6-1-2005

Training and Education Needs for Valencia County: A Survey of Businesses in Valencia County

Billy Ulibarrí

Robert Grassberger

Follow this and additional works at: https://digitalrepository.unm.edu/bber

TRAINING AND EDUCATION NEEDS FOR VALENCIA COUNTY

A Survey of Businesses in Valencia County

June 2005

UNIVERSITY OF NEW MEXICO

BUREAU OF BUSINESS AND
ECONOMIC RESEARCH

The University of New Mexico

TRAINING AND EDUCATION NEEDS FOR VALENCIA COUNTY

A Survey of Businesses in Valencia County

Robert Grassberger, Ph.D.
Billy Ulibarrí, MA

June 2005

UNIVERSITY OF NEW MEXICO

BUREAU OF BUSINESS AND
ECONOMIC RESEARCH

The University of New Mexico

Table of Contents

Tables

Figures

Acknowledgements

Executive Summary

The University of New Mexico – Valencia Campus (UNMVC) retained the Bureau of Business and Economic Research (BBER) to survey local organizations about their perceptions of the current workforce and their training and educational needs.

A phone survey was conducted over a ten day period during the last week of May and the first week of June 2005. Over 900 phone calls were made resulting in 187 usable responses. The sample frame was obtained from the New Mexico Department of Labor and stratified by the number of persons employed. Because organizations of 20 or more employees constitute almost two-thirds of Valencia County employment and payroll, these organizations were sampled heavily. All organizations of over 50 employees were contacted as were a random sample of roughly half of those between 20 and 49 employees. There were 39 usable responses from those who employed 20 or more. Another 139 usable responses were received from organizations of less than 20 employees. There were 9 interviews conducted with organizations of unknown employment size. The 187 respondent organizations represent an estimated 14 percent or more of the total employees in Valencia County.

The collected data were categorized into three broad areas: respondent profile, workforce demographics, and educational needs.

The respondent profile assessed responses to questions interviewees were asked about their perceptions of their organizations and the local economy. When asked about growth in business activity over the past six months, 36 percent had experienced some growth and another 28 percent said that things were booming. Only 14 percent said that activity was down. When asked about their perception of the Valencia County economy 68 percent of respondents found it good or very good. Finally, when asked about plans for expansion, 61 percent indicated some plans for adding new employees over the next three years. An average of 12.9 new employees per organization was found for those who said they would add personnel. Firms of less than 20 persons believed they would add substantially more people on average than those over 20. If those who responded to the survey add the number of employees indicated here, another 1,367 new jobs will be generated in Valencia County.

Interviewees were also asked about their perceptions of the Valencia County workforce. When asked if the skill levels they needed were in the current labor force, 61 percent said they were. When asked about the work habits of the local workforce, 33 percent of respondents were neutral. However, 40 percent said they were satisfied or very satisfied. Only 26 percent were dissatisfied or very dissatisfied with the work habits of the existing workers. Lastly, those interviewed were asked if they believed that drug use affected the number of suitable employees in the area. A resounding 81 percent either agreed or strongly agreed that drug use reduced the number of persons suitable for employment.

Only 19 percent did not believe that drug use affected the number of employees in the region.

The last section of this report looks at the education and training needs of those interviewed. When asked about licenses and certifications required for those they employed, interviewees supplied diverse responses. Many of the licenses and certificates were industry specific. At the top of the list were licenses and certificates related to the building trades followed closely by health care certifications and licensure (e.g., nursing, pharmacy, and paramedic). Although not technically a certificate or license, also high on the needs list was higher education – a bachelor's degree or higher.

Respondents were asked to use a scale to rank the importance of several skill sets. Almost 90 percent of those interviewed said that teamwork and communication skills were very important. Similarly, when asked about the importance of problem solving skills and the ability to communicate in English, 75 and 73 percent respectively of respondents found these skills to be very important. Responses were more evenly distributed for the importance of the ability to speak Spanish or for bilingualism.

Three questions were designed to determine the minimum levels of skills acceptable to employers. Respondents were provided with examples of the levels of literacy, math, and computer skills and asked to state which level was most appropriate. With regard to literacy, about half of respondents said they needed employees to have intermediate skills like being able to read the newspaper while just over 40 percent said they needed for their workers to have advanced reading skills such as the ability to read industry and trade journals. Some 60 percent of respondents said they require those they employ to have the ability to do intermediate math such as conversions. Only 8 percent said they needed their workforce to have complex math skills like algebra or statistics. A surprising 30 percent of those interviewed said that those who worked for them needed no computer skills whatsoever. Another 39 percent said that basic computer skills such as data entry or word processing were needed and 23 percent required intermediate skills such as using spreadsheets or databases.

Respondents were asked two open-ended questions – first about any skill sets specific to their industry that were missing in the local workforce and second about the need for custom training developed by UNM – Valencia Campus. The responses collapsed to three major categories in the case of both questions – business and vocational skills, soft skills, and higher education and specialized training. Business and vocational skills include such things as office skills, building trades, or automotive training. Soft skills include problem solving, work ethics, customer service, and communication. Higher education and specialized training involves classes fulfilling degree requirements and white-collar skill sets.

For both questions, i.e., the skill sets missing in the local workforce and the need for custom training, four outdistanced all the rest. First, a substantial number of respondents saw a deficit in the availability of those with higher education and the need for enhancing what was offered at the Valencia Campus. The last three were all classified as soft skills

but were mentioned far and away more frequently than any others. These were: communication skills, specifically customer service and training for sales people; language skills, the ability to read, write, and speak to others; and work ethics, the ability to be dependable, reliable, and honest.

Introduction

The University of New Mexico Valencia Campus is located in Tome, New Mexico, halfway between Belen and Los Lunas, the two main population centers of Valencia County. The campus occupies 150 acres of rural land overlooking the Rio Grande Valley to the west, the Manzano Mountains to the east, and historic Tome Hill to the north. As a branch college of the University of New Mexico, UNM Valencia Campus is fully accredited by the North Central Association of Colleges and Secondary Schools.

The Mission of the University of New Mexico – Valencia Campus is to provide community residents with lifelong educational opportunities in order to better prepare them to actively participate in the world as productive, responsible, and creative individuals. The Valencia Campus, a branch college of UNM, is an open-access, student-centered institution which offers a variety of associate degrees, certificate, and credential programs. The courses offered by UNM – Valencia Campus provide basic skills, transfer credits, technical career training, and non-credit community education.

The UNM – Valencia Campus retained the Bureau of Business and Economic Research (BBER) in May 2005 to query local employers about their current and future educational and training needs. The BBER has performed assessment and impact research for State organizations and businesses for over 60 years. This project dove-tailed well with the BBER's other research focusing on workforce development within the State.

Valencia County Labor Overview

Employment

Both the number of people in the labor force and the number of persons employed in Valencia County have grown steadily, if slowly, over the past several years. Employment has grown at an annual rate of about 1.4 percent, with the labor force growing slightly faster at 1.7 percent per year. The working-age population (18 to 64 years) has grown since 2000 at an annual rate of about 1.3 percent; thus, employment growth has kept pace with population but not with the increase in the labor force. At the same time, unemployment has steadily increased from 3.9 percent in March 2000 to 5.9 percent in March 2005.

Valencia County's labor market is highly integrated with the greater Albuquerque labor market. Of the 31,545 employed workers[1] who live in Valencia County, 13,315[2] work in

---

[1] New Mexico Department of Labor, Economic Research Analysis, Table A – Civilian Labor Force, Employment, Unemployment, and Unemployment Rate – average for the third quarter of 2004.

covered jobs[3] in Valencia County. Thus, 58 percent of the Valencia County workforce commutes to other places for work.

Figure 1 shows where people are employed in Valencia County. The data has been aggregated into NAICS supersectors – groupings of two-digit industry sectors that are used later in the report. As can be seen, the largest share of employment is in public administration with 29 percent of the total. Public administration includes federal, state, and local government jobs. Trade, transportation, and utilities is also large with a 24 percent share of those employed. This supersector includes all of those employed in wholesale and retail trade as well as those in transportation and utilities.
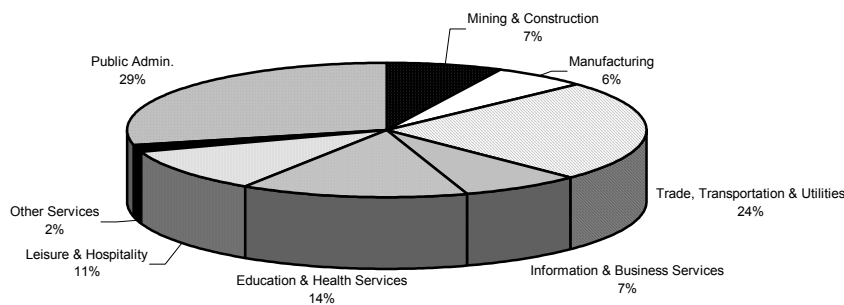
Source: New Mexico Department of Labor,
Quarterly Census of Employment and Wages Third Quarter 2004.

Figure 1. Percent of employment by NAICS supersector, 2004

Looking at employment trends by sector, most industries have maintained a constant share of total Valencia County employment from January 2001 to September 2004. Exceptions are public administration, which decreased from 33 to 29 percent of covered employment, and education and health services, which increased from a 9 to 14 percent share of employment.

