Findings on Student Outcomes:

Results from an Employer Survey Pilot Project

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We sincerely appreciate the time and effort that employers contributed to this research, whether this involved a few minutes answering a brief survey or more extended efforts involving phone or email communications with the research team. The data that was collected from employers will provide important information for understanding the labor market outcomes of Texas college and workforce training program graduates. Demand for this type of feedback will likely grow over the next decade if the Texas legislature expands on its efforts to tie state funding allocations to labor market performance.

Finally, we thank the WDQI team at RMC for their support of this survey in everything from testing the web-based version of the survey to answering the helpline to managing the financial accounts: Chris King, Kristin Christensen, Greg Cumpton, Trevor Udwin, Amanda Briggs, Shaun Alexander, Alanna Burney, Susie Riley, and Karen White. We want to especially acknowledge the contributions of Anthony Munoz and Darien Large, who built the web-based version of the survey (along with Catherine Camillone and her staff with Information Technology Services at UT-Austin). Our particular thanks also go to Patty Rodriguez who provided essential support for logistics and protocol development, data processing, and data exchanges with TWC.

INTRODUCTION

This report presents findings from the Employer Follow-Up Survey conducted for the Texas Workforce Commission (TWC) in the fall of 2013. The Employer Follow-Up Survey collected information on the job title, full/part-time employment status, and worksite ZIP code of recent graduates from a sample of Texas postsecondary institutions and workforce training programs. The Ray Marshall Center for the Study of Human Resources (RMC) administered the Employer Follow-Up Survey on behalf of TWC to:

- Follow up with employers to collect occupational information for participants who have graduated from Texas higher education institutions and publicly-funded job training programs;
- Examine survey responses to identify the most common occupations held by recent graduates;
- Determine if graduates are entering "training-related" employment; and
- Provide feedback to policymakers, education and training providers, and other stakeholders about the employment outcomes of graduates from specific programs.

Background

The majority of employers in Texas report employees' quarterly earnings to TWC, the agency that administers the state's Unemployment Insurance (UI) system. The earnings reports, however, do not collect detailed occupational information that would enable policymakers or researchers to draw conclusions about the type or characteristics of employment. To address the information gap, the Texas Workforce Commission contracted with the Survey Research Center at the University of North Texas to field occasional surveys in the 1990s to gather occupational information directly from employers. Those surveys, conducted before the onset of strict privacy legislation and widespread internet usage, were paper forms mailed directly to employers which identified employees by name and Social Security number. Given the changing legal and policy environment around the disclosure of personally identifiable information, the survey was discontinued after 2001.

A shift in the interpretation of the Family Educational Rights and Privacy Act (FERPA) by the US Department of Education in January 2013 has created new opportunities for collaboration and data sharing between education and workforce systems for research and

evaluation. There is a growing interest in using student outcome data, including employment data, to assess postsecondary institutions and workforce training programs. In fact, in 2013 the Texas Legislature tied all state funding for the Texas State Technical College (TSTC) System to student earnings outcomes. "Using a five-year average, the system will receive about 26 cents for every dollar students earn above minimum wage, completely replacing all appropriations based on enrollment."[1] The Legislature is also exploring options for making some portion of state funding for other postsecondary institutions performance-based in the future.

To meet the reporting requirements for accountability and performance measures, TSTC and other postsecondary education and training programs need supplemental data beyond the limited data currently required for UI wage record reports. Based on data access inquiries from TSTC, the University of Texas System, and others, TWC recognized an opportunity to revive the Employer Follow-Up Survey. TWC then asked the Ray Marshall Center to conduct a pilot survey test using new technology and a limited set of personally identifiable information. This report presents the findings of that pilot effort and provides recommendations for future iterations of the survey.

[1] Kelderman, Eric. "Texas' Technical Colleges are Banking on Student Earnings." *The Chronicle of Higher Education.* September 9, 2013. Available: http://chronicle.com/article/In-Texas-Technical-Colleges/141467/

METHODS

Research Questions

Three research questions motivated the Employer Follow-Up Survey:

1. Are university, college, and workforce training graduates entering work in a field related to their studies?
2. Are university, college, and workforce training graduates entering into full-time or part-time work?
3. Are university, college, and workforce training graduates finding employment in the regional labor markets from which they graduated?

As a pilot project, the research was also driven by the question of whether internet-based tools could be used to successfully gather occupational data from employers.

Sample Construction

The sample for the TWC Employer Follow-Up Survey was built from graduate "seed" records from three sources: TSTC System, UT System, and TWC.

The seed records provided by each source included data on recent graduates including full names, Social Security numbers (SSNs), Classification of Instructional Program (CIP)[2] codes from their programs of study, and the Federal Interagency Committee on Education (FICE) institutional identifier code.

The seed records were linked using SSNs to TWC's UI wage records to determine whether recent graduates were employed in the 4th Quarter (October through December) 2012. Only graduates with employer-reported wages in that quarter were included in the survey sample. A total of 20,400 individuals, working for 9,322 employers, were identified. The number of graduates per employer ranged from one to 72, with a median of two.

TWC amended the seed record file to provide employment-related data variables including: employer name and North American Industrial Classification (NAICS) code, employer address, employer UI Account Number, and earnings in the 4th quarter of 2012. Finally, TWC sent the linked individual records for the survey sample to the Ray Marshall Center through the secure data transfer platform, Tumbleweed.

2 The Classification of Instructional Programs (CIP) is taxonomy of instructional programs and descriptions.

Survey Development and Administration

A major goal for the pilot survey project was to determine whether internet-based tools might be used to successfully gather occupational data from employers. Prior follow-up surveys were paper-based, identified employees by name and SSN, and relied on employers to return responses by mail. Growing privacy concerns and new restrictions on transmitting personally identifiable information and the use of Internet-based data collection have made that survey method obsolete.

The Ray Marshall Center built an internet-based survey to collect occupational and other data from employers using the open-source Lime Survey platform. One factor in the selection of this survey platform was the Center's prior experience with it while conducting the annual Senior Exit Surveys for the Central Texas Student Futures Project.[3] Another factor was that it allowed the survey database and responses to be received on a secure server housed at the Ray Marshall Center. The survey form was pre-populated with employee names that were visible only after an employer had correctly entered their unique, confidential TWC Account Number to access the survey. The survey consisted of three questions for each employee based on their occupation in the 4th quarter of 2012: job title; full- or part-time status; and ZIP code of the worksite location. Employers could alternately indicate that the listed individual was "not known," which included cases where the individual was not recognized at all by the employer as well as cases where the individual shared a name in common with one or more other employees and could not be distinguished based on the information provided.

