



APPLIED ECONOMICS

***LONG TERM IMPACTS OF JOBPATH
GRADUATES ON PIMA COUNTY***

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1.0 INTRODUCTION

JobPath is a non-profit workforce development organization that sponsors unemployed and underemployed adults from Tucson and Pima County in long-term education and job training opportunities. JobPath was created in 1998 by Pima County Interfaith Council and community business leaders to meet an urgent need for job training programs in career areas with a demand for skilled workers in our community. Sponsorship includes financial assistance, wrap-around case management, mentoring, peer support and job seeking skills for participants in associate's degree or certification programs primarily at Pima Community College. Training programs include a variety of allied health care occupations, aviation technology, bioscience and other fields. JobPath's mission is to support long term job training in order to make a meaningful impact on the post-training wages of graduates.

This study is a look back at graduates from the past five years to determine whether they are currently working in Pima County and how their wage levels have increased over time. These graduates benefit from both their training and from the experience they have gained in their respective occupations. For each of the individuals that completed the JobPath program from 2010 through 2014, research was conducted using unemployment insurance records maintained by the Arizona Department of Economic Security to determine if these individuals were still working in Pima County. If so, information on current wages through second quarter 2015 was compiled and combined with information on pre and post-training wages.

This analysis is based on the best available information and is intended to aid JobPath in quantifying the value of its program relative to the cost of training. In no way will Applied Economics be held responsible or have any liability or be subject to damages as a result of this analysis. This report may be used only for the purposes that it was intended.

2.0 IMPACT SUMMARY

The following is a summary of performance metrics and economic impacts of graduates.

- Over the past five years from 2009-10 to 2013-14, 378 individuals completed the JobPath program. Of that total, 79 percent or 300 individuals are still employed in Pima County. This is a very high retention rate and demonstrates the long term benefits to the local economy of investing in education and training through the JobPath program.

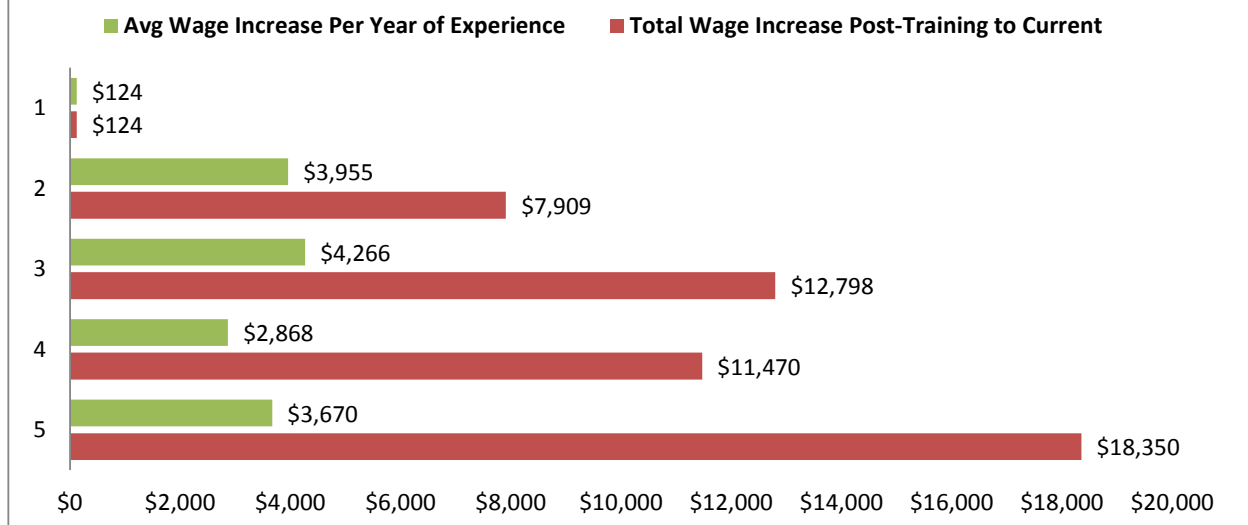
PROGRAM METRICS

	2009-10	2010-11	2011-12	2012-13	2013-14	5 Year Total
Total Graduates	85	65	63	92	73	378
Graduates Placed in Jobs Post-Training	47	51	39	76	60	273
Graduates Currently Working in Arizona	66	53	54	66	61	300
Continuing Education	2	0	0	2	3	7
Currently Out of State/Information Not Available	17	12	9	24	9	71
Percent Currently Working in Arizona	78%	82%	86%	72%	84%	79%
Average Wage Increase Pre-Training to Current	265%	421%	417%	448%	370%	NA
Average Wage Increase Post-Training to Current	69%	35%	44%	24%	0%	NA
Year of Experience	5	4	3	2	1	