The average rate of turnover[4], that is, the number of jobs vacated and filled as a proportion of total stable employment, is about 15 percent for all industries from 2001 to 2004. The leisure and hospitality sector has a higher turnover rate by about 10

---

[2] The most recent data is from the third quarter of 2004 and shows 9,931 persons employed in the private sector and another 3,384 in public administration in Valencia County. Thus, 13,315 / 31,545 or 42% of those employed work in Valencia County.
[3] Covered employment jobs are those covered by state unemployment insurance or by federal employment insurance. These account for about 97 percent of jobs in New Mexico. Source: US Bureau of Labor Statistics and New Mexico Department of Labor.
[4] The formal definition of the turnover rate is as follows: Turnover = (1/2)*(Accessions+Separations)/Full Quarter Employment. "Accessions" is defined as the number of workers employed during the current quarter but not in the previous quarter. "Separations" is a measure of the number of workers employed in the current quarter but not in the subsequent quarter. Full quarter employment is the number of workers employed in the current, previous, and subsequent quarters.

percentage points, on average, while educational and health services appears to have the lowest turnover rate at about seven percentage points below average.[5]

Wages

Real wages of Valencia County private establishment workers have decreased by 4.9 percent from the first quarter of 2001 to the first quarter of 2004. Real wages are calculated by accounting for the increase in consumer prices; the percentage change in consumer prices is subtracted from the percentage increase in reported wages to get the percentage change in purchasing power, or real wages.

The decrease in real wages is driven mostly by double-digit percentage decreases in the average real weekly wage of workers in the information, services, education, and health services sectors. Overall, workers in the service-producing sectors saw average real weekly wages decrease by five percent. The only increases in weekly wages were for workers in leisure and hospitality (14.3%) and natural resources and mining (7.3%)[6].

Educational Attainment

As depicted in Figure 2, 55 percent of Valencia County's population older than 25 years have attained at most a high school diploma. Of this 55 percent of the over-25 population, 33 percent have attained a high school diploma. Twenty-one percent of the population have some degree beyond high school (including associate's, bachelor's, master's, and doctoral/professional degrees). An additional 24 percent have had some college but have not attained a degree beyond high school.

Compared to the state, Valencia County has lower levels of educational attainment. In New Mexico, 47 percent of the over-25 population has a high school diploma or less education, and 30 percent have some degree beyond a high school diploma (see Figure 3). A notable difference between Valencia County and the state is the seven percent difference in those who do not advance beyond a high school education. The number of persons with some college and associate's degrees is roughly parallel. At the state level, this difference pops out of the educational pipeline as bachelor's and advanced degrees.

---

[5] Turnover rate information comes from the Quarterly Workforce Indicators (QWI), which is the result of a state-Census partnership to track employment and demographic data longitudinally. The data essentially tracks jobs and the people who fill them over time. Thus, the program is able to track how long an individual is in a job, and counts jobs even when a person holds more than one (since it is based on employer UI records).
[6] Real wage calculations by industry are particularly sensitive to end point bias due to seasonal variation, i.e. the change in real wages may be different depending on whether first or fourth quarter of 2001 and 2004 are chosen as the end points for analysis. In this case, the numbers change somewhat, but the basic story of decreasing real wages remains intact. Also, the particular industries mentioned here show similar trends regardless of the end points chosen. The industries not mentioned show changes in real wages close to zero, so they may switch from slightly negative to slightly positive depending on the end point.

As will be discussed later in the findings of the interviews, many of the employers indicated a desire for employees with post-high school degrees.
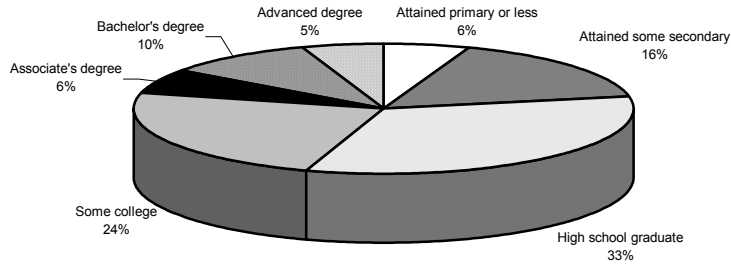
Source: U.S. Census Bureau, *Decennial Census,* 2000

Figure 2. Educational attainment of those over 25 years of age in Valencia County, 2000
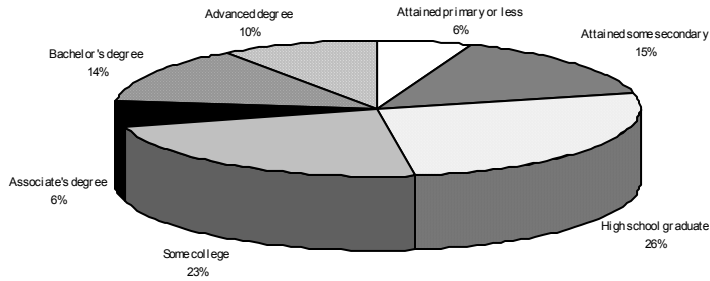
Source: U.S. Census Bureau, *Decennial Census,* 2000

Figure 3. Educational attainment of those over 25 years of age in New Mexico, 2000

Methodology

BBER and UNM – Valencia Campus (UNMVC) staff met in mid-May to clarify the goals and objectives of the research. Because of the short time frame allotted for completion of this study, it was determined that the best mechanism for accomplishing the objectives was a phone survey of employers served by UNMVC.

Using previous studies as a guide and, in concert with the new information needs of UNMVC determined in the May meeting, a questionnaire was designed. As per the request of UNMVC, questions were added targeting basic adult educational needs and issues related to the quality of the existing workforce. The developed instrument was reviewed by UNMVC and returned to the BBER for piloting. BBER piloted the instrument with several organizations external to those in the sample frame. Based on the pilot, one question was redesigned to enhance clarity and assure responses related to the established needs of UNMVC. The survey tool is included in Appendix A.

Concurrent with the designing and piloting of the questionnaire, the BBER developed the sample frame. In the BBER / UNMVC meeting, a list was developed of large employers served by the Campus that needed to be included in the survey. These were organizations employing in excess of 200 persons or, in some cases, organizations in process of locating large operations in the service area. The BBER acquired a list of all employers in Valencia and Socorro Counties from the New Mexico Department of Labor (NMDOL). Under an existing MOA with NMDOL, BBER was able to obtain listings of organizations, addresses, number of employees, phone numbers, industry classifications, and other variables for employers in the counties of interest. Table 1 shows the sample frame stratified by number of persons employed and NAICS supersector.[7] A total of 2,165 employers were included in the frame. The number of employers is shown in the table below according to the industry and the employment-size category. As can be seen from Table 1, 65 percent (1,411 / 2,165) of those in the frame employ from 1 to 4 persons.

---

[7] The list provided by NMDOL does not provide the actual number of employees. Instead organizations are classified by 8 employment size categories – 1 to 4, 5 to 9, 10 to 19, 20 to 49, 50 to 99, 100 to 249, 250 to 499, and 500+ employees.

Table 1. Sample Frame of Employers from Valencia County

NAICS Supersector	Number of Persons Employed					Total
	1 to 4	5 to 9	10 to 19	20 to 49	50+	
Mining & Construction	188	22	18	11	1	240
Manufacturing	50	11	6	2	3	72
Trade/Transportation & Utilities	345	102	43	20	7	517
Information & Prof. Business Services	365	67	27	10	4	473
Education & Health Services	87	34	27	34	38	220
Leisure & Hospitality	86	32	55	38	5	216
Other Services	224	36	16	3	1	280
Public Administration	66	35	24	15	7	147
Total	1,411	339	216	133	66	2,165

In drawing the sample, the sample frame was stratified based on those employing less than 20 persons and those employing 20 or more. Organizations employing 20 or more persons account for 66 percent or more of head count and payroll dollars.[8] Thus, these organizations were considered key because of the numbers they employ and the resources they have to direct to training and education. Consequently, all 66 of the firms in the 50+ category and a randomized list of roughly half of those employing 20 to 49 were contacted – however, not all responded to the survey.[9] Those 1,966 organizations with less than 20 employees were assigned random numbers, and sampled accordingly.

Three common methods are typically employed in conducting surveys – the mail survey, the phone survey, and the interview or face-to-face survey. All have unique advantages and disadvantages. Because mail surveys and field interviews are time costly, it was decided that the most efficient method for this survey was via telephone. The list provided by the NMDOL furnished both company names and phone numbers. One disadvantage of phone surveys is the ability to connect with the correct party. On average, four phone calls will have to be made to get one completed survey because of wrong numbers, disconnected numbers, unanswered phones, answering machines, and unwilling or unavailable respondents.[10] A phone bank comprised of 8 staff and students made 986 phone calls during ten days in late May and early June 2005. From these phone calls, 187 useable responses were obtained. These results are shown in Table 2 below.

---

[8] See NMDOL Fast Facts at http://www.dol.state.nm.us/pdf/FandF04.PDF and the US Census Bureau, Statistics of US Business: 2001: New Mexico at http://www.census.gov/epcd/susb/2001/nm/NM--.HTM
[9] Of the 38 organizations of 50+ employees in the Education & Healthcare Services Supersector, 32 (84%) were area primary and secondary schools who were no longer in session at the time of the survey. While phone calls were made to all on this list, contacting these schools proved to be less than fruitful.
[10] Quigley, Patrick and Bob Wallach (2004), "Online Market Research: Trends and Technologies," American Marketing Association Seminar presented via WebEx Event Center, http://amaseminars.webex.com/.

