

# **DIGITAL LITERACY**

## **Miami-Dade and Monroe Counties 2010**

Prepared for:



## CREDITS AND ACKNOWLEDGEMENTS



**Metropolitan  
Center**

150 S.E. 2<sup>nd</sup> Avenue, Suite 500  
Miami, FL 33131  
305.349.1251  
<http://metropolitan.fiu.edu/>

### **FIU Metropolitan Center Project Team:**

Dario Moreno, Ph.D., Principal Investigator  
Maria Ilcheva, Ph.D., Co-Principal Investigator  
Victoria Lerma, M.A., Research Associate  
Stephen Draeger, M.A. Research Assistant  
Myrte de Alfred, B.A., Research Assistant

### **Acknowledgements**

The project was made possible with the assistance of the South Florida Workforce Investment Board in Region 23 and the Miami-Dade Broadband Coalition.

**The Miami-Dade Broadband Coalition (MDBC)** is an unprecedented collaboration among diverse South Florida leaders dedicated to deploying next generation broadband technology. The Coalition aims to transform our community and close the digital divide, create jobs, increase economic opportunities and reduce operating costs. MDBC's goal is to construct a robust broadband network that will connect community anchor institutions throughout Miami-Dade County and extend broadband services to our underserved communities. This initiative will create efficiencies in the delivery of healthcare, education and government, impact our economy, improve public safety, and create jobs.

**South Florida Workforce Investment Board** is responsible for initiating state and federally funded workforce development programs in Miami-Dade and Monroe counties. We assist employers and job seekers with employment services, labor market information, and provide training for economically disadvantaged adults, youth, dislocated workers, individuals transitioning from welfare to work, and refugees.

## HIGHLIGHTS

### BUSINESS SURVEY:

- Only 15.7% of the businesses surveyed in South Florida are extremely satisfied with the level of digital literacy of the area's workforce.
- Firms with larger revenues placed greater importance on digital literacy.
- The majority of companies were small establishments of less than 50 employees (95.8%). The majority of the firms surveyed are family-owned (63.3%).
- The majority of businesses consider a number of computer and Internet skills important in entry level hiring.
- The vast majority of firms (94.4%) indicated most of their employees have entry-level digital skills. However, a majority (53.3%) also reported they do not have employees with advanced level skills.
- Almost a third of businesses in each county reported none of their employees have intermediate skills.
- E-mailing is most frequently recognized as a skill required of entry level employees and considered very important (50.3%) or somewhat important (18.2%) by most businesses.
- Other Internet tasks most employers considered important for entry level hiring include browsing (62.9%) and the ability to register/buy/pay for goods and services (49.5%).
- Only 15.7% of businesses reported being extremely satisfied and 49.1% were somewhat satisfied with the level of digital literacy of South Florida's workforce.
- A small majority of businesses (51.3%) feel their employees need training.
- The majority of businesses (56.4%) consider it important or very important for their business to make future investments in technology and an additional 20.7% also indicate such investment is somewhat important.

### WORKFORCE SURVEY:

The sample studied reflects a 'best case scenario' that may underestimate the need for technology training to advance the digital literacy skills of South Florida's workforce.

- Although the majority of respondents were between the ages of 45 and 64 (57.7%), a significant percentage of respondents were 65 or older (13.4%).
- The vast majority of respondents reported their household had a computer (93.2%).
- Seven out of ten employees indicated computers are required for their job.
- Almost half of Miami-Dade residents (49.2%) spent in excess of 3 hours on the computer compared to 39.8% of Monroe residents.
- Disparities exist between the digital skills the workforce and the digital requirements of businesses and firms in entry level hiring.
  - Only 41.2% have good/excellent Excel/spreadsheet skills despite the fact that 56.2% of firms considered this skill somewhat or very important in entry level hiring.
  - Half of the firms in South Florida (50.8%) reported file management is somewhat or very important in entry level hiring, yet only 34.1% of the workforce felt their skills at file management are good or excellent.

- Monroe residents were better skilled at online tasks like browsing (72.4% compared to 63.7% for Miami-Dade), registering (62.6% and 50.8% for Miami-Dade) and web design (10.2% and 7.3% for Miami-Dade).
- 52.0% of Miami-Dade residents believed they would have greater career opportunities if they had better computer skills, only 37.7% of their Monroe counterparts felt the same.
- Slightly more than half wished they had taken more computer classes in school (50.7%).
- The majority of Miami-Dade and Monroe counties' workforce would not participate in technology training if there was a fee involved (58.1%).
- Employees would be very willing to participate in free technology training both during (77.1%) and after work hours (59.3%).
- Over one-third of businesses would send employees to technology training either during or after work hours. Also, 35.7% would even send employees to training for a fee with 73.5% of those willing to pay up to \$50 per person per hour.

## EXECUTIVE SUMMARY

From March through May 2010 the Florida International University Metropolitan Center conducted two sets of surveys for the Miami-Dade Broadband Coalition (MDBC) and the South Florida Workforce Investment Board. The business survey database consists of 600 responses from Miami-Dade County and 300 responses from Monroe businesses. The business data excludes responses provided from non-profit organizations.

The majority of companies surveyed are small establishments with fewer than 50 employees (95.8%). The majority of the firms are family-owned (63.3%). One in six businesses had Minority/Disadvantaged Business Enterprise status and slightly less than one in five (19.0%) are Women Business Enterprises. The majority of companies had between 2 and 10 computers (63%). Most firms have a website (64.9%) with approximately one in four (27.3%) using social networking sites to promote their products and/or services. The majority of businesses conduct transactions online (57.2%).

Only 15.7% of the businesses surveyed in South Florida are extremely satisfied with the level of digital literacy of the area's workforce, while 8.9% are somewhat or extremely dissatisfied, and 26.4% are ambivalent, indicating they are neither dissatisfied nor satisfied. Only 17.7% indicated that digital literacy is either not at all or not very important for their company. Firms with larger revenues placed greater importance on digital literacy. In fact, 67.5% of businesses earning revenues between \$1 and 5 million considered digital literacy important or very important compared to 59.4% of businesses with less than \$1 million in revenues. The majority of businesses consider a number of computer and Internet skills important in entry level hiring. While 62.7% considered word processing skills somewhat important/very important in entry level hiring, 56.2% indicated the same about Excel and 50.8% about file management. E-mailing is most frequently recognized as a skill required of entry level employees and considered somewhat important (18.2%) or very important (50.3%) by most businesses. Other Internet tasks most employers considered important for entry level hiring include browsing (62.9%) and the ability to register/buy/pay for goods and services (49.5%).

A small majority of businesses (51.3%) feel their employees need training. A larger percentage of Monroe businesses (55.9%) than Miami-Dade firms (45.0%) indicated their employees do not require technology training. The vast majority of firms (94.4%) indicated most of their employees have entry-level digital skills. However, a majority (53.3%) also reported they do not have employees with advanced level skills. In Monroe County, 57.6% of firms indicated they lack employees with advanced digital skills while 52.1% of Miami-Dade businesses reported the same. Over one-third of businesses would send employees to technology training either during or after work hours. Also, 35.7% would even send employees to training for a fee with 73.5% of those willing to pay up to \$50 per person per hour.

The workforce data includes 634 responses from Miami-Dade's labor force and 420 from Monroe County. The workforce data excludes respondents who are not in the workforce and not seeking employment. Although the majority of respondents were between the ages of 45 and 64 (57.7%), a significant percentage of respondents were 65 or older (13.4%). The high percentage of respondents in the older age group may indicate that some area residents are coming out of retirement and back in the labor force, or the current economy has made retirement a non-option for many. There is also the fact that people are healthier and live longer and are able to stay on the job longer. Social Security full retirement age has been advanced from 65 to 66 for those born in 1943-1954. Also, there is a natural tendency for workers in education, training and libraries (occupations captured in the sample) to stay in their jobs until 70 and sometimes even

longer. In fact, there are incentives provided in some cases for them to do so. In terms of income, although a majority refused to provide their income category (50.4%), 35.7% of respondents who provided their income reported family income under \$50,000.

The vast majority of respondents reported their household had a computer (93.2%). Computer usage seems to be correlated with the level of education of the workforce. In fact, 53.6% of those with Bachelor's degrees and higher use a computer for 3 or more hours compared to 36.8% of those without advanced degrees who reported similar computer usage. Computer usage also varies by county. Almost half of Miami-Dade residents (49.2%) spent in excess of 3 hours on the computer compared to 39.8% of Monroe residents. 57.3% of all residents surveyed reported accessing the Internet exclusively from home and 20.6% primarily from work. In terms of usage of Internet, the workforce primarily checks email (96.3%) and researches information on products and services when online (86.8%). A majority also go online to make purchases (76.1%) or conduct banking transactions (67.5%). More than a third of Miami-Dade (41.7%) and Monroe residents (35.4%) claimed they were very skilled at using the Internet.

Disparities exist between the digital skills the workforce and the digital requirements of businesses and firms in entry level hiring. While 58.1% of the workforce reported good or excellent skills at word processing, 62.7% of businesses considered word processing skills somewhat or very important in entry level hiring. Only 41.2% have good/excellent Excel/spreadsheet skills despite the fact that 56.2% of firms considered these skills somewhat or very important in entry level hiring. Half of the firms in South Florida (50.8%) reported file management is somewhat or very important in entry level hiring, yet only 34.1% of the workforce felt their skills at file management were good or excellent. Differences in skill level of the workforce exist between the two counties. Monroe residents seem less likely than Miami-Dade residents to have good or excellent skills at computer tasks like Excel (37.9% compared to 43.4% for Miami-Dade) and PowerPoint (32.1% compared to 37.4% for Miami-Dade). However, Monroe residents seem better skilled in file management (38.1% compared to 31.4% in Miami-Dade), and in specialized applications like accounting programs (23.1% compared to 19.4% for Miami-Dade).

A small disparity exists between what employers expect from the workforce and the digital skills they actually possess in terms of online computer usage. The workforce reported good or excellent skills in browsing (67.2%), email (66.0%) and registering for products and services online (55.5%). Employers considered the following Internet skills important for entry level hiring: email (68.5%), browsing (62.9%) and the ability to register/buy/pay for goods and services (49.5%). Some differences between the workforces of the two counties are evident in Internet skills. The Miami-Dade workforce had a slightly higher percentage of the workforce who reported good or excellent skills in using social media (33.3% compared to 28.1% for Monroe) and texting (35.8% compared to 29.5% for Monroe). Monroe residents were better skilled at other online tasks like browsing (72.4% compared to 63.7% for Miami-Dade), registering (62.6% and 50.8% for Miami-Dade) and web design (10.2% and 7.3% for Miami-Dade).

Seven out of ten employees indicated computers are required for their job. In assessing the importance of digital skills in the job market, the workforce seems somewhat ambivalent. In fact, 46.4% agreed or strongly agreed that if their computer skills were more advanced they would have greater opportunities for employment and job advancement, while 41.4% disagreed or strongly disagreed. The two counties differ in their evaluations of the importance of digital literacy. In fact, whereas 52.0% of Miami-Dade residents believed they would have greater career opportunities if they had better computer skills, only 37.7% of their Monroe counterparts felt the same. A small majority wished they had taken more computer classes in school (50.7%). Interestingly, employees would be very willing to participate in free technology training both

during (77.1%) and after work hours (59.3%). Miami-Dade residents are more likely than Monroe residents to participate in free training both during (81.8% compared to 71.0% for Monroe) and after work (61.2% and 56.5% respectively).

The majority of Miami-Dade and Monroe counties' workforce would not participate in technology training if there was a fee involved (58.1%). Approximately two-thirds of those who would pay a fee (67.1%) would pay no more than \$25 per hour of training. Monroe residents have a higher reservation price (highest price a consumer would be willing to pay for a good/service) since they would be more willing than Miami-Dade residents to incur a cost of over \$25 per person per hour for digital literacy (40.0% compared to 28.6% for Miami-Dade).

# TABLE OF CONTENTS

<b>METHODOLOGY</b> .....	<b>1</b>
<b>BUSINESS SURVEY RESULTS</b> .....	<b>3</b>
OVERALL RESULTS .....	3
RESULTS BY COUNTY .....	13
MIAMI-DADE COUNTY .....	13
MONROE COUNTY .....	22
RESULTS COMPARISON BETWEEN MIAMI-DADE AND MONROE COUNTIES.....	30
<b>WORKFORCE SURVEY RESULTS</b> .....	<b>33</b>
OVERALL RESULTS .....	33
RESULTS BY COUNTY .....	42
MIAMI-DADE COUNTY .....	42
MONROE COUNTY .....	50
RESULTS COMPARISON BETWEEN MIAMI-DADE AND MONROE COUNTIES.....	56
<b>APPENDICES</b>	
APPENDIX A: BUSINESS SURVEY – OVERALL RESULTS.....	61
APPENDIX B: BUSINESS SURVEY – RESULTS BY COUNTY.....	85
APPENDIX C: WORKFORCE SURVEY – OVERALL RESULTS.....	114
APPENDIX D: WORKFORCE SURVEY – RESULTS BY COUNTY.....	146
<b>TABLES</b>	
TABLE: BUSINESS SURVEY - FREQUENCY OF TRAINING BY INDUSTRY SECTOR.....	9
TABLE: MIAMI-DADE BUSINESS SURVEY - FREQUENCY OF TRAINING BY INDUSTRY SECTOR.....	18
TABLE: MONROE BUSINESS SURVEY - FREQUENCY OF TRAINING BY INDUSTRY SECTOR .....	27
<b>FIGURES</b>	
FIGURE: BUSINESS SURVEY - INDUSTRY SECTORS .....	4
FIGURE: BUSINESS SURVEY - EMPLOYMENT SIZE OF BUSINESSES .....	4
FIGURE: BUSINESS SURVEY - EMPLOYMENT SIZE OF BUSINESSES .....	5
FIGURE: BUSINESS SURVEY - NUMBER OF COMPUTERS .....	5
FIGURE: BUSINESS SURVEY - FREQUENCY OF HARDWARE AND SOFTWARE UPGRADES.....	6
FIGURE: BUSINESS SURVEY - INTERNET CONNECTION .....	6
FIGURE: BUSINESS SURVEY - SATISFACTION WITH WORKFORCE DIGITAL LITERACY.....	7
FIGURE: BUSINESS SURVEY - IMPORTANCE OF DIGITAL LITERACY .....	7
FIGURE: BUSINESS SURVEY - IMPORTANCE OF COMPUTER SKILLS IN ENTRY LEVEL HIRING.....	7
FIGURE: BUSINESS SURVEY - IMPORTANCE OF INTERNET SKILLS IN ENTRY LEVEL HIRING .....	8
FIGURE: BUSINESS SURVEY - TECHNOLOGY TRAINING NEEDS BY BUSINESS SIZE .....	9
FIGURE: BUSINESS SURVEY - PERCEPTION OF EMPLOYEES DIGITAL SKILLS LEVEL .....	10
FIGURE: BUSINESS SURVEY - DEMAND FOR TECHNOLOGY TRAINING .....	11
FIGURE: BUSINESS SURVEY - DEMAND FOR TECHNOLOGY TRAINING .....	11
FIGURE: BUSINESS SURVEY - TECHNOLOGY TRAINING FEES PREFERENCES.....	12



FIGURE: WORKFORCE SURVEY - TECHNOLOGY TRAINING FEES PREFERENCES.....	12
FIGURE: BUSINESS SURVEY - IMPORTANCE OF FUTURE INVESTMENT IN TECHNOLOGY.....	12
FIGURE: MIAMI-DADE BUSINESS SURVEY - INDUSTRY SECTORS.....	13
FIGURE: MIAMI-DADE BUSINESS SURVEY - EMPLOYMENT SIZE OF BUSINESSES.....	13
FIGURE: MIAMI-DADE BUSINESS SURVEY - EMPLOYMENT SIZE OF BUSINESSES.....	14
FIGURE: MIAMI-DADE BUSINESS SURVEY - NUMBER OF COMPUTERS.....	14
FIGURE: MIAMI-DADE BUSINESS SURVEY - FREQUENCY OF HARDWARE AND SOFTWARE UPGRADES.....	15
FIGURE: MIAMI-DADE BUSINESS SURVEY - INTERNET CONNECTION.....	15
FIGURE: MIAMI-DADE BUSINESS SURVEY - SATISFACTION WITH DIGITAL LITERACY.....	16
FIGURE: MIAMI-DADE BUSINESS SURVEY - IMPORTANCE OF DIGITAL LITERACY.....	16
FIGURE: MIAMI-DADE BUSINESS SURVEY - IMPORTANCE OF COMPUTER SKILLS IN ENTRY LEVEL HIRING.....	16
FIGURE: MIAMI-DADE BUSINESS SURVEY - IMPORTANCE OF INTERNET SKILLS IN ENTRY LEVEL HIRING.....	17
FIGURE: MIAMI-DADE BUSINESS SURVEY - PERCEPTION OF EMPLOYEES DIGITAL SKILLS LEVEL.....	19
FIGURE: MIAMI-DADE BUSINESS SURVEY - DEMAND FOR TECHNOLOGY TRAINING.....	19
FIGURE: MIAMI-DADE BUSINESS SURVEY - DEMAND FOR TECHNOLOGY TRAINING BY REVENUES.....	20
FIGURE: MIAMI-DADE BUSINESS SURVEY - TECHNOLOGY TRAINING FEES PREFERENCES.....	20
FIGURE: MIAMI-DADE WORKFORCE SURVEY - TECHNOLOGY TRAINING FEES PREFERENCES.....	20
FIGURE: MIAMI-DADE BUSINESS SURVEY - IMPORTANCE OF FUTURE INVESTMENT IN TECHNOLOGY.....	21
FIGURE: MONROE BUSINESS SURVEY - INDUSTRY SECTORS.....	22
FIGURE: MONROE BUSINESS SURVEY - EMPLOYMENT SIZE OF BUSINESSES.....	22
FIGURE: MONROE BUSINESS SURVEY - EMPLOYMENT SIZE OF BUSINESSES.....	23
FIGURE: MONROE BUSINESS SURVEY - NUMBER OF COMPUTERS.....	23
FIGURE: MONROE BUSINESS SURVEY - FREQUENCY OF HARDWARE AND SOFTWARE UPGRADES.....	24
FIGURE: MONROE BUSINESS SURVEY - INTERNET CONNECTION.....	24
FIGURE: MONROE BUSINESS SURVEY - SATISFACTION WITH WORKFORCE DIGITAL LITERACY.....	25
FIGURE: MONROE BUSINESS SURVEY - IMPORTANCE OF DIGITAL LITERACY.....	25
FIGURE: MONROE BUSINESS SURVEY - IMPORTANCE OF COMPUTER SKILLS IN ENTRY LEVEL HIRING.....	25
FIGURE: MONROE BUSINESS SURVEY - IMPORTANCE OF INTERNET SKILLS IN ENTRY LEVEL HIRING.....	26
FIGURE: MONROE BUSINESS SURVEY - PERCEPTION OF EMPLOYEES DIGITAL SKILLS LEVEL.....	28
FIGURE: MONROE BUSINESS SURVEY - DEMAND FOR TECHNOLOGY TRAINING.....	28
FIGURE: MONROE BUSINESS SURVEY - TECHNOLOGY TRAINING FEES PREFERENCES.....	29
FIGURE: MONROE WORKFORCE SURVEY - TECHNOLOGY TRAINING FEES PREFERENCES.....	29
FIGURE: MONROE BUSINESS SURVEY - IMPORTANCE OF FUTURE INVESTMENT IN TECHNOLOGY.....	29
FIGURE: MIAMI-DADE AND MONROE COUNTY BUSINESSES – NUMBER OF COMPUTERS.....	30
FIGURE: MIAMI-DADE AND MONROE.....	31
COUNTY BUSINESSES - IMPORTANCE OF DIGITAL LITERACY.....	31
FIGURE: MIAMI-DADE AND MONROE COUNTY BUSINESSES – DEMAND FOR TECHNOLOGY TRAINING.....	32
FIGURE: MIAMI-DADE AND MONROE BUSINESSES – TECHNOLOGY TRAINING FEES PREFERENCES.....	32
FIGURE: MIAMI-DADE AND MONROE BUSINESSES – INVESTMENT IN TECHNOLOGY.....	32
FIGURE: WORKFORCE SURVEY - AGE GROUPS.....	33
FIGURE: WORKFORCE SURVEY - RACE.....	34
FIGURE: WORKFORCE SURVEY - HIGHEST LEVEL OF EDUCATIONAL ATTAINMENT.....	34
FIGURE: WORKFORCE SURVEY - ANNUAL FAMILY INCOME.....	34
FIGURE: WORKFORCE SURVEY - LEADING INDUSTRIES.....	35
FIGURE: WORKFORCE SURVEY - LEADING OCCUPATIONS.....	35
FIGURE: WORKFORCE SURVEY - DAILY HOURS OF COMPUTER USAGE.....	36
FIGURE: WORKFORCE SURVEY - INTERNET ACCESS.....	36
FIGURE: WORKFORCE SURVEY - TYPE OF INTERNET CONNECTION.....	36

FIGURE: WORKFORCE SURVEY - INTERNET SKILL LEVELS.....	37
FIGURE: WORKFORCE SURVEY - USES OF THE INTERNET .....	37
FIGURE: WORKFORCE SURVEY - COMPUTER SKILL LEVELS .....	38
FIGURE: WORKFORCE SURVEY –INTERNET SKILL LEVELS.....	38
FIGURE: WORKFORCE SURVEY - IMPORTANCE OF COMPUTER SKILLS (AGREEMENT WITH STATEMENT)...	40
FIGURE: WORKFORCE SURVEY - WILLINGNESS TO PARTICIPATE IN FREE TRAINING .....	40
FIGURE: WORKFORCE SURVEY - FEE RESPONDENT WOULD PAY PER HOUR FOR TRAINING .....	41
FIGURE: MIAMI-DADE WORKFORCE SURVEY - MIAMI-DADE WORKFORCE BY AGE .....	42
FIGURE: MIAMI-DADE WORKFORCE SURVEY - RACE OF WORKFORCE.....	42
FIGURE: MIAMI-DADE WORKFORCE SURVEY - HIGHEST LEVEL OF EDUCATIONAL ATTAINMENT .....	43
FIGURE: MIAMI-DADE WORKFORCE SURVEY - ANNUAL FAMILY INCOME.....	43
FIGURE: MIAMI-DADE WORKFORCE SURVEY - LEADING INDUSTRIES.....	44
FIGURE: MIAMI-DADE WORKFORCE SURVEY - LEADING OCCUPATIONS.....	44
FIGURE: MIAMI-DADE WORKFORCE SURVEY - INTERNET ACCESS.....	45
FIGURE: MIAMI-DADE WORKFORCE SURVEY - TYPE OF INTERNET CONNECTION .....	45
FIGURE: MIAMI-DADE WORKFORCE SURVEY - DAILY HOURS OF COMPUTER USAGE .....	45
FIGURE: MIAMI-DADE WORKFORCE SURVEY - INTERNET SKILL LEVELS .....	46
FIGURE: MIAMI-DADE WORKFORCE SURVEY - USES OF THE INTERNET .....	46
FIGURE: MIAMI-DADE WORKFORCE SURVEY - COMPUTER SKILL LEVELS.....	47
FIGURE: MIAMI-DADE WORKFORCE SURVEY - INTERNET SKILL LEVELS .....	47
FIGURE: MIAMI-DADE WORKFORCE SURVEY - ROLE OF COMPUTER SKILLS.....	48
FIGURE: MIAMI-DADE WORKFORCE SURVEY - WILLINGNESS TO PARTICIPATE IN FREE TRAINING.....	48
FIGURE: MIAMI-DADE WORKFORCE SURVEY - FEE RESPONDENT WOULD PAY PER HOUR FOR TRAINING..	49
FIGURE: MONROE WORKFORCE SURVEY - MONROE WORKFORCE BY AGE .....	50
FIGURE: MONROE SURVEY - HIGHEST LEVEL OF EDUCATIONAL ATTAINMENT.....	50
FIGURE: MIAMI-DADE WORKFORCE SURVEY - ANNUAL FAMILY INCOME.....	51
FIGURE: MONROE WORKFORCE SURVEY - LEADING INDUSTRIES .....	51
FIGURE: MONROE WORKFORCE SURVEY - LEADING OCCUPATIONS.....	51
FIGURE: MONROE WORKFORCE SURVEY - INTERNET ACCESS.....	52
FIGURE: MONROE WORKFORCE SURVEY - TYPE OF INTERNET CONNECTION .....	52
FIGURE: MONROE WORKFORCE SURVEY - DAILY HOURS OF COMPUTER USAGE.....	52
FIGURE: MONROE WORKFORCE SURVEY - INTERNET SKILL LEVELS.....	53
FIGURE: MONROE WORKFORCE SURVEY - USES OF THE INTERNET .....	53
FIGURE: MONROE WORKFORCE SURVEY – COMPUTER SKILL LEVELS .....	54
FIGURE: MONROE WORKFORCE SURVEY – INTERNET SKILL LEVELS.....	54
FIGURE: MONROE WORKFORCE SURVEY - ROLE OF COMPUTER SKILLS.....	54
FIGURE: MONROE WORKFORCE SURVEY - WILLINGNESS TO PARTICIPATE IN FREE TRAINING.....	55
FIGURE: MONROE WORKFORCE SURVEY - FEE RESPONDENT WOULD PAY PER HOUR FOR TRAINING.....	55
FIGURE: WORKFORCE SURVEY COMPARISON - DAILY HOURS OF COMPUTER USAGE.....	56
FIGURE: WORKFORCE SURVEY COMPARISON INTERNET ACCESS.....	56
FIGURE: WORKFORCE SURVEY COMPARISON - TYPE OF INTERNET CONNECTION .....	57
FIGURE: WORKFORCE SURVEY COMPARISON - USES OF THE INTERNET .....	57
FIGURE: WORKFORCE SURVEY COMPARISON - INTERNET SKILLS .....	58
FIGURE: WORKFORCE SURVEY COMPARISON - GOOD/EXCELLENT SKILL LEVELS COMPUTER.....	58
FIGURE: WORKFORCE SURVEY COMPARISON - GOOD/EXCELLENT SKILL LEVELS IN INTERNET TASKS.....	59
FIGURE: WORKFORCE SURVEY COMPARISON - WILLINGNESS TO PARTICIPATE IN FREE TRAINING.....	60
FIGURE: WORKFORCE SURVEY COMPARISON - FEE PER HOUR FOR TRAINING.....	60

## METHODOLOGY

From March through May 2010 the Florida International University Metropolitan Center conducted two sets of surveys for the Miami-Dade Broadband Coalition (MDBC) and the South Florida Workforce Investment Board in Region 23. The goal of the surveys was to gauge computer usage and literacy levels, and identify key issues influencing Workforce and Business digital literacy. The project used the following definition of digital literacy: “digital technology, communications tools, and/or networks to access, manage, integrate, evaluate and create information in order to function in a knowledge society” (Digital Transformation. A framework for ICT literacy. A report from the ICT Literacy Panel. Educational Testing Service ETS, Princeton, NJ, 2002. p. 2). The Digital Literacy Surveys also measure any difference in perception between the business sector and the workforce regarding the importance of information and communication technologies (ICT) and Internet applications. The data collected in this project is intended to serve as a baseline assessment of existing and emerging needs for access and education in digital literacy in the workforce.

Both survey instruments, one to be used for collection of information from businesses, and one targeting the workforce, were designed in collaboration with the MDBC and with input from the South Florida Workforce Investment Board. Some of the areas covered in the survey questionnaires include an assessment of workforce computer skills and identification of discrepancies with the perception of required skills among businesses; access to and usage of Internet; type of Internet service and connection speed, barriers to technological development and education, including costs, no access to training, lack of time etc.