Survey invitation letters signed by TWC's Executive Director and a "Quick Start Guide" (see the appendices for samples of both) were mailed through the US Postal Service to 9,322 employers based on address information primarily supplied by TWC. The Quick Start Guide provided step-by-step instructions for accessing the survey. TWC's UI employer address file includes the name and address of the organization submitting quarterly UI wage reports on behalf of the employer. In many cases the entity is the employer; however, for a growing number of businesses this function has been outsourced to a 3rd party along with payroll and other human resources functions. In some instances, the 3rd party chooses to report to TWC the

[3] For more information, see: centexstudentfutures.org

direct employer or DBA (meaning "doing business as") information on the second entry line for company identification, but it is not required and fairly uncommon. No data are collected on the name or job title of the individual submitting the wage information for follow-up, neither is phone or website information collected for the company. Center staff contacted numerous payroll firms to request direct employer address information and/or to ask that survey invitation letters be forwarded to employers; none of these requests were successful. For employers with five or more graduates in the seed records, RMC staff sought to confirm whether the employer's address matched with a payroll processing firm In some cases, staff members were able to identify an employer's address through business directories or internet search tools. Payroll processing firms were listed as the employer on record for 432 individuals.

Survey invitations were mailed out twice; the second mailing only went to employers who did not respond within six weeks of the initial invitation. The Quick Start Guide was modified for the second mail-out, and TWC announced an incentive for survey completion—all employers who completed the survey were entered into a drawing to win a new iPad AIR. Across the two mailings, the US Postal Service returned 42 letters, less than 1% of the total mail-out, as undeliverable. Those employers and the graduates they employed were removed from the sample denominator, leaving a total of 9,280 employers and 20,348 graduates.

The invitation letter and Quick Start Guide directed employers to enter a URL into an Internet browser to take the survey. Access to the survey was controlled through a required access code which was the unique TWC Account Number assigned to each employer for reporting quarterly earnings to the UI system. A toll-free helpline was established to answer questions from employers. The most common questions received related to the voluntary nature of the study; the need to further confirm an employee's identity; trouble with the online tool; or requests for information on where to find an assigned TWC Account Number. To simplify data collection, helpline staff obtained survey responses over the phone whenever possible. Information on 690 graduates (3.4% of the total sought) was collected by phone.

Survey Data Collection

The Employer Follow-up Survey was open online from October 1, 2013 through January 17, 2014. Over this period, researchers collected employer responses on 2,852 graduates (14%

of the 20,348 sought), including 140 graduates who were reported as "unknown" by the employer. Table 1 shows a breakdown of the 2,712 responses received by graduate source and level of response.

Table 1. Survey Responses Received, by Graduate Source

Graduate Source	Complete Responses	Partial Responses	Total
UT System	952	89	1,041
TSTC System	617	59	676
TWC	903	92	995
Total	**2,472**	**240**	**2,712**

Complete responses were received from employers on 2,472 graduates. A response was considered complete if the employer provided full information on an employee's job title, full/part-time status, and worksite ZIP code. There were also 240 partial responses, in which at least one of the survey questions about a graduate was left blank.

Data Processing

The research team at the Ray Marshall Center downloaded and cleaned the raw survey data file and checked the validity of each response. In some cases, web and phone responses were received from the same employer. Center staff compared the responses and clarified any discrepancies with employers when necessary; only one response per graduate was retained. Center staff then appended both the web and phone survey responses to the original data file provided by TWC and returned it to the agency for further processing through the secure Tumbleweed platform.

TWC's AutoCoder program was used to standardize the lay job title provided by employers and assign a Standard Occupational Classification (SOC)[4] code based on job title and industry of employment. TWC then assigned a training-relatedness score to each graduate's post-program employment based on a crosswalk of CIP and SOC codes. Each graduate's

[4] The Standard Occupational Classification (SOC) classifies workers into detailed occupations according to standard occupational definitions.

occupation could be classified in one of four ways:

1. Directly related
2. Closely related
3. Unrelated
4. Not scored

Graduates in the "not scored" category include 181 individuals whose job title was not provided in the employer's survey response. TWC then securely transferred the enhanced data file back to RMC using Tumbleweed.

Analytic Methods

While the relatively low number of graduates for whom occupational data was received precluded some of the planned analysis, there were sufficient data to address several of the survey's key goals. Center researchers first produced descriptive and summary statistics from the enhanced data file. The analysis was then extended to include cross tabulations based on characteristics of interest: education/training provider; CIP code; SOC title; earnings; and full/part-time status. Finally, worksite ZIP code data were used to map employment locations based on the number of reported UT, TSTC, and TWC graduates employed and their average earnings. It is important to note that the findings presented here are sample specific and are not generalizable to the larger population of graduates.

SURVEY RESULTS

The combination of administrative education and workforce records with employer survey data provides a broad set of variables for analysis. It is important to note that the sample size for each of the analyses below differs somewhat based on the nature of the partial and "unknown" responses received from employers. The discussion begins with a summary of the instructional programs completed by graduates in the survey response file (based on the Classification of Instructional Programs-CIP), then shifts to employment outcomes, including job title and findings on training relatedness, employment intensity, earnings, and worksite location.

Instructional Programs Completed by Graduates

Table 2 shows the ten most common instructional programs completed by the 2,852 graduates for whom an employer survey response was received, including a mix of occupational and academic programs. The largest proportion of these graduates majored in Business Administration and Management, representing 7.3% of the responses received, while Manufacturing and Engineering Technology Technician came in at number ten with 2.4%.

Table 2. Most Common Instructional Programs Completed by Graduates in the Survey Response Sample

CIP Title	Count	Percent (%)
Business Administration and Management	207	7.3
Biology/Biological Sciences, General	141	4.9
Truck and Bus Driver/Commercial Vehicle	128	4.5
Psychology, General	109	3.8
English Language and Literature, General	104	3.6
Accounting	92	3.2
History, General	92	3.2
Occupational Safety and Health Technology	87	3.1
Welding Technology/Welder	76	2.7
Manufacturing Engineering Technology/Technician	68	2.4

Most Common Instructional Programs by Graduate Record Source

The individuals in the survey response sample came from a diverse range of academic and training backgrounds by virtue of the higher education system or TWC job training program that contributed the graduate seed record. Researchers identified the most common instructional programs completed by these graduates and, as expected, the top three programs for the UT system, the TSTC system, and TWC training programs varied widely based on their particular areas of purview (Table 3), with those from the UT System graduating from science or liberal arts programs and those from TSTC and TWC graduating from career-specific programs.

Table 3. Top 3 Instructional Programs among Graduates in the Survey Response File, by Record Source

University of Texas System (n=1,041)		
CIP Title	**Count**	**Share (%)***
Biology/Biological Sciences, General	141	13.5
Psychology, General	107	10.3
English Language and Literature, General	104	10.0
Texas State Technical College System (n=676)		
CIP Title	**Count**	**Share (%)**
Welding Technology/Welder	46	6.8
Substance Abuse/Addiction Counseling	32	4.7
Dental Assisting/Assistant	31	4.6
TWC Job Training Programs (n=995)		
CIP Title	**Count**	**Share (%)**
Truck and Bus Driver	128	12.9
Business Administration and Management	122	12.2
Occupational Safety	75	7.5

*Percentage based on each graduate record source total.

Employment Outcomes

The analysis of employment outcomes examined multiple measures for the 4th quarter of 2012, including occupational title, the training-relatedness of the occupation, quarterly earnings, full/part-time employment status, and worksite location. Once again, the size of the analytic sample for each measure varied depending on the nature of the partial survey responses received.