Table 2. Respondents by Industry Group and Employment-Size

NAICS Supersector	Number of Persons Employed		Total
	Less than 20	20 or more	
Mining & Construction	16	2	18
Manufacturing	4	4	8
Trade/Transportation & Utilities	36	7	43
Information & Prof. Business Services	32	13	45
Education & Health Services	13	3	16
Leisure & Hospitality	12	4	16
Other Services	12	5	17
Public Administration	14	1	15
NEC[1]	unk[1]	unk[1]	9
Total	139	39	187

1 Not elsewhere classified -- NMDOL data were not provided as to employment size

Thus, the 39 responses obtained from the 199 organizations in the survey region with 20 or more employees represent approximately 21 percent of those who employ two-thirds of those employed in Valencia County. Another 139 surveys were completed with organizations of less than 20 employees – reflecting the responses of smaller firms employing one-third of the county's employee workforce. Finally, another 9 interviews were conducted with organizations that had no associated employment-size characteristics listed in the NMDOL database.

Because the data about firm size were provided in ranges rather than actual number of employees, one can not say with certainty how much of Valencia County's workforce is represented in this sample. However, by using the minimum number from each category (e.g., 1 to 4 = 1employee, 5 to 9 = 5 employees, etc.) and multiplying by the number of respondents in each employment-size category one can make an estimate the number of employees represented by organizations surveyed here. Thus, the 187 interviews completed represent the responses of organizations that, at a minimum, employ almost 14 percent (1,846 of 13,315) of Valencia County workers. As several organizations are known to exceed these minimum employment assumptions, this represents a conservative estimate of the representation of this sample. If instead, one were to do the same calculation using the range mean instead (1 to 4 = 2, 5 to 9 = 7.5[11]), the result would be 2,502 / 13,315 or representative of almost 19 percent of those employed in Valencia County.

Supersectors

The data list provided by NMDOL also contained two-digit North American Industry Classification System (NAICS) codes.[12] The two-digit codes categorize organizations based on common industry characteristics e.g., manufacturing, construction, etc. There are 20 two-digit codes in the 2002 NAICS system. Because of the large number of codes

---

[11] Those organizations of 50 or more were assumed to average 60 persons in this calculation.

[12] The North American Industry Classification System (NAICS) replaced the U.S. Standard Industrial Classification (SIC) system. NAICS was developed jointly by the U.S., Canada, and Mexico to provide new comparability in statistics about business activity across North America.

and the relatively small number of organizations in Valencia County, the two-digit codes were difficult to table in a meaningful way. Therefore, the two-digit codes were aggregated into eight "supersectors." The supersectors are as follow:

1. Mining and Construction
2. Manufacturing
3. Trade[13], Transportation, and Utilities
4. Information[14] and Professional Business Services[15]
5. Education and Health Services
6. Leisure and Hospitality
7. Other Services[16]
8. Public Administration

Where appropriate, for descriptive purposes, the data in this report have been presented as cross tabulations using the supersectors on one axis. While the aggregate data is statistically sufficient for inference, the data across the individual supersectors are provided descriptively – as additive to the broader findings of this study. When data is stratified by supersectors, one must be cautious in making inferences as the resulting sub-samples are often too small to support inferential analyses.

---

[13] Includes retail and wholesale trade.

[14] Includes publishing, motion pictures, broadcasting, internet publishing, and telecommunications.

[15] Includes finance, real estate, accounting, legal, engineering services, etc.

[16] Includes repair and maintenance (including auto); personal and laundry services; religious, grantmaking, and civic organizations; private households.

Results

Rather than present the results as tabulations of each question, the questions have been grouped into three categories – respondent demographics, workforce profile, and educational needs. Respondent demographics discusses responses to questions asked about organizational growth and perceptions of the health of the economy. The workforce profile section looks at respondent perceptions of the Valencia County workforce. Finally, educational needs reviews the perceived needs and deficits in training and education in Valencia County.

Respondent Demographics

As presented earlier, 187 organizations were interviewed via phone survey in a 10 day period during late May and early June, 2005. Referring back to Table 2, 139 (74%) of the respondents were from organizations employing less than 20 persons, 39 (21%) were from organizations of 20 or more employees, and 9 (5%) respondents were from organizations of unknown size. In total, those interviewed represent organizations that employ at least 14 percent of Valencia County's paid workers.

Of the 16 questions asked in the interviews, three were devoted to perceptions about the organization and the local economy. Depending on the response, follow up questions were asked to clarify or expand those responses. This section is based on these collected data.

Organizational Growth

Using a four-point scale, interviewees were asked to indicate their perception of business activity over the last six months. The scale points were 1) sales and activity has been down, 2) activity has been about the same as a year ago, 3) seeing some growth over the last year, and 4) things are booming and we may have trouble keeping up. Although not provided as an option to respondents, six said that they "did not know" the state of activity as compared to six months ago. These responses have not been included in tabulation and explain the reduction of the total N to 181. As shown in Table 3 below, 36 percent perceived some growth in business activity over the last six month and 28 percent were experiencing such growth that they were having trouble keeping up. Only 14 percent saw a decline in activity from the previous year.

Table 3. Perception of Business Activity When Compared With Last Year

NAICS Supersector	N	Perception of Business Activity			
		Down	Same	Up Some	Booming
Mining & Construction	18	17%	22%	28%	33%
Manufacturing	8	0%	38%	13%	50%
Trade/Transportation & Utilities	45	18%	24%	38%	20%
Information & Prof. Business Services	47	17%	19%	40%	23%
Education & Health Services	15	0%	20%	53%	27%
Leisure & Hospitality	19	21%	16%	53%	11%
Other Services	15	20%	33%	20%	27%
Public Administration	<u>14</u>	<u>0%</u>	<u>0%</u>	<u>21%</u>	<u>79%</u>
Total	181	14%	21%	36%	28%

While being aware of the small sample sizes (noted by N) and the need for care in generalization, it is of interest to note that all organizations in the public administration (mainly federal, state, and local government) supersector indicated growth over the last six months. By using a system similar to that used for calculating grade point averages, i.e., "A" = 4 and "F" = 0, one can also compare the averages of the individual supersectors. In this case, 1 equates to "business activity is down" and 4 equates to "things are booming." Using this categorization and weighting according to the number of respondents in each category results in a mean score by supersector. As with a GPA, this score provides a mechanism for comparing and ranking the supersectors. These scores are graphically shown in Figure 4. Thus, it seems that some sectors are perceiving little growth on average (e.g., leisure and hospitality) while others (e.g., public administration) believe they are closer to booming. Again, care should be taken in generalizing this to the supersectors across the entire region as the small sample sizes of the cross tabulation can lead to sample bias issues.
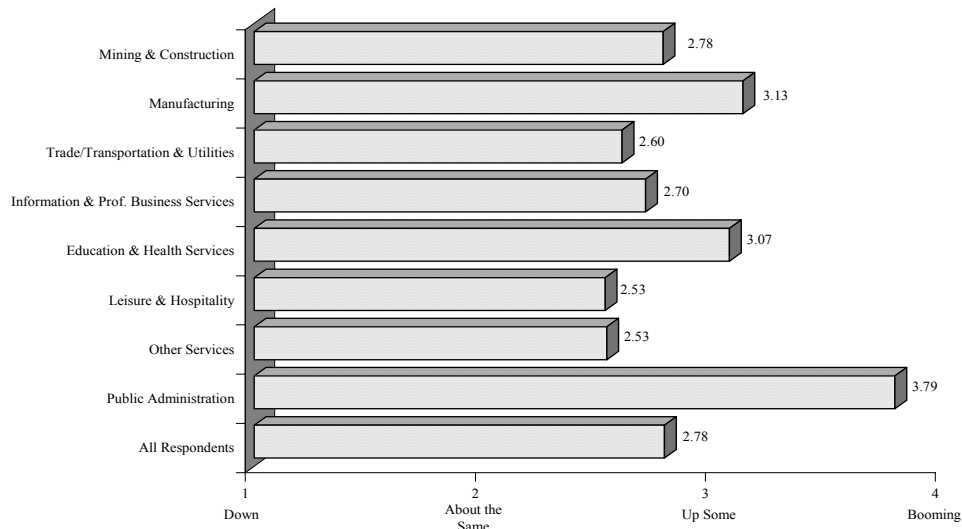
Figure 4. Mean response scores of growth expectations by supersector

Perception of the Valencia County Economy

Again, using a scale, interviewees were asked to choose a point on the scale that best described the current state of the Valencia County economy. The points ranged from 1) very poor to 4) very good. Although not offered as a response in the interview, 12 respondents "did not know" when queried. These responses are not included in the tabulation of the data. Table 4 shows the aggregated responses by supersector. As shown, 57 percent of interviewees believed that the Valencia economy was "good" and another 11 percent believed it to be "very good." Thus, over two-thirds of those interviewed were optimistic about the local economy.

