulative %
Minimal Contact[a]									
Unexpectedly positive outcome[b]	4	10.5%	10.5%	3	6.0%	6.0%	7	8.0%	8.0%
Positive outcome[c]	18	47.4%	57.9%	20	40.0%	46.0%	38	43.1%	51.1%
Negative outcome[d]	16	42.1%	100.0%	27	54.0%	100.0%	43	48.9%	100.0%
Subtotal	**38**	**100.0%**		**50**	**100.0%**		**88**	**100.0%**	
% of Total	**20.4%**			**12.7%**			**15.1%**		
Total	**186**			**395**			**581**		
Progressing Within Education Level, With Less Than 12 Hours of Participation									
Unexpectedly positive outcome[b]	3	3.9%	3.9%	7	4.0%	4.0%	10	3.9%	3.9%
Positive outcome[c]	30	39.0%	42.9%	85	48.0%	52.0%	115	45.3%	49.2%
Negative outcome[d]	44	57.1%	100.0%	85	48.0%	100.0%	129	50.8%	100.0%
Subtotal	**77**	**100.0%**		**177**	**100.0%**		**254**	**100.0%**	
% of Total	**41.4%**			**44.8%**			**43.7%**		
Total	**186**			**395**			**581**		
Progressing Within Education Level, With at Least 12 Hours of Participation									
Unexpectedly positive outcome[b]	0	0.0%	0.0%	1	2.9%	2.9%	1	1.8%	1.8%
Positive outcome[c]	10	52.6%	52.6%	16	47.1%	50.0%	26	49.1%	50.1$
Negative outcome[d]	9	47.4%	100.0%	17	50.0%	100.0%	26	49.1%	100.0%
Subtotal	**19**	**100.0%**		**34**	**100.0%**		**53**	**100.0%**	
% of Total	**10.2%**			**8.6%**			**9.1%**		
Total	**186**			**395**			**581**		
Completing or Increasing at Least One Educational Level									
Unexpectedly positive outcome[b]	0	0.0%	0.0%	2	12.5%	12.5%	2	9.5%	9.5
Positive outcome[c]	4	80.0%	80.0%	9	56.3%	68.8%	13	61.9%	71.4%
Negative outcome[d]	1	20.0%	100.0%	5	31.2%	100.0%	6	28.6%	100.0%
Subtotal	**5**	**100.0%**		**16**	**100.0%**		**21**	**100.0%**	
% of Total	**2.7%**			**4.1%**			**3.6%**		
Total	**186**			**395**			**581**		
Received GED									
Unexpectedly positive outcome[b]	7	14.9%	14.9%	21	17.8%	17.8%	28	17.0%	17.0%
Positive outcome[c]	27	57.4%	72.3%	50	42.4%	60.2%	77	46.6%	63.6%
Negative outcome[d]	13	27.7%	100.0%	47	39.8%	100.0%	60	36.4%	100.0%
Subtotal	**47**			**118**			**165**		
% of Total	**25.3%**			**29.9%**			**28.4%**		
Total	**186**			**395**			**581**		
All Participants									
Unexpectedly positive outcome[b]	14	7.5%	7.5%	34	8.6%	8.6%	48	8.3%	8.3%
Positive outcome[c]	89	47.9%	55.4%	180	45.6%	54.2%	269	46.3%	54.6%
Negative outcome[d]	83	44.6%	100.0%	181	45.8%	100.0%	264	45.4%	100.0%
Total	**186**	**100.0%**		**395**	**100.0%**		**581**	**100.0%**	
Row %	**32.0%**			**68.0%**			**100.0%**		

[a]Includes participants who exited the program prior to the assessment of educational level (i.e., requires at least four hours of program participation) or who exited the program prior to completion of an assessed educational level.

[b]Includes participants who maintained employment stability or worked more quarters in the year after program exit *and* were enrolled in postsecondary education at Casper College.

[c]Includes participants who either: 1) maintained employment stability (i.e., worked the same number of quarters before and after program participation), 2) worked more quarters in the year after program exit, or 3) were enrolled in postsecondary education at Casper College during the two semesters after program exit.

[d]Includes participants who did not obtain employment in the year after program exit or worked fewer quarters in the year after program exit than in the year prior to program participation and were not enrolled in postsecondary education at Casper College during the two semesters after program exit.

