eREADINESS MARYLAND
ASSESSING OUR
DIGITAL OPPORTUNITIES

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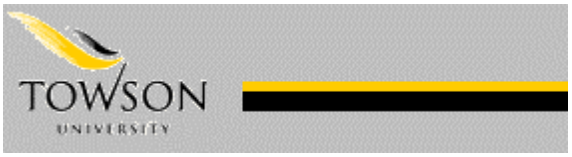
Prepared by:

R E S I
Research & Consulting



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I. Executive Summary

The heightened connectivity associated with the Internet provides households with an array of new opportunities, including best price/ best product shopping, education, communication, and entertainment. The Internet also affords households members the opportunity to obtain information on government services and labor market options. To the extent that households remain unconnected, their access to information is substantially diminished, and so too are their life chances.

The Maryland Technology Development Corporation (TEDCO) contracted with RESI to collect and analyze information about household Internet usage in Maryland. The primary objective of this analysis is to ascertain how Marylanders use the Internet and to identify prospects for further diffusion of connective technologies. A secondary objective the analysis realizes is to characterize the nature of Maryland's Digital Divide on the basis of geographic, income and educational attainment characteristics.

This study was initiated in September 2001. To conduct the evaluation, RESI collected 1,422 survey responses via telephone. The survey instrument was designed to elicit responses regarding the extent to which Maryland households' use personal computers and the Internet from their homes.

Because the data amassed by the TEDCO E-Commerce Household Survey is the first of its kind to be collected and analyzed in Maryland, RESI desired to do more than simply summarize results at the State level. In order to fully characterize the nature of Maryland's Digital Divide, it was necessary to delve deeper and perform a regional analysis. RESI disaggregated survey data into five Maryland regions: Western Maryland (comprised of Garrett, Allegany and Washington Counties), North Central Maryland (comprised of Baltimore City and Frederick, Carroll, Baltimore, and Harford Counties), Central Maryland (comprised of Howard, Montgomery, Anne Arundel and Prince George's Counties), South Central Maryland (comprised of Calvert, Charles and St. Mary's Counties) and Eastern Maryland (comprised of Cecil, Kent, Queen Anne's, Caroline, Talbot, Dorchester, Wicomico, Somerset and Worcester Counties).

RESI obtained responses from 1,422 Maryland households. This sample size allows RESI to generate statistically meaningful results both at state and sub-state regional levels. In general, the results indicate that there is a Digital Divide here in Maryland, regionally and otherwise. This Divide appears to follow anticipated patterns neatly, with affluent suburban communities reporting the highest household computer penetration and Internet utilization, and more rural and highly urban communities reporting less penetration and utilization. These regional variations are more a function of income than anything else. RESI was surprised by the extent to which income differentials successfully explained computer presence in households.

From a public policy standpoint, this is a troubling though anticipated result. To the extent that future income is a function of the ability to become familiar with the computer and its myriad capabilities, those without a computer today are likely to see less personal income growth than others, which means that they will continue to find computers expensive. One caveat to this is that there appears to be a considerable lack of awareness among many households in Maryland with respect to the costs of technology generally, and computers in particular. It would appear that many households believe they cannot afford a computer though their income would suggest

otherwise. Many others also appear to believe that Internet access is cost prohibitive, though this is clearly not true.

Therefore, Maryland faces a growing Divide. Whether one views this as a divide along income or regions is less important than the fact of its existence and the notion that dynamics would cause this Divide to expand over time. Our state's success should be measured by our ability to maintain or even shrink the Divide as we move forward. The fact of the matter is that computers are essential to the acquisition of knowledge, and the acquisition of knowledge is essential to full participation in the emerging economy. To not address the lack of computer penetration among lower income households would be to doom many of these households to persistent underperformance vis-à-vis their own potential, and doom the state to a similar outcome.

II. Introduction

A. Problem Statement / Purpose of Analysis

The Maryland Technology Development Corporation (TEDCO) contracted with RESI to collect and analyze information regarding household Internet usage in Maryland. The primary objective of this analysis is to ascertain how Marylanders use the Internet and to identify prospects for further diffusion of connective technologies. A secondary objective the analysis realizes is to characterize the nature of Maryland's Digital Divide on the basis of geographic, income and educational attainment characteristics.