Table 4. Respondent Perceptions of the Valencia Economy by Supersector

NAICS Supersector	N	State of the Valencia Economy			
		very poor	poor	good	very good
Mining & Construction	18	0%	18%	82%	0%
Manufacturing	9	13%	38%	50%	0%
Trade/Transportation & Utilities	44	2%	27%	56%	15%
Information & Prof. Business Services	47	5%	20%	59%	16%
Education & Health Services	16	0%	56%	44%	0%
Leisure & Hospitality	19	12%	29%	47%	12%
Other Services	18	12%	24%	59%	6%
Public Administration	15	0%	27%	53%	20%
Total	186	5%	27%	57%	11%

Following the previously introduced comparative using a calculated mean score, the categories were assigned numeric values 1 = "very poor" to 4 = "very good." The results are shown in Figure 5. As shown, with scores near 3, most supersectors respondents cluster around "good" as their perception of the local economy. The education and healthcare services supersector would appear to be neutral with a score (2.44) that falls almost dead center between poor and good.

One would expect some correlation between perceptions of organizational growth and perceptions of the economy, that is, those who are experiencing booming growth would also be those who are most optimistic about the local economy. However, the numbers do not bear this out – statistically, the correlation between these variables is non significant at an α of .05.

Mining & Construction — 2.94
Manufacturing — 2.67
Trade/Transportation & Utilities — 2.98
Information & Prof. Business Services — 3.00
Education & Health Services — 2.44
Leisure & Hospitality — 2.84
Other Services — 2.72
Public Administration — 2.93
All Respondents — 2.88

1 Very Poor   2 Poor   3 Good   4 Very Good
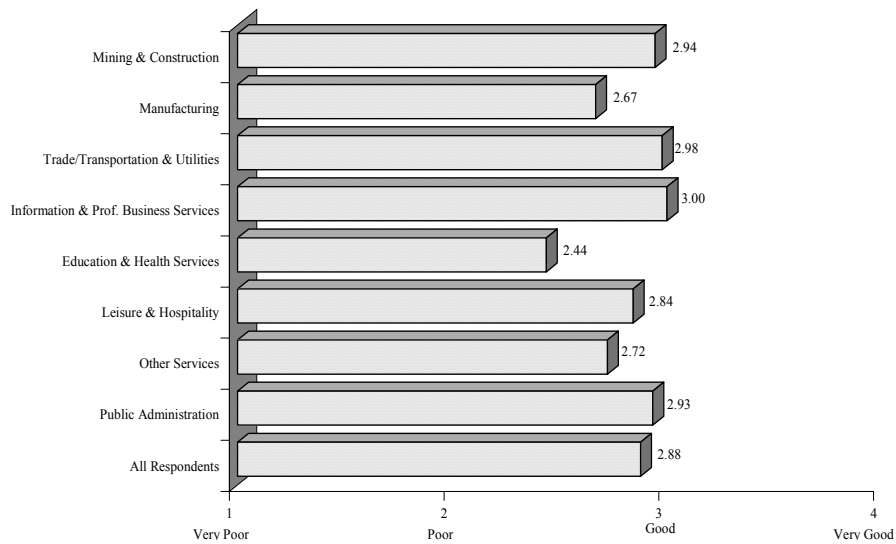
Figure 5. Average respondent perception of the Valencia economy by industry

Plans for Business Expansion

Interviewees were asked if they were planning to expand and hire more employees over the next three years. Table 5 shows the responses by supersector. Seven of those asked "did not know" and are not included in this table. Almost two-thirds of those interviewed indicated that they intended to expand and add employees.

Table 5. Respondent Expectations for Business Expansion in the Next Three Years

NAICS Supersector	N	Business Expansion	
		Yes	No
Mining & Construction	18	61%	39%
Manufacturing	9	44%	56%
Trade/Transportation & Utilities	44	55%	45%
Information & Prof. Business Services	45	53%	43%
Education & Health Services	16	75%	25%
Leisure & Hospitality	16	67%	22%
Other Services	18	72%	28%
Public Administration	14	86%	14%
Total	180	61%	36%

With the expectation that those who had experienced increased activity were also those who would be expanding, tests were run seeking correlations between expectations of

17

business expansion and the perception of growth. No significant correlations were found. Likewise, a test was run between perceptions of the economy and plans for business expansion. No significant results were noted here either. This implies that respondents are planning expansions independently of their perceptions of the economy or their current business activity.

As a continuation of the question about plans for business expansion, those who indicated they were intending to expand and add employees over the next several years were asked to estimate how many employees they would add. Table 6 shows the number of respondents classified by supersector and a categorical number of employees to be added. Two respondents stated that they would be adding in excess of 100 persons in the next few years.[17] One firm was involved in construction and stated that additions would be seasonal – 600 in the summer and 300 in the winter. Interestingly, this firm also indicated that business had been down over the previous months.

Of the 106 organizations that responded that they were adding employees, the average number projected was 12.9 new hires. That is, if these expectations are followed, these organizations will hire another 1,367 workers over the next three years.

Table 6. Projected Addition of Employees

NAICS Supersector	1 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100+	Total
			Number of Persons Hired in Next 3 Years				
	---------- number of organizations -----------						
Mining & Construction	2	6	1	0	0	1	10
Manufacturing	1	2	0	0	1	0	4
Trade/Transportation & Utilities	11	4	3	4	0	1	23
Information & Prof. Business Services	18	4	3	0	0	0	25
Education & Health Services	3	3	4	0	0	0	10
Leisure & Hospitality	3	2	2	4	0	0	11
Other Services	8	1	0	2	1	0	12
Public Administration	7	1	3	0	0	0	11
Total	53	23	16	10	2	2	106

A cross tabulation of those who indicated that they would be adding personnel by the current employment size of the organization yields Table 7. In this tabulation, three organizations that are counted in the previous table were excluded as their employment size was unknown. Of interest is that almost 70 percent of the organizations indicating that they will add employees in the next three years are currently small firms employing 10 or less. It is common knowledge that small organizations generate many of the new jobs in an economy. The two organizations that indicated the largest addition of personnel are currently employing 1 to 4 people.

The larger organizations (those employing 20 or more) are indicating much less exuberant plans with hiring expectations of adding between 1 to 19 new personnel. It

---

[17] Although contact was attempted, BBER was unable to contact an incoming manufacturer who will locate 700 jobs in Los Lunas. Had these 700 jobs been included in manufacturing, the average number of projected new hires in the next three years would jump to 19.5 and the total to 2,067 new jobs added.

should be remembered that these larger organizations are those who currently employ two-thirds of those in the County and are responsible for two-thirds of payroll. For respondents in the "20 to 49" category, the average number of persons added is 4.1; for those in the "50 or more" category, the average is 4.6.

Table 7. Number of Organizations Planning to Hire by Current Number Employed

Current Number of Employees	Number of Persons Hired in Next 3 Years						Total
	1 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100+	
	---------- number of organizations -----------						
1 to 4	15	8	12	8	0	2	45
5 to 9	15	10	1	1	0	0	27
10 to 19	10	0	1	0	2	0	13
20 to 49	7	1	1	0	0	0	9
50 or more	4	4	1	0	0	0	9
Total	51	23	16	9	2	2	103

Workforce Profile

Several questions were asked related to perceptions about the existing workforce. These included questions about the availability of needed skills, satisfaction with work habits, and work ethic, and drug use in the workforce.

Skill Levels in the Current Labor Force

Respondents were asked if they could find the skill levels they needed for their organizations in the current labor force. Table 7 examines the responses to the question of the availability of needed skills in the region by supersector. As shown, just over two-thirds said that they were able to find the skill levels they needed. Two supersectors, highlighted in the table below, are of note in their response to this question. First is manufacturing with 78 percent of respondents indicating that they are unable to find the skills they need. The second is education and health services showing half of those interviewed declaring that the skills they need are not available in the region. Both of these supersectors represent opportunities to UNMVC in training and education. As will be shown in the next section on educational needs, those in manufacturing are seeking employees with better math and reading skills. Those from the education and health services are seeking advanced reading, intermediate math, and basic or intermediate computer skills.

Table 8. Availability of Skills Sets Needed in the Current Workforce by Supersector

NAICS Supersector	N	Skills in current workforce?		
		Yes	No	Don't Know
Mining & Construction	18	72%	28%	0%
Manufacturing	9	22%	78%	0%
Trade/Transportation & Utilities	44	75%	20%	5%
Information & Prof Business Svcs	44	70%	27%	2%
Education & Health Services	16	50%	50%	0%
Leisure & Hospitality	19	68%	26%	5%
Other Services	17	59%	41%	0%
Public Administration	13	77%	23%	0%
Total	180	67%	31%	2%

Work Habits

Those interviewed were asked to rank their overall satisfaction with the work habits of the local workforce. The scale was from 1 to 5 with 1 equating to "very unsatisfied" and 5 being "very satisfied." Examples of good work habits were provided to assist in the clarity of this question, e.g., showing up on time and not goofing off at work. As shown in Figure 6, a third of respondents were neutral believing that the work habits of the local workforce were neither good nor bad. Another 40 percent were satisfied or very satisfied with the work habits of local employees and 26 percent found the work habits of the local work force to be unsatisfactory. As will be discussed in the upcoming section on educational needs, some of the most requested training is in work ethics and customer service which reflects this dissatisfaction.

Table 9 presents the breakout of the responses to the question about satisfaction with the work habits of the workforce. As can be seen, most respondents across supersectors are fairly balanced with a slight skew toward satisfaction. Public administration is a noticeable anomaly in that no respondent indicated any dissatisfaction with the work habits of the existing workforce.