- *Employment Stability/Increase and Enrollment (unexpectedly positive outcome).*

  Includes participants who maintained employment stability or worked more quarters in the year after program exit *and* were enrolled in postsecondary education at Casper College.

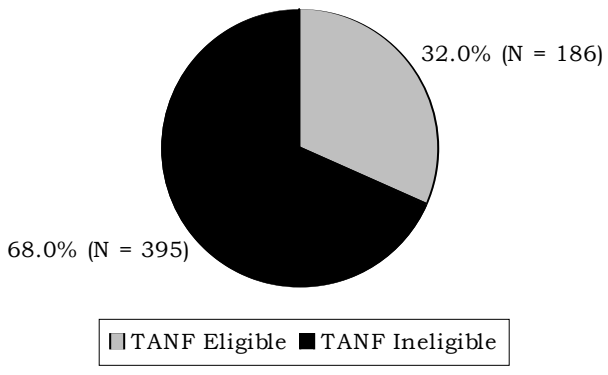
For purposes of this research, the TANF eligible group is defined as ABE/GED participants whose family income did not exceed 185 percent of the federal poverty guidelines. The other group (TANF ineligible) is composed of ABE/GED participants who did not meet TANF eligibility criteria.

ABE/GED participants in correctional programs were excluded from the analysis because they do not have the same ability to pursue educational or employment goals as the general ABE/GED population. English as a Second Language participants were also removed.

Results

The Table (see page 20) presents outcome data for all program year 2001-2002 participants in order of typical program progression (i.e., from ABE/GED participants with minimal program contact to those who completed their GED).

Figure 1: Casper College ABE/GED Participants (N = 581), Program Year 2001-2002



All ABE/GED Participants

Approximately one-third (186) of the 581 program year 2001-2002 ABE/GED participants were TANF eligible at time of enrollment (see Figure 1). Overall, employment and enrollment outcomes were very similar for ABE/GED participants who were TANF eligible and those who were TANF ineligible. Specifically, 55.4 percent of TANF eligible participants and 54.2 percent of TANF ineligible participants experienced a positive employment or enrollment outcome (see Figure 2, page 22).

ABE/GED Participants With Minimal Program Contact

Participants with minimal program contact are those who exited the program prior to assessment to determine educational level (most in this category had fewer than four hours of program participation). Eighty-eight participants (15.1%) of all participants had minimal program contact (see Figure 3, page 22). A higher percentage of TANF eligible participants (20.4%) had minimal program contact compared to TANF ineligible participants (12.7%) in program year 2001-2002 (see Figure 4, page 24).

ABE/GED Participants Progressing Within Educational Level With Less Than 12 Hours of Program Participation

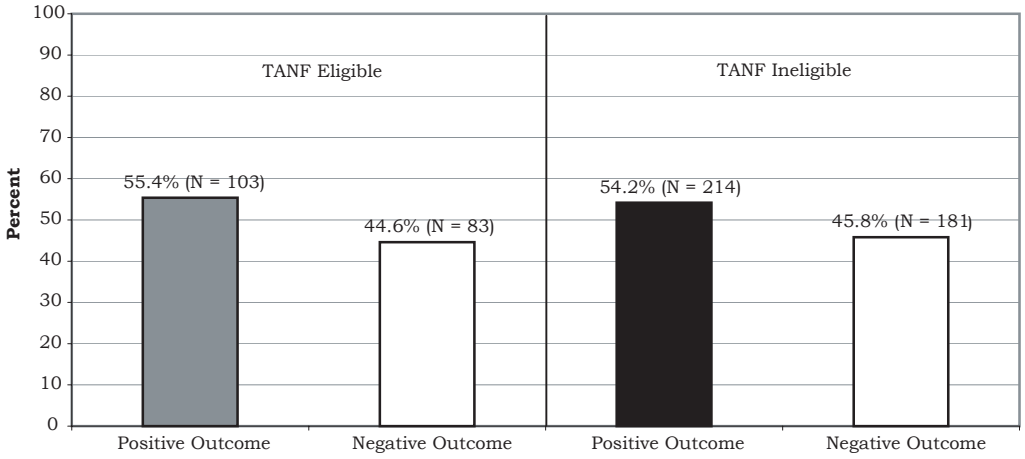
Participants progressing in an educational level (Murray, 2004) that have less than 12 hours of program participation comprise the largest segment of program year 2001-2002 participants (254 or 43.7%; see Figure 3, page 22). Although the

number of TANF eligible participants (77) and TANF ineligible participants (177) seems vastly different (see Table, page 22), the percentages of TANF eligible and TANF ineligible participants in this category are within 3.4 percentage points of each other (41.4% and 44.8%, respectively). However, the data indicate that TANF eligible participants progressing in their educational level but with fewer than 12 hours of program participation experience employment and enrollment difficulties at a higher rate than participants who are TANF ineligible (57.1% compared to 48.0%; see Figure 5, page 24).