The surveys were implemented over the phone among residents and businesses in both Miami-Dade and Monroe counties. Phone surveys were conducted by expert phone interviewers in the respondent's preferred language – English, Spanish or Creole. The FIU Metropolitan Center collected statistically representative samples by gathering over 1000 surveys with residents who are in the workforce (employed or trying to obtain employment) and over 900 surveys with businesses from various industries. The business survey database consists of 600 responses from Miami-Dade County with a +/- 4% response margin of error, and 300 responses from Monroe businesses with a +/- 6% response margin of error. The workforce data includes 634 responses from Miami-Dade's labor force with a +/- 4% margin of error and 420 from Monroe County with a +/- 5% margin of error. For the Workforce Survey respondents were screened with a filter question to establish whether they are currently employed or seeking employment. The workforce data excludes respondents who are not in the workforce and not seeking employment. The business data excludes responses provided from non-profit organizations.

For both target groups, the project team used randomized lists of businesses and residents which ensured the accurate statistical representation of individuals and organizations in terms of demographics, business size, industry etc. The business list included approximately 140,000 businesses in Miami-Dade and 11,000 in Monroe County. The workforce list included approximately 218,000 phone contacts in Miami-Dade and 27,000 in Monroe County.

The business survey data was collected from a wide range of for-profit organizations in different economic sectors, and with varying employment and revenue figures. The sample is representative of the general makeup of the businesses in the two counties in terms of industry sector and employment size.

Respondents to the workforce survey represent the counties' different linguistic, racial and ethnic groups. In terms of income and education, the respondents reported higher income and education levels than the estimates in the latest American Community Survey. With regards to

income, half of the respondents in the two counties, or 50.4%, refused to provide their income category. Of those who provided a response to the income question, 64.2% reported annual family income of \$50,000 and above. According to the 2006-2008 American Community Survey, half of the employed population had earnings of \$27,303 per person or over \$50,000 for a family of two in Miami-Dade and \$30,538 per person or over \$60,000 for a family of two in Monroe County. Since income and education are correlated, there is an identical discrepancy observed in the respondents' income levels. While 51.0% of the sample respondents reported they have Bachelor's degrees or higher, only 31.8% of the labor force in the two counties in the ages 25 to 64 was estimated to have advanced degrees in 2008. There are three main reasons for the over sampling of respondents with higher educational attainment. First, the 2008 ACS estimates are limited to the population in the ages 25 to 64, while the workforce survey sample included 7.8% of respondents in the ages 18 to 29, and 13.5% of respondents 65 years of age and older. In addition, a higher percentage of survey respondents were older members of the workforce than the percentage of residents of that age in the labor force as reported in the 2008 American Community Survey. For example, while according to the 2008 ACS 4.7% of Miami-Dade's workforce is comprised of residents aged 65 and above, respondents of that age are 13.4% of the sample. In addition, while 28.4% of the survey respondents were in the 55-64 age group, the 2008 ACS estimates them to be 14.3% of the Miami-Dade workforce. The high participation rate of older respondents is likely to produce a higher percentage of participants with advanced degrees. Placed within the context of current economic conditions, it is possible that many residents previously in retirement and not included in the labor force may be returning to the workforce.

Second, the survey subject matter has a direct effect on the willingness of respondents to participate in the survey. Respondents with higher income and educational attainment may be more interested and engaged in an assessment of digital literacy. Finally, it should be noted that the workforce survey was conducted over the phone with the adult householder who answered. All demographic questions were asked at the end of the survey and responses were collected and analyzed regardless of demographic characteristics. Moreover, calls were only made to landline phones and this method of response collection over samples people of higher age and income. Recent research reported in the National Health Interview Survey conducted in 2009 shows that of those living below the federal poverty level of about \$22,000 a year for a family of four, 36 percent have only cell phones. Twenty-nine percent of the near-poor — between the poverty level and \$44,000 annually for a family of four — are cell phone users only, as are 20 percent of those with higher incomes. In addition, more than a third of people under age 35 — including about half of those age 25 to 29 — have only cell phones. The figure drops steadily at age 35 and after, with only about 1 in 20 people age 65 and older relying only on mobile service.<sup>1</sup>

Sample composition has a recognized effect on the survey results and may produce a more conservative assessment of the technology needs of South Florida's workforce. Labor force members with higher educational attainment and income levels are more likely to have both more advanced digital skills and higher appreciation of such skills for career advancement. To mitigate this effect, the analysis includes references to any differences in responses between income, age and educational attainment groups. Nevertheless, the reader should take into consideration that the workforce survey results may show a 'best case scenario' and may underestimate the need for technology training to advance the digital literacy skills of South Florida's workforce.

---

<sup>1</sup> U.S. Department of Health and Human Services. Centers for Disease Control and Prevention. Early Release Brochure. [http://www.cdc.gov/nchs/data/nhis/earlyrelease/ER\\_booklet.pdf](http://www.cdc.gov/nchs/data/nhis/earlyrelease/ER_booklet.pdf)

## BUSINESS SURVEY RESULTS

The FIU Metropolitan Center collected 600 survey responses from businesses in Miami-Dade County and 300 completed surveys from businesses in Monroe County. The analysis below presents the cumulative results of for-profit organizations for the two counties, followed by results in each of the counties including analysis on the major differences in employer responses between the two geographic areas.

### OVERALL RESULTS

---

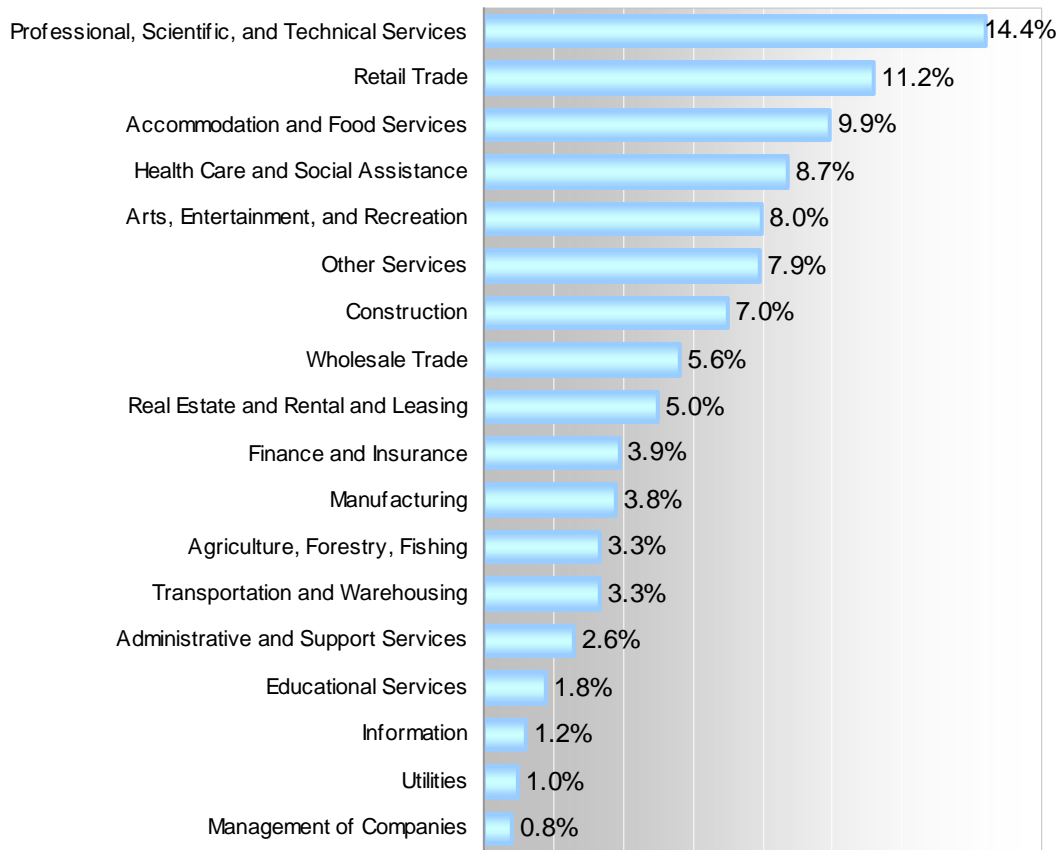
The organizations surveyed were for-profit establishments from different industry sectors. The most represented sector in terms of responses in the two counties was Professional, Scientific and Technical Services (14.4%). According to the North American Industry Classification System, the Professional, Scientific and Technical Services sector includes activities which require a high degree of expertise and training. The establishments in this sector specialize according to expertise and provide these services to clients in a variety of industries and, in some cases, to households. Activities performed include: legal advice and representation; accounting, bookkeeping, and payroll services; architectural, engineering, and specialized design services; computer services; consulting services; research services; advertising services; photographic services; translation and interpretation services; veterinary services; and other professional, scientific, and technical services.

The second highest ranked sector in terms of responses is Retail Trade (11.2%). The Retail Trade sector comprises establishments engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise.

The third sector with the highest response rate was Accommodation and Food Services (9.9%). Establishments in this sector provide customers with lodging and/or preparing meals, snacks, and beverages for immediate consumption.

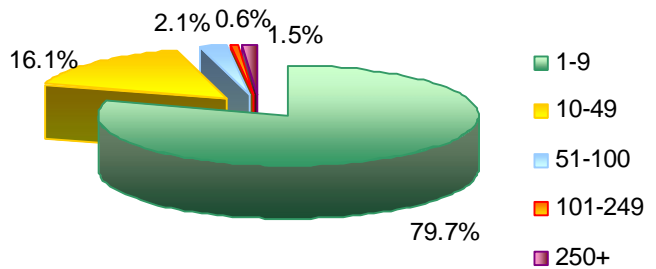
The other two industry sectors included in the Top Five of businesses surveyed include Healthcare and Social Assistance (8.7%) and Arts, Entertainment and Recreation (8.0%). A large number of businesses from the category 'Other Services' also provided responses (7.9%). Establishments in this sector are primarily engaged in activities such as equipment and machinery repairing, promoting or administering religious activities, grantmaking, advocacy, and providing drycleaning and laundry services, personal care services, death care services, pet care services, photofinishing services, temporary parking services, and dating services.

**Figure: Business Survey - Industry Sectors**

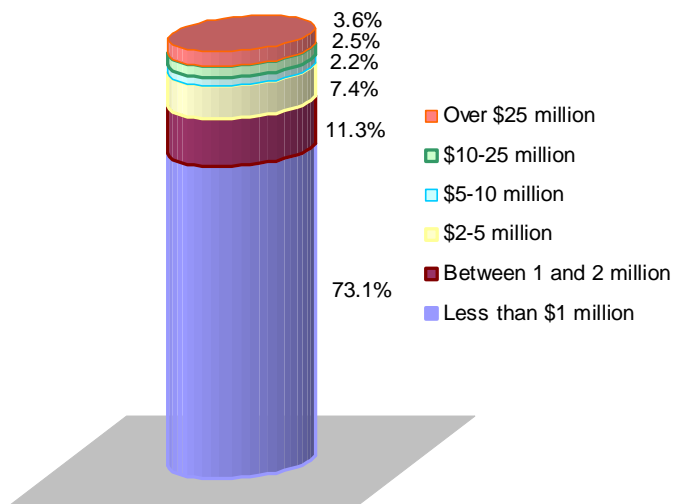


The majority of companies providing responses (95.8%) were small size establishments (1-49 employees). Only 2.7% of respondents were medium-size firms (50-249 employees) and 1.5% were large-size businesses. The response rate and representation of firms in the sample, closely reflects the actual composition of businesses in Miami-Dade County. According to the 2007 County Business Patterns database of the U.S. Census, 96.3% of the business establishments in the county were small-size (1-49 employees), 3.3% had between 50 and 249 employees, and 0.5% had 250 or more employees. Similar data is not available for Monroe County.

**Figure: Business Survey - Employment Size of Businesses**



**Figure: Business Survey - Employment Size of Businesses**



While the majority of business respondents (59.7%) refused to provide their revenues, of those who provided revenue figures, 73.1% reported revenues of under \$1 million for 2009.

Approximately 18.7% reported revenues between \$1 and 5 million, and 3.6% had revenues of over \$25 million.

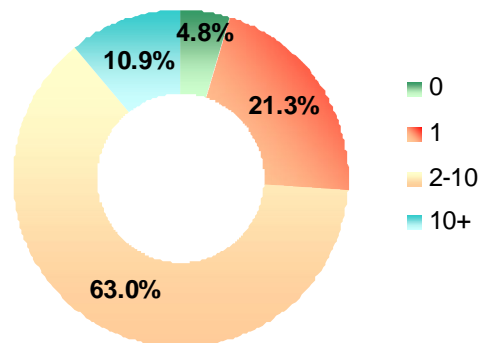
A large percentage of businesses in the two counties are privately owned and have special classification as minority, women or veteran-owned. The majority of businesses participating in the survey (63.3%) are family-controlled. In addition, one in six (15.9%) have a Minority/Disadvantaged Business Enterprise status, 19.0% are Women Business Enterprises, and 2.2% are veteran-owned.

Given the demographic makeup of South Florida, the majority of businesses in the area conduct transactions with clients, suppliers, and financial institutions, and issue advertisements in both English and Spanish. While 96.0% use English as the language of communication, 59.5% also use Spanish, mostly businesses located in Miami-Dade County. In addition, 6.2% also use Creole, 4.6% use Portuguese, and 4.3% use other languages, including French, Italian, German, Hebrew, Chinese and others.

**USE OF TECHNOLOGY**

Only a small percentage of companies surveyed in Miami-Dade and Monroe counties (4.8% or 43 companies) do not have computers, either because they do not need them (28 companies) or because they cannot afford them (8 companies). Only two businesses do not have a computer because no one in the firms knows how to use it. While a very large percentage have only one computer (21.3%), the majority have between 2 and 10 computers (63.0%). Approximately one in ten businesses (10.9%) have more than 10 computers.

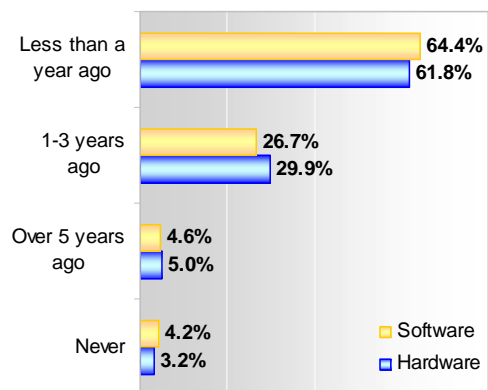
**Figure: Business Survey - Number of Computers**



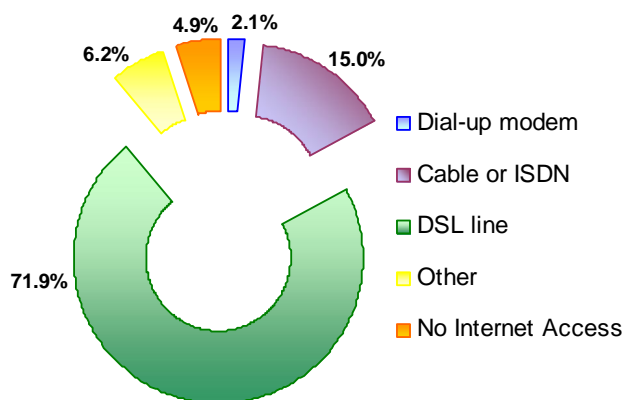
The majority of businesses have updated their computers fairly recently, within the last year. Approximately 61.8% have updated their computer hardware and 64.4% have updated their software within the last year. Only about 5% have done upgrades and updates over 5 years ago.

In addition, 8.2% have either never updated their hardware or not within the last five years. Also, 8.8% indicated the same about their computer software.

**Figure: Business Survey - Frequency of Hardware and Software Upgrades**



**Figure: Business Survey - Internet Connection**



The overwhelming majority of businesses in South Florida have fast access to Internet. Almost nine out of ten businesses (86.9%) have Cable, ISDN or DSL access. Only 2.1% of businesses still use dial-up connection and 6.2% have another type of Internet access, either via a T1 line, wireless service or smart phone. Only 43 businesses (4.9%) have no Internet access at their place of operation. The main reason why some businesses have no Internet connection is that they do not need it at their business location (32 businesses). In addition, seven (7) businesses indicated they cannot afford to pay for access to the Internet. However, 20 businesses reported that they use Internet at home for business purposes.

The majority of businesses have a website (64.9%). Less than a quarter of the businesses which do not have a website, would like to have a website for their company (18.2%). Slightly over a quarter (27.3%) use social networking sites like Facebook, MySpace, Hi5, Twitter and other to promote their products or services.

Most businesses conduct transactions online (57.2%). Of the businesses which conduct online transactions, almost half (47.5%) conduct both purchases and sales online. About a third (35.7%) only make online purchases and 11.6% only make online sales. Some other online transactions which businesses conduct include banking, bill payments, and advertising. The businesses which conduct online financial transactions most frequently mention PayPal (60.4%), Amazon (9.8%) and EBay (7.1%) as the online accounts they use for payments, promotion, sales and other online transactions.

A significant percentage of businesses (42.1%) offer company-issued smart phones (Iphone, Blackberry, Palm Treo and others) for some of their employees. Most of these smart phones are issued for upper management only (67.3%), but 26.8% offer those phones to both upper and middle management.

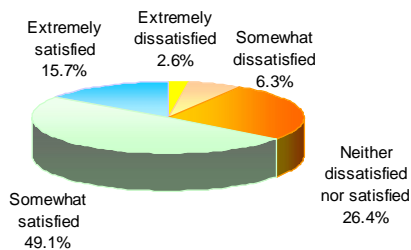


## IMPORTANCE OF DIGITAL LITERACY

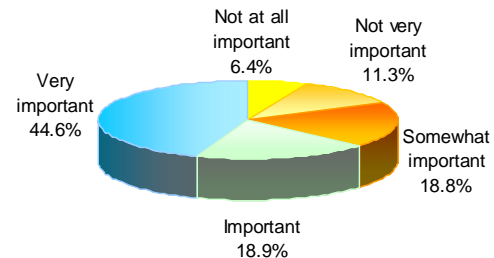
**Only 15.7% of businesses are extremely satisfied with the level of digital literacy of South Florida's workforce.** The figure below also shows that 8.9% are somewhat or extremely dissatisfied, and 26.4% are ambivalent, indicating they are neither dissatisfied nor satisfied with the level of digital literacy of the workforce. South Florida's businesses and workforce seem convinced that digital literacy is essential in today's job market. Only 17.7% indicated that digital literacy is either not at all or not very important for their company. Interestingly, only 1.7% of the workforce survey respondents disagreed or strongly disagreed with the statement that computer skills are required for today's job market.

Although the majority of companies, regardless of revenues, agreed that digital literacy is important to them, it seems more important for companies with larger revenues. While 59.4% of businesses with revenues under \$1 million considered it important or very important, 67.6% of those with revenues between \$1-5 million, and 73.3% of those over \$5 million indicated the same.

**Figure: Business Survey - Satisfaction with Workforce Digital Literacy**



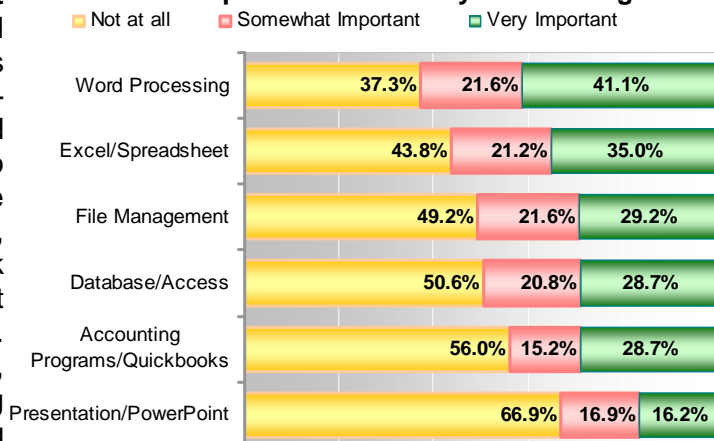
**Figure: Business Survey - Importance of Digital Literacy**



The workforce survey results show that 44.4% consider themselves fairly skilled, 30.3% reported being very skilled and 8.8% indicated they were at the expert level of digital literacy. Yet, only 15.7% of businesses reported being extremely satisfied and 49.1% were somewhat satisfied with the level of digital literacy of South Florida's workforce. While the survey did not ask the businesses to assess whether they need more employees with advanced skills, the workforce survey shows that based on the self-assessment of the respondents, the area's businesses can rely on a large percentage of potential employees with moderate to high level skills. Although a very small percentage (8.8%) considered themselves to have expert-level Internet skills, the majority (74.7%) considered themselves to be fairly or very skilled.

**South Florida's businesses reported that digital literacy plays an important role in the hiring of entry level employees.** The majority of businesses assign some importance to computer-related technical skills such as word processing (62.7%), followed by ability to work with Excel (56.2%) and file management skills (50.8%). Conversely, ability to prepare presentations and work with accounting programs were least important in entry level employee hiring. Some businesses mentioned other, specialized software as important in hiring entry level employees, including AutoCAD, graphic design software, tax return programs, medical software etc.

**Figure: Business Survey - Importance of Computer Skills in Entry Level Hiring**

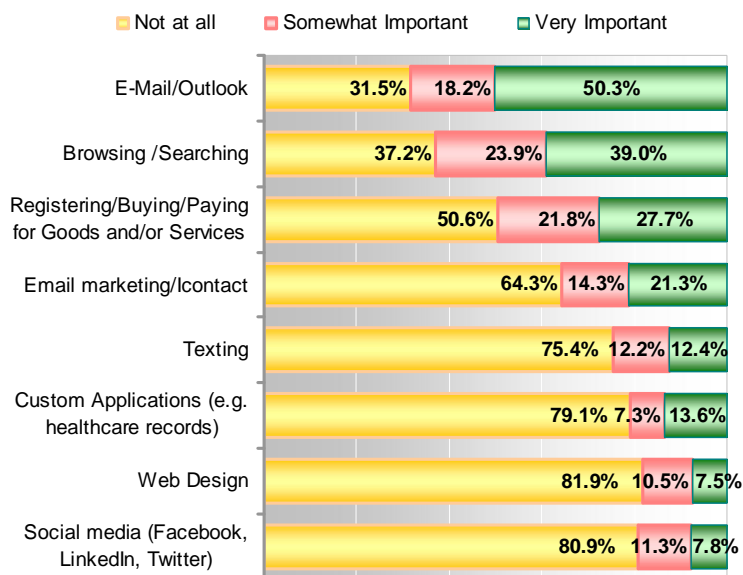


Significant percentages of South Florida workforce seems to know how to conduct the tasks and possess the necessary technical skills important to businesses. The workforce results show that 58.1% of the workforce consider their word processing skills good excellent, 41.2% indicated the same about their excel skills, and 34.1% about their file management skills.

Miami-Dade and Monroe counties' businesses also have specific preferences for the Internet skills entry level employees are required to have. E-mailing is most frequently recognized as a skill required of entry level employees considered somewhat important (18.2%) or very important (50.3%). In addition, a majority of businesses also consider browsing/ searching (62.9%) and ability to register/buy/pay for goods and services (49.5%) important skills. Some businesses also mentioned knowledge of eFax as an important skill for entry level employees.

The Internet applications identified by most businesses as important for entry level hiring were the same which majorities of South Florida's workforce feel skilled to use. The majority of the workforce reported having good or excellent skills in browsing (67.2%), email (66.0%), and registering for products and services (55.5%).

**Figure: Business Survey - Importance of Internet Skills in Entry Level Hiring**



## DEMAND FOR TECHNOLOGY TRAINING

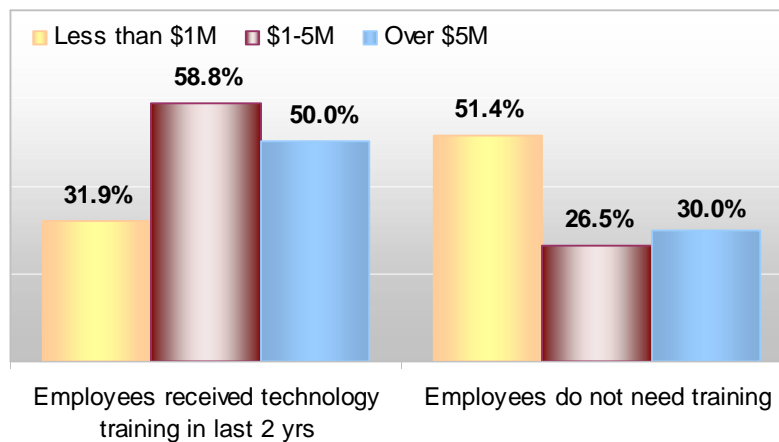
South Florida's businesses seem to realize the need for training to upgrade and update their employees' knowledge and use of technology, yet many businesses have not exposed their workforce to any training recently. The majority of businesses reported that their employees have not received any technology training in the last two years (63.7%). Yet, 47.2% also indicate that their employees need training to upgrade their knowledge and use of technology at least every two years. However, a significant percentage (48.7%) of businesses do not feel their employees need any training. Depending on their industry sector, some businesses are more likely to consider that technology training is needed for their employees. Unsurprisingly, businesses who consider their employees need training at least every two years or more frequently are from industry sectors which generally require more specialized and technologically advanced workforce. Some of these industry sectors include Management of Companies and Enterprises, Health Care and Social Assistance, Finance and Insurance, and Information. Conversely, sectors in which a technologically savvy workforce is less important include Agriculture, Forestry and Fishing, Accommodation and Food Services, and the "Other" category which includes many of service-oriented businesses such as auto repairs, beauty salons etc. Interestingly, a large percentage of the businesses in the Educational Services category (68.8%) also indicate their employees do not need any technology training. Given the need to develop a globally competitive workforce in a digital economy, and the fact that our educators need to be leaders in the use of technology, this result may be cause for some concern.

**Table: Business Survey - Frequency of Training by Industry Sector**

	Employees do not need training	Every 2 yrs or more frequently	Every 3 yrs or less frequently
Agriculture, Forestry, Fishing	74.1%	25.9%	0.0%
Educational Services	68.8%	31.3%	0.0%
Retail Trade	63.3%	33.7%	3.1%
Accommodation and Food Services	60.9%	33.3%	5.7%
Construction	59.7%	35.5%	4.8%
Other	57.4%	42.6%	0.0%
Arts, Entertainment, and Recreation	55.9%	39.7%	4.4%
Manufacturing	54.5%	30.3%	15.2%
Utilities	50.0%	50.0%	0.0%
Administrative and Support Services	45.5%	54.5%	0.0%
Transportation and Warehousing	41.4%	58.6%	0.0%
Wholesale Trade	39.1%	56.5%	4.3%
Professional, Scientific, and Tech. Svcs.	38.0%	58.7%	3.3%
Finance and Insurance	32.4%	64.7%	2.9%
Management of Companies and Enterprises	28.6%	57.1%	14.3%
Real Estate and Rental and Leasing	27.9%	69.8%	2.3%
Health Care and Social Assistance	27.6%	64.5%	7.9%
Information	27.3%	54.5%	18.2%

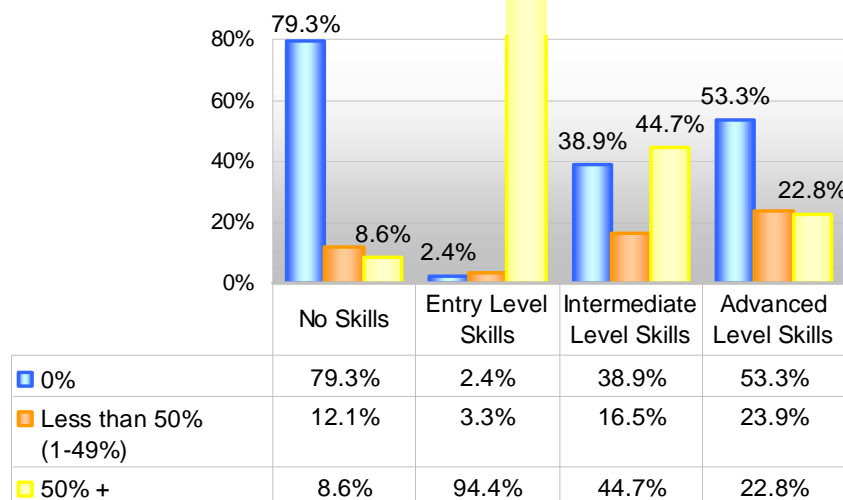
In addition to the industry sector of the businesses, another factor which affects the frequency of training employees receive is revenues. The figure below shows that a lower percentage of employees at companies with lower revenues have received training in the last two years than companies with higher revenues. While smaller establishments may not have the capacity and resources to offer or send their employees to technology training, they may also have no need for their employees to receive technology training. The majority of businesses with revenues under \$1 million indicated that their employees do not need training.