By taking the mean scores as was done before, on can shed light on the relative satisfaction across supersectors. In this case, a value of 1 was assigned to "very unsatisfied" and a value of 5 to "very satisfied." In Figure 7, a three represents neutrality. Thus, lower satisfaction scores are notable in manufacturing and leisure and hospitality. Higher scores are other services and public administration.
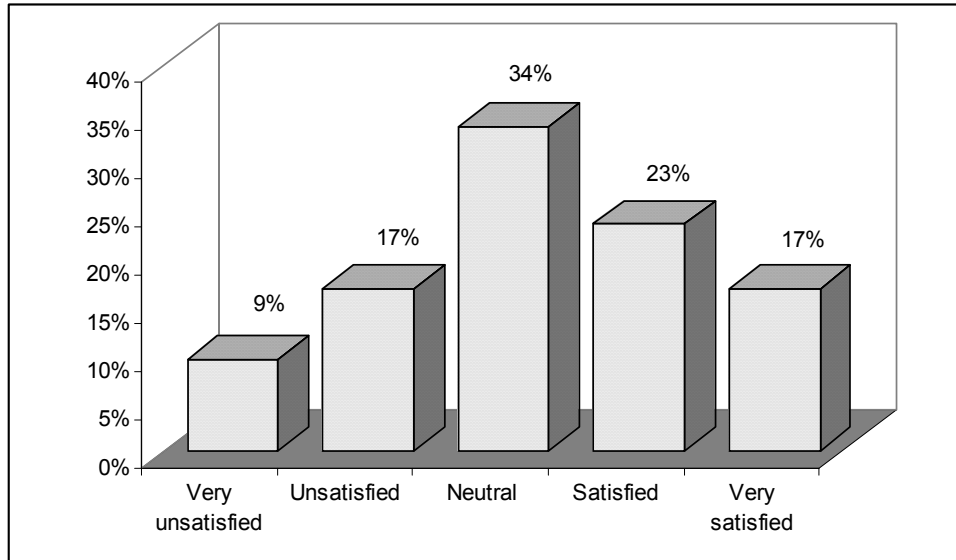
Figure 6. Satisfaction with the work habits of the existing workforce

Table 9. Satisfaction With the Work Habits in the Existing Workforce by Supersector

| NAICS Supersector | N | Perception of work habits in local workforce | | | | |
		Very unsatisfied	Unsatisfied	Neutral	Satisfied	Very satisfied
Mining & Construction	16	13%	19%	38%	25%	6%
Manufacturing	8	13%	25%	50%	0%	13%
Trade/Transportation & Utilities	45	7%	24%	29%	27%	13%
Information & Prof Business Svcs	45	16%	9%	40%	13%	22%
Education & Health Services	16	6%	19%	31%	19%	25%
Leisure & Hospitality	18	11%	33%	28%	17%	11%
Other Services	18	6%	6%	33%	33%	22%
Public Administration	13	0%	0%	23%	62%	15%
Total	179	9%	17%	34%	23%	17%
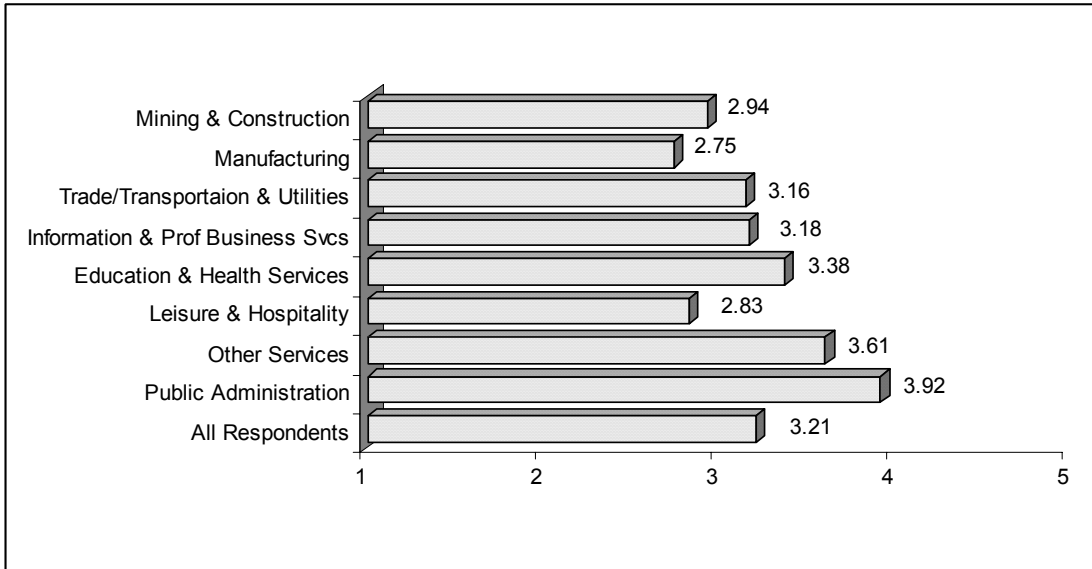
Figure 7. Mean satisfaction score by supersector

Drug Abuse and Suitable Employees

Interviewees were asked if they believed that drug abuse in the local area decreased the number of suitable employees. Respondents were provided with four choices ranging from strongly disagree to strongly agree. Figure 8 shows the results, on a percentage basis, of the 177 respondents. As can be seen, 81 percent of those interviewed believe that drugs have a negative impact on the availability of employees in the area. Only one fifth of those asked do not see a problem with drugs and the workforce.

Figure 9 shows those who strongly agree or agree as a percentage of total respondents by supersector. Roughly three fourths or more of those in all supersectors found the number of suitable employees to be hurt by drug use.

Figure 8. Drug abuse decreases the number of suitable employees

Figure 9. Percent by industry who agree that drug abuse decreases the number of employees

Educational / Training Needs

A major objective of this study was to identify the training and educational needs of businesses in Valencia County. To this end, BBER staff asked businesses a variety of questions about their current and future training needs, the importance of particular skills and their thoughts on skills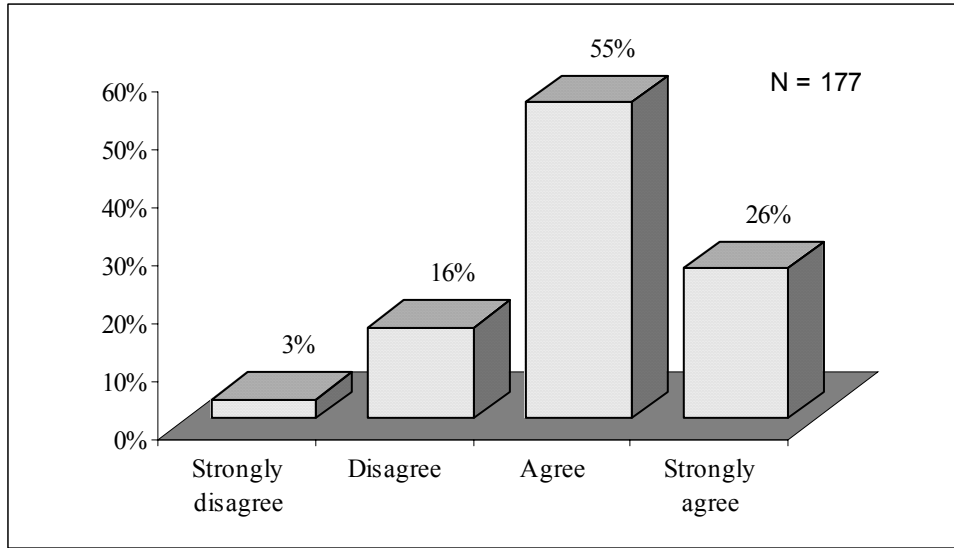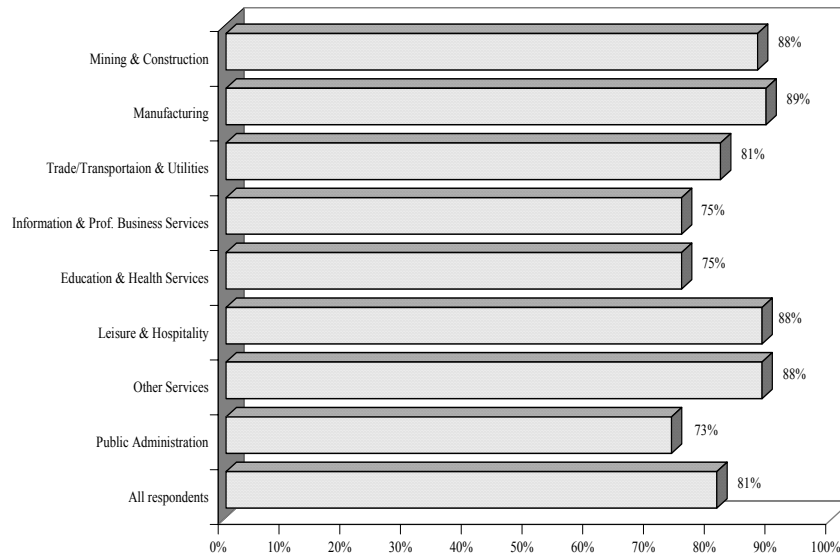 lacking in the workforce. Research participants were also asked what customized training would they like to see developed by UNMVC.