Industry of Employment

Table 4 shows the ten most common industries of employment among graduates in the survey response file. Industries were identified based on NAICS codes provided in the UI wage record. Elementary and Secondary Schools were the most frequently identified industry of employment for recent graduates (13.5%), followed by Employment Services (5.5%), General Medical and Surgical Hospitals (4.4%), and Colleges, Universities, and Professional Schools (3.9%). The NAICS "Employment Services" category consists primarily of those businesses that list employment vacancies and select, refer and place applicants in employment. In the graduate sample, those in the Employment Services category were employed more frequently in office and administrative support occupations (26% in this NAICS category), management occupations (13%), production occupations (12%), and computer and mathematical occupations (11%).

Table 4. Most Common Industries of Employment (NAICS) for Graduates in the Survey Response File (N=2,826)

Industry Title	Count	Share (%)
Elementary and Secondary Schools	365	12.9
Employment Services	148	5.2
General Medical and Surgical Hospitals	118	4.2
Colleges, Universities, and Professional Schools	106	3.8
Computer Systems Design and Related Services	73	2.6
Architectural, Engineering, and Related Services	71	2.5
Justice, Public Order, and Safety Activities	66	2.3
Building Equipment Contractors	63	2.2
Support Activities for Mining	62	2.2
Executive, Legislative, and other General Government Support	62	2.2

Occupations

There were 2,703 responses (99% of total) containing job title information. Table 5 below details each of the occupations (classified by Standard Occupational Classification (SOC) System code) held by at least 1% of the graduates in the survey response file. Elementary School Teachers were the most commonly reported occupation at 4.4%, followed by Teacher Assistants (3.1%) and Computer User Support Specialists (2.5%).

Table 5. Common Occupations (SOC Code) of Recent Graduates as Reported by Employers (N=2,703)

Job Title	Count	Share (%)
Elementary School Teachers, Except Special Education	120	4.4
Teacher Assistants	84	3.1
Computer User Support Specialists	67	2.5
Heavy and Tractor-Trailer Truck Drivers	66	2.4
Mechanical Engineers	50	1.9
Customer Service Representatives	48	1.8
Secretaries and Administrative Assistants	48	1.8
Retail Salespersons	47	1.7
Accountants and Auditors	45	1.7
Secondary School Teachers, Except Special Education	44	1.6
First-Line Supervisors of Office and Administrative Support Workers	38	1.4
Maintenance and Repair Workers, General	38	1.4
Sales Representatives, Wholesale and Manufacturing	37	1.4
Automotive Service Technicians and Mechanics	36	1.3
Graduate Teaching Assistants	36	1.3
Laborers and Freight, Stock, and Material Movers, Hand	36	1.3
First-Line Supervisors of Mechanics, Installers, and Repairers	35	1.3
First-Line Supervisors of Production and Operating Workers	31	1.2
General and Operations Managers	30	1.1
Registered Nurses	30	1.1
Pharmacy Technicians	29	1.1
Welders, Cutters, Solderers, and Brazer	28	1.0
Civil Engineers	27	1.0
Licensed Practical and Licensed Vocational Nurses	27	1.0

Common Occupations of Recent Graduates by Record Source

The next three tables identify the most common occupations held by one percent or more of recent graduates from each university, college, or training system.

Common Occupations of UT System Graduates

Table 6 presents the most frequently reported occupations of recent UT System graduates for whom an employer survey response was received. Ten percent of UT System graduates were reported employed as Elementary School Teachers in the 4th quarter of 2012. Other common occupations for UT graduates in that quarter were Mechanical Engineers, Secondary School Teachers, and Accountants and Auditors.

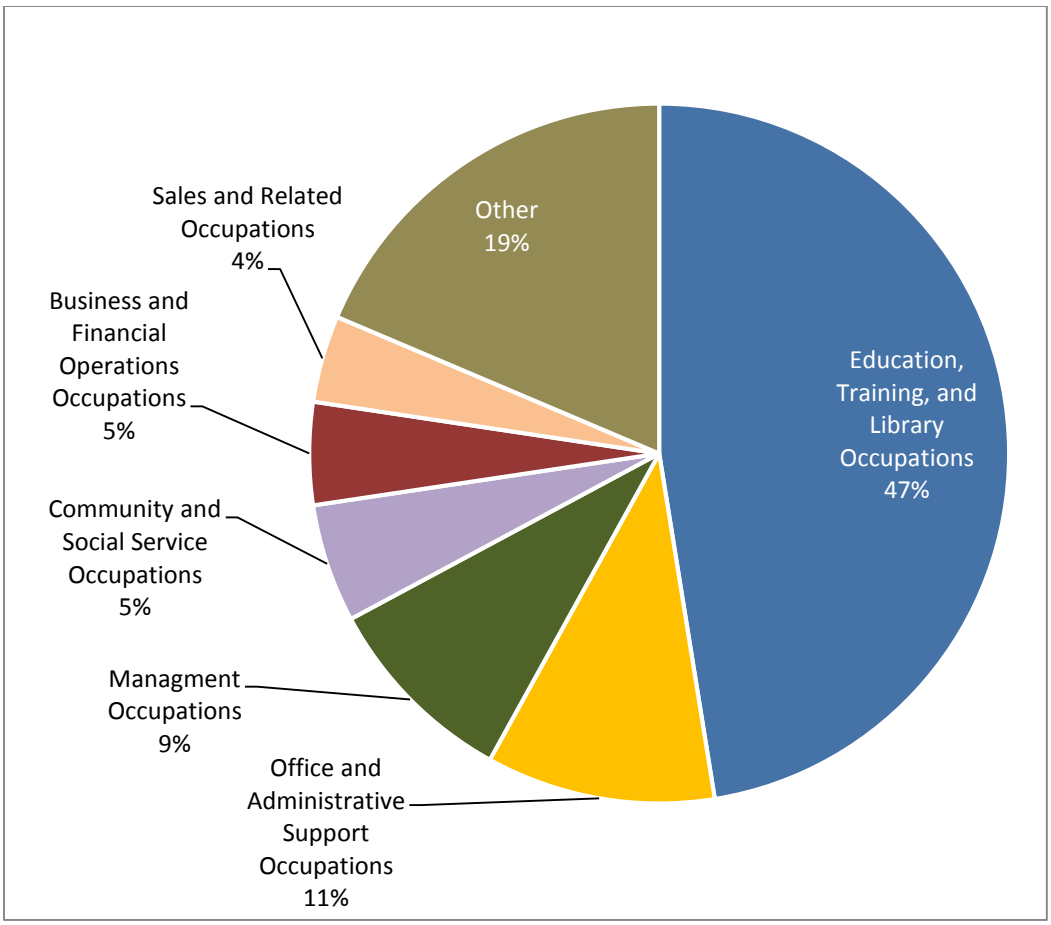
Table 6. Most Commonly Reported Occupations for UT System Graduates (n=1,037)