III. Methodology

A. Survey Design & Implementation

The E-Commerce Readiness survey utilized in this analysis was designed by TEDCO staff. RESI survey researchers tested the instrument to ensure that the structure, language, and responses were free of ambiguity.

Once the final survey instrument was approved by TEDCO, RESI began to disseminate the survey via telephone. The telephone is often cited as the best means of survey dissemination, primarily because it minimizes non-response bias, as well as ensures that the survey responses represent a random, representative sample.

RESI obtained a sample of 9,000 randomly selected, listed Maryland residential phone numbers from a credible data/information acquisition group. Using this random sample, RESI was able to successfully survey 1,422 heads of household in the state of Maryland.

B. Survey Robustness

Because the data collected by the TEDCO E-Commerce Household Survey is the first of its kind to be collected and analyzed in Maryland, RESI desired to do more than simply summarize results at the State level. In order to fully characterize the nature of Maryland's Digital Divide, it was necessary to delve deeper and perform a regional analysis. RESI disaggregated survey data into five Maryland regions: Western Maryland (comprised of Garrett, Allegany and Washington Counties), North Central Maryland (comprised of Baltimore City and Frederick, Carroll, Baltimore, and Harford Counties), Central Maryland (comprised of Howard, Montgomery, Anne Arundel and Prince George's Counties), South Central Maryland (comprised of Calvert, Charles and St. Mary's Counties) and Eastern Maryland (comprised of Cecil, Kent, Queen Anne's, Caroline, Talbot, Dorchester, Wicomico, Somerset and Worcester Counties).

RESI feels comfortable with the size of the sample population (1,422 responses). This sample size allows RESI to generate analyses that are statistically significant, both at the state level and regional levels.

C. Assumptions

RESI carefully determined sample sizes for each region analyzed in order to ensure that the size of sample populations was proportionate to the actual population sizes of the Maryland regions considered in this study. This allowed for more meaningful analysis and provided a representative sample of residents. Once the surveys were completed, jurisdictions that were over or under sampled were statistically adjusted to reflect the population.

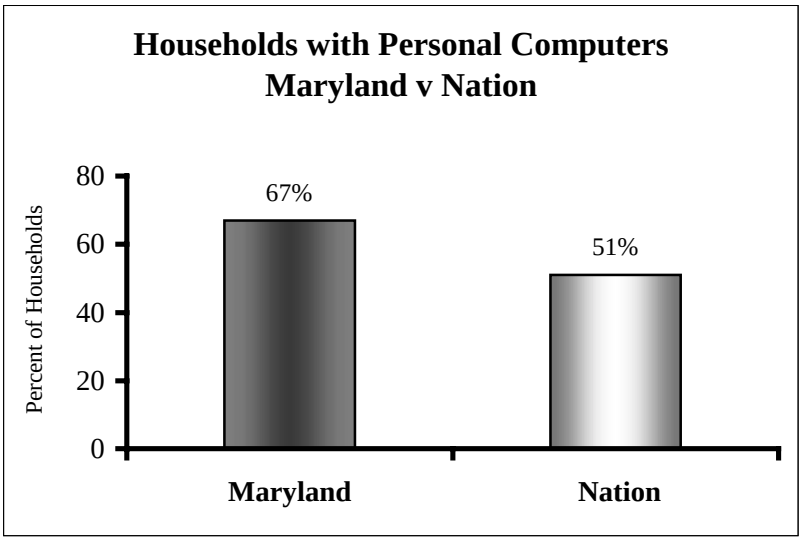
For the both the state and regional analyses, the data have been proportionately adjusted to represent the population at large. The individual region summary tables are based on the actual number of surveys that were conducted in that region; the results are not weighted like they are for the statewide/ regional analysis.

IV. Analysis & Synthesis of Survey Data

A. Statewide Analysis

Computer Ownership
Survey results indicate that Maryland compares favorably to the nation overall with respect to computer ownership. More than 67% of the respondents have a personal computer in their home. According to a U.S. Census Bureau report, the corresponding percentage for the nation is 51%[1].