Employer Educational/ Training Expectations

Business owners and managers were asked if their employees were generally expected to hold any licenses, degrees, or certificates. Eighty-nine respondents (47.6 percent) stated that they require employees to hold a license, degree, or certificate and their answers are illustrated below in Figure 10. The most common certification was Building Trades[18], mentioned by 14.6 percent of respondents who have expected educational requirements. The same percentage of respondents indicated that they expected employees to have at least a four-year degree. The second most common responses were stated by businesses needing employees with certification in Childhood Development (12.4 percent). The Others/Miscellaneous category includes responses such as art training, drafting, and certified personal trainers.
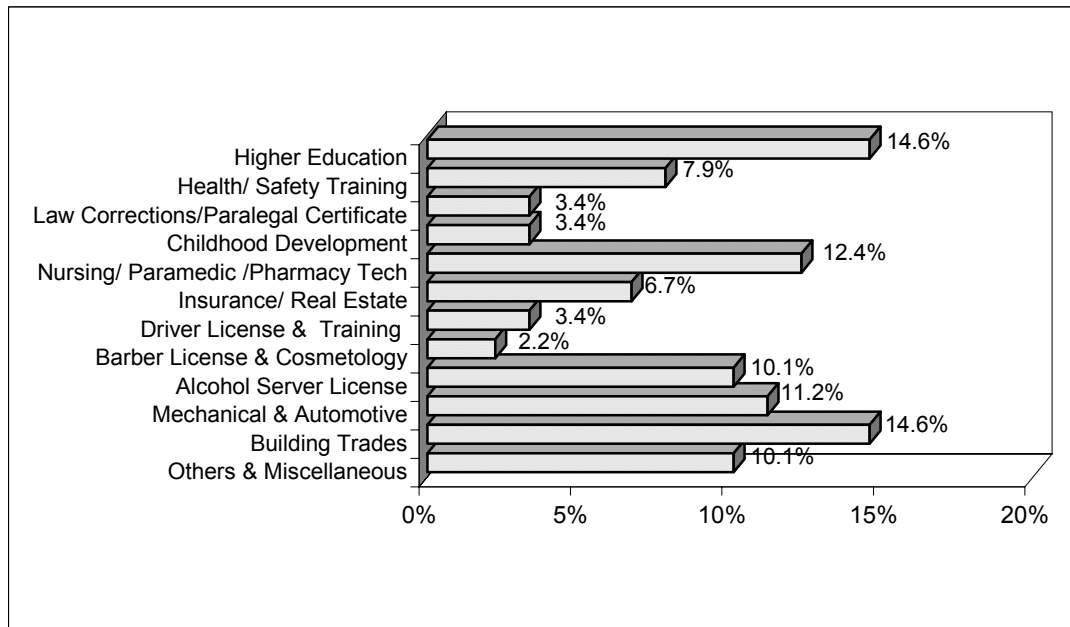
Figure 10. Special licenses or certificates required for employment (N=89)

While the data shown in Figure 10 are from all respondents, Figure 11 below highlights the required certificates, licenses, and degrees for businesses that stated they cannot find the skill level they need in the local workforce. There were 56 businesses (31 percent of whole sample) that indicated they could not find the skill level they need in the local

---

[18] Includes carpentry, electrical and plumbing certifications and contractor licenses.

workforce. Of these, 26 stated they require their employees to have a particular license, certificate, or degree. Figure 11 illustrates what certificates and licenses are currently missing in the local workforce, as perceived by business owners and managers. Again, one must be cautious when interpreting these results, as this cross tabulation is beneficial only for descriptive analysis and not for making inferential conclusions. It appears that licenses for Building Trades are most in demand (plumbing, carpentry, and electrical), and it was the most commonly identified item by businesses that feel they cannot find the skill level they need in Valencia County. Further, certificates for first aid and nursing assistant are also perceived as lacking in the area. It should be noted that these certificates and licenses are perceived as currently lacking in the area. Later tables describe perceived training and educational needs for the future.
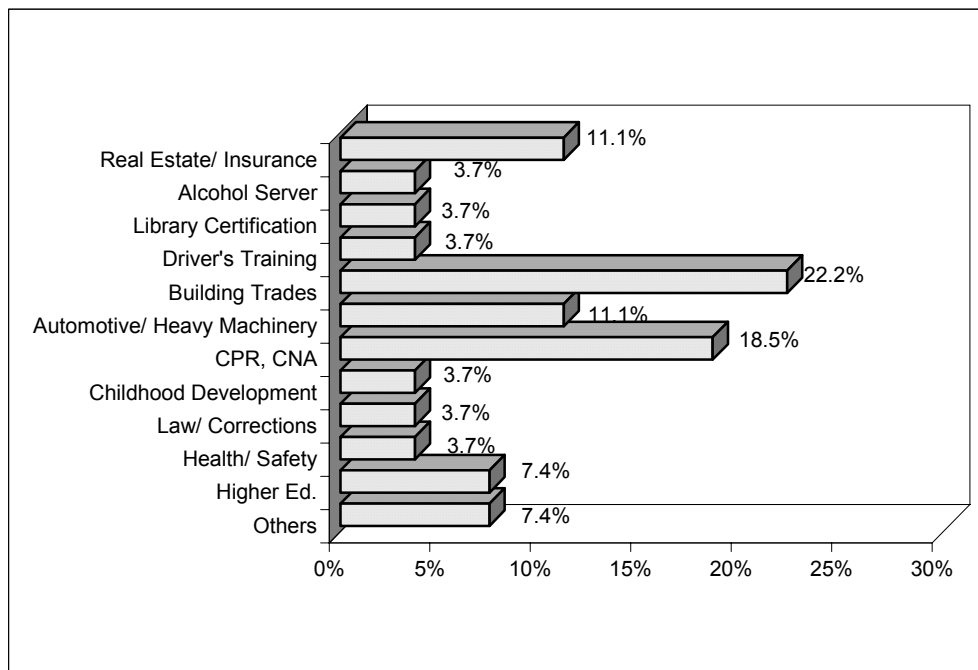
Figure 11. Percent of Businesses Who Cannot Find Skill Levels They Need by Certificate, License or Degree Required for Employees (N=26)

Respondents who indicated their business operations would be expanding and hiring more employees over the next three years (N=113) were asked, "*Will you require these new employees to have any specific licenses or degrees?*" Fifty-eight of these businesses stated they will have educational requirements for their new employees. Again, a demand for at least 4-year degrees is noted with nine businesses specifying a need for higher education. Other/ Miscellaneous, which includes drafting, personal training certification, and art training is also in demand for future business growth. Figure 12 below confirms that the most common certifications, licenses, and degrees that are needed for current employees will continue to be important for business owners in the future.
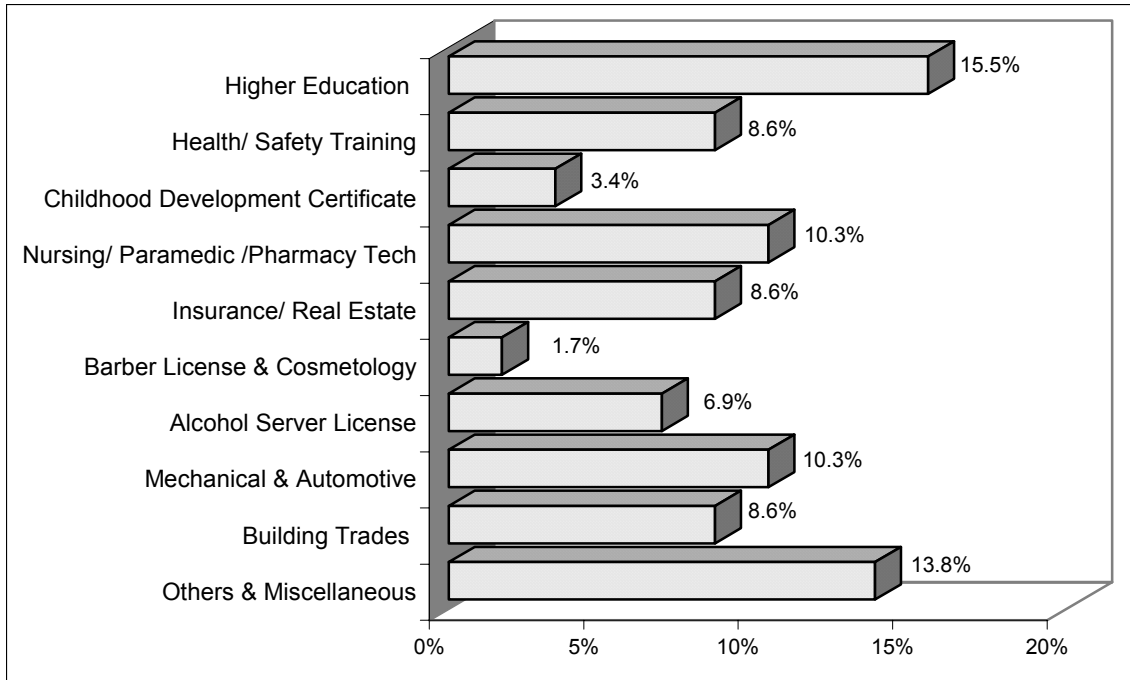
Figure 12. Requirements for degrees, certificates, & licenses for future hires (N=58)

Importance of Communication and Problem Solving Skills

In an effort to rank the importance of particular skills of interest to UNMVC, businesses were asked to rate, on a five point scale, the importance of: 1) teamwork and communication skills, 2) problem-solving skills, 3) the ability to communicate in English, 4) the ability to communicate in Spanish, and 5) the ability to communicate in both English and Spanish.