Job Title	Count	Share (%)
Elementary School Teachers, Except Special Education	109	10.5
Mechanical Engineers	43	4.2
Secondary School Teachers, Except Special Education	42	4.1
Accountants and Auditors	39	3.8
Teacher Assistants	33	3.2
Graduate Teaching Assistants	32	3.1
Civil Engineers	25	2.4
Social Science Research Assistants	25	2.4
Computer User Support Specialists	24	2.3
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	19	1.8
Secretaries and Administrative Assistants	19	1.8
Teachers and Instructors, All Other	19	1.8
Customer Service Representatives	17	1.6
Bookkeeping, Accounting, and Auditing	15	1.5
Retail Salespersons	15	1.5
General and Operations Managers	14	1.4
First-Line Supervisors of Office and Administrative Support Workers	13	1.3
Human Resources Managers	13	1.3
Management Analysts	12	1.2
Social and Human Service Assistants	12	1.2
Financial Managers	11	1.1

Common Occupations of UT System Liberal Arts Graduates

Graduates from the UT System who majored in a liberal arts program (n=274) held a variety of occupations in the 4th quarter of 2012; almost half (47%) were classified in education, training, or library occupations (Figure 1). That classification was comprised largely of elementary school teachers (22%), followed by secondary school teachers (6%), graduated teaching assistants (5%), all other teachers and instructors (5%), and teaching assistants (4%).

Figure 1. Standard Occupational Classifications of Jobs Held by UT System Liberal Arts Graduates, 4th Quarter 2012



Of those graduates who majored in English (n=95), by far the most commonly reported occupational classification was education, training, and library occupations (66%). Among history majors (n=85), the most commonly reported occupational categories were education,

training, and library occupations (49%) and office and administrative occupations (13%). Graduates who majored in psychology (n=94), were commonly reported in occupations such as: education, training, and library occupations (27%); office and administrative occupations (14%); management occupations (13%); and community and social service occupations (12%).

Common Occupations of TSTC System Graduates

Table 7 presents the common occupations of recent graduates from the TSTC System for whom an employer survey response was received. In the 4th quarter of 2012, the most frequently reported occupations for TSTC graduates were Teacher Assistants (4.6%), Computer User Support Specialists (4%), and Licensed Practical/ Vocational Nurses (2.8%).

Table 7. Most Commonly Reported Occupations for TSTC System Graduates (n=673)

Job Title	Count	Share (%)
Teacher Assistants	31	4.6
Computer User Support Specialists	27	4.0
Licensed Practical and Licensed Vocational Nurses	19	2.8
Automotive Service Technicians and Mechanics	18	2.7
Substance Abuse and Behavioral Disorder	18	2.7
Welders, Cutters, Solderers, and Brazer	18	2.7
Maintenance and Repair Workers, General	16	2.4
Pharmacy Technicians	13	1.9
Customer Service Representatives	12	1.8
Retail Salespersons	12	1.8
Bus and Truck Mechanics	11	1.6
Heating, Air Conditioning, and Refrigerator	11	1.6
Machinists	11	1.6
Network and Computer Systems Administrators	11	1.6
Registered Nurses	11	1.6
Correctional Officers and Jailers	10	1.5
Medical Equipment Repairers	10	1.5
Heavy and Tractor-Trailer Truck Drivers	9	1.3
Structural Iron and Steel Workers	9	1.3
Electrical and Electronic Engineering T	8	1.2
First-Line Supervisors of Office and Administrative Support Workers	8	1.2
Mechanical Drafters	8	1.2
Packaging and Filling Machine Operators	8	1.2

Job Title	Count	Share (%)
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	8	1.2
Cashiers	7	1.0
Computer Network Support Specialists	7	1.0
Educational, Guidance, School	7	1.0

Common Occupations of TWC Job Training Program Graduates

Table 8 lists the most common occupations of students who recently graduated from TWC job training programs for whom an employer survey response was received. In the 4th quarter of 2012, the most frequently reported occupations for TWC graduates included Heavy/Tractor-Trailer Truck Drivers (5.4%); Freight, Stock, and Material Laborers (3.0%); and First-Line Supervisors of Mechanics, Installers, and Repairers (2.8%).

Table 8. Most Commonly Reported Occupations for TWC Job Training Graduates (n=993)

Job Title	Count	Share (%)
Heavy and Tractor-Trailer Truck Drivers	54	5.4
Laborers and Freight, Stock, and Material	30	3.0
First-Line Supervisors of Mechanics, Installers, and Repairers	28	2.8
Secretaries and Administrative Assistants	23	2.3
First-Line Supervisors of Production and Operating Workers	22	2.2
Maintenance and Repair Workers, General	21	2.1
Retail Salespersons	20	2.0
Teacher Assistants	20	2.0
Customer Service Representatives	19	1.9
First-Line Supervisors of Office and Administration	17	1.7
Automotive Service Technicians and Mechanics	16	1.6
Computer User Support Specialists	16	1.6
First-Line Supervisors of Transportation	16	1.6
Correctional Officers and Jailers	14	1.4
Light Truck or Delivery Services Driver	14	1.4
Receptionists and Information Clerks	14	1.4
Cashiers	13	1.3
Combined Food Preparation and Serving W	12	1.2
Electricians	12	1.2
First-Line Supervisors of Construction	11	1.1
General and Operations Managers	11	1.1

Job Title	Count	Share (%)
Pharmacy Technicians	11	1.1
Machinists	10	1.0
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	10	1.0
Welders, Cutters, Solderers, and Brazer	10	1.0

Training-Relatedness of Employment

TWC analysts coded each graduate's reported occupation based on an assessment of training-relatedness developed from the CIP-SOC crosswalk, industry data, and other information. Table 9 shows that approximately two-thirds of graduates in the survey response file obtained employment in jobs directly (14%) or closely (54%) related to their education or training. About one-third of the reported graduates were employed in a field unrelated to their preparation.

Table 9. Training-Relatedness Score of Reported Occupation

Training-Relatedness Score	Count	Share (%)*
Directly-Related	374	13.8
Closely-Related	1,455	53.8
Unrelated	874	32.3
Total	**2,703**	

*percentage may not total 100 due to rounding

Quarterly Earnings by Training-Relatedness Score

As presented in Table 10, graduates who found a job directly-related to the instructional program they completed earned the highest wages in the 4th quarter of 2012. A significant pay gap appears to exist between participants who were employed in a job related to their training and those not employed in their fields. Graduates with jobs directly related to their training had average quarterly earnings of more than $10,000, while participants working in jobs unrelated to their training earned approximately $3,000 less in that quarter.

Table 10. 4th Quarter 2012 Earnings for Reported Graduates, by Training-Relatedness of Employment

Training-Relatedness Score	Mean Quarterly Earnings	Median Quarterly Earnings
Directly-Related	$10,791	$9,765
Closely-Related	$9,746	$9,044
Unrelated	$7,765	$6,673

Employment Intensity

Employment intensity measures both the number of hours worked per week and the number of weeks worked per quarter. Employers responding to the follow-up survey were asked to define full-time workers as those who were regularly scheduled for more than 35 hours per week for the entire 4th quarter of 2012. Workers who were regularly scheduled for fewer hours and those who were not employed for the entire quarter were considered part-time. There were 2,476 survey responses providing the full/part time status of identified employed graduates. The vast majority (almost 83%) were employed full-time in the 4th quarter of 2012 (Table 11).