**Figure: Business Survey – Technology Training Needs by Business Size**



The level of digital literacy of South Florida’s workforce is best represented by the businesses’ perception of the level of technological skills their employees exhibit. The figure below shows the percentage of companies reporting what proportion of their employees has the respective level of digital skills. The first row in the table shows the skill level. The first column contains the categories of responses – 0% of workforce, less than 50%, i.e. 1-49%, and more than 50%. The percentages in the table and in the figure reflect the percentage of businesses who reported the percentage of their workforce possessing skills at the respective skill level. First, the figure and table show that South Florida’s businesses believe most of their employees have some level of technological skills. Approximately 79.1% of businesses indicate they have no employees who lack any digital skills. **However, the figure also demonstrates that large percentages of South Florida’s workforce have low level of technological skills. The overwhelming majority of businesses (94.4%) reported that most of their employees have entry-level skills. However, more than a third of businesses (38.9%) reported they have no employees with intermediate level skills. Also, a majority of the businesses (53.3%) indicate they have no employees with advanced level skills but almost half of businesses (44.7%) reported the majority of their employees have intermediate level skills.**

**Figure: Business Survey - Perception of Employees Digital Skills Level**

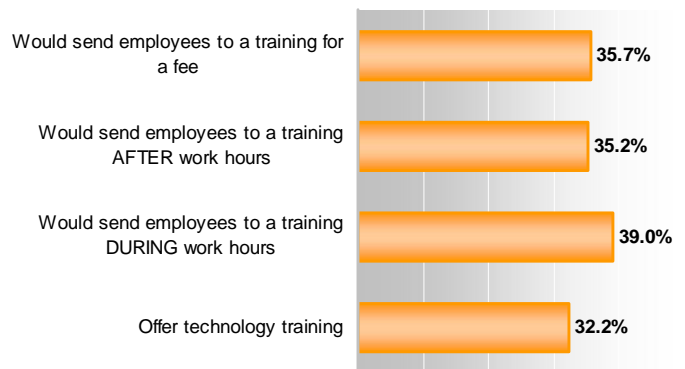


The analysis of the level of digital skills of the businesses’ employees shows that there are some gaps that can be bridged with targeted training. Many businesses seem to recognize the importance of technological training and offer such training internally (32.2%). **Small businesses, with employees fewer than 50, are less likely to offer technology training internally (30.4%) than businesses with over 50 employees (58.0%).**

Less than half of businesses (47.5%) service their own IT and web development needs in house, while the majority service their IT needs by outsourcing. A larger percentage of the businesses with more resources, i.e. higher revenues and more employees, prefer to service their IT and web development needs in-house, than businesses with fewer employees and lower revenues. While 49.0% of businesses with fewer than 50 full time employees rely on their in-house resources for their technology needs, 74.0% of businesses with more than 50 employees reported the same. Overall, 41.6% of South Florida’s businesses receive technology services from companies located in Miami-Dade or Monroe counties, and 4.2% outsource to companies located somewhere else, including Broward County, Florida; Atlanta, Georgia; California, Minnesota, Kansas and even Columbia.

The fact that many companies seek technology services outside their company may also explain their willingness to dedicate resources for the technology training of their employees. Many businesses are willing to send their employees to a training offered by another organization. More than a third of businesses would send their employees to technology training, either during or after work hours, and are also willing to pay a fee. Overall 35.7% of businesses would pay a fee to have their employees trained.

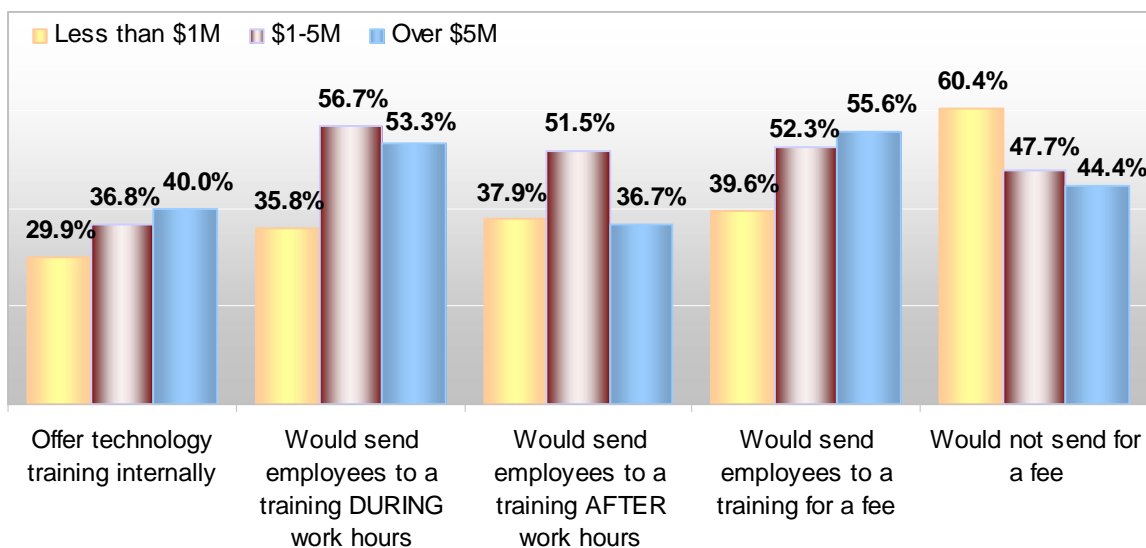
**Figure: Business Survey - Demand for Technology Training**



Workforce survey respondents were also asked questions about their willingness to participate in training for free and for a fee. The results show a greater willingness by the workforce to undergo training than the businesses may consider necessary. Compared to the approximately one-third of businesses who would send their employees to a training, the majority of workforce respondents would go to a training – 77.1% would go to a free training during work hours and 59.3% after work hours. The comparison of the results from the business and workforce surveys also shows that the majority of both businesses and employees are not willing to pay a fee for technology training. The majority of Miami-Dade and Monroe counties' workforce would not participate in technology training if there was a fee involved (58.1%) and 64.3% of businesses would not pay a fee for the training of their employees.

The capacity of businesses to offer training to their employees and their willingness to send employees to technology training is correlated to business revenues. A lower percentage of businesses with revenues under \$1 million reported that they offer technology training internally than enterprises with higher revenues. The figure below also shows that businesses with higher revenues are also more willing to send their employees to technology training and that they would even pay a fee for their employees to receive such training.

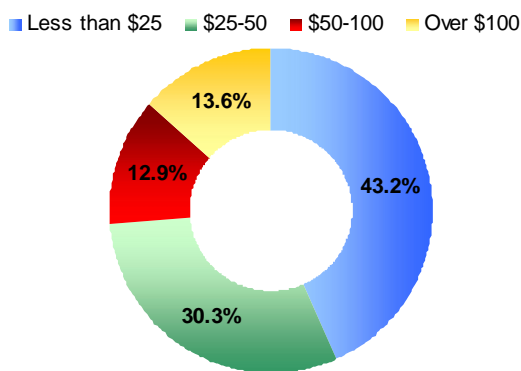
**Figure: Business Survey - Demand for Technology Training**



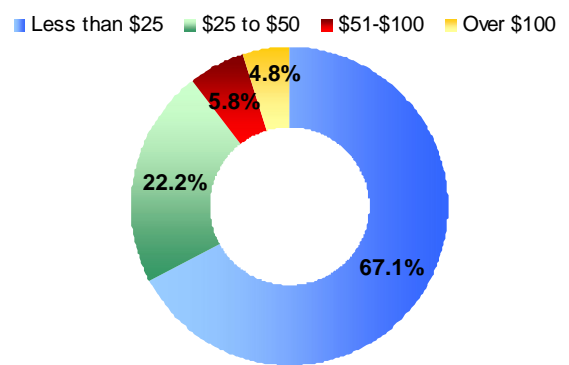
The overwhelming majority of businesses in South Florida who would pay a fee for their employees' technology training (73.5%) would pay up to \$50 per person per hour. Almost a third of the businesses who would be willing to pay a fee for the training of their employees (30.3%) find the fee of \$25-50 acceptable, and 43.2% would be willing to pay less than \$25. The fact that 26.5% reported they would pay over \$50 per employee demonstrates the importance they assign to technology training. A quarter of the businesses (25.1%) would also consider paying more than \$50 for training per employee.

While the majority of both companies and the workforce are not willing to pay a fee for training, South Florida's firms which are inclined to pay for training have a higher fee tolerance than the workforce. While 67.1% of the workforce would pay up to \$25, a smaller percentage of companies (45.5%) indicated the same.

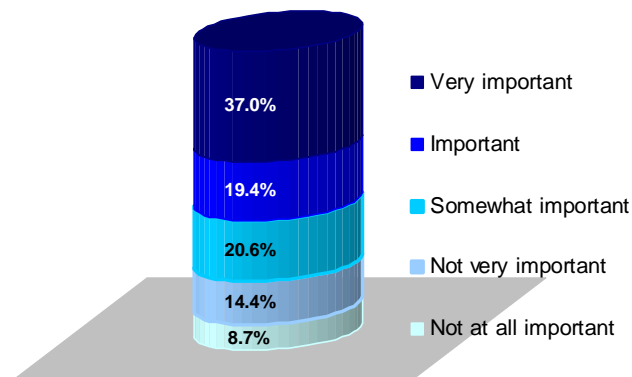
**Figure: Business Survey - Technology Training Fees Preferences**



**Figure: Workforce Survey - Technology Training Fees Preferences**



**Figure: Business Survey - Importance of Future Investment in Technology**



The willingness of South Florida businesses to expend financial resources to keep pace with technology is also evident in the importance they attribute to future investments in technology. The majority (56.4%) consider it important or very important for their business to make future investments in technology and an additional 20.7% also indicate such investment is somewhat important. **The survey results demonstrate investment in technology is important to the majority of all businesses regardless of revenues and size of business in terms of employees.** While 52.7% of businesses with revenues under \$2 million consider such investment important or very important, 66.7% of establishments with revenues over \$2 million indicated the same. In addition, while 55.3% of businesses with fewer than 50 employees reported future investment in technology is important or very important for their company, 72.0% of those with 50 or more employees indicated the same.

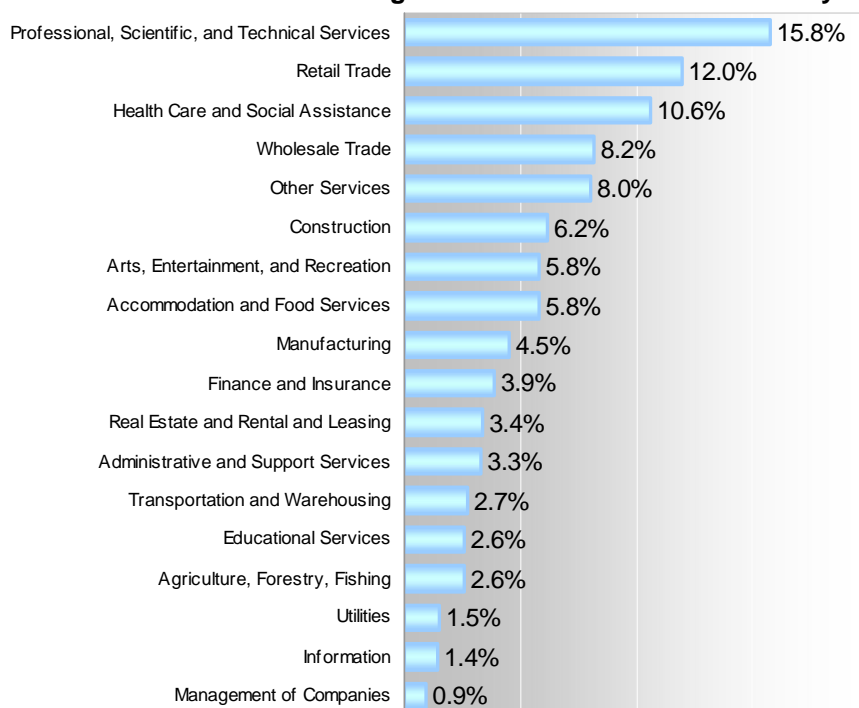
## RESULTS BY COUNTY

### MIAMI-DADE COUNTY

#### COMPANY CHARACTERISTICS

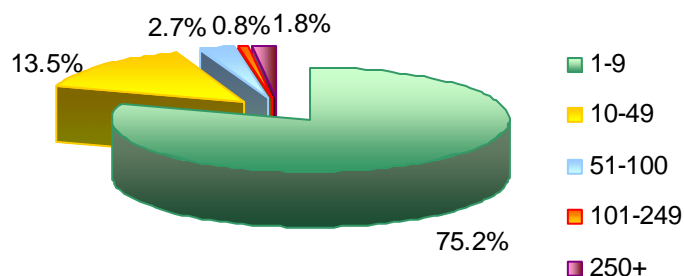
The Miami-Dade businesses who provided responses were for-profit establishments from different industry sectors. The most represented sector in terms of responses in Miami-Dade County was Professional, Scientific and Technical Services (14.6%). The second highest ranked sector in terms of responses was Retail Trade (11.0%), followed by Health Care and Social Assistance (9.9%). A large number of businesses from the category 'Other Services' also provided responses (8.0%).

**Figure: Miami-Dade Business Survey - Industry Sectors**

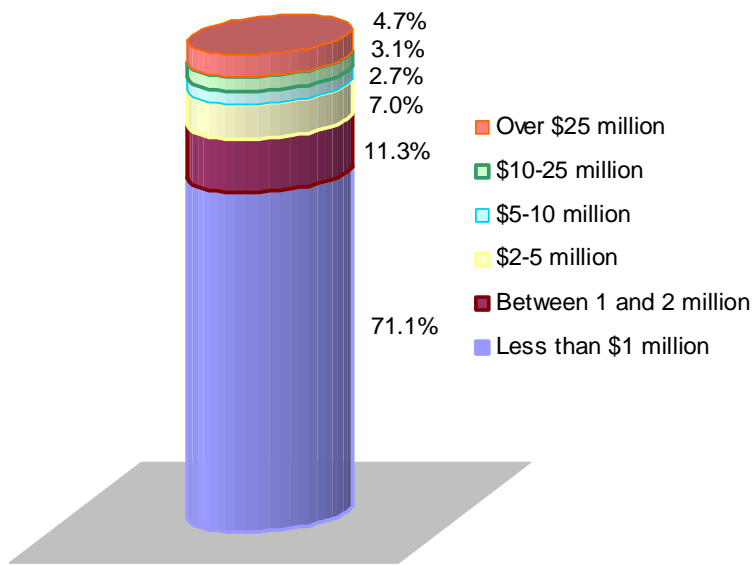


The majority of companies providing responses (88.7%) were small size establishments (1-49 employees). Only 3.5% of respondents were medium-size firms (50-249 employees) and 1.8% were large-size businesses. The response rate and representation of firms in the sample, closely reflects the actual composition of businesses in Miami-Dade County. According to the 2007 County Business Patterns database of the U.S. Census, 96.3% of the business establishments in the county were small-size (1-49 employees), 3.3% had between 50 and 249 employees, and 0.5% had 250 or more employees.

**Figure: Miami-Dade Business Survey - Employment Size of Businesses**



**Figure: Miami-Dade Business Survey - Employment Size of Businesses**



While the majority of business respondents (55.6%) refused to provide their revenues, of those who provided revenue figures, 71.1% reported revenues of under \$1 million for 2009.

Approximately 18.3% reported revenues between \$1 and 5 million, and 4.7% had revenues of over \$25 million.

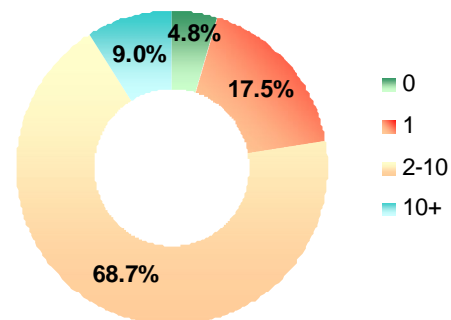
Family-owned, women-owned and minority enterprises are a vital part of the economy of Miami-Dade County. The majority of businesses participating in the survey (59.8%) are family-controlled. In addition, almost a quarter (22.0%) have a Minority/Disadvantaged Business Enterprise status, 18.0% are Women Business Enterprises, and 2.3% are veteran-owned.

Given the demographic makeup of the county, the majority of Miami-Dade County’s businesses conduct transactions with clients, suppliers, and financial institutions and issue advertisements in both English and Spanish. While 94.5% use English as the language of communication, 72.7% also use Spanish. In addition, 7.8% also use Creole, 6.3% use Portuguese, and 4.0% use other languages, including French, Italian, German, Hebrew, Chinese and others.

**USE OF TECHNOLOGY**

Only a small percentage of companies surveyed in Miami-Dade County (4.8% or 29 companies) do not have computers, either because they do not need them (18 companies) or because they cannot afford them (7 companies). Only one business does not have a computer because no one in the firms knows how to use it. While a very large percentage have only one computer (17.6%), the majority have between 2 and 10 computers (68.5%). Almost one in ten businesses (9.1%) have more than 10 computers.

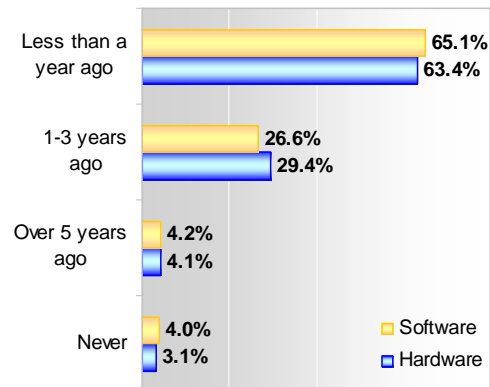
**Figure: Miami-Dade Business Survey - Number of Computers**



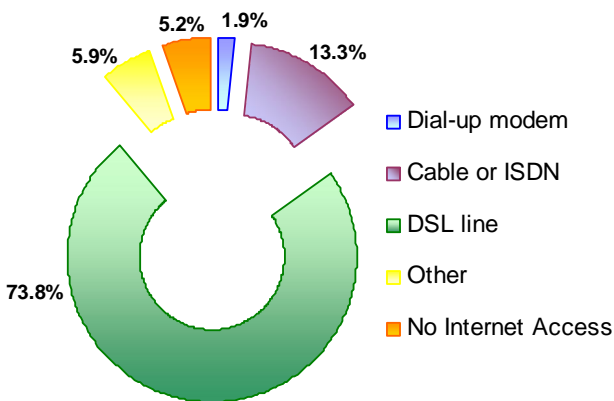


The majority of businesses have updated their computers fairly recently, within the last year. Approximately 63.4% have updated their computer hardware and 65.1% have updated their software within the last year. However, slightly over 4% have last done upgrades and updates over 5 years ago. In addition, 3.1% have either never updated their hardware or at least not within the last five years. Also, 4.0% have either never updated their computer software or not within the last five years.

**Figure: Miami-Dade Business Survey - Frequency of Hardware and Software Upgrades**



**Figure: Miami-Dade Business Survey - Internet Connection**



The overwhelming majority of businesses surveyed in Miami-Dade County have fast access to Internet. Almost nine out of ten businesses (87.1%) have Cable, ISDN or DSL access. Only 1.9% of businesses still use dial-up connection and 5.9% have another type of Internet access, either via a T1 line, wireless service or smart phone. Only 5.2% of businesses have no Internet access at their place of operation. The main reason why some businesses have no Internet connection is that they do not need it at their business location. However, 15 of the 29 businesses with no internet access at their place of operation reported that they use Internet at home for business purposes.

The majority of businesses have a website (60.8%). Less than a quarter of the businesses which do not have a website, would like to have a website for their company (22.5%). Almost a quarter (23.2%) use social networking sites like Facebook, MySpace, Hi5, Twitter and other to promote their products or services.

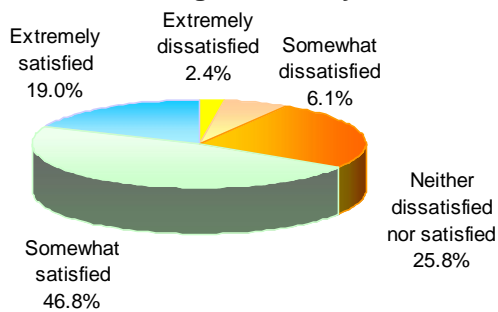
A small majority of businesses conduct transactions online (51.0%). Of the businesses which conduct online transactions, almost half (46.4%) conduct both purchases and sales online. About a third (35.6%) only make online purchases and 11.1% only make online sales. Some other online transactions which businesses conduct include banking, bill payments, and advertising. The businesses which conduct online transactions most frequently mention PayPal (60.9%), Amazon (7.9%) and EBay (7.3%) as the online account they use for payments, promotion, sales and other online transactions.

A significant percentage of businesses (43.8%) offer company-issued smart phones (Iphone, Blackberry, Palm Treo and others) for some of their employees. Most of these smart phones are issued for upper management only (65.7%), but 27.7% offer those phones to both upper and middle management.

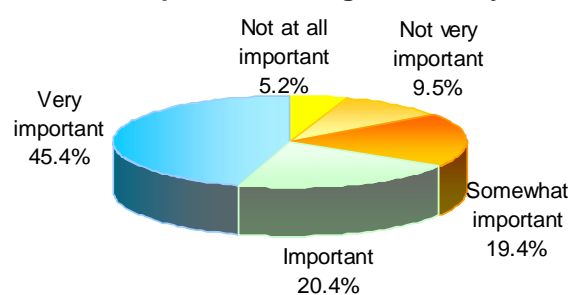
## IMPORTANCE OF DIGITAL LITERACY

Only 14.7% of businesses indicated that digital literacy is either not at all or not very important for their company. Only 19.0% of businesses are extremely satisfied with the level of digital literacy of South Florida’s workforce. Significant percentages of businesses are somewhat or extremely dissatisfied (8.5%), and 25.8% are ambivalent, indicating they are neither dissatisfied nor satisfied with the level of digital literacy of the workforce. Interestingly, there seems to be a mismatch between the expectations and assessment of businesses of the workforce digital literacy, and the workforce self-assessment of their digital skills.

**Figure: Miami-Dade Business Survey - Satisfaction with Digital Literacy**



**Figure: Miami-Dade Business Survey - Importance of Digital Literacy**

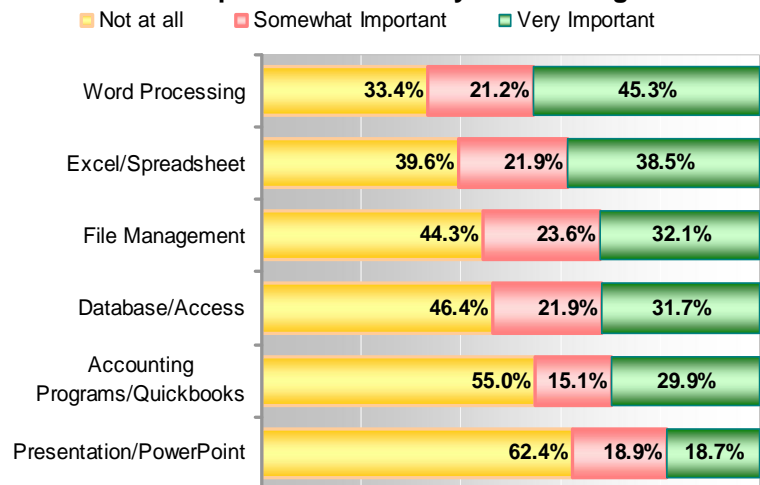


**Miami-Dade’s businesses reported that digital literacy plays an important role in the hiring of entry level employees.**

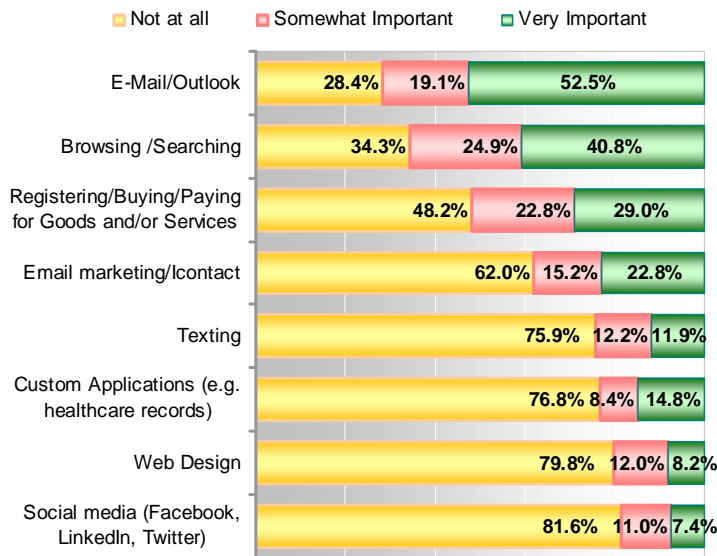
Computer-related technical skills considered important by large percentages of businesses include word processing (66.5%), followed by ability to work with Excel (60.4%) and file management skills (55.7%). Conversely, ability to prepare presentations and work with accounting programs were assigned least importance in entry level employee hiring.

Some businesses mentioned other, specialized software as important in hiring entry level employees, including AutoCAD, graphic design software, tax return programs, medical software and others.

**Figure: Miami-Dade Business Survey - Importance of Computer Skills in Entry Level Hiring**



**Figure: Miami-Dade Business Survey - Importance of Internet Skills in Entry Level Hiring**



Miami-Dade’s businesses also have specific preferences for the Internet skills entry level employees are required to have. **E-mailing is most frequently recognized as a skill required of entry level employees (71.6%).** In addition, a majority of businesses also consider browsing/ searching (65.7%) and ability to register/ buy/pay for goods and services (51.8%) as important skills. Some businesses also mentioned knowledge of eFax as an important skill for entry level employees.

### DEMAND FOR TECHNOLOGY TRAINING

The majority of businesses reported that their employees have not received any technology training in the last two years (63.9%). Yet, 50.2% also indicate that their employees need training to upgrade their knowledge and use of technology at least every two years. Miami-Dade’s businesses seem to realize the need for training to upgrade and update their employees’ knowledge and use of technology, yet many businesses have not exposed their workforce to any training recently. **More than a third (41.5%) of respondents who reported that their employees need training at least every 2 years or more frequently, also indicated that their employees had not received any technology training in the past two years.** However, a significant percentage (45.0%) of businesses do not feel their employees need any training. Depending on their industry sector, some businesses are more likely to consider that technology training is needed for their employees. **Businesses which consider their employees need training at least every two years or more frequently are from industry sectors which generally require more specialized and technologically advanced workforce.** Some of these industry sectors include Health Care and Social Assistance, Finance and Insurance, and Real Estate and rental and Leasing. Conversely, sectors in which a technologically savvy workforce is less important include Agriculture, Forestry and Fishing, Accommodation and Food Services, and the “Other” category which includes many of service-oriented businesses such as auto repairs, beauty salons etc. Interestingly, a large percentage of the businesses in the Educational Services category (66.7%) also indicate their employees do not need any technology training.