As Table 10 shows, almost all supersectors stated that teamwork and communication skills are important in their employees. Similarly, problem-solving skills (critical thinking, time management, etc.) are important to all supersectors as well, as shown in Table 11. While it may seem intuitive that these two common skills are important across the board, it is important to acknowledge that these two skill sets were the most commonly identified as "lacking" in the local workforce. This is explained further in an upcoming section.

Table 10. Importance of Teamwork & Communication Skills by Supersector

NAICS Supersector	N	not at all important	a little important	doesn't matter	somewhat important	very important
Mining & Construction	18	0%	0%	11%	17%	72%
Manufacturing	9	0%	11%	0%	22%	67%
Trade/Transportation & Utilities	45	0%	0%	2%	4%	93%
Information & Prof. Business Services	46	0%	0%	2%	9%	89%
Education & Health Services	16	0%	0%	6%	0%	94%
Leisure & Hospitality	19	0%	0%	0%	11%	89%
Other Services	18	0%	0%	6%	11%	83%
Public Administration	15	0%	0%	0%	0%	100%
All respondents	186	0%	1%	3%	8%	⬭

Column header spanning: *Importance of Teamwork & Communication Skills*

Table 11. Importance of Problem Solving Skills by Supersector

NAICS Supersector	N	not at all important	a little important	doesn't matter	somewhat important	very important
Mining & Construction	18	0%	0%	17%	11%	72%
Manufacturing	9	0%	0%	44%	11%	44%
Trade/Transportation & Utilities	45	0%	2%	2%	20%	76%
Information & Prof. Business Services	46	0%	2%	4%	17%	76%
Education & Health Services	16	0%	0%	6%	0%	94%
Leisure & Hospitality	19	5%	5%	21%	16%	53%
Other Services	18	0%	11%	0%	11%	78%
Public Administration	15	0%	0%	0%	0%	100%
All respondents	186	1%	3%	8%	13%	75%

Column header spanning: *Importance of Problem Solving Skills*

Tables 12, 13, and 14 illustrate the importance of being able to communicate in English and Spanish. Only in one supersector, Manufacturing, it is not unvaryingly important to communicate in English. Tables 13 and 14 show scattered distributions for the ability to speak Spanish and both Spanish and English.

Table 12. Importance of Communication in English by Supersector

NAICS Supersector	N	not at all important	a little important	doesn't matter	somewhat important	very important
Mining & Construction	18	0%	6%	0%	28%	67%
Manufacturing	9	11%	11%	11%	11%	56%
Trade/Transportation & Utilities	45	2%	2%	16%	7%	73%
Information & Prof. Business Services	46	2%	0%	4%	20%	74%
Education & Health Services	16	0%	0%	13%	13%	75%
Leisure & Hospitality	19	5%	0%	11%	16%	68%
Other Services	18	0%	0%	17%	11%	72%
Public Administration	15	0%	0%	0%	13%	87%
All respondents	186	2%	2%	9%	15%	73%

Column header spanning: *Importance of Communicating in English*

Table 13. Importance of Communication in Spanish by Supersector

NAICS Supersector	N	Importance of Communicating in Spanish				
		not at all important	a little important	doesn't matter	somewhat important	very important
Mining & Construction	18	22%	33%	11%	22%	11%
Manufacturing	9	56%	0%	0%	33%	11%
Trade/Transportation & Utilities	45	11%	22%	38%	20%	9%
Information & Prof. Business Services	46	13%	17%	35%	22%	13%
Education & Health Services	16	19%	13%	31%	19%	19%
Leisure & Hospitality	19	11%	37%	26%	11%	16%
Other Services	18	6%	11%	28%	28%	28%
Public Administration	15	0%	20%	27%	33%	20%
All respondents	186	14%	20%	29%	22%	15%

Table 14. Importance of Communicating in Both English & Spanish by Supersector

NAICS Supersector	N	Importance of Communicating in Both English & Spanish				
		not at all important	a little important	doesn't matter	somewhat important	very important
Mining & Construction	18	17%	17%	17%	28%	22%
Manufacturing	9	44%	0%	11%	22%	22%
Trade/Transportation & Utilities	45	11%	20%	31%	24%	13%
Information & Prof. Business Services	45	11%	20%	18%	18%	33%
Education & Health Services	16	13%	0%	31%	25%	31%
Leisure & Hospitality	19	11%	21%	26%	16%	26%
Other Services	18	0%	22%	11%	33%	33%
Public Administration	15	0%	20%	33%	20%	27%
All respondents	185	11%	17%	23%	23%	25%

Minimum Levels of Literacy, Math Skills and Computer Skills

In addition to the importance of particular skill sets, UNMVC is interested in exploring the minimum levels of literacy, math, and computer skills required by employers. BBER interviewers asked participants how they would best describe the minimum level of literacy skills: basic ("like simple instructions"), intermediate ("like the newspaper"), or advanced ("like industry and trade journals"). Table 15 shows that half of all respondents require at least intermediate literacy skills. Forty one percent of all respondents need their employees to have advanced reading skills, especially in the Other Services and Public Administration supersectors.

Table 15. Minimum Level of Literacy in Potential Employees by Supersector

| NAICS Supersector | N | Minimum Required Literacy | | |
		Basic reading like simple instructions	Intermediate reading like the newspaper	Advanced reading like industry and trade journals
Mining & Construction	18	11%	39%	50%
Manufacturing	9	11%	89%	0%
Trade/Transportation & Utilities	44	11%	64%	25%
Information & Prof. Business Services	46	7%	39%	54%
Education & Health Services	16	19%	31%	50%
Leisure & Hospitality	19	16%	74%	11%
Other Services	18	0%	39%	61%
Public Administration	14	0%	36%	64%
All respondents	184	9%	50%	41%

As with literacy skills, respondents were asked how they would best describe the minimum level of math skills required in employees: basic (addition and subtraction), intermediate (measurements and conversions), and advanced (algebra, statistics or calculus). Table 16 reveals that most respondents (60 percent) need their employees to have at least intermediate math skills. Seventy-five percent of respondents in the Education & Health Services supersector stated that intermediate was the minimum level of math skills they require. One third of all respondents stated they need their employees to have the ability to at least add and subtract. However, basic math was not a major skill set that was identified by business leaders as lacking in the workforce. Again, Other Services and Public Administration indicated they need employees with advanced skills.

Table 16. Minimum Level of Math Skills in Potential Employees by Supersector

| NAICS Supersector | N | Minimum Required Math Skills | | |
		Basic math such as addition and subtraction	Intermediate math such as measurement conversions	Complex math such as algebra, statistics and calculus
Mining & Construction	18	22%	72%	6%
Manufacturing	9	44%	44%	11%
Trade/Transportation & Utilities	45	33%	62%	4%
Information & Prof. Business Services	46	28%	65%	7%
Education & Health Services	16	19%	75%	6%
Leisure & Hospitality	19	47%	47%	5%
Other Services	18	44%	33%	22%
Public Administration	15	27%	60%	13%
All respondents	186	32%	60%	8%

BBER asked interviewees to describe the level of computer skills that was required in their businesses. For this question, BBER added a "no skills needed" category, which proved fruitful because a surprising one third of all respondents indicated that their employees really do not need computer skills. This was especially the case for businesses in the Mining and Construction supersector. The largest concentrations of

responses lie in basic skills ("data entry or word processing"). Less than 10 percent of all respondents need advanced skills ("running macros or programming"); however, notice that 22 percent of the Other Services supersector need employees with advanced skills.

Table 17. Minimum Level of Computer Skills in Potential Employees by Supersector

| NAICS Supersector | N | No skills needed | Minimum Required Computer Skills | | |
			Basic skills such as data entry or word processing	Intermediate skills such as using spreadsheets or databases	Advanced skills such as running macros or programming
Mining & Construction	18	67%	28%	6%	0%
Manufacturing	9	33%	44%	22%	0%
Trade/Transportation & Utilities	44	36%	52%	7%	5%
Information & Prof. Business Services	46	17%	30%	39%	13%
Education & Health Services	16	25%	44%	31%	0%
Leisure & Hospitality	19	42%	42%	5%	11%
Other Services	18	22%	33%	22%	22%
Public Administration	15	0%	40%	53%	7%
All respondents	185	30%	39%	23%	8%