ABE/GED Participants Progressing Within Educational Level With At Least 12 Hours of Program Participation

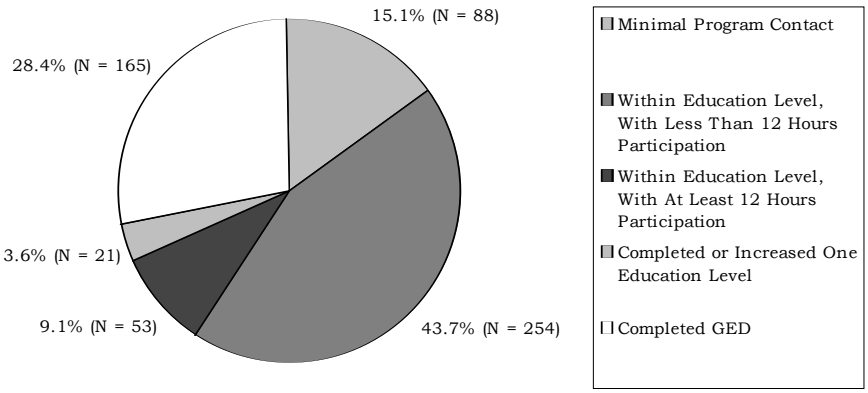
Fifty-three program participants (9.1%) progressed within their educational level

Figure 2: Employment and Enrollment Outcomes[a] for Casper College ABE/GED Participants (N - 581) by Temporary Assistance for Needy Families (TANF) Eligibility, Program Year 2001-2002



[a]Postive Outocmes includes participants who maintained or increased employment in the year after program exit or were enrolled in postsecondary education at Casper College (or did both, i.e., Unexpectedly Positive Outcome). Negative Outcome includes participants who did not obtain employment in the year after program exit or worked fewer quarters in the year after program exit and were not enrolled in postsecondary education at Casper College.

Figure 3: Casper College ABE/GED Participants (N = 581) by Progression, Program Year 2001-2002



Note: Due to rounding, percent totals do not equal 100 percent.

and had at least 12 hours of program participation (see Figure 3, page 22). About an equal percentage of TANF eligible and TANF ineligible participants (52.6% and 50.0%, respectively) in this category experienced a positive employment or enrollment outcome (see Figure 6, page 25).

ABE/GED Participants Completing or Increasing One Educational Level

Few (21 or 3.6%) of the participants completed or increased one educational level (see Figure 3, page 22). This excludes the 165 participants who had already earned their GED (see Table, page 20). Because of the small number of participants in this category, it is difficult to draw conclusions about the nature of the employment or enrollment outcomes among TANF eligible and TANF ineligible participants. However, the marginal totals seem to indicate that a higher percentage of participants who completed or increased at least one educational level had at least a positive employment or enrollment outcome (71.4%) in comparison to participants who progressed within their educational level and had at least 12 hours of participation (50.1%).

ABE/GED Participants Completing GED

GED completion is the primary goal of most Casper College ABE/GED participants. Of the 581 ABE/GED participants, 165 or 28.4 percent completed their GED (see Figure 3, page 22). Results indicate that GED completion appears effective in reducing the number of participants with negative outcomes. More than half of all GED recipients (63.6%) experienced a positive employment or enrollment outcome during the year after GED completion (see Table, page 20). Additionally, the effect of obtaining a GED on reducing the number of participants with negative outcomes appears to be even stronger among TANF eligible participants. Specifically, a smaller percentage of TANF eligible participants (27.7%) experienced negative outcomes after GED completion than TANF ineligible participants (39.8%; see Figure 7, page 25).