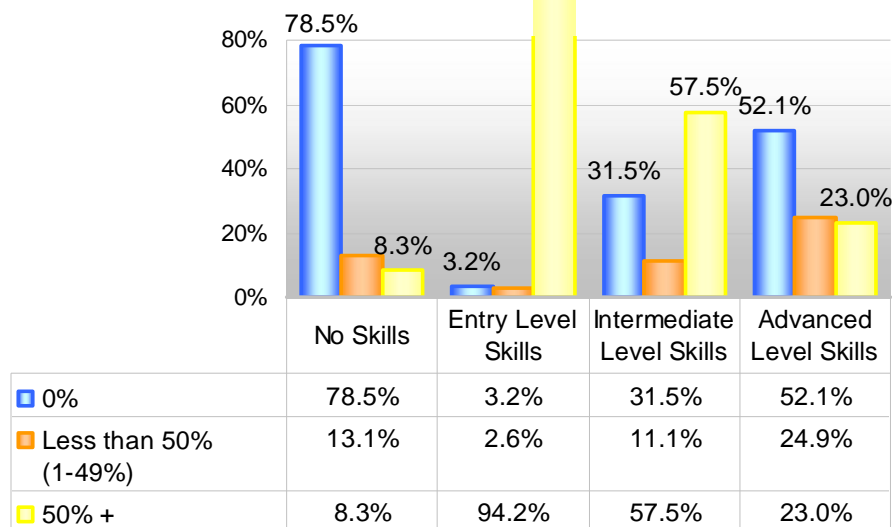
**Table: Miami-Dade Business Survey - Frequency of Training by Industry Sector**

	Employees do not need training	Every 2 yrs or more frequently	Every 3 yrs or less frequently
Agriculture, Forestry, Fishing	71.4%	28.6%	0.0%
Educational Services	66.7%	33.3%	0.0%
Accommodation and Food Services	63.6%	27.3%	9.1%
Other	60.9%	39.1%	0.0%
Retail Trade	58.0%	37.7%	4.3%
Construction	55.6%	38.9%	5.6%
Utilities*	50.0%	50.0%	0.0%
Manufacturing	50.0%	30.8%	19.2%
Arts, Entertainment, and Recreation	45.2%	45.2%	9.7%
Transportation and Warehousing	43.8%	56.3%	0.0%
Professional, Scientific, and Tech. Svcs	39.5%	58.1%	2.3%
Wholesale Trade	36.4%	59.1%	4.5%
Administrative and Support Services	33.3%	66.7%	0.0%
Real Estate and Rental and Leasing	31.6%	63.2%	5.3%
Information*	25.0%	50.0%	25.0%
Finance and Insurance	22.7%	72.7%	4.5%
Health Care and Social Assistance	21.3%	72.1%	6.6%
Management of Companies and Enterprises*	20.0%	80.0%	0.0%

\* The number of survey responses from companies in the marked categories is very small and results may not be representative of the total population of businesses in that industry category: Utilities (9), Information (9), and Management of Companies (5).

The level of digital literacy of South Florida’s workforce is best represented by the businesses’ perception of the level of technological skills their employees exhibit. The figure below shows the percentage of companies reporting what proportion of their employees has the respective level of digital skills. The first row in the table shows the skill level. The first column contains the categories of responses – 0% of workforce, less than 50%, i.e. 1-49%, and more than 50%. The percentages in the table and in the figure reflect the percentage of businesses who reported the percentage of their workforce possessing skills at the respective skill level. First, the figure and table show that Miami-Dade businesses believe most of their employees have some level of technological skills. Approximately 78.5% of businesses indicate they have no employees who lack any digital skills. However, the figure also demonstrates that large percentages of South Florida’s workforce have low level of technological skills. The overwhelming majority of businesses (94.2%) reported that most of their employees have entry-level skills. However, almost a third of businesses (31.5%) reported they have no employees with intermediate level skills. Also, a majority of the businesses (52.1%) indicate they have no employees with advanced level skills. While 57.5% of businesses reported the majority of their employees have intermediate level skills, only 23.0% have a majority of employees with advanced level skills.

**Figure: Miami-Dade Business Survey - Perception of Employees Digital Skills Level**

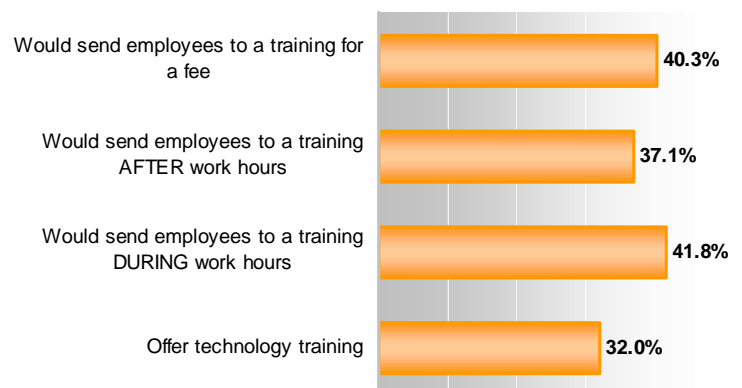


The analysis of the level of digital skills of the businesses' employees shows that there are some gaps that can be bridged with targeted training. Many businesses seem to recognize the importance of technological training and offer such training internally (32.0%). Small businesses, with employees fewer than 50, are less likely to offer technology training internally (28.5%) than businesses with over 50 employees (54.5%).

Only slightly less than half of businesses (49.7%) service their own IT and web development needs in house, while the majority service their IT needs by outsourcing. A larger percentage of the businesses with more resources, i.e. higher revenues and more employees, prefer to service their IT and web development needs in-house, than businesses with fewer employees and lower revenues. Overall, 46.8% of Miami-Dade businesses receive technology services from companies located in Miami-Dade or Monroe counties, and 3.4% outsource to companies located somewhere else, including Broward County, Florida; Atlanta, Georgia; Minnesota, Kansas and even Columbia.

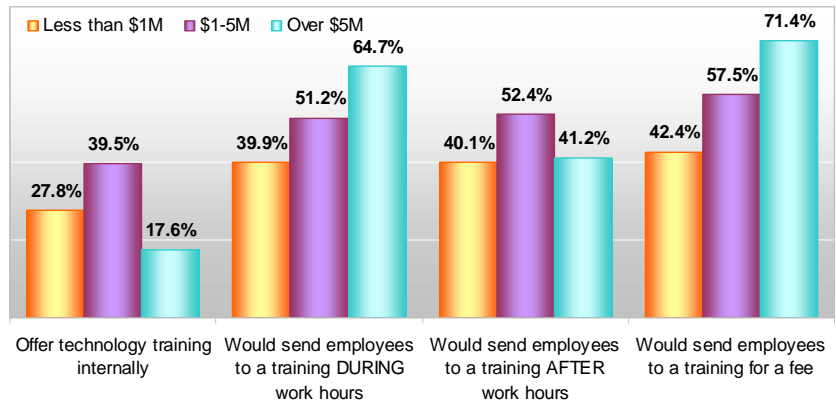
The fact that many companies seek technology services outside their company may also explain their willingness to dedicate resources for the technology training of their employees. Many businesses are willing to send their employees to a training offered by another organization. The majority of those who offer training in house (64.6%) would send their employees to technology training program during work hours. In addition, 44.9% of those businesses would also send their employees to a training after work hours. More than half of the businesses who have in house training (55.7%) would send their employees to an outside training for a fee. Overall 40.3% of businesses would pay a fee to have their employees trained.

**Figure: Miami-Dade Business Survey - Demand for Technology Training**



The figure below shows some important differences in the willingness of businesses to expend company resources on their employees' technology training depending on revenues. First, companies with higher revenues seem more willing to send employees to technology training both during and after work hours. Secondly, companies with higher revenues are much more willing to pay a fee for their employee training.

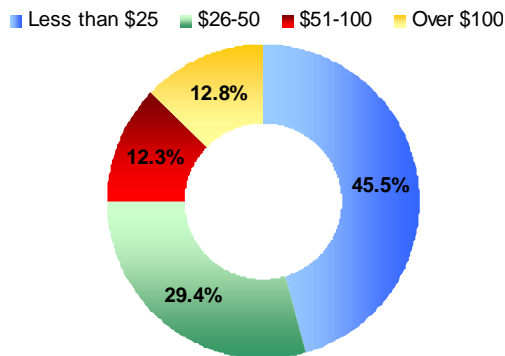
**Figure: Miami-Dade Business Survey - Demand for Technology Training by Revenues**



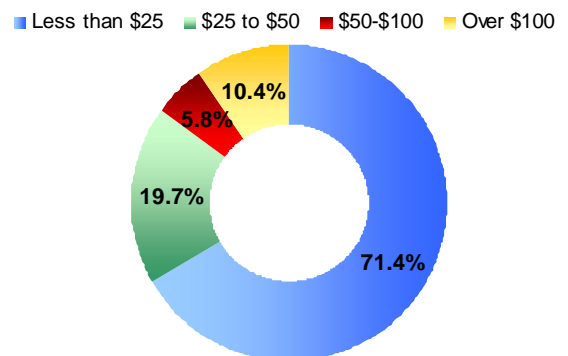
Businesses which recognize the importance of training and may even already offer it in house are still open to any training offered by other organizations. Almost half of the businesses who would be willing to pay a fee for the training of their employees (45.5%) find the fee of \$25 or less, per person per hour, most appealing. However, a quarter of the businesses (25.1%) would also consider paying more than \$50 for training per employee.

Compared to Miami-Dade's businesses, the county's workforce demonstrated an even stronger preference for lower fees for training. The overwhelming majority of those who would pay for training are only willing to pay up to \$25 per hour of training.

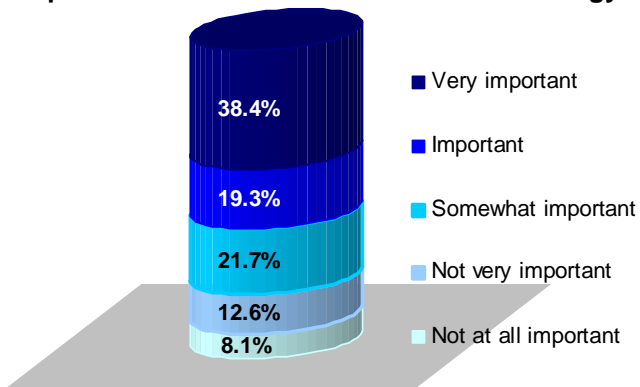
**Figure: Miami-Dade Business Survey - Technology Training Fees Preferences**



**Figure: Miami-Dade Workforce Survey - Technology Training Fees Preferences**



**Figure: Miami-Dade Business Survey - Importance of Future Investment in Technology**



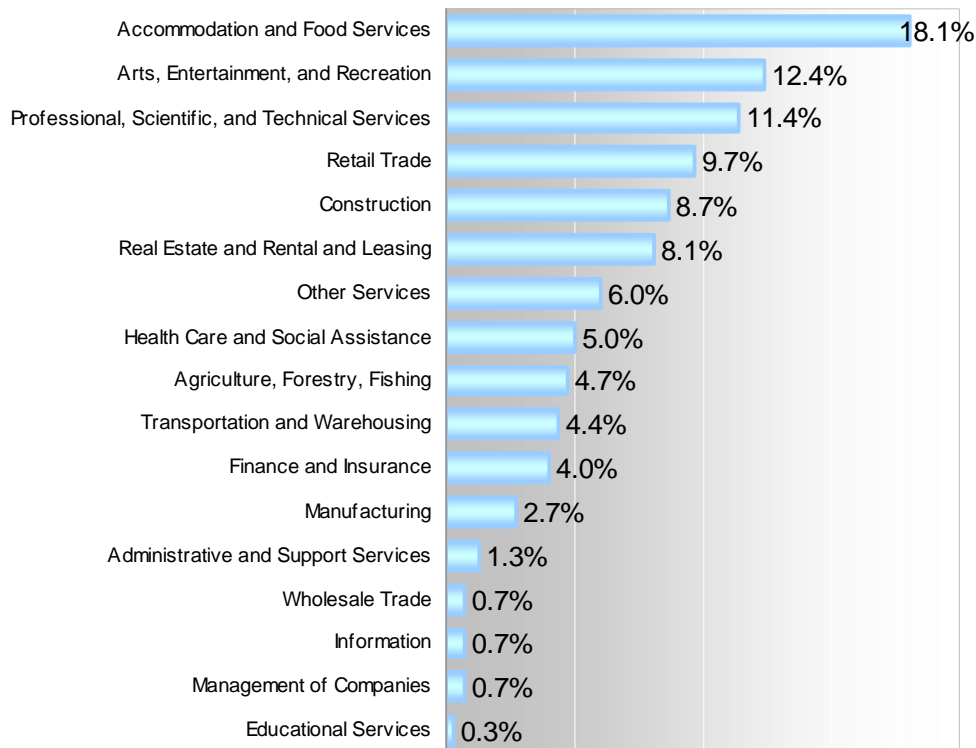
This willingness to expend financial resources to keep pace with technology is also evident in the importance Miami-Dade businesses attribute to investments in technology. The majority, or 57.7%, consider it important or very important for their business to make future investments in technology and an additional 21.7% also indicate such investment is somewhat important. The survey results demonstrate investment in technology is important to all businesses regardless of revenues and size of business in terms of employees as the majority in all categories consider such investment somewhat to very important.

## MONROE COUNTY

### COMPANY CHARACTERISTICS

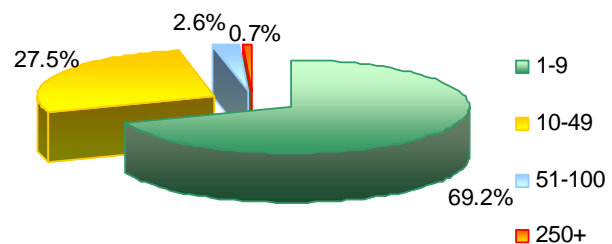
The type of business establishments in Monroe County differs from Miami-Dade in many important ways. Given the geographic location of the county and its primarily tourism-oriented business environment, the businesses most represented in the survey are from the Accommodation and Food Services (18.1%), and Arts, Entertainment and Recreation sectors (12.4%). The third highest ranked sector in terms of responses is Professional, Scientific and Technical Services (11.4%), followed by Retail Trade (9.7%), and Construction (8.7%).

**Figure: Monroe Business Survey - Industry Sectors**



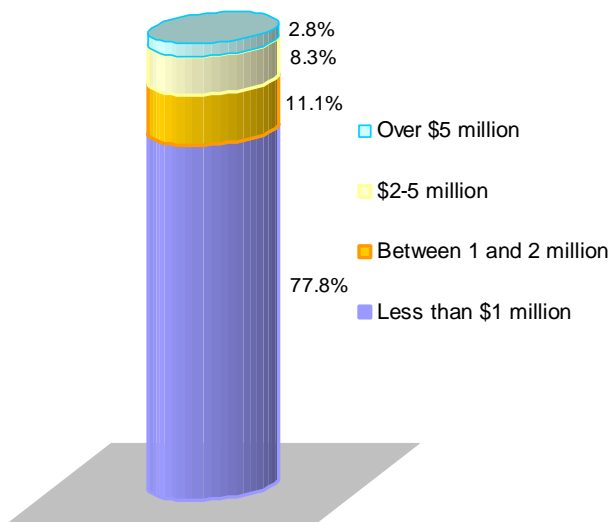
The majority of companies providing responses (96.7%) were small size establishments (1-49 employees). Only 2.6% of respondents were medium-size firms (50-249 employees) and 0.7% were large-size businesses. The response rate and representation of firms in the sample, closely reflects the actual composition of businesses in Monroe County. According to the 2007 County Business Patterns database of the U.S. Census, 97.4% of the business establishments in the county were small-size (1-49 employees), 2.4% had between 50 and 249 employees, and 0.02%, or six businesses had 250 or more employees.

**Figure: Monroe Business Survey - Employment Size of Businesses**





**Figure: Monroe Business Survey - Employment Size of Businesses**



While the majority of business respondents (64.4%) refused to provide their revenues, of those who provided revenue figures, 77.8% reported revenues of under \$1 million for 2009.

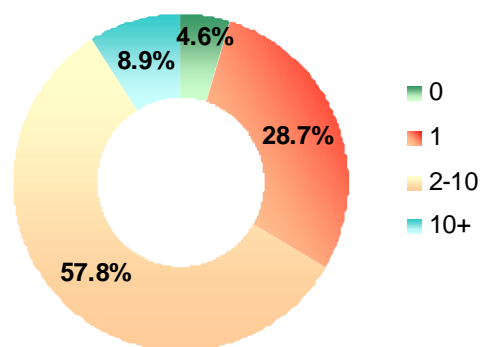
Approximately 19.4% reported revenues between \$1 and 5 million, and 2.8% had revenues of over \$5 million.

The majority of businesses in Monroe County are small-size, family-owned establishments. Approximately 70.8% of surveyed businesses were family-owned. In addition, about a quarter (26.6%) reported being a Woman Business Enterprise (20.9%), a Minority/ Disadvantaged Business Enterprise (3.7%), or veteran-owned (2.0%). The overwhelming majority (98.7%) conduct transactions with clients, suppliers, and financial institutions and issue advertisements in English but 32.9% also use Spanish. In addition, 3.0% also use Creole, 2.7% use French, and 5.0% use other languages, including Portuguese, German, and Italian.

**USE OF TECHNOLOGY**

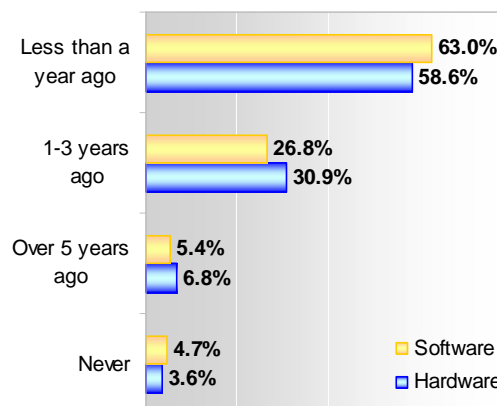
Similarly to businesses in Miami-Dade, in Monroe only a small percentage of companies surveyed (4.6% or 14 companies) do not have computers, mostly because they do not need them (10 companies). Only one business does not have a computer because no one in the firms knows how to use it and one business reported being unable to afford it. While a very large percentage have only one computer (28.7%), the majority have between 2 and 10 computers (57.8%). Almost one in ten businesses (8.9%) have more than 10 computers.

**Figure: Monroe Business Survey - Number of Computers**

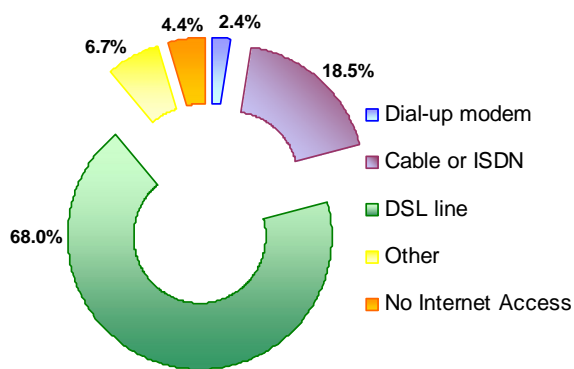


Most businesses in Monroe County update both their computer hardware and software frequently. The majority of businesses have updated their computer hardware (58.6%) and software (63.0%) within the last year. However, approximately 10% have either never done upgrades and updates, or not within the last five years.

**Figure: Monroe Business Survey - Frequency of Hardware and Software Upgrades**



**Figure: Monroe Business Survey - Internet Connection**



The overwhelming majority of Monroe businesses indicated they have Internet connectivity and only 4.4% have no Internet access. Instead, most Monroe businesses have fast access to Internet through Cable, ISDN or DSL. Only 2.4% reported still using dial-up connection. The main reason why some businesses have no Internet connection is that they do not need it at their business location. However, 5 of the 14 businesses with no internet access at their place of operation reported that they use Internet at home for business purposes.

The majority of businesses have a website (73.5%). Less than a quarter of the businesses that do not have a website, would like to have a website for their company (21.7%). Almost a third (31.5%) use social networking sites like Facebook, MySpace, Hi5, Twitter and other to promote their products or services.

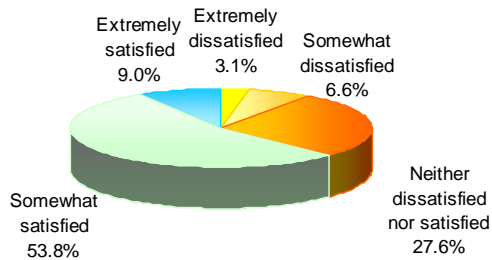
A majority of Monroe businesses conduct transactions online (60.5%). Of the businesses which conduct online transactions, almost half (49.4%) conduct both purchases and sales online. About a third (35.8%) only make online purchases and 12.5% only make online sales. Some other online transactions which businesses conduct include deposits, bill payments, and research. The businesses which conduct online financial transactions via specific sites most frequently mention PayPal (59.5%), Amazon (13.5%) and EBay (9.5%) as the online account they use for payments, promotion, sales and other online transactions.

A significant percentage of businesses (38.6%) offer company-issued smart phones (Iphone, Blackberry, Palm Treo and others) for some of their employees. Most of these smart phones are issued for upper management only (70.8%), but 24.8% offer those phones to both upper and middle management.

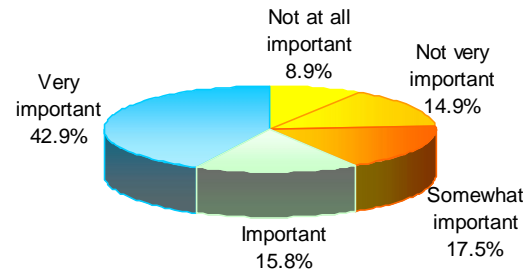
## IMPORTANCE OF DIGITAL LITERACY

Only 9.0% of the businesses surveyed in Monroe County are extremely satisfied with the level of digital literacy of South Florida's workforce, while 9.7% are somewhat or extremely dissatisfied, and 27.6% are not sure, indicating they are neither dissatisfied nor satisfied. A significant percentage (23.8%) indicated that digital literacy is either not at all or not very important for their company.

**Figure: Monroe Business Survey - Satisfaction with Workforce Digital Literacy**



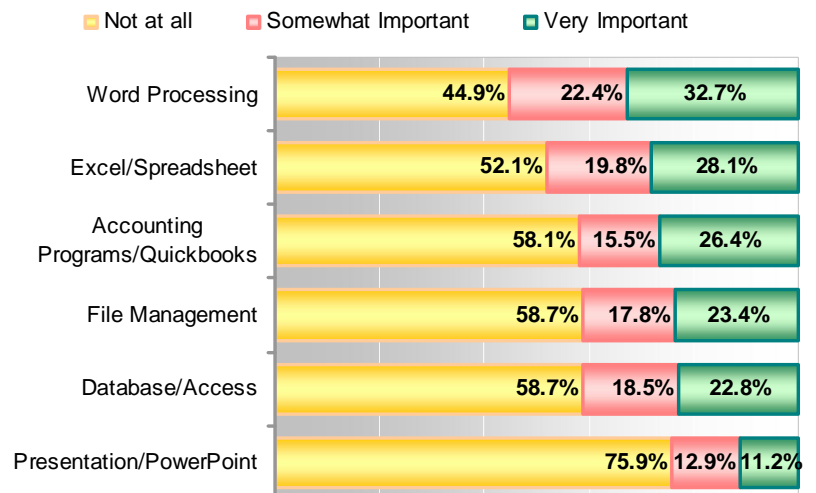
**Figure: Monroe Business Survey - Importance of Digital Literacy**



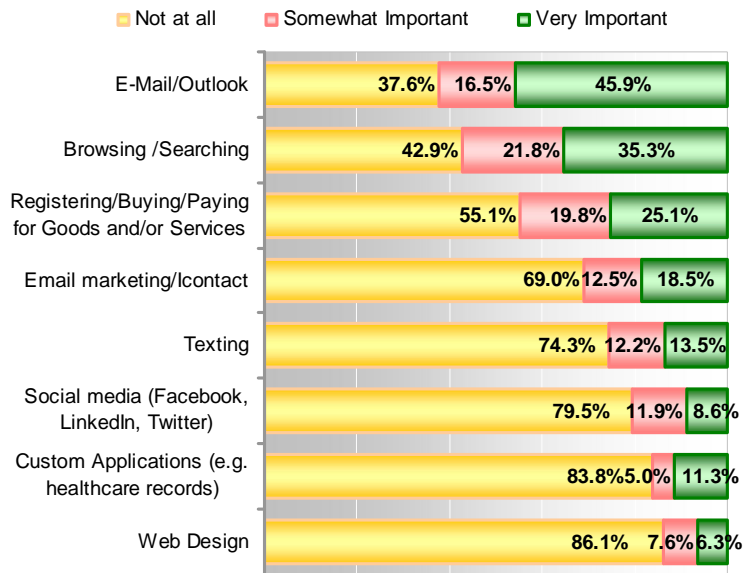
Certain computer skills seem to be of significant importance in Monroe businesses' entry level hiring. Most businesses seem to assign greatest importance to word processing (55.1%) and Excel/spreadsheet use (47.9%), although more sophisticated software for database management and accounting are also somewhat or very important for over 40% of businesses. Similarly to the Miami-Dade business survey results, ability to prepare presentations has the least importance in entry level employee hiring.

Some businesses mentioned other, specialized software as important in hiring entry level employees, including audio and video software, medical and sales software packages.

**Figure: Monroe Business Survey - Importance of Computer Skills in Entry Level Hiring**



**Figure: Monroe Business Survey - Importance of Internet Skills in Entry Level Hiring**



Monroe county businesses also reported on the importance of various Internet skills in their entry level hiring. The majority consider knowledge of E-mail (62.4%) and ability to browse/search (57.1%) important even for their entry level employees. In addition, a majority of businesses also consider the ability to register/ buy/pay for goods and services (44.9%) an important skill. Knowledge of custom applications and specialized software are the least important skills required in hiring entry level employees.

### DEMAND FOR TECHNOLOGY TRAINING

The majority of businesses reported that their employees have not received any technology training in the last two years (63.3%). Yet, 41.5% also indicate that their employees need training to upgrade their knowledge and use of technology at least every two years. However, the majority of businesses (55.9%) do not feel their employees need any training. Depending on their industry sector, some businesses may be more likely to consider that technology training is needed for their employees. Businesses who consider their employees need training at least every two years or more frequently are from industry sectors which generally require more specialized and technologically advanced workforce. Some of these industry sectors include Professional, Scientific and technical Services, Real Estate and Rental and Leasing, Finance and Insurance. Conversely, sectors in which a technologically savvy workforce is less important include Agriculture, Forestry and Fishing, Retail Trade, Manufacturing and Construction.