Table 11. Full Versus Part-Time Employment Status of Graduates in the Survey Response File

	Count	Share (%)
Part-time Employment *<35 hours/week or <full quarter*	428	17.3
Full-time Employment *35+ hours/week for the full quarter*	2,048	82.7
Total	**2,476**	

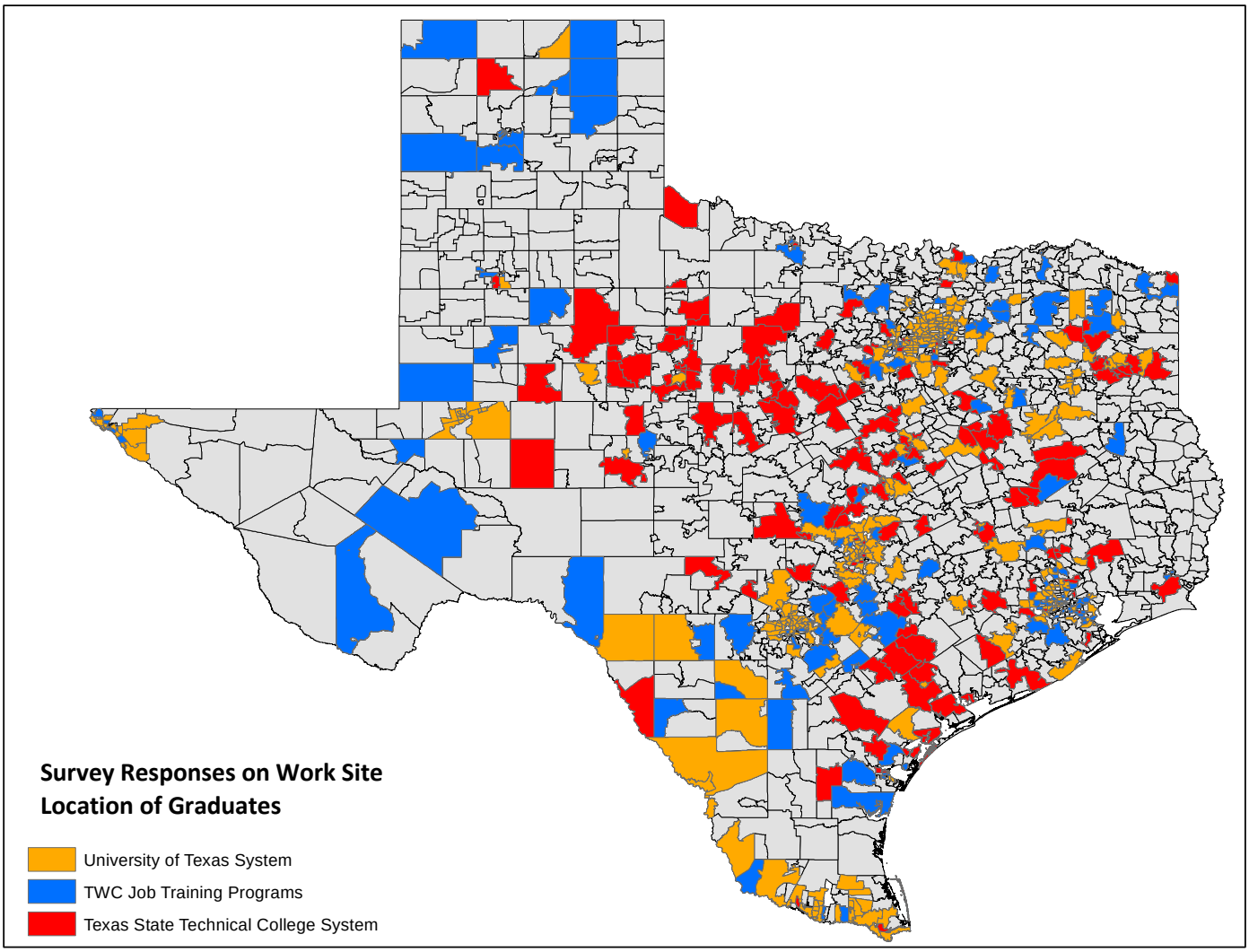
The most common occupation of graduates in the survey response file who were employed full-time in the 4th quarter of 2012 was Elementary School Teacher (4.4% of graduates), though it is worth noting that public educators typically sign 9- or 10-month contracts. Other occupations most frequently reported as full-time employment include Computer User Support Specialists (2.5%) and Teacher Assistants (2.3%).

Worksite Location

A total of 2,504 survey responses (92.3% of total) provided the employee's worksite ZIP code. As a few graduates (5) were reported as having worked in various locations and did not have a fixed worksite, these cases were excluded from the analysis, along with four invalid responses. The resulting analytic ZIP code file contains 2,495 records. The vast majority (99%) of graduates in the survey response file worked in Texas in the 4th quarter of 2012. A total of 14 graduates were reported as employees in other states: New Mexico, Arizona, Oklahoma, Arkansas, Tennessee, Missouri, Illinois, and a small region of Montana near the Canadian border.

Using ArcGIS, RMC researchers developed the Texas maps on the following pages to illustrate the geographical dispersion of employment outcomes obtained by recent graduates. Figure 2 highlights recent graduates who were reported to be employed in Texas ZIP codes by education or training provider. It is important to note that the map only displays the ZIP code results obtained through the survey; the map is not intended to provide a complete display of where graduates are employed.

Figure 2. Graduates Reported as Employed in the Zip Code, by Education or Training Provider



Figures 3-5 illustrate the range of earnings in the 4th quarter of 2012 for graduates in each reported worksite ZIP code by education or training provider. Note that these amounts represent an employee's total reported earnings for the quarter regardless of employment intensity (the number of hours per week and number of weeks that quarter the individual was employed).

Figure 3. Quarterly Earnings of UT System Graduates in the Survey Response File, 4th Quarter 2012