Perceptions of Skills "Lacking" in the Workforce

The discussion thus far in this section has discussed what skill sets and formal training are required in the respondents' companies. The following paragraphs explore the skills and education that business owners and managers perceive as lacking in the area. Interviewers asked respondents "*Are there any skill sets specific to your industry that are lacking in the local workforce?"* One hundred one respondents (55.5%) said yes. Interviewers asked, in an open-ended follow up question, to identify any *"industry specific skills that are lacking in the local workforce."* Sixty-three percent of all responses were in regards to some form of "soft-skills" that are perceived as lacking in the local workforce. Soft skills include communication, work ethic, problem solving, basic math, and customer service. While soft skills are not exclusively industry specific, it is important to recognize that they were the most common response. Figure 4 lists all responses for "lacking skills" and the percentage of all respondents who identified each skill. The reader should note that most participants identified more than one skill as lacking in their responses, so the percentages shown are of the number of respondents who identified lacking skills (N=101) and do not add to 100.
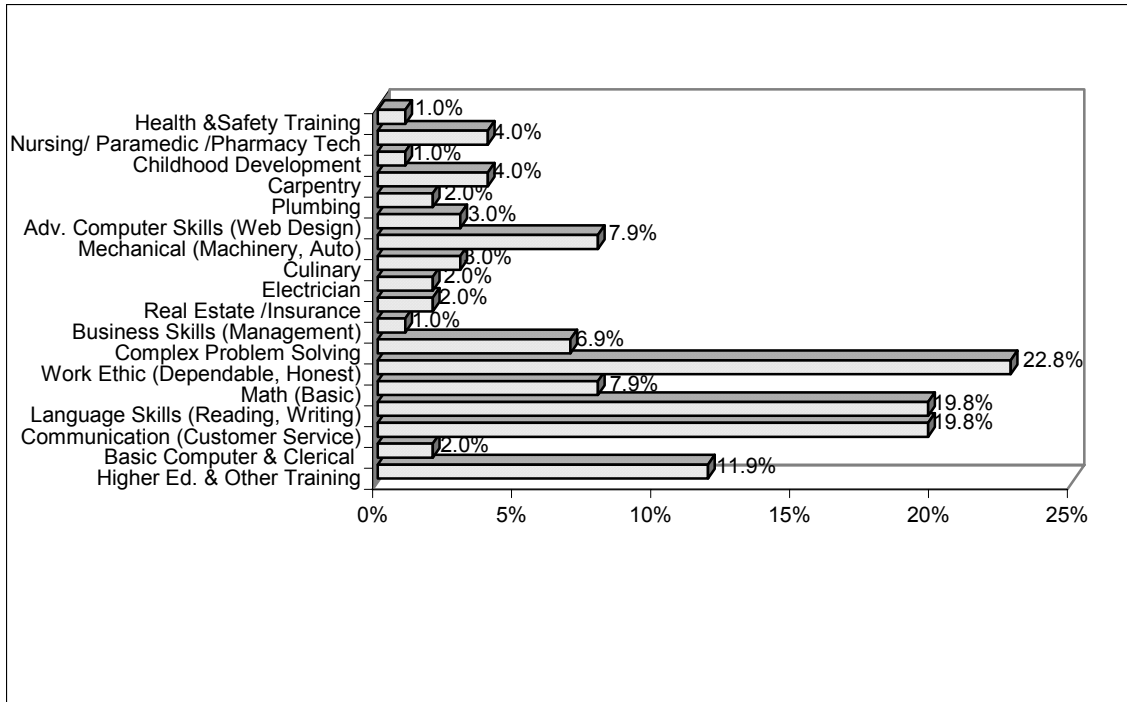
Figure 13. Industry specific skill sets lacking in the workforce (N=101)

More than one fifth of these respondents (22.8%) perceive work ethic to be missing in the local workforce. Work ethic is followed closely by language skills and communication skills, both at 19.8 percent. Tables 10 and 15, presented previously on 27 and 29 respectively, show that communication and literacy are exceptionally important to employers and are shown in this figure as lacking in the workforce. Figure 14 also shows a demand for employees with higher education. Figure 11 (page 25) showed that 7.4 percent of businesses that cannot currently find the skill levels they need said they are looking for employees with four-year degrees, which is lower than other requirements listed. However, Figure 12 (page 26) shows that the most common educational requirement for future hires is a four-year degree. A possible explanation of this could be that smaller businesses, which the data show are expecting more growth, already have college-educated employees. As the business grows, so will its need for more college educated employees.

It is interesting to compare Figure 13 with Figure 12 on page 26, which shows the educational requirements for businesses that plan on expanding in the future. This figure shows the Building Trades as separate skill sets; when combined they equal 8%. Figure 3 shows that 8.6 percent of businesses with educational requirements will require new employees to have some form of building trade license or certification.

In addition to asking businesses what skills are perceived as lacking, BBER asked interviewees what form of customized training would be helpful. Researchers used an open-ended question in order to capture a wide variety of responses. One hundred forty two respondents provided answers to this question, and their responses are listed below, in Figure 14. The most common response described a need for training in the building

trades (16.1%), although they are broken out in the figure below (Electrical, Carpentry and Plumbing). The second most common response depicts a need for training in communication and customer service (14.8%). Again, communication was found almost universally important across supersectors and is also perceived to be a significant skill set lacking in the workforce. Work ethic shows up again, with 9.9 percent of respondents stating that training in motivation and work habits would be beneficial. Almost ten percent of respondents indicated that they would be interested in training in mechanics, both automotive and heavy machinery.
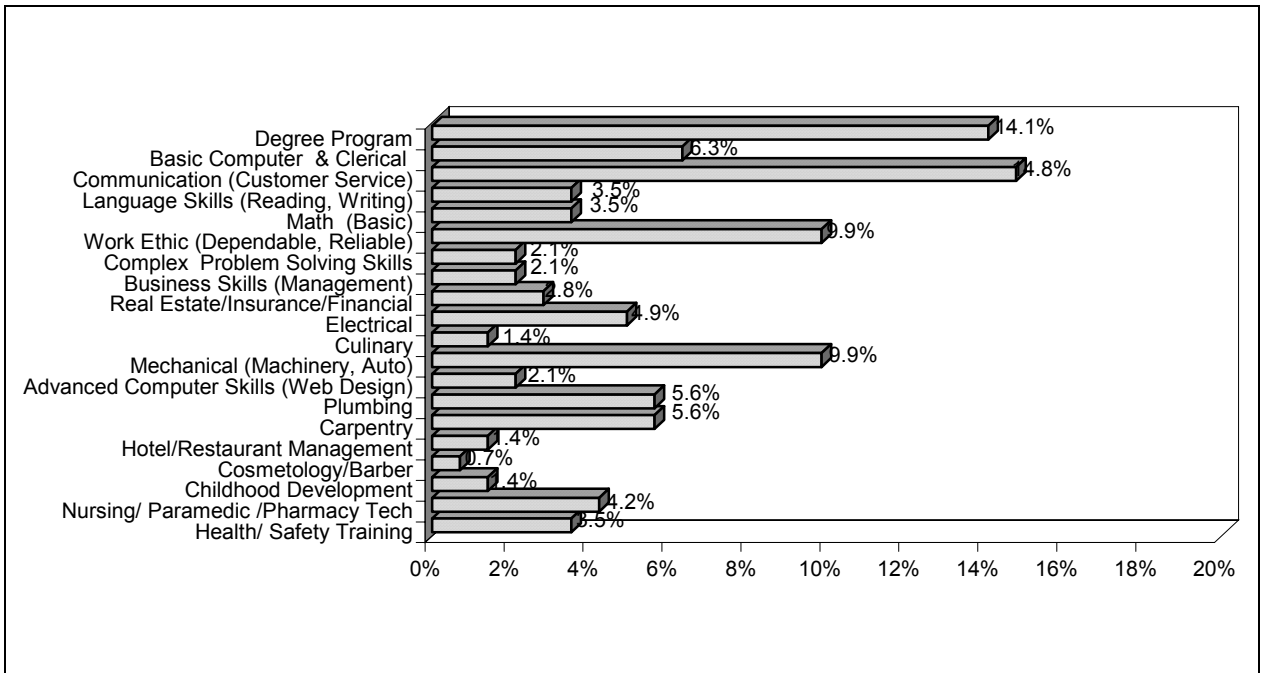

Figure 14. Requested Customized Training From UNM Valencia (N=142)

Although higher education is not part of customized training, many respondents indicated an interest and need for degree programs in various areas, such as counseling, corrections, art, drafting, and emergency medical fields.

Conclusion

Levels of educational attainment in Valencia County are lower as compared to state averages. The gap is most notable (7%) in those who do not advance beyond high school. The education and training needs for Valencia County can be discussed in terms of current and future needs. Existing economic data shows that the greatest shares of current employment are in the Public Administration sector, followed by the Trade, Transportation and Utilities and Health and Education Services sectors. While businesses in Public Administration and Health and Education Services almost universally reported growth over the past year, Trade, Transportation and Utilities reported more scattered growth, with some businesses reporting losses.

The survey data show that the most three common areas in which they currently need certified or licensed employees are Higher Education[19], Nursing/ Paramedic, and Building Trades. Similarly, respondents indicated they have the hardest time filling skilled positions in Nursing (requiring at least a CNA) and in Building Trades (includes carpentry, electrical and plumbing journeymen).

In the three supersectors listed above, more than half of all respondents indicated that they expect to continue growing and expanding over the next three years, especially in the Public Administration sector. The current study revealed that the greatest need for future hires in growing sectors are employees with at least a bachelor's degree, revealing an opportunity for education institutions to intervene. Health and Education Services and Public administration are more likely to require literacy, math and computer skills at the intermediate and advanced levels. Additionally, they are the sectors (along with Information and Business Services) that most commonly seek employees with college degrees.

Although training and education needs described above differ between current and future needs, there were needs that were mentioned significantly more than others. Respondents in all sectors described soft skills as extremely important, lacking in the current workforce and appropriate avenues for future trainings. These were: communication skills, specifically customer service and training for sales people; language skills, the ability to read, write, and speak to others; and work ethics, the ability to be dependable, reliable, and honest.

---

[19] Although "Higher Education" is not a technical field, respondents indicated that they needed employees with at least a four year degree, rather than a vocational certificate, in order to meet their business demands.