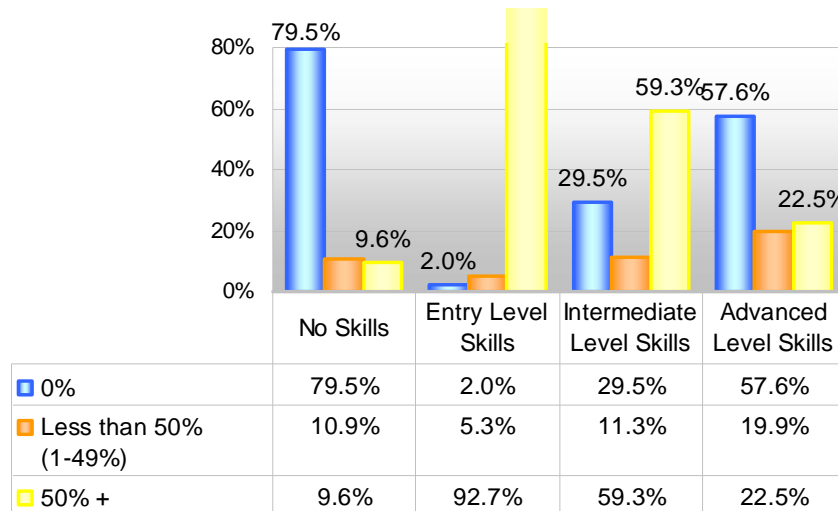
**Table: Monroe Business Survey - Frequency of Training by Industry Sector**

	Employees do not need training	Every 2 yrs or more frequently	Every 3 yrs or less frequently
Educational Services*	100.0%	0.0%	0.0%
Wholesale Trade*	100.0%	0.0%	0.0%
Agriculture, Forestry, Fishing	76.9%	23.1%	0.0%
Retail Trade	75.9%	24.1%	0.0%
Manufacturing	71.4%	28.6%	0.0%
Construction	65.4%	30.8%	3.8%
Arts, Entertainment, and Recreation	64.9%	35.1%	0.0%
Accommodation and Food Services	59.3%	37.0%	3.7%
Health Care and Social Assistance	53.3%	33.3%	13.3%
Other	52.9%	47.1%	0.0%
Finance and Insurance	50.0%	50.0%	0.0%
Management of Companies and Enterprises*	50.0%	0.0%	50.0%
Transportation and Warehousing	38.5%	61.5%	0.0%
Professional, Scientific, and Tech. Svcs	33.3%	60.6%	6.1%
Real Estate and Rental and Leasing	25.0%	75.0%	0.0%
Administrative and Support Services*	0.0%	0.0%	100.0%
Information*	0.0%	100.0%	0.0%

\* The number of survey responses from companies in the marked categories is very small and results may not be representative of the total population of businesses in that industry category: Educational Services (1), Wholesale Trade (2), Management of Companies (2), Admin. & Support Svcs. (4), and Information (2).

The level of digital literacy of South Florida’s workforce is best represented by the businesses’ perception of the level of technological skills their employees exhibit. The figure below shows the percentage of companies reporting what proportion of their employees has the respective level of digital skills. The first row in the table shows the skill level. The first column contains the categories of responses – 0% of workforce, less than 50%, i.e. 1-49%, and more than 50%. The percentages in the table and in the figure reflect the percentage of businesses who reported the percentage of their workforce possessing skills at the respective skill level. First, the figure and table show that Miami-Dade businesses believe most of their employees have some level of technological skills. Approximately 79.5% of businesses indicate they have no employees who lack any digital skills. However, the figure also demonstrates that large percentages of South Florida’s workforce have low level of technological skills. The overwhelming majority of businesses (92.7%) reported that most of their employees have entry-level skills. However, almost a third of businesses (29.5%) reported they have no employees with intermediate level skills. Also, a majority of the businesses (57.6%) indicate they have no employees with advanced level skills. While 59.3% of businesses reported the majority of their employees have intermediate level skills, only 22.5% have employees with advanced level skills.

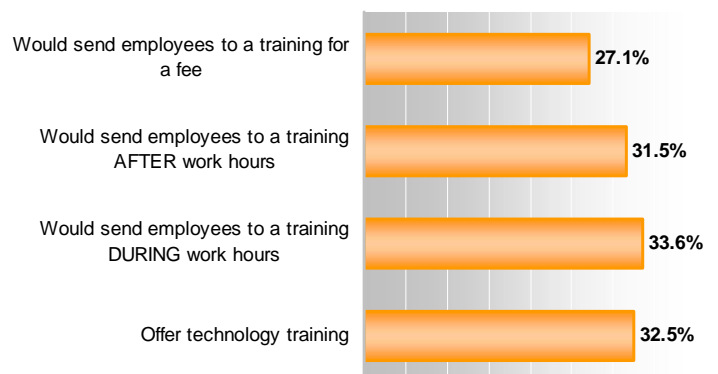
**Figure: Monroe Business Survey - Perception of Employees Digital Skills Level**



The analysis of the level of digital skills of the businesses' employees shows that there are some gaps that can be bridged with targeted training. Many businesses seem to recognize the importance of technological training and offer such training internally (32.5%). Only slightly more than half of businesses (51.2%) service their own IT and web development needs in house, while 45.2% service their IT needs by outsourcing. A few businesses (3.6%) claim they have no IT needs. Overall, 38.9% of Monroe businesses receive technology services from companies located in Miami-Dade or Monroe counties, and 6.3% outsource to companies located somewhere else, including California, South and North Carolina, Ohio and Arizona.

Recognizing the importance of digital literacy and the existing gaps in the workforce technology training, many businesses are willing to provide training for their employees. One in three Monroe businesses offers internal training. Also approximately a third of businesses are willing to send their employees to a training offered by another organization, either during or after work hours. Overall, about a quarter of businesses (27.1%) would pay a fee to have their employees trained. Moreover, almost half of businesses who already offer technology training to their employees would send them to a training for a fee (44.6%). Due to the small number of companies with high revenues and the large percentage of businesses which did not provide revenue figures, analysis of responses to each question by business revenue size is not statistically feasible.

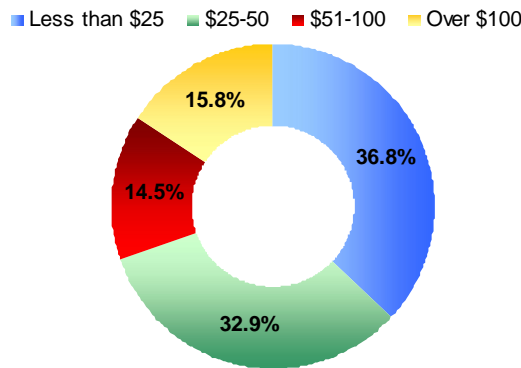
**Figure: Monroe Business Survey - Demand for Technology Training**



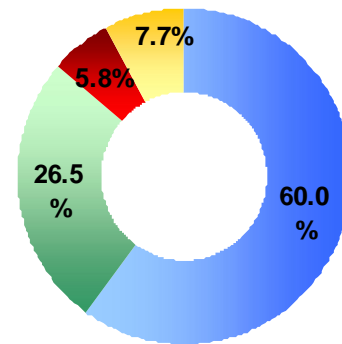
Businesses which recognize the importance of training and may even already offer it in house are still open to any training offered by other organizations. Over a third of the businesses who would be willing to pay a fee for the training of their employees (36.8%) find the fee of \$25 or less, per person per hour, most appealing. However, a third (32.9%) would pay \$26-50 and 14.5% would also consider paying more than \$50 for training per employee.

Businesses in Monroe County would be more willing to pay higher training fees than employees themselves. While 60.0% of Monroe's workforce who would participate in a training if there was a fee would pay no more than \$25, 63.2% of businesses would pay more than \$25.

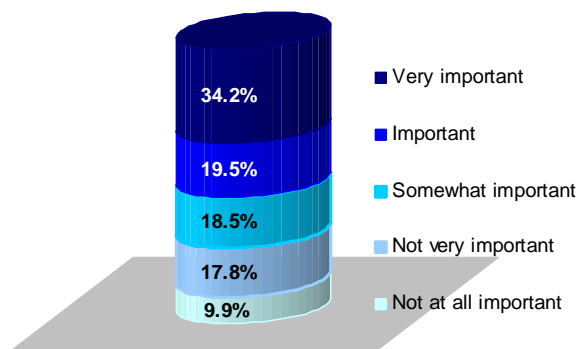
**Figure: Monroe Business Survey - Technology Training Fees Preferences**



**Figure: Monroe Workforce Survey - Technology Training Fees Preferences**



**Figure: Monroe Business Survey - Importance of Future Investment in Technology**



Similarly to Miami-Dade County, the majority of businesses in Monroe agree on the importance of future investment in technology for their company. The majority (53.7%) consider it important or very important for their business to make future investments in technology and an additional 18.5% also indicate such investment is somewhat important.

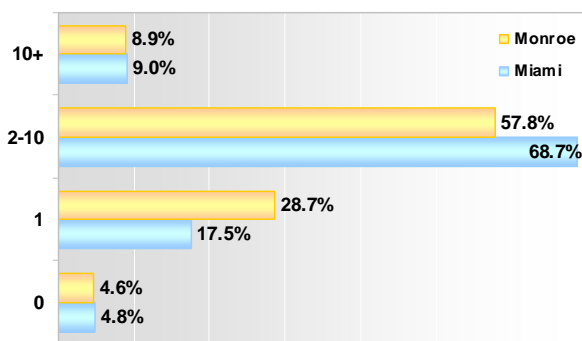
## RESULTS COMPARISON BETWEEN MIAMI-DADE AND MONROE COUNTIES

### COMPANY CHARACTERISTICS

Miami-Dade businesses were primarily in the Professional, Scientific and Technical Services; Retail Trade; Healthcare and Social Assistance; Wholesale Trade; and Other Services. In Monroe County, businesses fell primarily in the Accommodation and Food Services; Arts, Entertainment and Recreation; Professional Scientific and Technical Services; Retail Trade and Construction. The majority of businesses in both Miami-Dade and Monroe Counties are small establishments with less than 50 employees. In Monroe County, 96.7% of businesses reported having 1 to 49 employees, compared to 88.7% of businesses in Miami-Dade, which is consistent with the higher concentration of small businesses in Monroe County reported by the U.S. Census County Business Patterns database. The majority of both Miami-Dade (71.1%) and Monroe firms (77.8%), who reported revenues, indicated revenues of less than \$1 million. Consistent with the higher percentage of minorities in Miami-Dade, over one-fifth of Miami-Dade businesses were Minority/Disadvantaged Business Enterprises (22.1%) while only 3.7% of Monroe businesses fell in that category. Most businesses in both Miami-Dade (59.8%) and Monroe Counties (70.8%) are family-owned establishments. The majority of businesses in both counties conduct business in English, however, the vast majority of Miami firms (72.7%) also conduct business in Spanish compared to 32.9% of Monroe businesses.

### USE OF TECHNOLOGY

**Figure: Miami-Dade and Monroe County Businesses – Number of Computers**



A large percentage of Miami-Dade and Monroe counties had one computer (17.5% and 28.7% respectively) or between 2 and 10 computers (68.7% and 57.8% respectively).

Most businesses in both counties update their computer hardware and software frequently. In fact, the majority of business in Miami-Dade and Monroe update their computer hardware within the last year (63.4% and 58.6%) as well as their software (65.1% and 63.0% respectively).

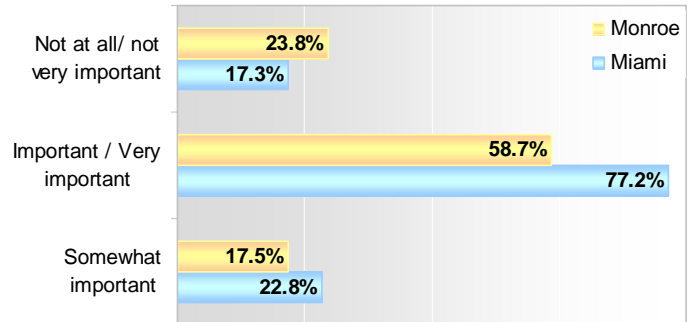
The vast majority of businesses in both counties had Internet connectivity. Of those with Internet access, most businesses accessed the Internet through DSL lines (73.8% for Miami-Dade and 68.0% for Monroe). The percentage of businesses servicing their own IT and web development needs in house is lower in Miami-Dade than in Monroe (45.5% in Miami-Dade and 51.2% in Monroe). Many firms outsource their IT needs to local technology firms (43.4% in Miami-Dade and 38.9% in Monroe).



## IMPORTANCE OF DIGITAL LITERACY

Most businesses were satisfied with the digital literacy of their workforce. In fact, 65.8% of Miami-Dade firms and 62.8% of Monroe businesses were extremely or somewhat satisfied with the level of digital literacy of the South Florida workforce. Although a majority of businesses in both counties consider digital literacy important or very important, the percentage of businesses in Miami-Dade which indicate that is higher (77.2%) than in Monroe (58.7%).

**Figure: Miami-Dade and Monroe County Businesses – Importance of Digital Literacy**



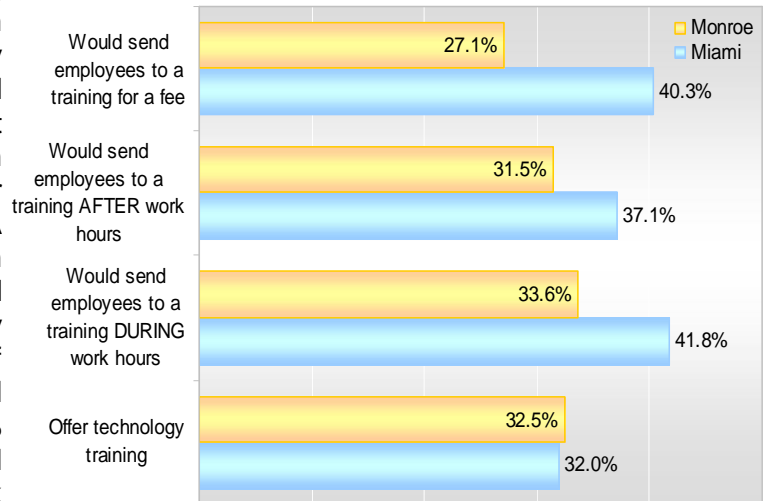
Certain computer skills seems to be necessary for entry level hiring in both Miami-Dade and Monroe counties. Most businesses place priority on skills like word processing (66.5% for Miami-Dade and 55.1% for Monroe), spreadsheet/Excel (60.4% and 47.9% respectively), Database/Access (53.6% and 41.3%), and file management (55.7% in Miami-Dade and 41.2% in Monroe). Some businesses also placed importance in more complex skills like accounting programs/QuickBooks (45.0% and 41.9%), presentation/PowerPoint (37.6% and 24.1%) and custom applications (23.2% and 16.3%). In addition, Miami-Dade and Monroe firms placed great importance on Internet skills like e-mail (71.6% and 62.4%), browsing (65.7% and 57.1%), registration and payment of goods and services (66.5% and 55.1%), email marketing/contact (38.0% and 31.0%), social media (18.4% and 20.5%), texting (24.1% and 25.7%) and web design (20.2% and 13.9%).

## DEMAND FOR TECHNOLOGY TRAINING

The vast majority of firms in Miami-Dade and Monroe counties indicated none of their workforce lacked computer skills. The majority of employees in most firms in both counties had workers with entry level digital skills (94.2% for Miami-Dade and 92.7% for Monroe). However, the majority reported that none of their workers have advanced digital skills (52.1% for Miami-Dade and 57.6% for Monroe). Almost a third of businesses in each county reported none of their employees have intermediate level skills.

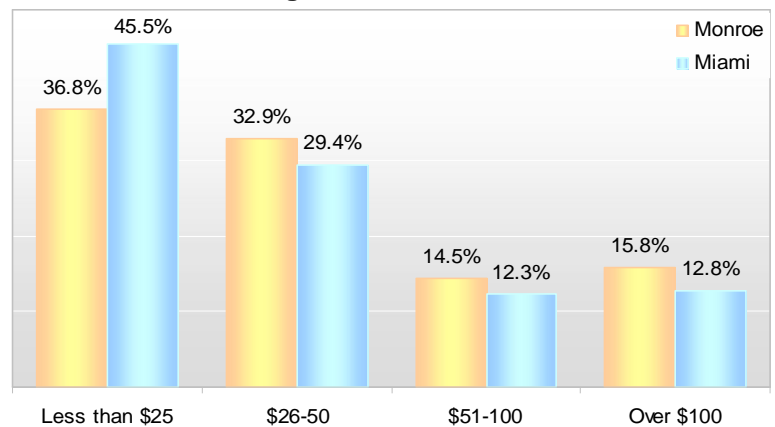
Although the majority of firms in both counties do not offer technology training internally (approximately 68% in each county), the majority also indicated they would not send their employees to digital training courses. These results are not surprising, given that many businesses in both counties do not believe their employees need any technology training. A larger percentage of Monroe (55.9%) than Miami-Dade businesses (45.0%) reported their employees do not require technology training. Yet, a significant percentages of Miami-Dade and Monroe businesses would send employees to training for a fee (40.3% and 27.1% respectively). Many would send employees both during and after work hours.

**Figure: Miami-Dade and Monroe County Businesses – Demand for Technology Training**



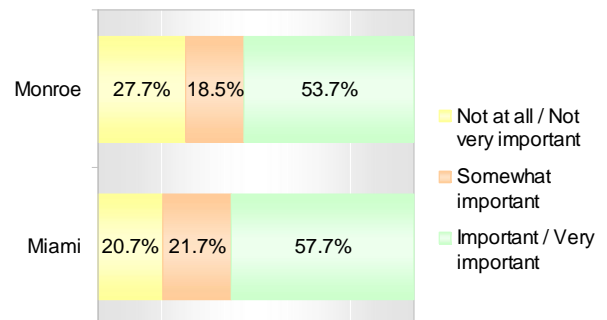
Of the businesses that would be willing to pay a fee for the digital training of their employees, the majority would be willing to pay up to \$50 per person per hour for training (69.7% in Monroe and 74.9% in Miami-Dade). About a quarter of businesses in both counties willing to pay a fee for training would pay over \$50 per person per hour (30.3% in Monroe and 25.1% in Miami-Dade).

**Figure: Miami-Dade and Monroe Businesses – Technology Training Fees Preferences**



Businesses in Monroe and Miami-Dade placed great importance on future investment in technology. In fact, 53.7% of Monroe firms and 57.7% of Miami-Dade businesses considered future investment in technology important or very important.

**Figure: Miami-Dade and Monroe Businesses – Investment in Technology**



# WORKFORCE SURVEY RESULTS

## OVERALL RESULTS

The survey conducted among Miami-Dade and Monroe counties' workforce collected a total of 1,054 responses, 634 obtained from Miami-Dade and 420 from Monroe. While results for each county are presented in subsequent sections of this report, the section below analyzes the cumulative responses for the two counties. In addition, for the purpose of identifying any discrepancies between the business and workforce answers in similar questions, the section also includes comparisons with the responses obtained from the business survey where appropriate.

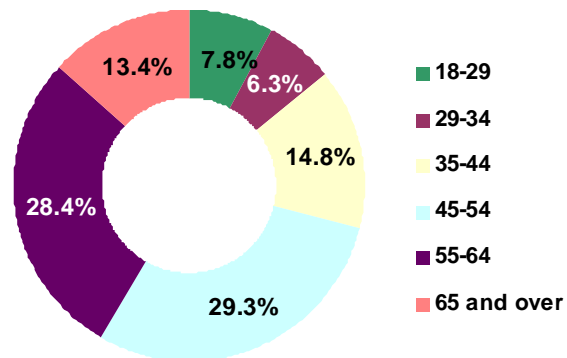
### DEMOGRAPHICS

The survey sample includes respondent of different age groups, income, educational attainment, race and ethnicity. Although the survey sample was drawn from a randomized list of Miami-Dade residents, as discussed in the Methodology section at the beginning of the report, the survey respondents have higher income and educational attainment than the areas' populations and workforce (pp. 1-2). In addition, the sample includes are higher percentage of respondents in the advanced age categories of 55 to 64, and 65 and over. Despite the differences between the sample demographics and the estimates reported in the 2008 American Community Survey, a sufficient number of responses were obtained in the different income and educational attainment categories to allow for a comparative analysis among categories of respondents. Comparisons will be presented throughout the analysis for the questions where those differences are statistically significant.

The majority of the workforce surveyed were currently employed (84.5%) while 15.5% were not employed but were actively seeking employment. The majority of respondents were female (57.2%) while 42.8% were male. The majority of respondents (75.8%) did not have school-aged children (defined as children between the ages of 6 and 17 years) living at home. Of those with school aged children, 50.9% had at least one child in high school, while 30.2% and 36.5% had at least one child in middle and elementary school respectively.

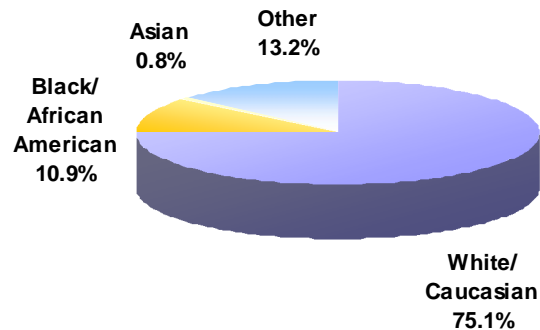
The majority of residents surveyed were between the ages of 45 and 64 (57.7%). **A significant percentage of respondents (13.4%) were 65 or older.** Taking into account the fact that the survey screened respondents to ensure they were in the labor force by obtaining responses only from those who were employed or seeking employment, this high percentage may be evidence that residents of retirement age are either not retiring or coming out of retirement.

Figure: Workforce Survey – Age Groups



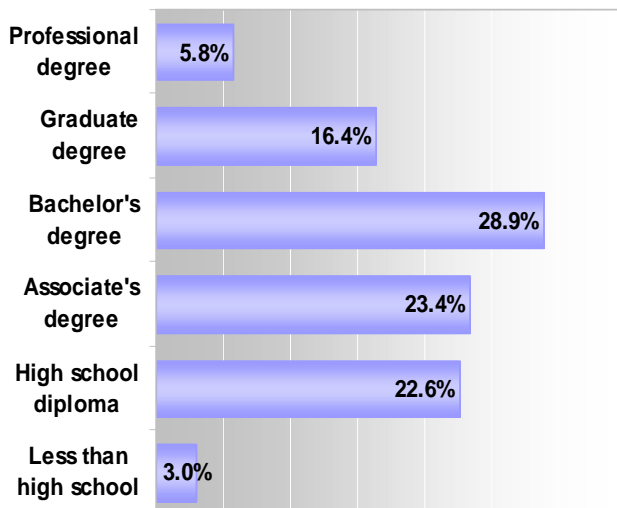
In terms of the racial distribution of the survey respondents, the majority were White or Caucasian (75.1%) while approximately one in ten were Black or African-American (10.9%). Approximately one in three respondents identified themselves ethnically as Hispanic or Latino (34.5%), and most of them are concentrated in Miami-Dade County. Many Hispanic/Latino respondents preferred to complete the survey in English and only 13.1% completed it in Spanish. Only four respondents (0.04%) completed the survey in Creole. Due to the high concentration of Hispanics in Miami-Dade County, analysis of inter-group differences based on race and ethnicity will be presented in the report section on Miami-Dade.

**Figure: Workforce Survey - Race**

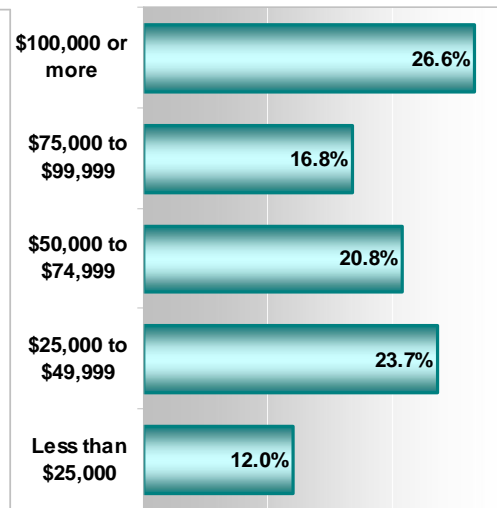


A small majority of the survey respondents have a Bachelor's degree and above (51.1%) while only 3.0% have no high school diploma. Although the majority (50.4%) refused to provide their income category, since education and income have a high degree of correlation, it is not surprising that the respondents who provided an answer to the income questions reported high income levels. Only 35.7% of respondents reported income under \$50,000. More than a quarter of the respondents (26.6%) reported annual family income of over \$100,000. Approximately one in five respondents (18.1%) indicated either them or someone in their family owns a business.

**Figure: Workforce Survey - Highest Level of Educational Attainment**



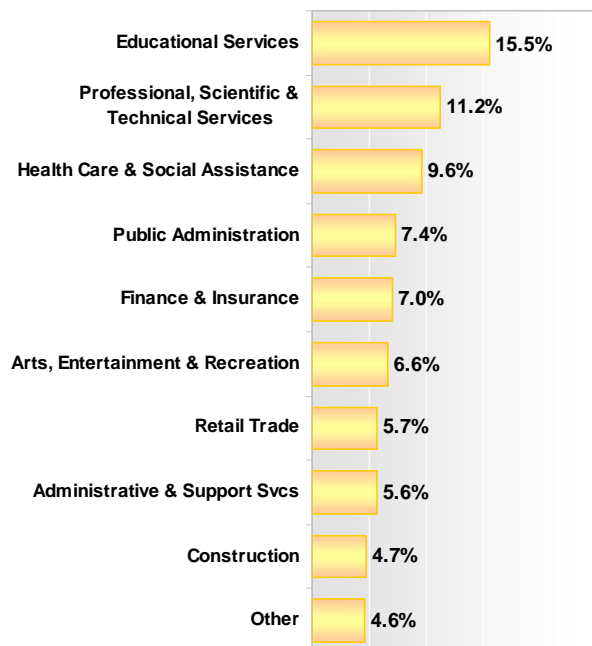
**Figure: Workforce Survey - Annual Family Income**



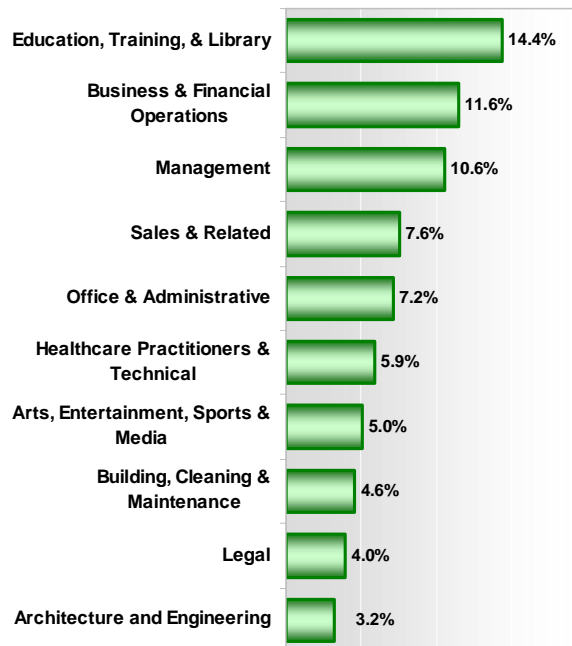
The leading industries of current or potential employment for the surveyed sample of the workforce were: Educational Services (15.5%), Professional, Scientific and Technical Services (11.2%), Health Care and Social Assistance (9.6%), Public Administration (7.4%) and Finance and Insurance (7.0%). Similarly, Education, Training and Library (14.4%),

Business and Financial Operations (11.6%), Management (10.6%), Sales and related occupations (7.6%), and Office and Administrative (7.2%) occupations were the leading occupations of the surveyed members of the Miami-Dade and Monroe counties' workforce.