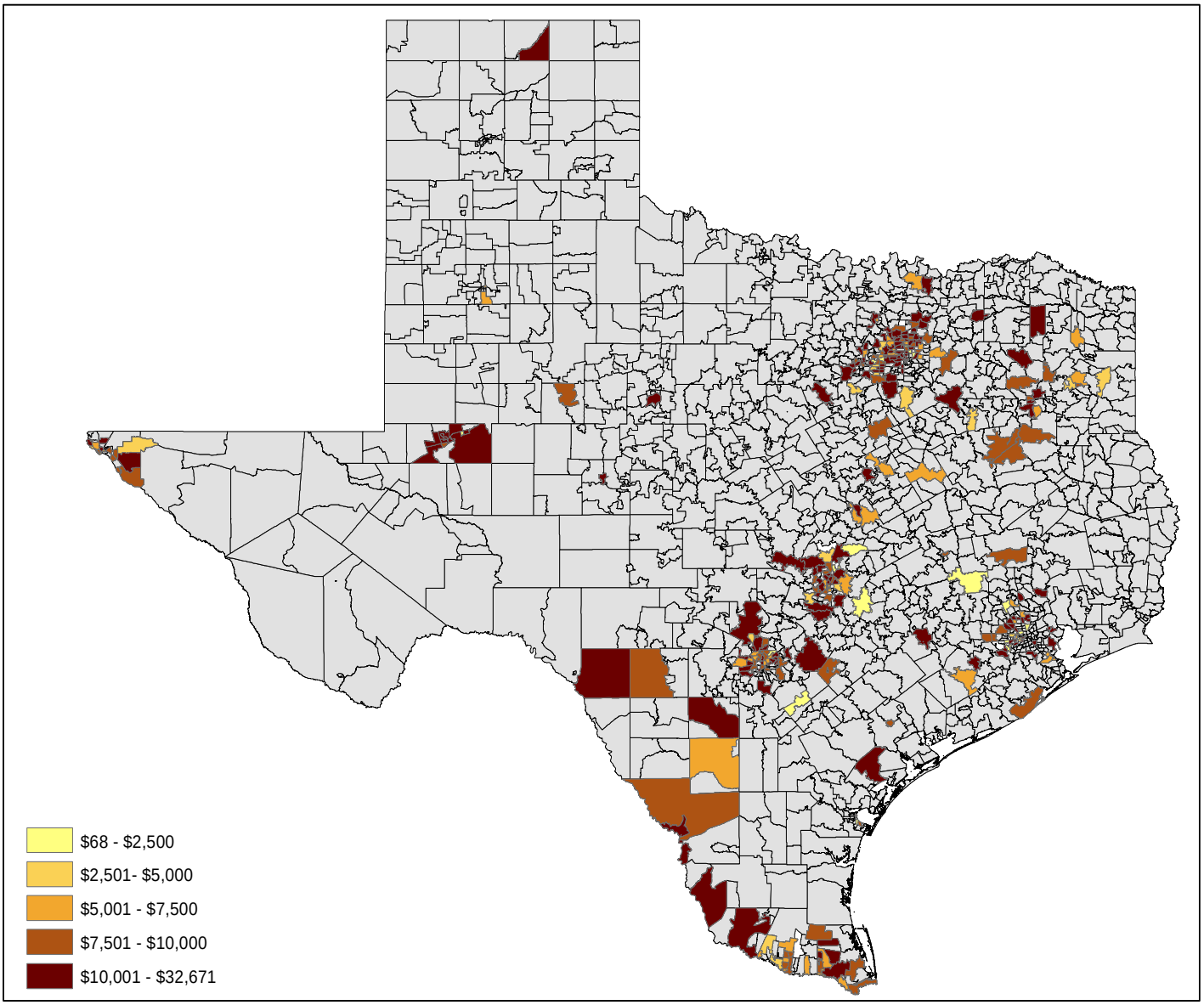


Figure 4. Quarterly Earnings of TSTC System Graduates in the Survey Response File, 4th Quarter 2012

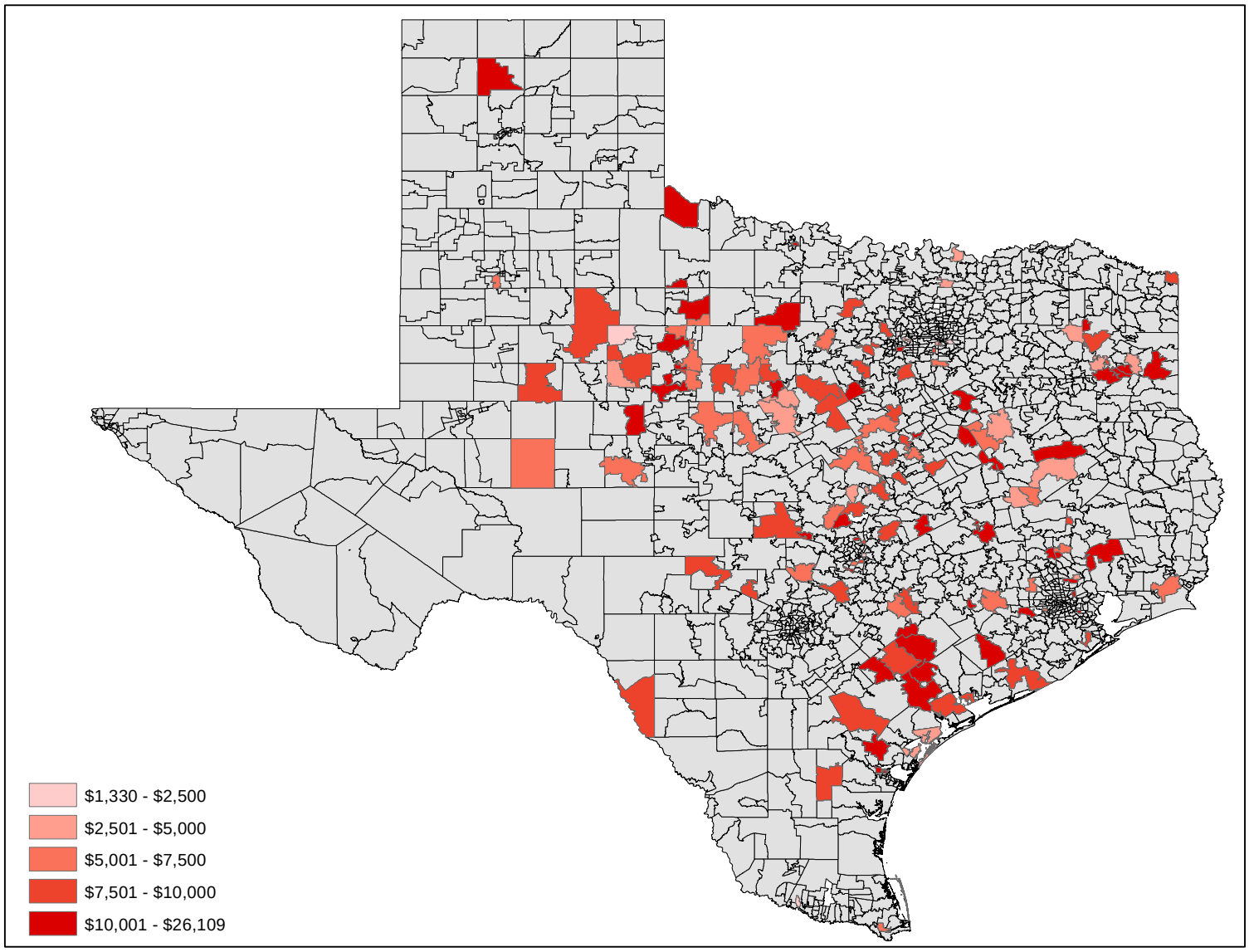
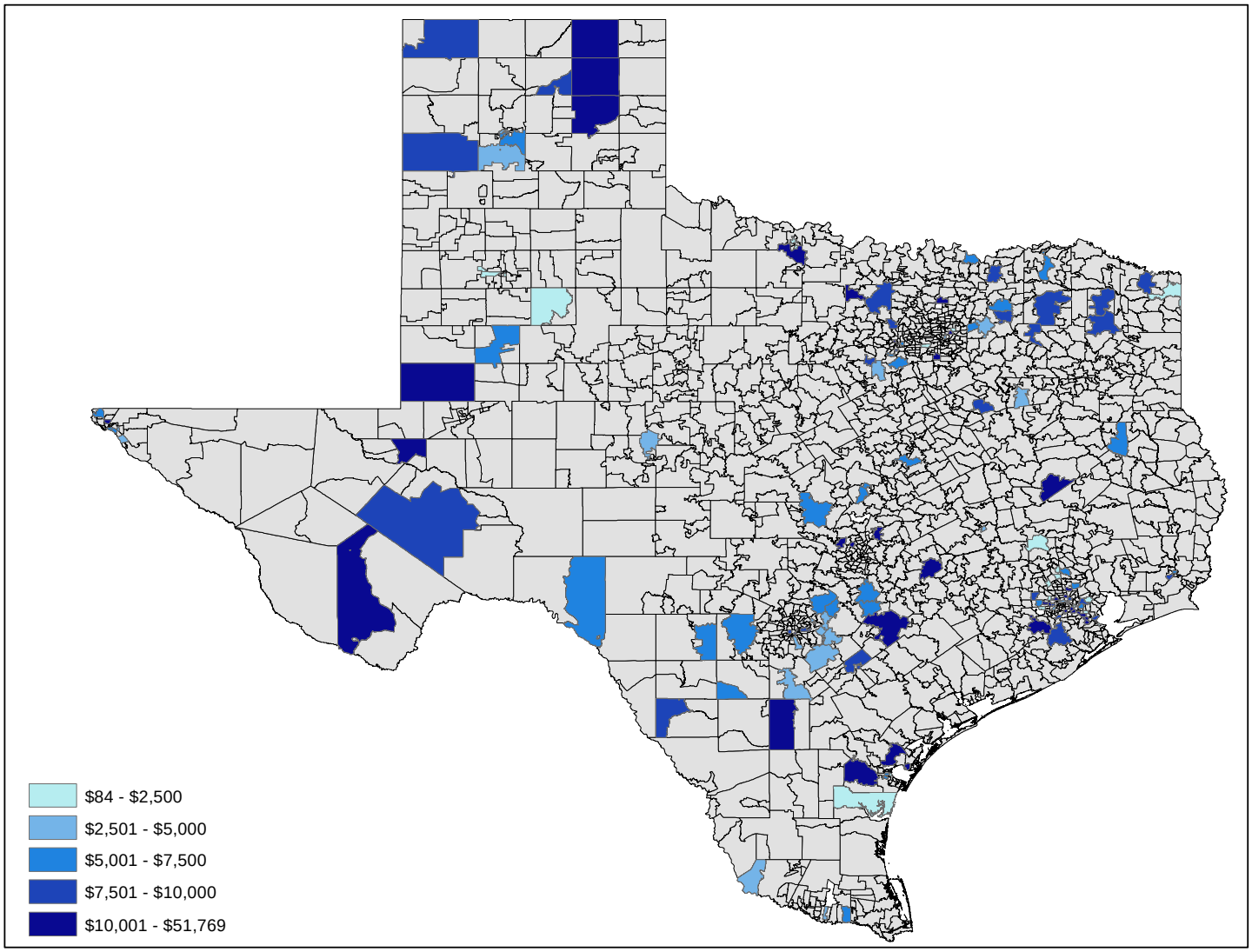