Conclusions

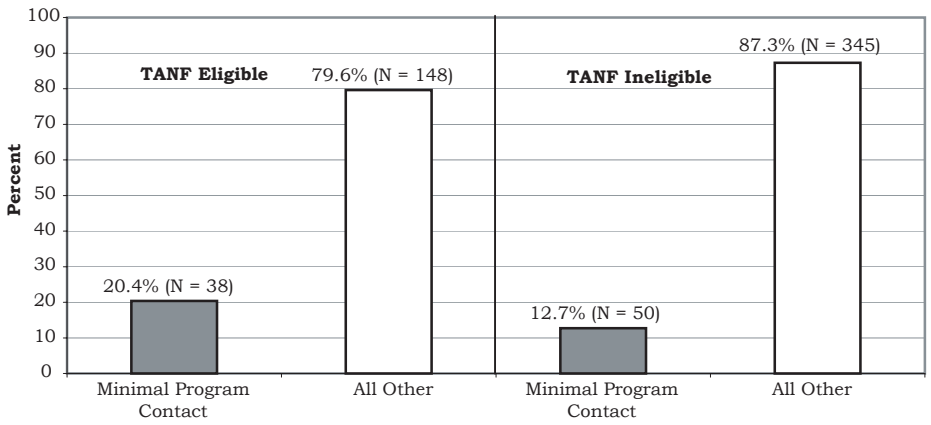
According to results presented in this study, Casper College ABE program participation appears to assist TANF eligible participants in achieving positive employment and enrollment outcomes relative to participants who are TANF ineligible. The effect appears to be particularly strong among TANF eligible participants who have earned their GED.

Participation in the initial stages (i.e., those making progress within an education level but accumulating less than 12 hours of participation) appears to be associated with negative outcomes (most likely employment difficulty at this stage) among TANF eligible participants. The rigors of program participation may necessitate a temporary withdrawal from or reduction in labor market activity for TANF eligible participants. TANF eligible participants may have less family and social network support to balance the requirements of work and school. This may also explain why TANF eligible participants are more likely to experience minimal program contact.

Implications and Future Research

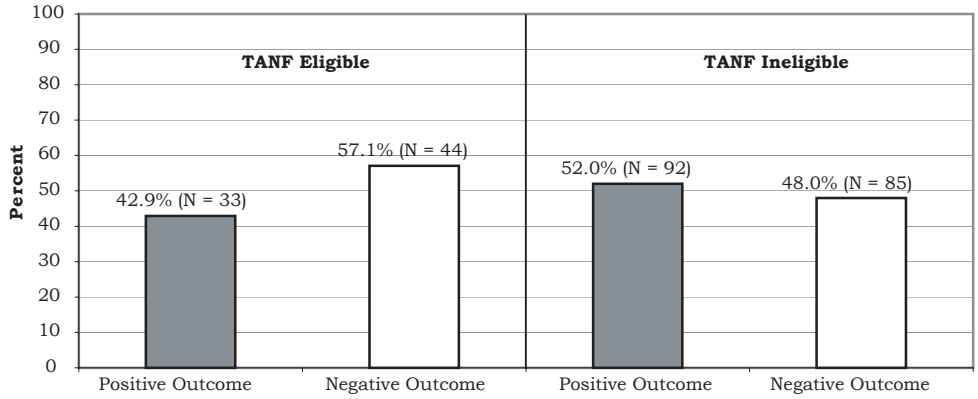
Positive benefits for TANF eligible participants appear to accrue with more ABE/GED program contact. Additional monetary and staff resources devoted to the retention of TANF eligible participants may reduce the number who leave the program with only minimal contact. Casper

Figure 4: Program Contact[a] of Casper College ABE/GED Participants (N = 581) by Temporary Assistance for Needy Families (TANF) Eligibility, Program Year 2001 to 2002



[a]Recipients with minimal program contact include those who exited the program prior to the assessment of educational level (i.e., requires at least four hours of program participation) or who exited the program prior to completion of an assessed educational level (most in this category had less than five hours of program participation).

Figure 5: Employment and Enrollment Outcomes[a] for Casper College ABE/GED Participants Progressing Within Educational Level With Less Than 12 Hours of Program Participation (N = 254), Program Year 2001 to 2002