**Figure: Workforce Survey - Leading Industries**



**Figure: Workforce Survey - Leading Occupations**

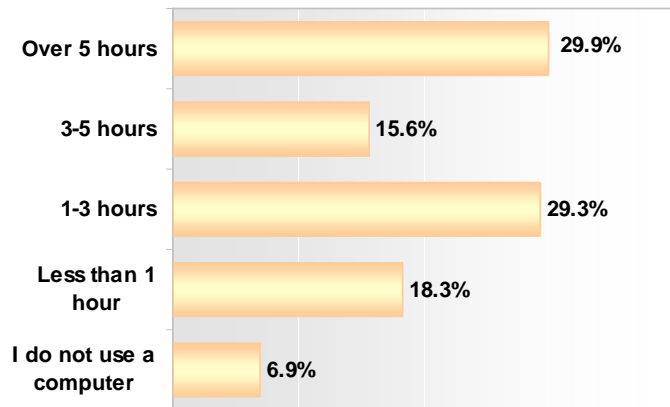


## COMPUTER USE

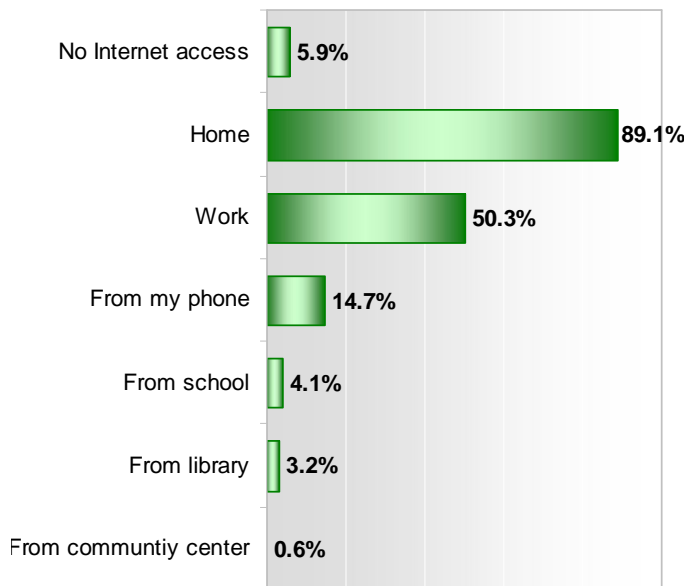
The majority of respondents reported their household had a computer (93.2%). A higher percentage of respondents with Associate's degrees and above reported having a computer in their household (95.6%) than those without a college degree (85.4%). Similarly, a higher percentage of respondents with high household income tend to have a computer in their household. While 74.6% of households with income under \$25,000 have a computer, almost all but two (0.5%) of those with income above \$25,000 have one. Overall only 6.8% indicated there is no computer in their household, mainly because they cannot afford it (38.0% of those without a computer) or because they do not need it (28.2%). Only eight respondents reported they do not have a computer because no one in their household knows how to use it.

In an average day, almost half of the workforce surveyed (45.5%) use computers for 3 or more hours. In addition, 29.3% use a computer daily for 1 to 3 hours. Only 6.9% reported not using a computer at all, either at home or some place else because they do not know how (37.5%), because they cannot afford it (33.3%) or because they do not need to (27.8%). Respondents with higher educational attainment, with at least a Bachelor's degree, use a computer on a daily basis longer than those without a Bachelor's degree. While 53.6% of those with postgraduate degrees use a computer for 3 or more hours, only 36.8% of those without advanced degrees reported the same.

**Figure: Workforce Survey - Daily Hours of Computer Usage**



**Figure: Workforce Survey - Internet Access**

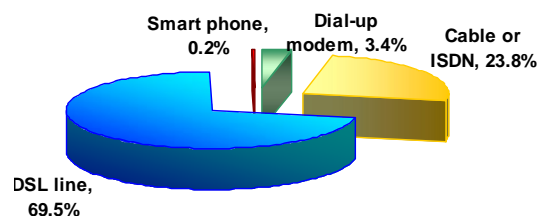


The majority of survey respondents (94.1%) have Internet access and use Internet at multiple locations. The majority of respondents have Internet access at home (89.1%) and at work (50.3%). A large percentage (14.7%) also go online from their phones. Reasons for not accessing the Internet at home include: using the Internet at some other location, not needing the Internet at all, inability to pay for Internet access, and not knowing how to use the Internet. Other reasons for not using the Internet at home include using at work and home computer not working.

While more than half of the respondents (57.3%) indicated they access the Internet primarily and exclusively from home, 20.6% go online primarily at work, and 11.8% use Internet equally at home and at work or on their phone.

Most respondents indicated their households connect to the Internet via a DSL line (69.5%) while 23.8% use cable or ISDN. Only 3.4% rely on a dial-up connection for accessing the Internet. Only three respondents rely on their smart phone for Internet, and six have wireless access.

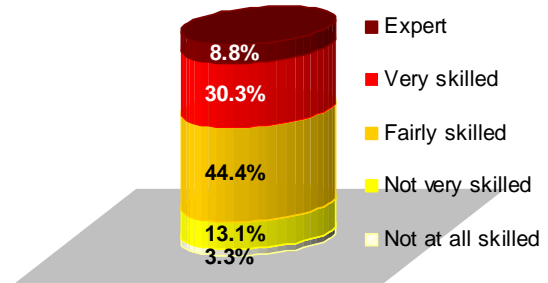
**Figure: Workforce Survey - Type of Internet Connection**



## SKILL LEVEL

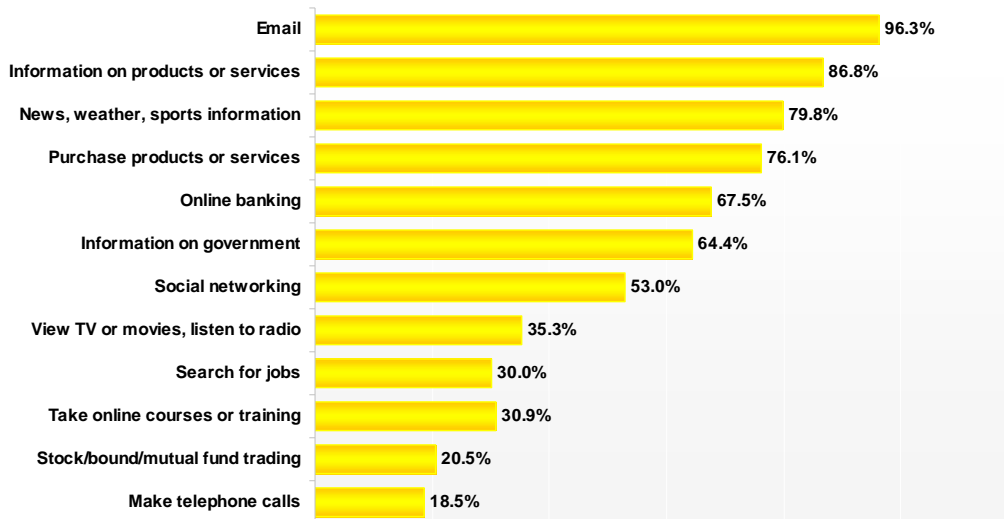
The survey respondents expressed significant confidence in their Internet skills. Although a very small percentage (8.8%) considered themselves to have expert-level Internet skills, the majority (74.7%) considered themselves to be fairly or very skilled. Only 3.3% of Miami-Dade and Monroe's workforce reported having no Internet skills. Respondents with postgraduate degrees reported more advanced Internet skill levels. While 13.0% of those with Bachelor's degree or above considered themselves not at all or not very skilled, 20.2% of those without a university degree indicated the same. Similarly, 24.4% of those with family incomes under \$50,000 reported being not at all or not very skilled using the Internet, compared to only 11.3% of those with income above \$50,000.

**Figure: Workforce Survey - Internet Skill Levels**



The most widespread usage of Internet reported by the workforce was Email (96.3%), followed by information on products and services (86.8%), and to obtain news, weather and/or sports information (79.8%). A majority of respondents also go online to purchase products or services (76.1%), to do online banking (67.5%), for information on government (64.4%), and for social networking (53.0%). The least frequently reported reasons for using the Internet were stock/bond/mutual fund trading (20.5%) and telephone calls (18.5%).

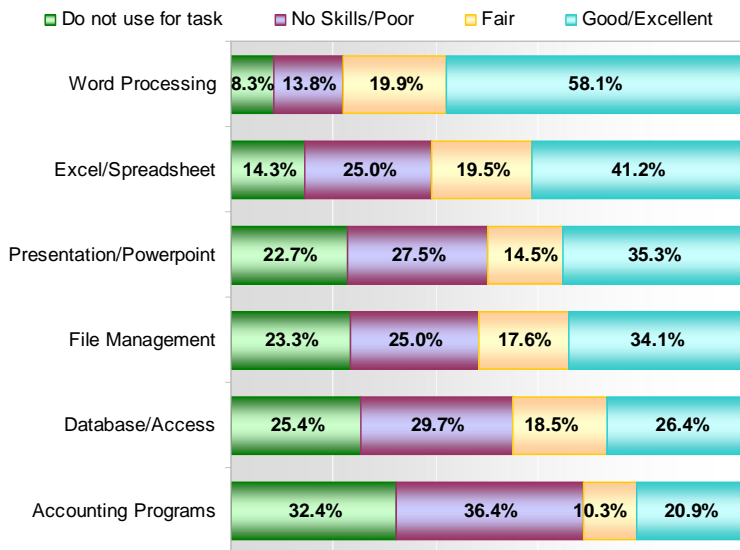
**Figure: Workforce Survey - Uses of the Internet**



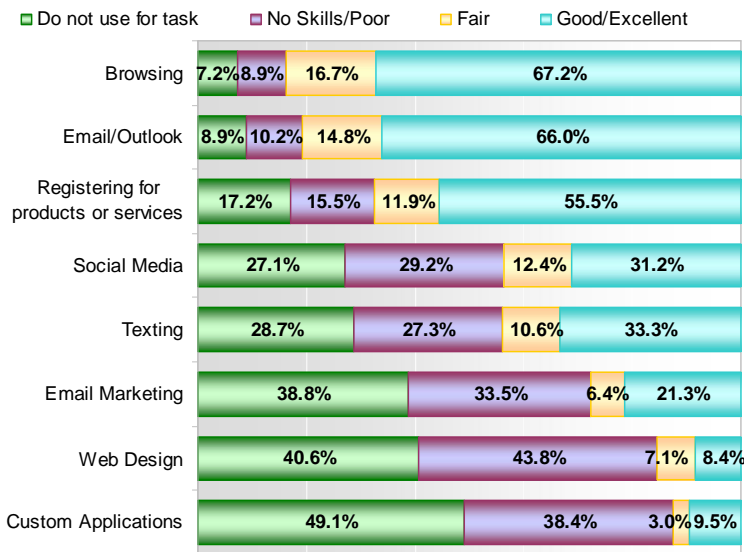
Miami-Dade and Monroe counties' workforce uses a variety of applications on their computers and on the Internet. The most widely used applications and tasks performed by respondents include word processing, spreadsheet applications and presentations software. More specialized applications and tasks such as database management and accounting programs are being used by fewer members of the workforce.

The only computer task which the majority of the workforce reported having good or excellent skills was Word processing (58.1%). High percentages also have good or excellent skills in Excel/ spreadsheet (41.2%) and in the preparation of presentations or use of PowerPoint (35.3%). Level of education affects the respondents' level of skill in using all applications. For example, while 74.4% of those with postgraduate degrees consider themselves with good or excellent skills in Word processing, only 50.3% of those without a postgraduate degree indicated the same.

**Figure: Workforce Survey – Computer Skill Levels**



**Figure: Workforce Survey – Internet Skill Levels**



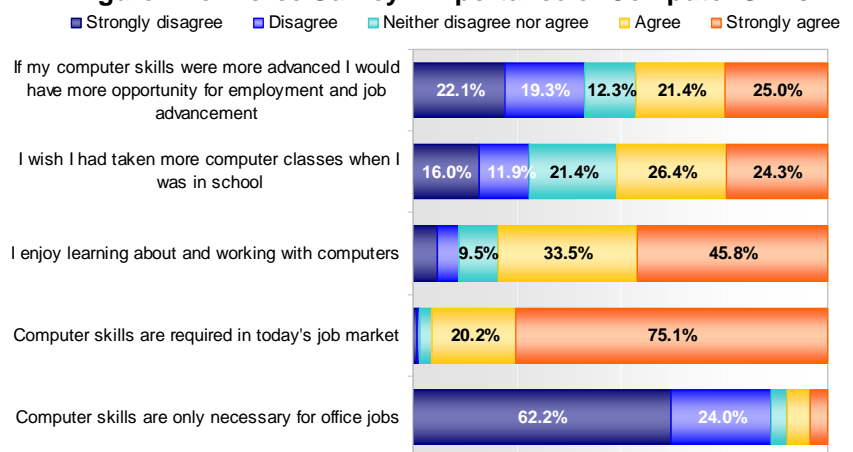
The most widely used Internet tasks are also the ones which respondents feel most confident performing. A majority of respondents reported having good or excellent skills in browsing (67.2%), Email (66.0%) and registering for products of services online (55.5%). These tasks are also the ones which the smallest percentage of respondents do not conduct. A larger percentage of the workforce with high school diploma or less education reported either not having any skills or only poor skills in browsing (21.0%), than respondents with at least a Bachelor's degree (5.5%). Similarly, while 32.6% of those with family income less than \$25,000 indicated they have no skills or poor skills in browsing, only 9.3% of those with income between \$25-50,000 and 4.3% of those with income above \$50,000 indicated the same.



## COMPUTERS IN THE WORKPLACE

The widespread use of computers in the workplace is indicative of the importance of digital technology and the continuous training of South Florida's workforce. The overwhelming majority of respondents (70.2%) reported the use of a computer was being required in their job. An even larger percentage (79.3%) also indicated they enjoy learning and working with computers. Moreover, 95.3% realize computer skills are not only required for their job but also in the job market in general. In addition, only 9.7% believe computer skills are only required for office jobs, while 86.2% disagree or completely disagree with that statement. Despite the high appreciation of technological skills in the job market, the workforce survey results are somewhat ambivalent with regards to the role computer skills play in job advancement. Less than half (46.4%) agreed or strongly agreed that if their computer skills were more advanced, they would have more opportunity for employment and job advancement, while 41.4 disagree with that statement. One possible explanation is that due to the high educational attainment of the respondents, they may have all the skills needed to make them competitive in the job market. The same argument can explain why only a small majority (50.7%) reported they wished they had taken more computer classes when in school, although some respondents, particularly in the higher age groups reported there were no computer classes when they were in school.

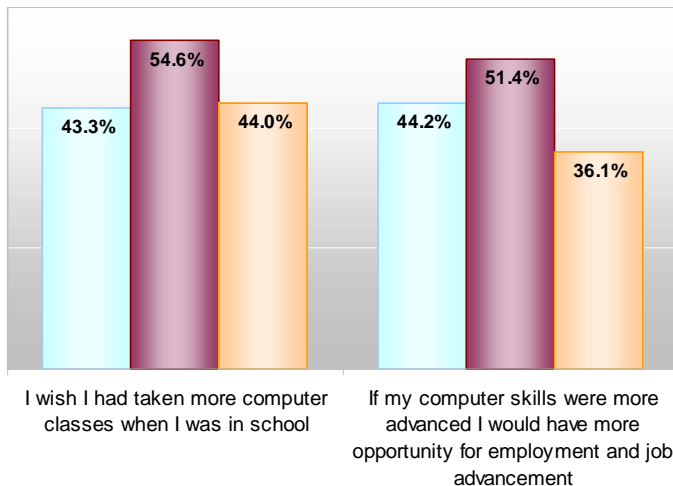
**Figure: Workforce Survey - Importance of Computer Skills**



The response analysis based on educational attainment shows that it indeed has a significant influence on the level of agreement or disagreement with some of the statements. Above 90% of the respondents, regardless of income agree or strongly agree that computer skills are required in today's job market. However, while 74.3% of those with high school degree or less enjoy learning about and working with computers, 79.1% of those with Associate's degree and 83.6% of those with Bachelor's degree or higher reported the same. The following figure shows the percentage of respondents in each educational attainment category who agreed or strongly agreed with two statements in which the most significant differences are observed. Respondents with only an Associate's degree seem to have a better appreciation of the importance of digital literacy as a majority of them reported they wished they had taken more classes when in school (54.6%) and agreed that if their computer skills were more advanced, they would have more opportunity for employment and job advancement (51.4%). Interestingly, the percentages of respondents from the lower and higher education categories who agreed with the statements were lower than those in the Associate's category, but identical to each other. The relatively low percentage of respondents with advanced degrees who agreed with the statement may be the result of their belief their skills are advanced enough to allow them career growth. On the other hand, those with only high school degrees or less may believe in their industry of employment more advanced computer knowledge is not required, or they may believe they have already achieved the career growth they had aspired for regardless of their computer skills.

**Figure: Workforce Survey - Importance of Computer Skills (Agreement with Statement)**

□ High school or less    ■ Associate's degree    □ Bachelor's degree and higher

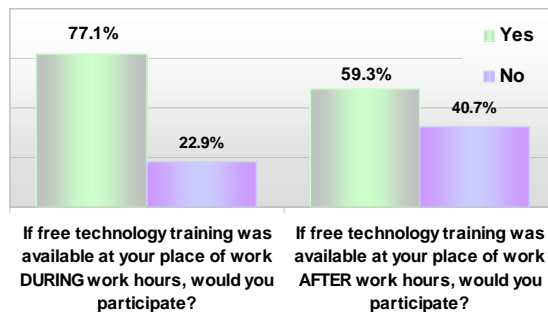


**DEMAND FOR TECHNOLOGY TRAINING**

The recognition of the importance of digital literacy by Miami-Dade and Monroe counties' workforce translates into willingness to participate in technology training. Even though, as discussed in the previous section, less than half (46.4%) agreed or strongly agreed that if their computer skills were more advanced, they would have more opportunity for employment and job advancement, the majority are still interested in free technology training, either during or after work hours. Especially telling is the high percentage (59.3%) who would sacrifice their personal time to attend a training session.

Even more importantly, overall 41.9% would be willing to participate in technology training at their work place even if it was for a fee.

**Figure: Workforce Survey - Willingness to Participate in Free Training**

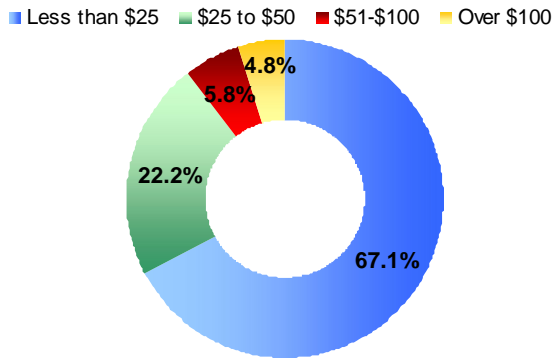


There are no significant differences between respondents of different income categories in terms of their willingness to participate in technology training. Of those who reported income, the same percentages (80.4%) in the category with than \$25,000 family income and those with over \$50,000 indicated they would go to a training during work hours. The percentages are identical in the income categories regarding training *after* work hours. However, income levels play a role in willingness to pay for the training. While almost half of those with income over \$50,000 would pay a fee (47.2%), only 35.7% of those with income under \$25,000 indicated the same.

Educational level has a similar effect. While there are no significant differences on willingness to participate for free during or after work hours, respondents with higher degrees are more willing to pay for training. Only 35.0% of those with high school diploma or less would participate if there was a fee, compared to 43.1% of those with Bachelor's degrees or higher.

There are some interesting differences in the willingness of respondents to participate in free training depending on race and ethnicity. While 78.0% of Hispanics would participate in free technology training *during* work hours, 88.2% of Black/African American respondents indicated the same. With regards to free training *after* work hours, 58.8% of Hispanics would participate, compared to 59.2% of Whites/Caucasians and 68.3% of Blacks. However, Blacks are less willing to pay for training (38.4%) than Hispanics (41.0%) and Whites/Caucasians (42.6%).

**Figure: Workforce Survey - Fee Respondent Would Pay per Hour for Training**



The majority of Miami-Dade and Monroe counties' workforce would not participate in technology training if there was a fee involved (58.1%). Approximately two-thirds of those who would pay a fee (67.1%) would pay no more than \$25 per hour of training.

Only a small percentage of respondents would be willing to pay over \$50 per hour of training (5.8%) and even fewer (4.8%) would consider paying \$100 or more. Respondents with higher income are more likely to be willing to pay a higher fee. While only 2.7% of those with income under \$50,000 would pay more than \$50 per hour of training, 13.1% of those with income above \$50,000 indicated the same. Similarly, only 10.3% of those with high school degree or below would pay over \$50, compared to 13.8% of those with Bachelor's degree and above.

## RESULTS BY COUNTY

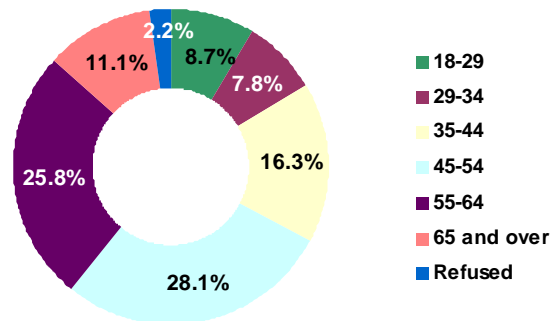
### MIAMI-DADE COUNTY

#### DEMOGRAPHICS

The survey sample was drawn from a randomized list of Miami-Dade residents. Responses were collected only from residents in the workforce, i.e. either employed or seeking employment. The majority of the workforce surveyed were currently employed (84.4%) while 15.6% were not employed but were actively seeking employment.

The majority of residents surveyed were between the ages of 45 and 64 (53.9%). Additionally, 16.3% of respondents were between 35 and 44 years of age. A large percentage of retirement age residents continue to be active members of the workforce (11.1%).

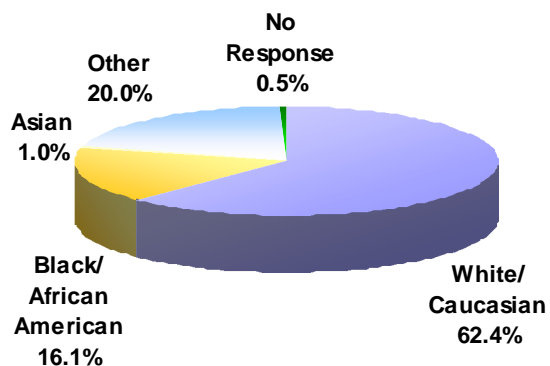
**Figure: Miami-Dade Workforce Survey - Miami-Dade Workforce by Age**



The majority of respondents were female (58.6%) while 41.4% were male. The majority of respondents (73.1%) did not have school-aged children (defined as children between the ages of 6 and 17 years) living at home. Of those who have school aged children, 52.3% had at least one child in high school, while 34.2% and 40.9% had at least one child in middle and elementary school respectively.

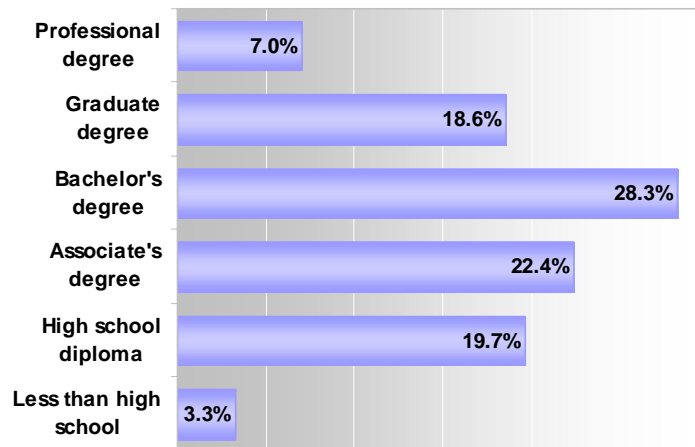
The majority of the labor force surveyed were White or Caucasian (62.4%) while less than one in five members of the workforce were Black or African-American (16.1%). Respondents were also asked if they were Hispanic or Latino and 45.7% indicated they were of Hispanic/Latino ancestry. While the survey response rate from Hispanics is lower than their estimated 63.7% of the workforce (2008 American Community Survey), it should be noted that 11.8% refused to provide an answer as respondents of mixed heritage often do. The majority of surveys (78.8%) were conducted in English, while 20.5% and 0.6% were conducted in Spanish and Creole respectively.

**Figure: Miami-Dade Workforce Survey - Race of Workforce**



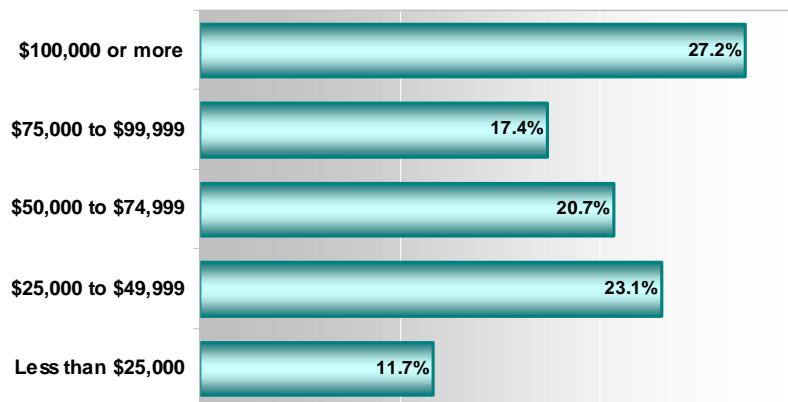
The majority of respondents reported advanced degree, with approximately three quarters having at least a college degree (77.0%). The majority of respondents (53.9%) had a bachelor's, graduate or professional degree, while only 3.3% of residents surveyed did not have a high school diploma.

**Figure: Miami-Dade Workforce Survey - Highest Level of Educational Attainment**



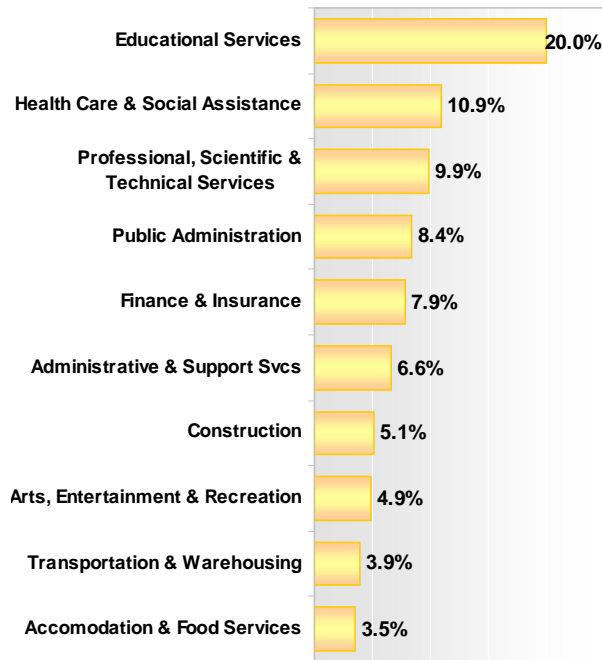
A large percentage of survey respondents refused to provide their annual family income (47.3%). Approximately a third of respondents who agreed to provide their annual family income had income of under \$50,000 (34.8%). The majority reported income under \$75,000 (55.5%). More than a quarter of the respondents (27.2%) reported annual family income of over \$100,000. Approximately one in nine respondents (11.3%) indicated either them or someone in their family owns a business.

**Figure: Miami-Dade Workforce Survey - Annual Family Income**

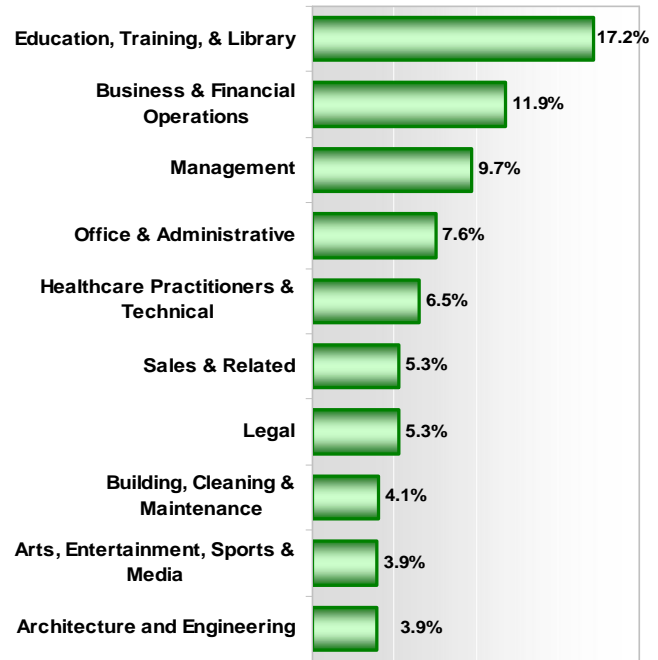


The leading industries of employment and potential employment for the surveyed sample of the workforce were: Educational Services (20%), Health Care and Social Assistance (10.9%), Professional, Scientific and Technical Services (9.9%), Public Administration (8.4%) and Finance and Insurance (7.9%). Similarly, Education, Training and Library (17.2%), Business and Financial Operations (11.9%), Management (9.7%), Office and Administrative (7.6%) and Healthcare, Practitioners and Technical occupations (6.5%) were the leading occupations of the surveyed members of the Miami-Dade County workforce.