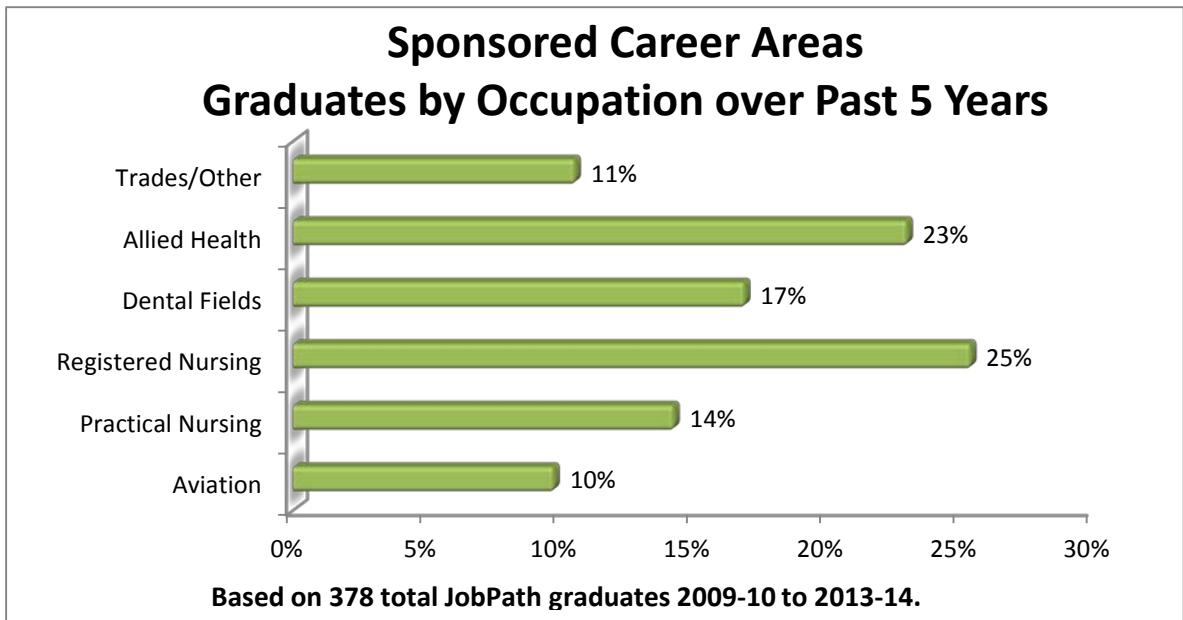
- The number of graduates currently working includes 71 individuals who were not placed in jobs immediately following graduation, but have since pursued careers within their field of training. There are also 7 more graduates who went on to pursue additional higher education and will likely re-join the local workforce in the future.
- The average wage increase from pre-training to current levels ranged from 265 to 448 percent, with many of the graduates not in the workforce prior to participating in the JobPath program.
- In comparing average wages for graduates between their first post-training job to their current job, increases range from 24 to 69 percent, depending on the length of time since program completion and corresponding years of work experience. Graduates from 2013-14 had not been working long enough to have a significant wage increase yet.¹
- On average, salaries for graduates increased by about \$3,700 per year (as compared to their initial post-training wage) for every additional year of work experience.

¹ Note that average wages included graduates who are currently employed, but may not have had jobs immediately after completing training.

Average Annual Wage Growth for JobPath Graduates Based on Years of Work Experience



- It is important to note that graduates from the 2009-10 to 2013-14 period entered the job market during one of the longest and deepest recessions in Arizona history, making their history of job retention and wage increases that much more significant.
- Workers in certain occupations benefit more from experience than others. The mix of JobPath graduates by occupation varies from year to year, but looking at graduates in specific occupations over time reveals that the following occupations benefit most from work experience in terms of the impact on wages.
 - Respiratory Therapy
 - RN
 - LPN
 - Dental Hygienist
 - Dental Assisting
 - Biotech Research
 - Medical Lab Technologist
 - Medical Coding and Billing
 - Aircraft Service Technicians
- As a result, investing in job training and education in these fields yields the greatest benefit to the local economy. About 81 percent of JobPath graduates over the past five years fall within these occupational categories.
- These occupations are also high growth occupations, all with a projected 25 percent or higher increase in the number of job openings in Arizona over the next ten years, according to the Arizona Department of Administration Occupational Projections.