Figure 5. Quarterly Earnings of TWC Programs graduates in the Survey Response File, 4th Quarter 2012



DISCUSSION

Conclusions

Most recent graduates of Texas education and training programs appear to be entering full-time employment in training-related occupations within the state. Based on the survey responses received from employers, the vast majority (83%) of graduates for whom employers completed the follow-up survey were employed full-time in the 4th quarter of 2012. In addition, researchers found that the majority of recent graduates entered into employment that was closely- or directly-related to their training. Graduates who entered training-related employment had much higher earnings than those who did not. Half of the graduates in the survey response file were in employment closely-related to their program of study; their earnings totaled, on average, $9,746 in the 4th quarter of 2012. Earnings for the 13% of graduates who were in directly-related employment totaled the highest at an average of $10,791 for the quarter. Graduates in unrelated employment earned considerably less, averaging just $7,765 that quarter.

Study Limitations

While the survey responses received from employers did indeed provide valuable information that is unavailable from any other source, the pilot survey overall was limited in its success due to a number of factors. A brief list of issues is provided below to document the challenges presented when attempting a survey of this type.

- Targeted employers were unfamiliar with the TWC Employer Follow-Up Survey. The last time a similar study was completed was in 2001, when the survey invitation letter was signed by the Governor of Texas rather than the Executive Director of TWC.
- Public perceptions and legal interpretations of privacy and the consequences of sharing personally identified information have shifted in the intervening years. Some employers have developed strict privacy policies, while others alerted us to policies against participation in voluntary research. At many employers, access to personally identified information has been sharply restricted. All of these factors likely

contributed to the low survey response rate.

- The lack of detailed and specific contact information for employers made it difficult to request participation in the survey. As noted in the methodology section, 2% of the addresses in the UI employer files were for payroll processing companies that contract with employers to provide human resources and payroll services. Those companies were unable or unwilling to identify the direct employers of identified graduates or to share survey requests with their clients. Also, paper invitations were mailed necessarily to the general attention of Human Resources departments. In many companies, it is likely that the invitation letter never reached the desk of someone with the authority, interest, knowledge or required information needed to answer the survey.
- While the survey was intended to be completed online, survey access depended on an employer correctly typing the complete URL https://www.twcsurvey2013.org into a current version of the internet browser of your choice. Typists who failed to enter the entire "https://www" sequence often reported security warnings that further raised their concerns about participation. Others reported that entering TWC into their browser landed them on the website of Time Warner Cable. While asking employers to click on a hyperlink to participate in the survey would resolve this issue, TWC does not require employers to provide email contact information or regularly communicate with employers by email.
- The survey team underestimated the challenges in building a secure, internet-based survey in-house that would function across multiple computer platforms and internet browsers. The team also underestimated technical difficulties on the part of the employers. A significant share of employers still use Internet Explorer 7 or earlier versions, and many do not allow employees to update internet browsers or install different browsers without IT support. Further, the Lime Survey platform used by RMC researchers did not perform well on older browsers, which may have resulted in some of the partial responses or prevented some employers from responding.

Recommendations

Based on the pilot survey, the authors have developed several recommendations. First, expanded employer contact information, including an email address for the person or position responsible for reporting to TWC, should be collected by the agency. Given that most UI functions are now handled online, it makes sense that TWC should move to more digital communications with employers. Second, TWC should consider conducting a telephone survey in conjunction with a web-based survey. The RMC survey team found that employers who called the helpline and had their questions about the survey's purpose, an employee's identity, or other concerns addressed were likely to provide the requested data and often preferred to do it over the phone. Third, TWC should consider asking employers to provide survey data as an amendment to their next quarterly UI report. Providing information about current employees rather than someone who may have left employment a year ago might help to make the research more relevant to employers.