**Figure: Miami-Dade Workforce Survey - Leading Industries**



**Figure: Miami-Dade Workforce Survey - Leading Occupations**

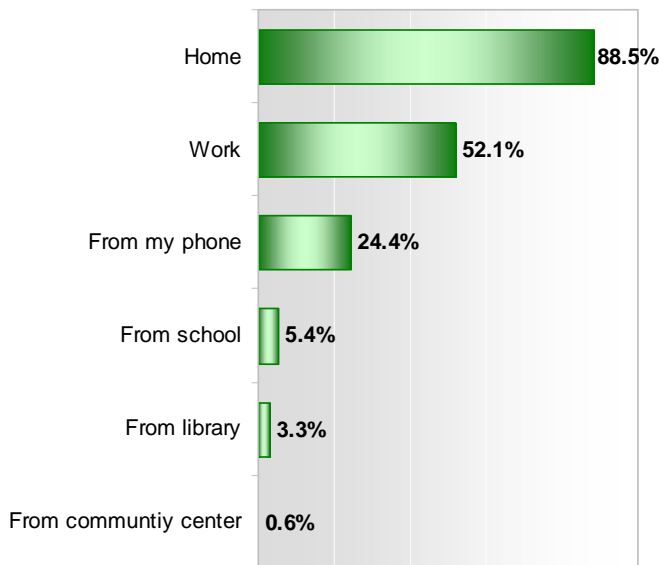


## COMPUTER USE

The majority of households own a computer (93.3%). A higher percentage of respondents with college degrees or higher educational attainment reported having a computer in their household (97.0%) than those without a college degree (88.8%). As income and educational attainment are correlated, an identical distinction is evident among the different income categories, i.e. a higher percentage of respondents with high household income tend to have a computer in their household. While 74.4% of households with income under \$25,000 have a computer, over 90% of those with income above \$25,000 have one. Overall only 6.7% (42 respondents) indicated there is no computer in their household, mainly because they cannot afford it (19 respondents) or because they do not need it (10 respondents). Only four respondents reported they do not have a computer because no one in their household knows how to use it.

A higher percentage of respondents who identified themselves as Black or African American reported that there is no computer in their household (11.0%), than Hispanics (6.3%). Only 5.2% of Whites reported the same.

**Figure: Miami-Dade Workforce Survey - Internet Access**

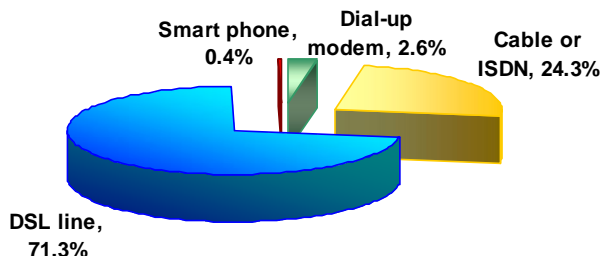


Residents access the Internet from multiple locations. Among the several locations where members of the workforce access the Internet from home (88.5%), work (52.1%) and from their phone (24.4%). Reasons for not accessing the Internet at home include: using the Internet at some other location, not needing the Internet at all, inability to pay for Internet access, and not knowing how to use the Internet. Other reasons for not using the Internet at home include using at work and it not working at their home.

While more than half of the respondents (53.8%) indicated they access the Internet primarily and exclusively from home, 21.7% go online primarily at work, and 14.6% use Internet equally at home and at work or on their phone.

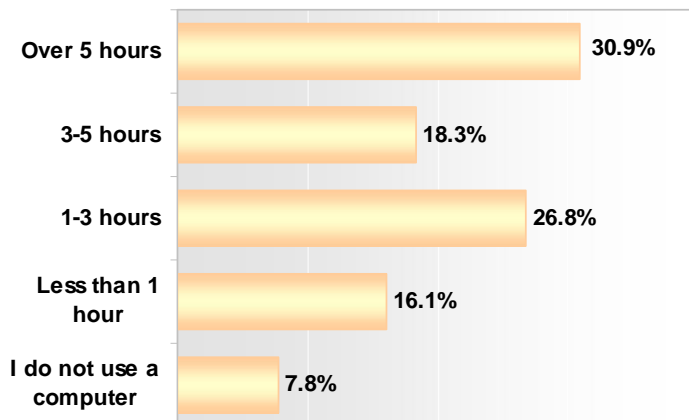
The majority of residents indicated they have a DSL line to access the Internet (71.3%) while 24.3% use cable or ISDN. Only 2.6% rely on a dial-up connection for accessing the Internet. Other connections included smart phone and satellite.

**Figure: Miami-Dade Workforce Survey - Type of Internet Connection**



**In an average day, almost half of the workforce surveyed (49.2%) use computers for 3 or more hours.** Only 16.1% reported using a computer less than one hour a day. Respondents with higher educational attainment, with at least a Bachelor's degree, use a computer on a daily basis longer than those without a Bachelor's degree. While 59.6% of those with postgraduate degrees use a computer for 3 or more hours, only 44.4% of those without higher degrees reported the same. Of those who indicated they do not use a computer at home or some place else (7.8%), most indicated they could not afford a computer, while others claimed they did not need a computer or they did not know how to use one. Some respondents indicated they do not use a computer at home because they use one at work.

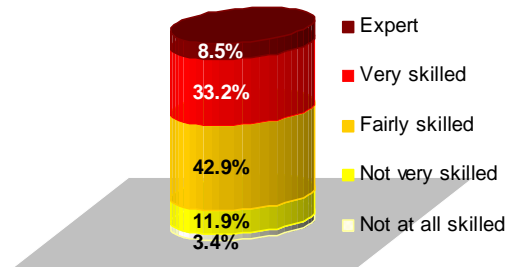
**Figure: Miami-Dade Workforce Survey - Daily Hours of Computer Usage**



## SKILL LEVEL

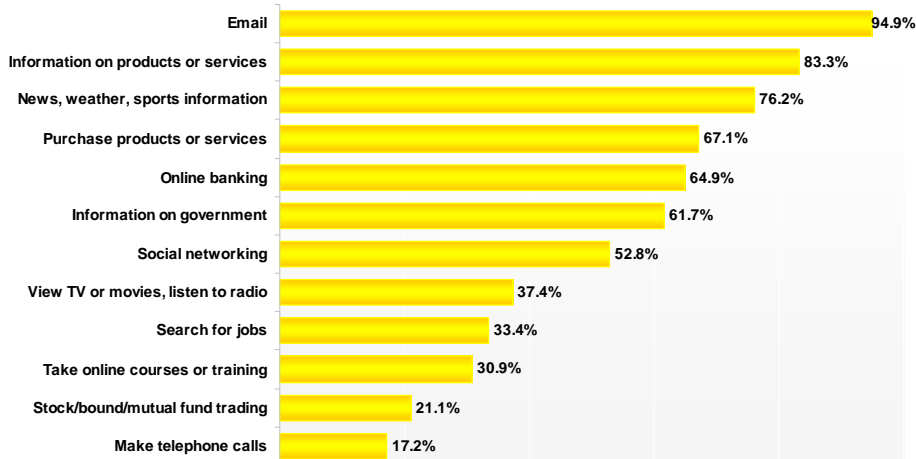
Although very few considered themselves to be expert in terms of their Internet skills (8.5%), the majority (76.1%) considered themselves to be fairly or very skilled. Only 3.4% of Miami-Dade’s workforce reported having no Internet skills. Respondents with postgraduate degrees also reported more advanced Internet skill levels. While 11.2% of those with Bachelor’s degree or above considered themselves not at all or not very skilled, 20.9% of those without a university degree indicated the same. **Race and ethnicity also seem to affect how respondents define their Internet skill levels. While 38.4% of Hispanics consider themselves very skilled or expert, 45.4% of non-Hispanics indicate the same. Also, 39.1% of the Black/African American workforce reported being very skilled or expert than White/Caucasian (44.5%).**

**Figure: Miami-Dade Workforce Survey - Internet Skill Levels**



The majority of respondents used the Internet for email (94.9%). A majority also use it for information on products or services (83.3%), news, weather and sports information (76.2%), online shopping (67.1%) and online banking (64.9%), information on government (61.7%) and social networking (52.8%).

**Figure: Miami-Dade Workforce Survey - Uses of the Internet**

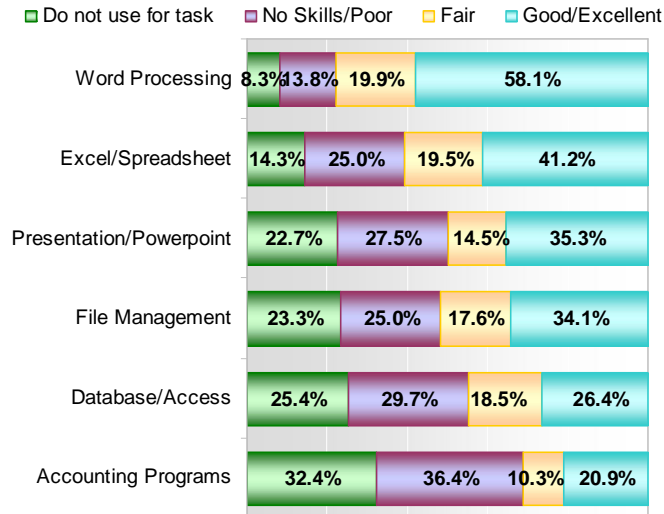


The majority of Miami-Dade’s workforce uses a variety of applications on their computers and on the Internet. Unsurprisingly, more specialized applications and tasks are being used by fewer members of the workforce. Such specialized applications and tasks include web design, custom applications, accounting programs and email marketing. The only computer task which the majority of the workforce reported having good or excellent skills is Word processing (58.0%). High percentages also have good or excellent skills in Excel/ spreadsheet (43.4%) and the preparation of presentations or use of PowerPoint (37.4%). Level of education is positively correlated with the respondents’ level of skill in using all applications. For example, while 72.1% of those with postgraduate degrees consider themselves with good or excellent skills in Word processing, only 50.8% of those without a postgraduate degree indicated the same.

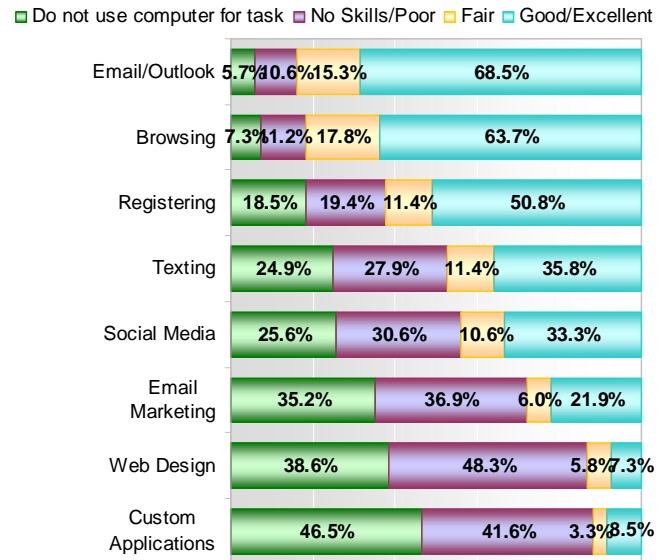


The Internet-related tasks and applications which the workforce seems most skilled to conduct or use include E-mail (68.5%), browsing (63.7%), product or service registration (50.8%), and texting/SMS (35.8%).

**Figure: Miami-Dade Workforce Survey – Computer Skill Levels**



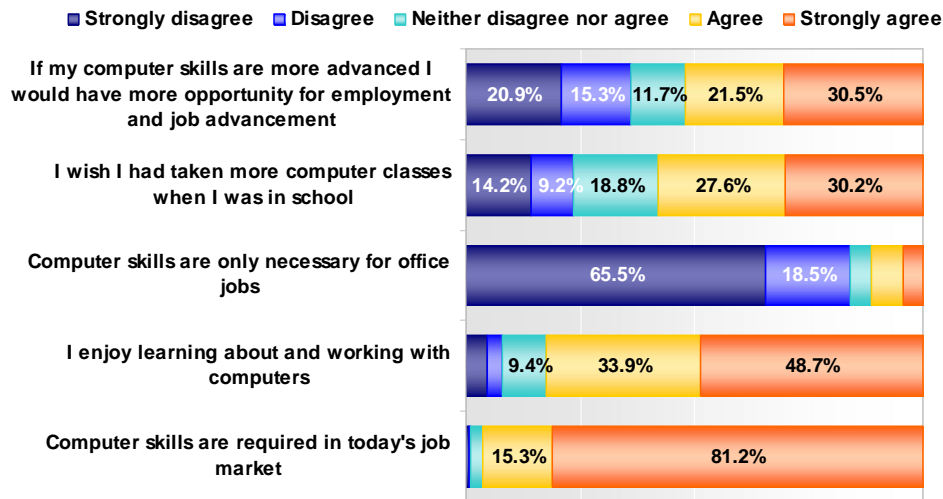
**Figure: Miami-Dade Workforce Survey – Internet Skill Levels**



## COMPUTERS IN THE WORKPLACE

The demand for digital literacy in the workforce is demonstrated by the workforce use of computers in their workplace. Almost three quarters (71.9%) reported the use of a computer being required in their job. Moreover, the majority of respondents recognize the importance of computer skills for career advancement. Respondents were asked to indicate their level of agreement with five statements regarding computer use, skills and the role of computers in the workplace. The vast majority (96.5%) agreed computer skills are required in today's job market. Furthermore, 84.0% disagreed that computer skills are only necessary for office jobs. The majority (52.0%) also believe if their computer skills were more advanced they would have more opportunity for employment or job advancement, and 57.8% wish they had taken more computer classes when in school. Finally, 82.6% reported they enjoy learning about and working with computers. There are no statistically significant differences in the responses to the question assessing the importance of digital literacy among the different ethnic and racial groups in the county.

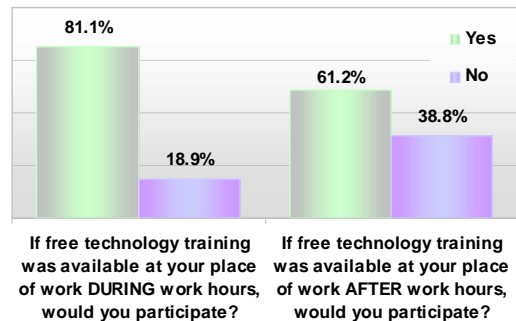
**Figure: Miami-Dade Workforce Survey - Role of Computer Skills**



**DEMAND FOR TECHNOLOGY TRAINING**

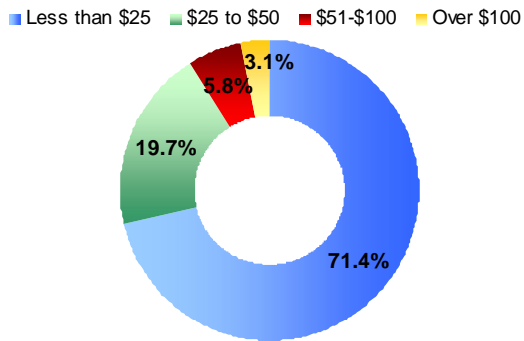
Given the importance Miami-Dade’s workforce assigns to computer use, it is unsurprising that the majority of them are willing to participate in free technology training both during and after work hours. The high percentage of respondents who are willing to go to a free training *after* work hours (61.2%) demonstrates the significance of technology in their career. Even more importantly, overall 43.9% would be willing to participate in technology training at their work place even if it was for a fee.

**Figure: Miami-Dade Workforce Survey - Willingness to Participate in Free Training**



There are some interesting differences in the willingness of respondents to participate in free training depending on race and ethnicity. While 77.9% of Hispanics would participate in free technology training *during* work hours and 57.9% would participate *after* work hours, 84.3% and 63.2% respectively of non-Hispanics indicated the same. Also, a higher percentage of Blacks/African Americans (89.0%) are open to both during (89.0%) and after work hours training (67.0%), compared to 80.9% and 62.2% of Whites/Caucasians. Black/African Americans are less likely to participate in technology training for a fee, than Whites or Hispanics. While 55.6% of the White/Caucasian workforce would not participate if there was a fee, 61.8% of Blacks indicated the same. Also, 58.9% of Hispanics and 55.2% of non-Hispanics indicated unwillingness to pay for technology training.

**Figure: Miami-Dade Workforce Survey - Fee Respondent Would Pay per Hour for Training**



Although most of Miami-Dade's workforce would not participate in technology training if there was a fee involved (56.1%), the majority of those who would go to a free training during work hours (52.5%) would also be willing to pay a fee for that training. Of those who would participate in training for a fee, 71.4% would pay less than \$25 per hour of training while 19.7% would pay up to \$50 per hour. Only a few respondents would be willing to pay over \$50 per hour of training and even fewer would consider paying \$100 or more.

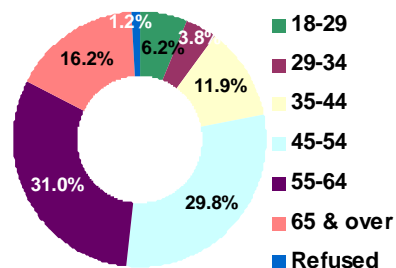
## MONROE COUNTY

### DEMOGRAPHICS

The survey sample was drawn from a randomized list of Monroe residents. Responses were collected only from resident who are in the workforce, i.e. either employed or seeking employment. The majority of the workforce surveyed was currently employed (86.7%) while 13.3% were not employed but were actively seeking employment. The demographic responses collected from the respondents demonstrate that the survey sample accurately represents the demographics of Monroe.

The majority of residents surveyed were between the ages of 45 and 64 (60.8%). Additionally, 11.9% of respondents were between 35 and 44 years of age. A large percentage of the Monroe County workforce surveyed is comprised of retirement age respondents (16.2%).

**Figure: Monroe Workforce Survey - Monroe Workforce by Age**

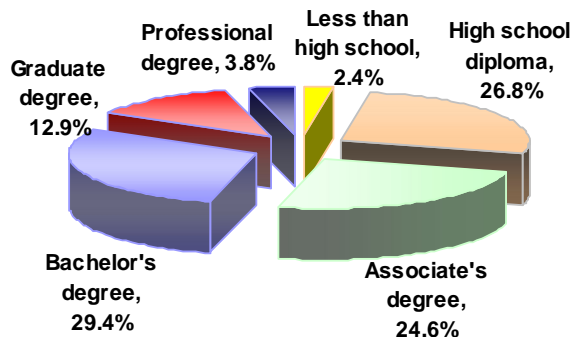


The majority of respondents were female (55.0%) while 45.0% were male. The majority of respondents (79.8%) did not have school-aged children (defined as children between the ages of 6 and 17 years) living at home. Of those who have school aged children, 46.6% had at least one child in high school, while 20.5% and 45.2% had at least one child in middle and elementary school respectively.

The majority of the labor force surveyed were White or Caucasian (93.6%) while 3% was Black or African-American. Respondents were also asked if they were of Hispanic or Latino and 10.2% indicated they were of Hispanic/Latino ancestry. The majority of surveys (97.9%) were conducted in English, while 1.9% and 0.2% were conducted in Spanish and French respectively.

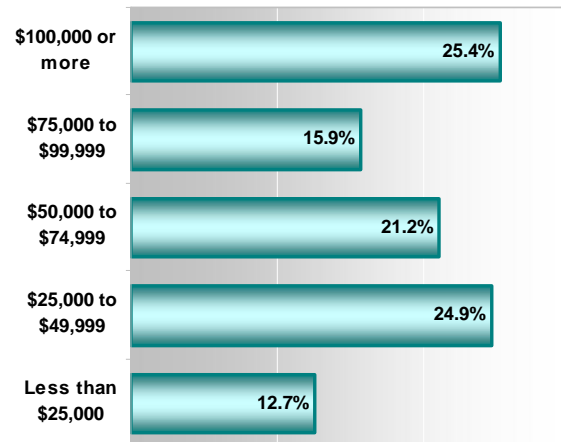
Monroe County seems to have a well educated workforce, with a large percentage having at least a college degree (46.1%). 2.4% of residents surveyed did not have a high school diploma.

**Figure: Monroe Survey - Highest Level of Educational Attainment**



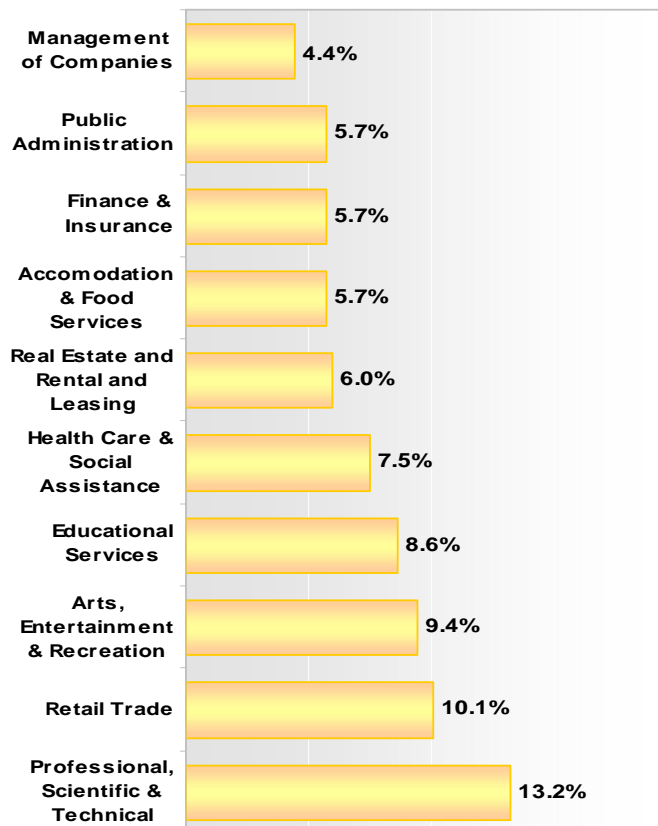
A large percentage of survey respondents refused to provide their annual family income (54.7%). Many of the respondents who agreed to provide their annual family income had income of under \$50,000 (37.6%). More than a quarter of the respondents (25.4%) reported annual family income of over \$100,000. Approximately one in nine respondents (28.3%) indicated either them or someone in their family owns a business.

**Figure: Miami-Dade Workforce Survey - Annual Family Income**

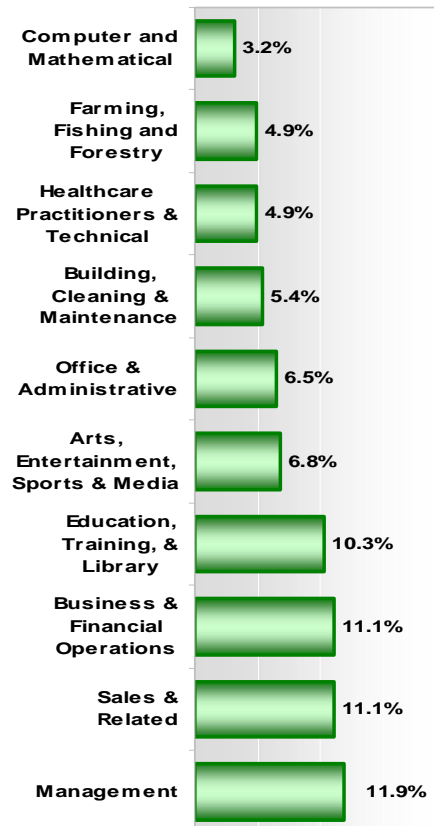


The leading industries of employment and potential employment for the surveyed sample of the workforce were: Professional, Scientific and Technical Services (13.2%), Retail Trade (10.1%); Arts, Entertainment, and Recreation (9.4%); Educational Services (8.6%), Health Care and Social Assistance (7.5%), and Real Estate Rental and Leasing (6.0%). Similarly, Management (11.9%); Sales & Related (11.1%); Business and Financial Operations (11.1%); Education, Training, and Library (10.3%); and Arts, Entertainment, Sports and Media (6.9%) occupations were the leading occupations of the surveyed members of the Monroe County workforce.

**Figure: Monroe Workforce Survey - Leading Industries**



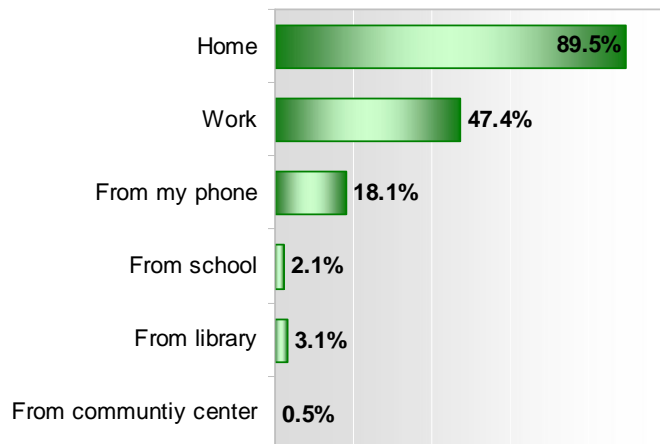
**Figure: Monroe Workforce Survey - Leading Occupations**



## COMPUTER USE

The majority of households own a computer (93.1%). A higher percentage of respondents with college degrees or higher educational attainment reported having a computer in their household (96.9%) than those without a college degree (89.8%). Overall only 6.9% (29 respondents) indicated there is no computer in their household, mainly because they do not need one (10 respondents) or because they cannot afford it (8 respondents). Only four respondents reported they do not have a computer because no one in their household knows how to use it.

**Figure: Monroe Workforce Survey - Internet Access**

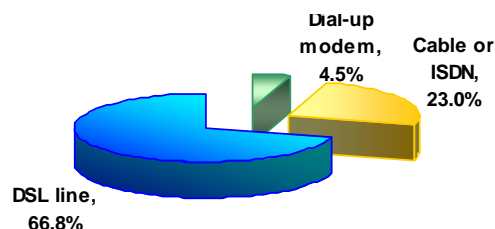


Residents access the Internet from multiple locations. Among the several locations where members of the workforce access the Internet, most indicated they connect to the Internet from home (89.5%), work (47.4%) and from their phone (18.1%). Reasons for not accessing the Internet at home include: using the Internet at some other location, not needing the Internet at all, inability to pay for Internet access, and not knowing how to use the Internet.

While the majority of respondents (70.9%) indicated they access the Internet primarily and exclusively from home, 19.5% go online primarily at work, and 6.1% use Internet equally at home and at work or on their phone.

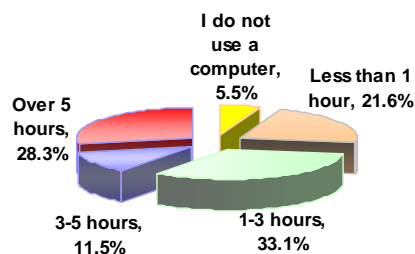
The majority of residents indicated they have a DSL line to access the Internet (66.8%) while 23% use cable or ISDN. Only 4.5% rely on a dial-up connection for accessing the Internet.

**Figure: Monroe Workforce Survey - Type of Internet Connection**



In an average day, almost four in ten members of the workforce (39.8%) use computers for 3 or more hours. Only 21.6% reported using a computer less than one hour a day. Respondents with higher educational attainment, with at least a Bachelor's degree, use a computer on a daily basis longer than those without a Bachelor's degree. While 45.6% of those with college degrees use a computer for 3 or more hours, only 35.1% of those without higher degrees reported the same.