- As JobPath graduates continue to contribute to the local economy, they create economic impacts by increasing production at their place of work, and also through their household spending.
- JobPath created a total economic impact of \$34.3 million on the Pima County economy in 2014-15 based on the current contributions of graduates from the past five years. A total of 300 graduates from 2009-10 through 2013-14 are currently working in the county, resulting in an increase in annual wages of \$10.0 million over pre-training levels.
- This translates into a total annual impact per person of \$114,000, or a total lifetime impact of \$5.2 million per person over a working life of 45 years.
- Economic impacts include direct and indirect jobs, personal income and output that are supported by graduates of the JobPath program. Indirect impacts are the result of the multiplier effect and capture supported supplier and consumer businesses and their employees in Pima County that benefit from this economic stimulus.
- The direct increase in annual production value created by these 300 workers is estimated at \$19.6 million. Total economic impacts include local supplier purchases by the employers of JobPath graduates in order to support additional production, and consumer spending by employees and their families. Both of these activities in turn support additional jobs, payroll and production value at other local businesses.
- This increased level of economic activity indirectly supports an estimated 132 additional jobs and \$4.7 million in annual payroll at other local businesses throughout the County through business supplier purchases and employees' spending. The figure below shows

the economic impacts created by each graduating year and the total for 2014-15. Note that these impacts are based on current wages versus *pre-training* wages.

CURRENT YEAR ECONOMIC IMPACTS OF JOB PATH GRADUATES FROM 2009-2014

Graduation Year	Direct Impacts			Total Impacts		
	Output	Jobs	Income*	Output	Jobs	Income
2009-10	\$4,160,284	66	\$2,145,959	\$7,143,893	90	\$3,085,900
2010-11	\$3,904,029	53	\$1,881,327	\$6,673,032	76	\$2,758,809
2011-12	\$3,543,046	54	\$1,815,903	\$6,306,391	80	\$2,696,507
2012-13	\$4,373,284	66	\$2,235,192	\$7,787,002	99	\$3,335,300
2013-14	\$3,604,457	61	\$1,877,839	\$6,433,558	87	\$2,774,567
Total Current Year Impacts	\$19,585,100	300	\$9,956,220	\$34,343,875	432	\$14,651,083

Source: JobPath; Applied Economics, 2015.

*Direct income represents only increase in salary over pre-training level, not full ending salary.

- The 300 graduates from the past five years who are currently working in Pima County also support increases in sales and income tax revenues. The increases in payroll attributed to these workers resulted in an estimated \$85,000 in annual city and county sales tax revenues and \$572,000 in annual state sales and personal income tax revenues in 2014-15, based on reported employee wage levels and the number of graduates in each year.

2014-15 REVENUE IMPACTS OF JOBPATH GRADUATES BASED ON CURRENT WAGES

Graduation Year	Local Impacts		State Impacts		
	City Sales Tax	RTA Sales Tax	Sales Tax	Personal Income Tax	Total Taxes
2009-10	\$15,962	\$3,990	\$44,693	\$89,484	\$154,129
2010-11	\$12,573	\$3,143	\$35,204	\$70,334	\$121,254
2011-12	\$12,157	\$3,039	\$34,040	\$67,599	\$116,835
2012-13	\$14,766	\$3,691	\$41,344	\$82,042	\$141,843
2013-14	\$12,880	\$3,220	\$36,065	\$71,055	\$123,220
Total Current Year Revenues	\$68,338	\$17,084	\$191,346	\$380,513	\$657,281

Source: JobPath; Applied Economics, 2015.

JobPath creates long term value by providing individuals with the ability to begin a career path that will allow them to increase their earnings as they accumulate experience in their selected field. This type of investment in human capital continues to provide benefits long after individuals complete the training programs. Most of these long term benefits remain within Pima County given the high retention rate of graduates within the county. JobPath produces graduates to fill positions in key growth occupations in health care, aviation and other fields. The availability of skilled workers benefits the local economy in general, plus it produces significant increases in earnings and standard of living for program graduates that continue throughout their careers.