Figure 1



Of the 67% of Marylanders who own a personal computer, 40% have more than one and 58% own a computer that is more than two years old. The vast majority of households with more than one computer (75%) do not have a network installed to connect their computers. Ninety-four percent of respondents indicated that they own a desktop model while 18% own a laptop.

Internet Access
More than half (55%) of all survey respondents have a home Internet connection. Perhaps even more telling, 48% of survey respondents *use* the Internet from home. Once again, Maryland outperforms the nation (42%) in this respect[2]. Twenty-nine percent of respondents who do not have a home Internet connection report that they have used the Internet at least once. Thus, the percentage of respondents who have used the Internet, whether at home or at some location, is 64%. Of that population (64%), 90% of respondents reported using the Internet within four weeks prior to responding to the survey.

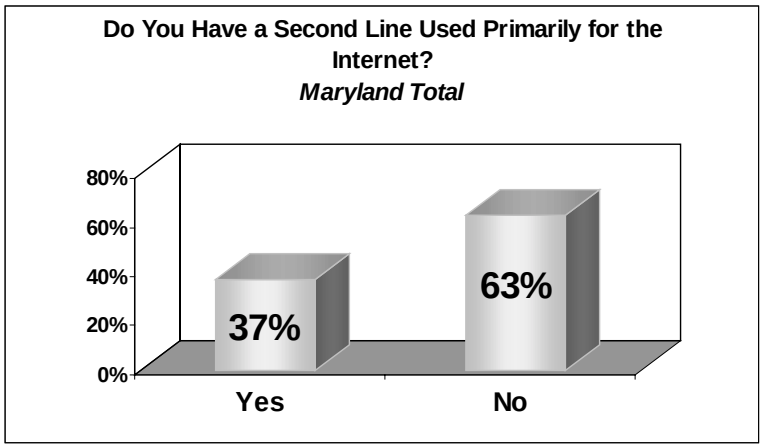
[1] US Census Bureau. *Home Computers and Internet Use in the United States: August 2000*. US Department of Commerce: September 2001.

[2]US Census Bureau. *Home Computers and Internet Use in the United States: August 2000*. US Department of Commerce: September 2001.

Survey results also indicate the types of connections Marylanders utilize to access the Internet from home. In particular, survey responses shed some light into the following topics: survey respondents' primary mode of Internet access, various modes of access available within respondents' geographic areas, the types of Internet Service Providers (ISPs) Marylanders rely on and the extent to which Marylanders are satisfied with their Internet service.

The majority of Marylanders with home Internet access (84%) rely on a telephone/modem connection. A mere 3% have a modem connection through the television/cable, and 5% have a Digital Subscriber Line (DSL). The Integrated Services Digital Network (ISDN), direct Internet connection on a T1 line, and wireless connection were only used by a handful of respondents. Thirty-seven percent of respondents indicated they had a second line used primarily for Internet access

Figure 2



Respondents who use the Internet were also asked what modes of access are available within their area. Specifically, respondents were asked if the following types of Internet access were available to them: modems, ISDN lines, DSLs, Direct Internet connection or T1 lines, Fiber Optics, and wireless connections. The following figure lists the responses to these questions.

Figure 3

Mode of access	Yes	No	Don't know/ remember
Modem	62%	12%	26%
ISDN line	28%	20%	52%
DSL	40%	19%	41%
Direct Internet or T1 line	28%	19%	53%
Fiber Optic	19%	25%	56%
Wireless Connection	23%	21%	56%

Internet Service Providers (ISPs)
Another finding in this report is that Marylanders have access to a large variety of Internet Service Providers. Thirty-five percent of survey respondents subscribe to AOL (America On Line) for their Internet access. Another 20% of respondents subscribe to