Finally, it is important to acknowledge the growing interest in expanding UI wage reports to include occupational-level details like the ones requested in the Employer Follow-Up Survey. In Texas and other states, legislative interest in performance-based budgeting will likely intensify the demand for graduate outcome data that is not currently being collected on a systematic basis. The national Workforce Data Quality Campaign (WDQC) "advocates for inclusive, aligned and market-relevant data systems used for advancing the nation's skilled workforce and helping U.S. industries compete in a changing economy."[5] The WDQC and others nationwide have highlighted multiple applications where enhanced wage records including detailed occupational information could make a significant contribution, including accountability for public education and training systems and analysis to support state and regional economic development programs.

While linkages between administrative data systems at the state level can increase the amount and types of data available for research, the lack of detailed occupational information is a barrier for program evaluation efforts. A recent report for the Workforce Information Council by the Administrative Wage Records Enhancement Study Group examined UI reporting

[5] "About: Workforce Data Quality Campaign." http://www.workforcedqc.org/about. Last accessed 07.12.2014.

requirements, wage record enhancements currently in effect, and allowable uses for UI data.[6] Twelve states require employers to report on additional data elements. Only Alaska collects SOC code data. Ten states collect data on hours and/or weeks worked and five states collect worksite information. Other data collected include pay rate, gender, pay type, date of hire, tips, and bonuses.[7] While few states require employers to report these data with their quarterly wage records, all employers nationally are required by the Fair Labor Standards Act to maintain these or similar data. Efforts to enhance wage records do not, therefore, require employers to collect any new data on their employees but rather to report additional data they already have.

Mandated employer reports offer a low-cost alternative to surveys conducted by the Bureau of Labor Statistics or state LMI departments (or the pilot Employer Follow-Up Survey presented in this report). Internet- and electronic-based records submission options have eased the reporting burden on employers: more than half of states require some or all employers to submit quarterly wage records electronically.[8] The value of occupational data for program improvement, decision-making, and accountability more than off-sets any new burden from enhanced wage record requirements. Texas policymakers and TWC should consider a pilot project asking select employers to submit enhanced wage records (collecting job title, hours/weeks worked, and worksite location) and then work with business groups to refine the process based on an evaluation of that effort.

[6] *Phase One Interim Report on the Current Practices of Unemployment Insurance Wage Record Collection and Use.* Prepared for the Workforce Information Council by the Administrative Wage Records Enhancement Study Group. January 31, 2014. Available: http://www.workforcedqc.org/sites/default/files/images/UI%20Wage%20Record%20Phase%20I%20Report%20Final%2001-31-14.pdf

[7] Ibid. Page 10.

[8] Ibid. Page 4.

APPENDIX A. SURVEY INVITATION LETTER

Texas Workforce Commission

A Member of Texas Workforce Solutions

September 12, 2013

Dear Texas Employer:

I share your commitment to economic development in our state and fully recognize that the education and training of a highly skilled workforce is important to Texas' economic development strategy. For all Texans to prosper, we must prepare students and adults to compete in a global economy.

Under authority granted by the Texas Legislature and on the advice of the Texas Workforce and Investment Council, the Office of the Governor has adopted core performance measures and standards to improve education and training programs in this state. An automated student and adult learner follow-up survey by the Labor Market and Career Development unit of the Texas Workforce Commission collects information necessary to implement the strategy. The information is important for program evaluation, for calculating returns on the investment of your tax dollars in education and training, for planning future programs, and for helping students and adults make informed career choices.

Records indicate that you employ one or more students who graduated from schools or job training programs across the state. You can find each former student's name by going to the website **https://www.twcsurvey2013.org/**. **Your password will be your Account Number assigned to you by the Texas Workforce Commission.**

I will appreciate it if you or a personnel representative of your company would provide each employee's job title and other information requested by using the online survey tool.

I am aware that this will take some effort; however, this information will help us determine the success rate of the state's education and training programs. By consolidating the information on a single online survey form, we can streamline data collection to assess public education's capacity to meet the needs of Texas employers for skilled workers. The information will be kept completely confidential, and will be analyzed by a team of authorized researchers from state agencies and educational institutions solely for the purpose of planning program improvements. No data on individual workers will ever be disclosed.

If you have any questions, please contact Dr. Chris King, the research team leader, toll-free at (888) 336-6597. I appreciate your cooperation.

Sincerely,

Larry E. Temple
Executive Director

101 E. 15th Street • Austin. Texas 78778-0001 • (512) 463-2222 • Relay Texas: 800-735-2989 (TDD) 800-735-2988 (Voice) • www.texasworkforce.org

APPENDIX B. QUICK START GUIDES

The guide on this page was mailed with the first round of survey invitations in October 2013.

Survey Quick Start Guide

1. Get your TWC Account Number ready
2. The survey is on a secure website. Please enter this entire link into your browser, including the https://

   https://www.twcsurvey2013.org
3. Enter your TWC Account Number
4. Click next to begin the survey
5. Enter contact information for the person completing the survey
6. Enter the requested personnel information for the employees listed
7. Provide feedback on the survey

This survey should take approximately 15 minutes, depending on the number of employees listed.

Please contact Judy Chen with any questions about this survey:
judy.chen@raymarshallcenter.org
Phone: 512-471-5459
Toll-free: 1-888-336-6597

The guide on this page was mailed as the reverse side of the survey letter in the envelope marked "Second Request – Please Respond" mailed to employers in November 2013.

To thank you for your participation in our survey, your company will be entered into a drawing to win a brand new iPad AIR after the survey is complete!

Survey Quick Start Guide

1. You will need your TWC Account Number to start the survey
2. Open up the survey website in any of the following browsers: **Internet Explorer 10, Mozilla Firefox, Google Chrome, or Apple Safari**. If you do not have any of the browsers listed above, or are unsure of the browser you are currently using, please contact Judy Chen at judy.chen@raymarshallcenter.org directly for additional assistance.

   The survey is on a secure website. **Please enter this entire link** into your browser https://www.twcsurvey2013.org (including the **https://**)
3. Enter your TWC Account Number.
4. Click **"Next"** to begin the survey.
5. Enter contact information for the person completing the survey.
6. Enter the requested personnel information for the employees listed.
7. Provide feedback on the survey.

This survey should take approximately 15 minutes, depending on the number of employees listed.

Please contact Judy Chen with any questions about this survey.
judy.chen@raymarshallcenter.org
Phone: 512-471-5459
Toll-free: 1-888-336-6597

Tips for Completing the TWC Survey

What is the TWC Account Number?
Each employer who pays into the Unemployment Insurance system through the Texas Workforce Commission is assigned a unique TWC Account Number. You need this number to complete the survey. If you do not have a TWC Account Number, please contact Judy Chen at judy.chen@raymarshallcenter.org directly for additional assistance.

What if the survey link does not work?
Please make sure that you have **typed in the entire link**, or else the browser might prompt you to go to another website instead of the TWC survey.

What if the individual is no longer employed?
Your organization should have hired every employee listed in the **4th Quarter of 2012**. For the timeframe, if you identify anyone who no longer works for you, please provide the most recent information for the individual

What if the mail is not addressed to my business?
If the letter is sent to you, but addressed to a different organization, please return the mail to the Texas Workforce Commission.