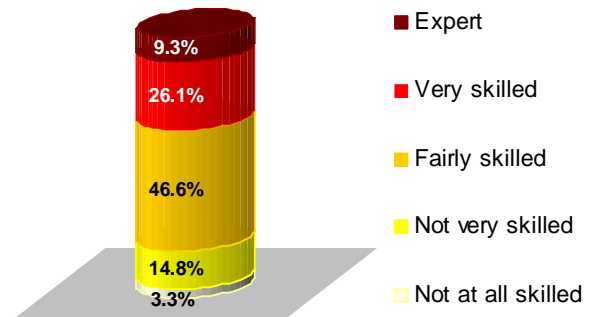
**Figure: Monroe Workforce Survey - Daily Hours of Computer Usage**



## SKILL LEVEL

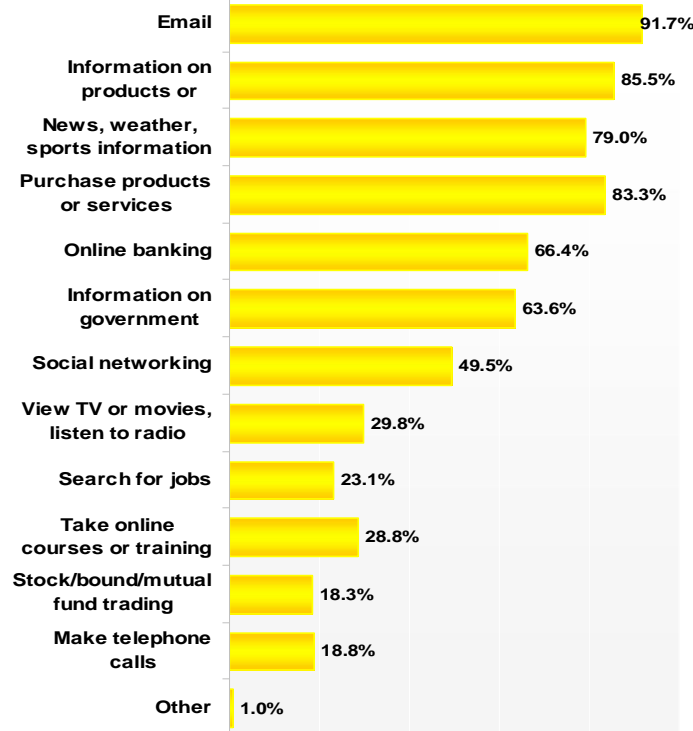
Although very few considered themselves to be expert in terms of their Internet skills (9.3%), the majority (72.7%) considered themselves to be fairly or very skilled. Only 3.3% of Monroe's workforce reported having no Internet skills. Respondents with postgraduate degrees also reported more advanced Internet skill levels. While 16.2% of those with Bachelor's degree or above considered themselves not at all or not very skilled, 20% of those without a university degree indicated the same.

**Figure: Monroe Workforce Survey - Internet Skill Levels**



The majority of respondents used the Internet for email (91.7%). A majority also use it for information on products or services (85.5%), news, weather and sports information (79%), online shopping (83.3%) and online banking (66.4%), information on government (63.6%) and social networking (49.5).

**Figure: Monroe Workforce Survey - Uses of the Internet**



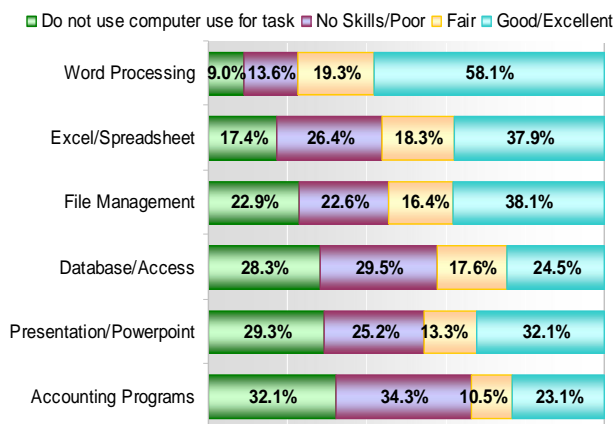
The majority of Monroe's workforce uses a variety of application on their computers and on the Internet. Unsurprisingly, more specialized applications and tasks are being used by fewer members of the workforce. Such specialized applications and tasks include web design, custom applications, accounting programs and email marketing.

The only computer task which the majority of the workforce reported having good or excellent skills is Word processing (58.1%). High percentages also have good or excellent skills in Excel/spreadsheet (37.9%) and the preparation of presentations or use of PowerPoint (32.1%). Level of education is positively correlated with the respondents' level of skill in using all applications.

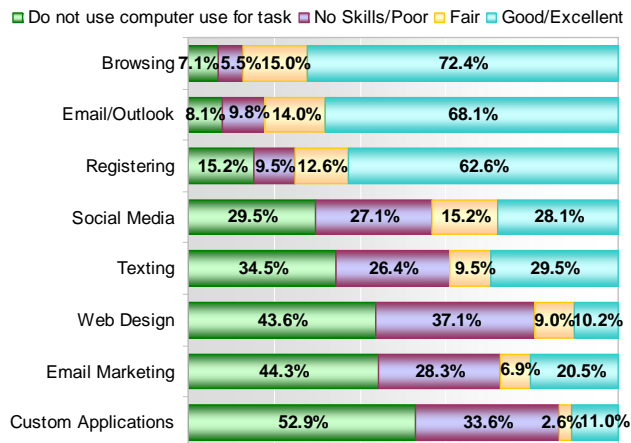
For example, while 78.4% of those with college degrees consider themselves with good or excellent skills in Word processing, only 49.7% of those without a degree indicated the same.

The Internet-related tasks and applications which the workforce seems most skilled to use include E-mail (68.1%), browsing (72.4%), product or service registration (62.6%), and texting/SMS (29.5%).

**Figure: Monroe Workforce Survey – Computer Skill Levels**



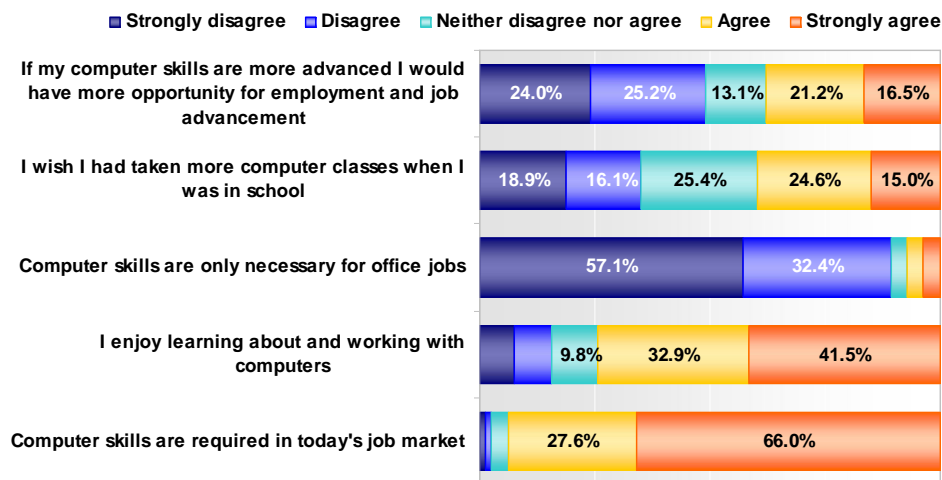
**Figure: Monroe Workforce Survey – Internet Skill Levels**



## COMPUTERS IN THE WORKPLACE

Monroe County’s workforce exhibits a widespread use of computers at the workplace. Two-thirds (67.6%) reported the use of a computer being required in their job. Moreover, the majority of respondents recognize the importance of computer skills for career advancement. Respondents were asked to indicate their level of agreement with five statements regarding computer use, skills and the role of computers in the workplace. The vast majority (93.6%) agreed computer skills are required in today’s job market. Furthermore, 89.5% disagreed that computer skills are only necessary for office jobs. A large percentage (37.7%) also believe if their computer skills were more advanced they would have more opportunity for employment or job advancement, and 39.6% wish they had taken more computer classes when in school. Finally, 74.4% reported they enjoy learning about and working with computers.

**Figure: Monroe Workforce Survey - Role of Computer Skills**



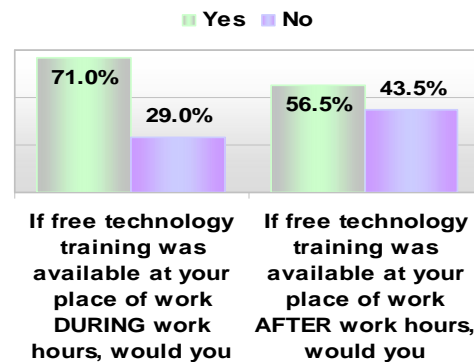


## DEMAND FOR TECHNOLOGY TRAINING

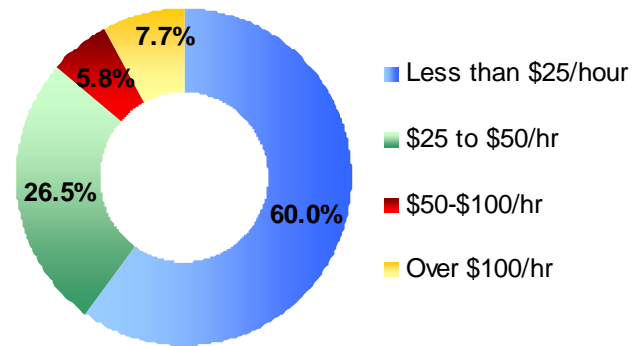
Given the importance Monroe's workforce assigns to computer use, it is unsurprising that the majority of them are willing to participate in free technology training both during and after work hours. The high percentage of respondents who are willing to go to a free training *after* work hours (56.5%) demonstrates the significance of technology in their career. Even more importantly, overall 39.7% would be willing to participate in technology training at their work place even if it was for a fee.

Although most of Monroe's workforce would not participate in technology training if there was a fee involved, the majority of those who would go to a free training during work hours (52.4%) would also be willing to pay a fee for that training. Of those who would participate in training for a fee, 60% would pay less than \$25 per hour of training while 26.4% would pay up to \$50 per hour. Only a few respondents would be willing to pay over \$50 per hour of training and even fewer would consider paying \$100 or more.

**Figure: Monroe Workforce Survey - Willingness to Participate in Free Training**



**Figure: Monroe Workforce Survey - Fee Respondent Would Pay per Hour for Training**

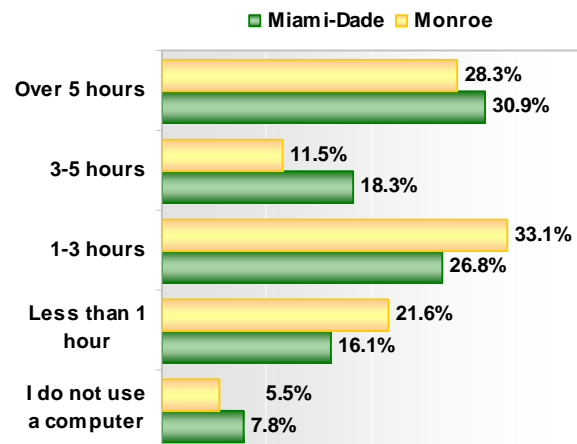


## RESULTS COMPARISON BETWEEN MIAMI-DADE AND MONROE COUNTIES

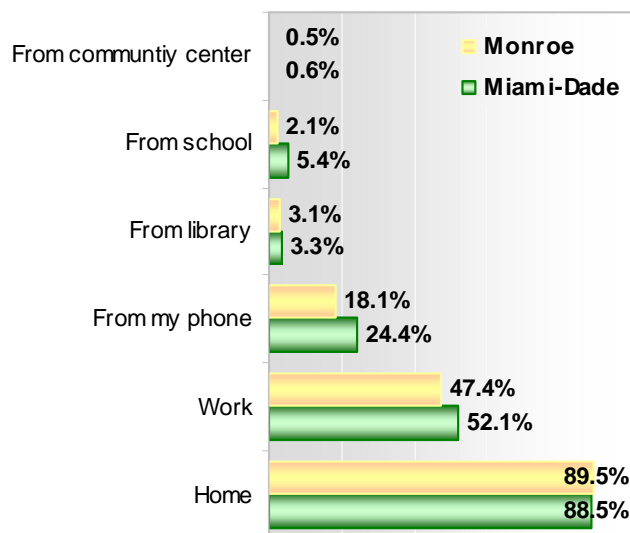
The results of the Miami-Dade and Monroe workforce surveys show very small differences in the two populations' opinions concerning the importance of digital literacy and their digital literacy needs. Analysis illustrating key distinctions among members of the workforce in both counties is presented below.

In terms of the daily usage of computers, Miami-Dade's workforce reported spending more hours on the computer than their Monroe counterparts. In fact, 49.2% of Miami-Dade residents spent in excess of 3 hours on the computer. In Monroe County, only 39.8% of residents spend three or more hours a day on the computer.

**Figure: Workforce Survey Comparison - Daily Hours of Computer Usage**



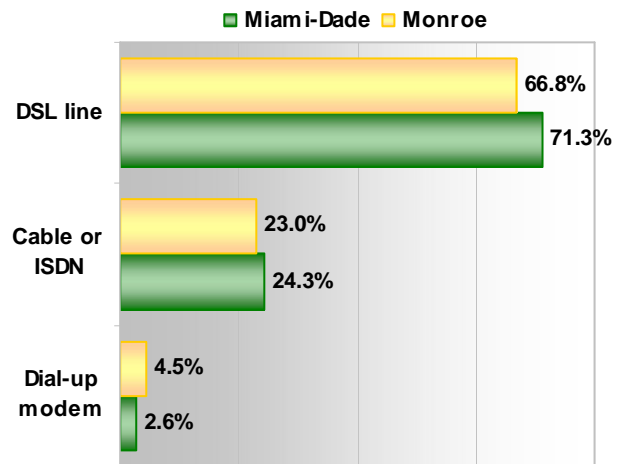
**Figure: Workforce Survey Comparison Internet Access**



The majority of respondents in both Miami-Dade and Monroe counties access the Internet from home (over 85% for each) and work. A larger percentage of Miami-Dade respondents indicated they use Internet at work (52.1%) than Monroe respondents (47.4%). In addition, while in Miami-Dade approximately half of the respondents (53.8%) indicated they access the Internet primarily and exclusively from home, a larger percentage in Monroe (70.9%) indicated the same.

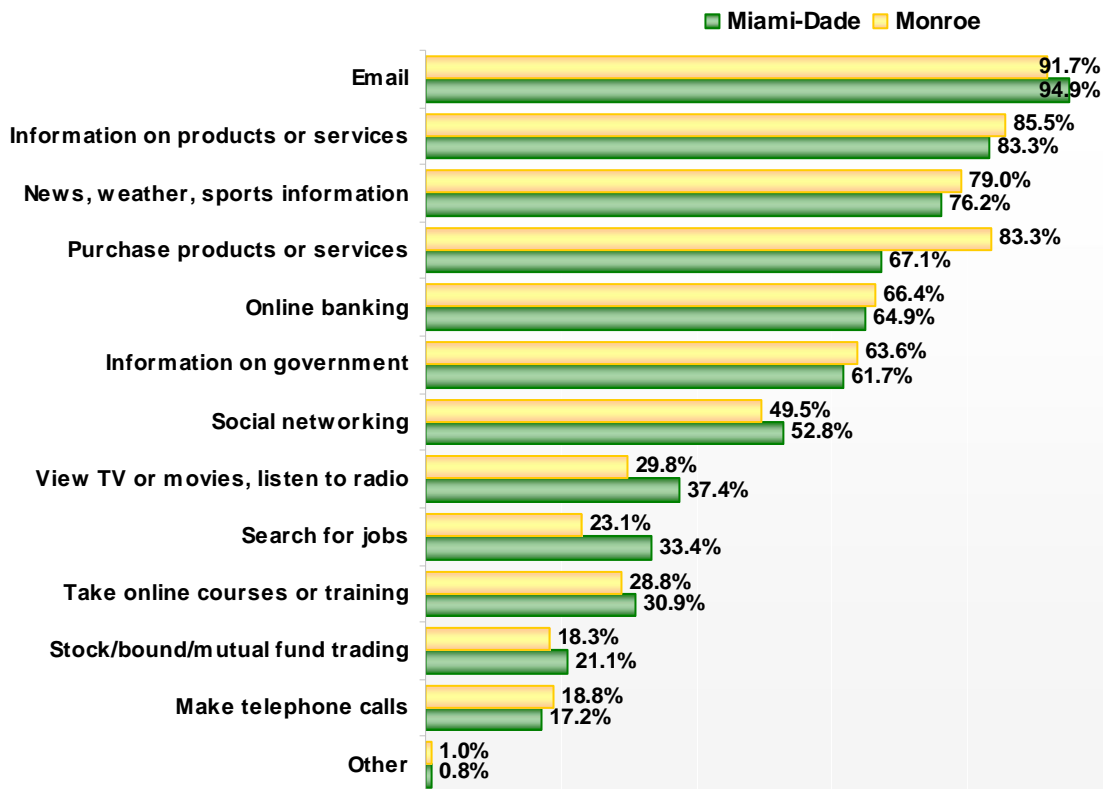
Most residents in both counties use DSL Internet connection at home. Interestingly, a larger percentage of the Monroe workforce seem to rely on dial-up connection (4.5%) than the members of the Miami-Dade workforce, but the difference is not statistically significant.

**Figure: Workforce Survey Comparison - Type of Internet Connection**



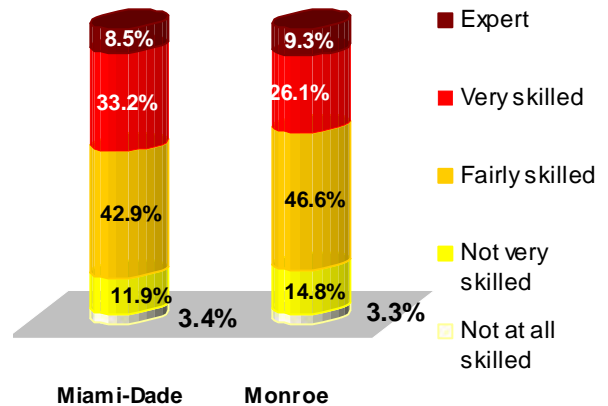
The majority of the Monroe and Miami-Dade workforce use the Internet for various tasks, most notably for email, as well as to gather information on and purchase products and services. Miami-Dade residents are more likely than Monroe residents to watch TV or movies and listen to the radio online (37.4% compared to 29.8% for Monroe residents). In addition, a larger percentage of Monroe respondents reported purchasing products or services online (83.3%) than Miami-Dade respondents (67.1%).

**Figure: Workforce Survey Comparison - Uses of the Internet**



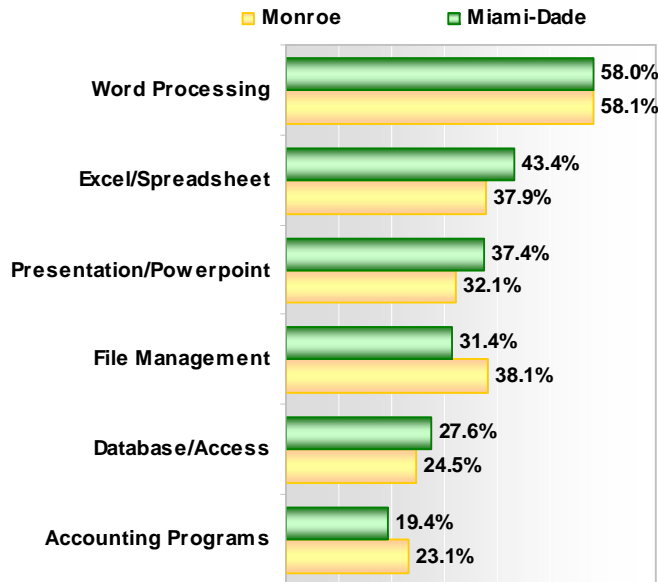
In terms of skill level using the Internet, Monroe and Miami-Dade residents differ slightly. Whereas, a larger percentage of Miami-Dade residents indicated they were very skilled at using the Internet (33.2%), only 26.1% of Monroe residents made the same claim. Monroe residents, on the other hand, were slightly more likely to consider themselves experts (9.3%) than Miami-Dade members of the workforce (8.5%). However, a larger percentage of Monroe residents considered themselves not at all or not very skilled at using the Internet (18.1% compared to Miami-Dade's 15.3%).

**Figure: Workforce Survey Comparison – Internet Skills**



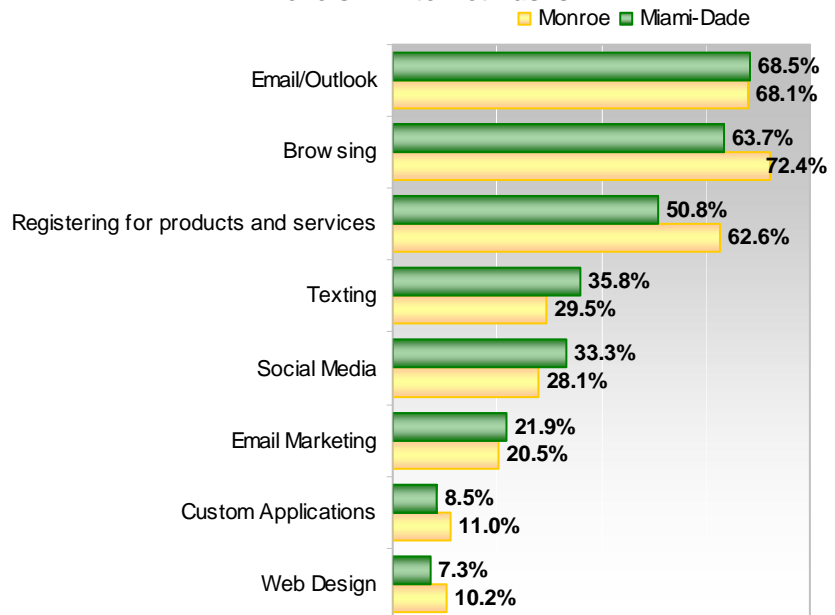
Miami-Dade respondents were slightly better skilled than Monroe respondents at using the computer to conduct tasks like word processing and presentations. One notable distinction was the use of spreadsheet programs like Excel. Monroe respondents were less likely than Miami-Dade residents to report good/excellent skills for Excel (37.9% and 43.4% had good/excellent skills respectively). Also, Monroe respondents were better skilled at more complex tasks like accounting programs (23.1% compared to 19.4% for Miami-Dade).

**Figure: Workforce Survey Comparison – Good/Excellent Skill Levels Computer**



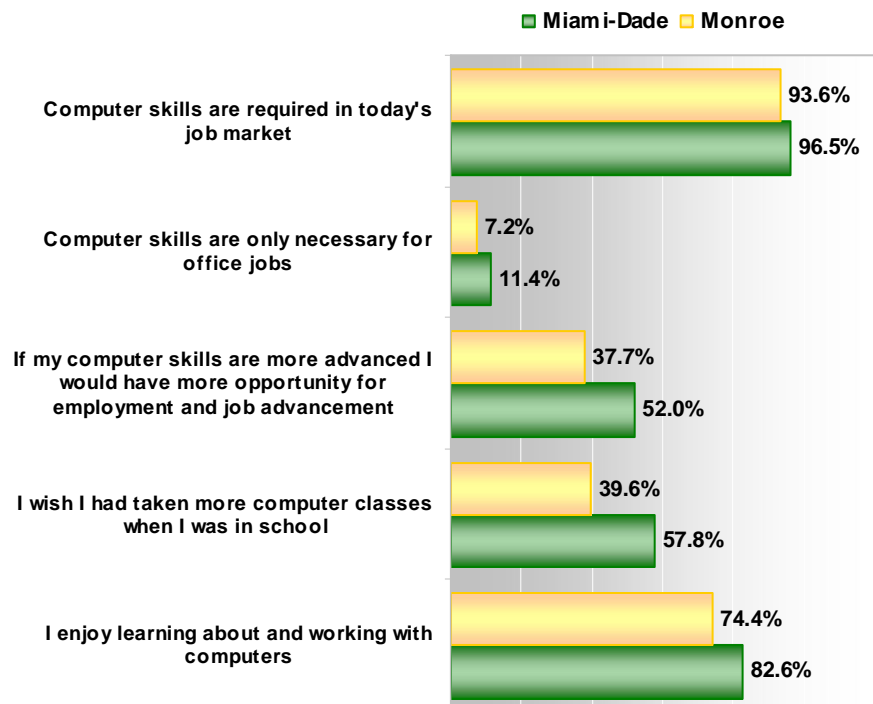
Miami-Dade and Monroe respondents were equally confident in the level of skill they had on most tasks conducted online. However, a larger percentage of Monroe residents claimed they were better skilled at browsing (72.4% with good/excellent skills compared to 63.7% for Miami-Dade), registering (62.6% compared to 50.8%) and Web design (10.2% compared to 7.3%).

**Figure: Workforce Survey Comparison – Good/Excellent Skill Levels in Internet Tasks**



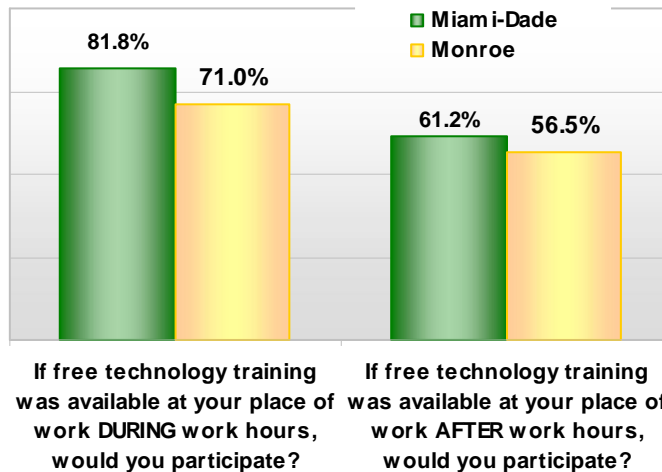
Members of the Miami-Dade and Monroe workforce recognized the importance of computers in the job market (96.5% and 93.6% respectively). In addition, the figure below which shows level of agreement with each statement indicates both groups had low levels of agreement with the claim that computers are only necessary for office jobs (11.4% for Miami-Dade and 7.2% for Monroe). The two counties differ in more specific questions about the importance of digital literacy in their lives. For instance, whereas 52.0% of Miami-Dade residents believed their opportunities for career advancement would be greater if they had better computer skills, only 37.7% of their Monroe counterparts felt the same. Furthermore, Miami-Dade residents were more likely to regret not having taken more computer courses when they were in school (57.8% and 39.6%). Fewer Monroe residents seem to enjoy learning about computers (74.4% compared to 82.6% for Miami-Dade). This could be explained by the larger percentage of older members (those aged 55 and above) of the workforce in Monroe County than Miami-Dade (47.2% and 36.9% respectively).

**Figure: Comparison Workforce Survey - Role of Computer Skills**



Given that Miami-Dade had a higher percentage of respondents who wished they had taken more computer classes in school and who reported they enjoyed learning about and working with computers than Monroe County, not surprisingly, Miami-Dade's workforce seems more likely than Monroe's workforce to participate in free digital literacy training both during and after work hours. In Miami-Dade, 81.8% would participate during work hours and 61.2% after work hours, compared to 71% and 56.5% for Monroe County.

**Figure: Workforce Survey Comparison - Willingness to Participate in Free Training**



A majority of respondents in both counties indicated they would not participate in technology training for a fee (56.1% in Miami-Dade and 60.3% in Monroe). Of those who would participate in technology training for a fee, the majority of residents in both counties would be willing to pay less than \$25 per person per hour (71.4% in Miami-Dade and 60.0% in Monroe). Monroe residents have a higher reservation price (highest price a consumer would be willing to pay for a good/service) since they would be more willing than Miami-Dade residents to incur a cost of over \$25 per person per hour for digital literacy (40.0% compared to 28.6% for Miami-Dade).

**Figure: Workforce Survey Comparison - Fee per Hour for Training**