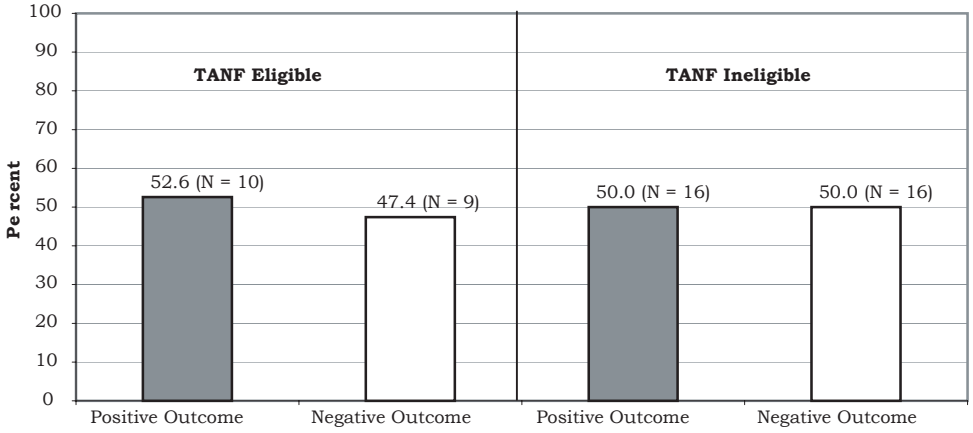


[a]Postive Outocmes includes participants who maintained or increased employment in the year after program exit or were enrolled in postsecondary education at Casper College (or did both, i.e., Unexpectedly Positive Outcome). Negative Outcome includes participants who did not obtain employment in the year after program exit or worked fewer quarters in the year after program exit and were not enrolled in postsecondary education at Casper College.

College ABE/GED staff desire to test whether monetary incentives may increase the length of time that TANF eligible participants remain in the program.

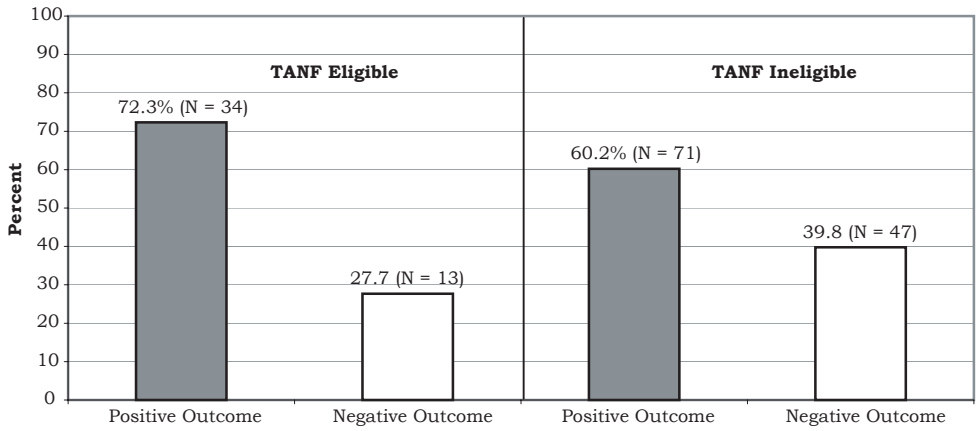
Another potential research question is whether TANF eligible participants who participate in ABE/GED programs are less likely to become TANF recipients (or spend less time on TANF) than those who do not participate in ABE/GED programs. The empirical demonstration of saving TANF dollars would represent one solid justification for the continuation or expansion of TANF-funded ABE/GED participation. The positive employment and

Figure 6: Employment and Enrollment Outcomes[a] for Casper College ABE/GED Participants Progressing Within Educatinal Level With At Least 12 Hours of Program Participation (N = 53), Program Year 2001 to 2002



[a]Postive Outocmes includes participants who maintained or increased employment in the year after program exit or were enrolled in postsecondary education at Casper College (or did both, i.e., Unexpectedly Positive Outcome). Negative Outcome includes participants who did not obtain employment in the year after program exit or worked fewer quarters in the year after program exit and were not enrolled in postsecondary education at Casper College.

Figure 7: Employment and Enrollment Outcomes[a] for Casper College ABE/GED Participants Who Received Their GED (N = 165), Program Year 2001 to 2002



[a]Postive Outocmes includes participants who maintained or increased employment in the year after program exit or were enrolled in postsecondary education at Casper College (or did both, i.e., Unexpectedly Positive Outcome). Negative Outcome includes participants who did not obtain employment in the year after program exit or worked fewer quarters in the year after program exit and were not enrolled in postsecondary education at Casper College.

enrollment outcomes shown for TANF eligible participants in the current study, particularly among those who received their GED, increase participants' self-sufficiency, decreasing their need for TANF assistance. Merging ABE/GED and Department of Family Services administrative data would allow us to definitively answer these additional questions.

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