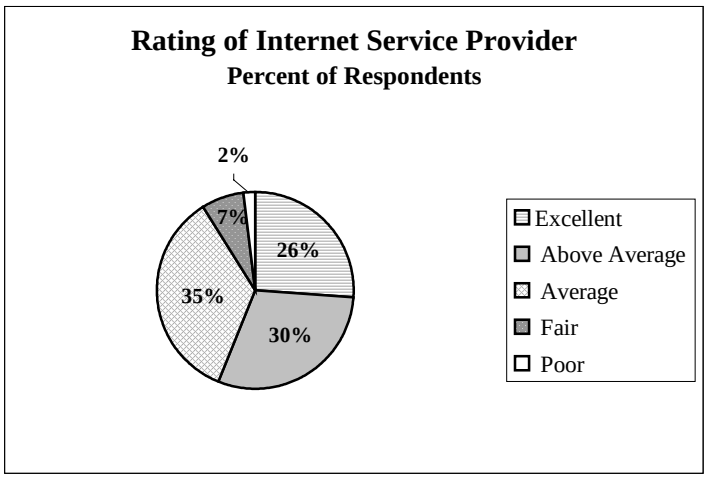
the following ISPs: MSN (8%), Erols (7%) and Verizon (5%). Each of the following firms was named as an ISP by 1-3% of respondents:

College/ University server
Employer's server
WorldNet
Compuserve
Earthlink
Mindspring
Prodigy
Delmarva Online
Juno
Starpower

An additional 30 ISPs were named by the remaining respondents, including, Chesapeake.Net, Delaware Online, Easton Online, Fast Online, Net.zero, and Smart.net, to name a few.

In terms of ease of setting up their Internet connection, more than half (56%) of survey respondents reported being connected to the Internet within a couple of hours of signing up. An additional 25% were connected the same day, and 10% were connected to the Internet within two or three days.

Figure 4



Survey results also indicate that the majority of survey respondents are satisfied with their Internet Service Provider. Twenty-six percent of the respondents rated their Internet Service Provider as excellent, and 30% gave their ISP an above-average rating. Thirty-five percent of respondents feel their ISP service is average, and 7% rated it as fair. A mere 2% of respondents rate their ISP service as poor.

Internet Utilization

Survey respondents revealed that in terms of home Internet usage, personal email ranks as the most popular activity. Nearly all survey respondents are using the Internet to send/ receive personal email. Figure 5 lists additional activities respondents reported engaging in from home. The percentage frequency of respondents who engage in each activity is listed in the far right column.

Figure 5

	Total	**Frequency**
Internet Access set up at home	**782**	**55%**
Use the Internet at home	**718**	**50%**
Send/ receive personal email	678	94%
Send/ receive business email	363	51%
Visit chat rooms	157	22%
Casual Browsing	575	80%
Checking news/ sports	532	74%
Research for school	370	52%
Research for job	328	46%
Searching for products/ services	547	76%
Buying products/ services	462	64%
Visiting online auctions (ex: eBay)	236	33%
Banking or paying bills	218	30%
Entertainment or playing games	392	55%
Listening to music	304	42%
Socializing with family or friends	441	61%

Online Shopping

This survey also elicited additional information regarding Internet usage. In particular, respondents were asked questions that serve to determine the extent to which Marylanders purchase products/ services online. Of those respondents who buy products/ services online (N= 462, 64%), 39% enjoy the ability to shop from home. Moreover, 32% of this population enjoys the convenience of shopping while avoiding crowds and save time. Figure 6 lists the types of products Marylanders purchase online. The percentage frequency of respondents purchasing each product is listed in the right column.

Figure 6

Product	Frequency
Books	57%
CD's, tapes, videos	42%
Clothing	40%
Concert, theater, sports tickets	30%
Airline tickets	49%
Car rental	23%
Toys	26%
Other[3]	37%

Survey respondents provided information regarding the types of businesses they buy from. For instance, Marylanders make online purchases from firms that they have frequented in traditional brick-and-mortar settings (48% of online buyers report that half the companies they shop from on the Internet are companies they had dealt with before Internet shopping). Sixteen percent said they were purchasing items from companies they had never dealt with before. The Internet usage to purchase products or services from a local business is small; roughly 10% of those who use the Internet have arranged the purchase of items from local merchants[4].

The survey responses also reveal factors that deter Marylanders from shopping online. Of those who do not make online purchases (N= 259), 66% are concerned with the security of financial information. Forty-four percent have privacy concerns, and 16% are concerned about the reliability of online merchants. When asked why they do not shop online, 41% preferred seeing a product before buying it, and 31% enjoy shopping in brick-and-mortar stores. Only 10% stated a difficulty with returning purchases caused them to avoid shopping online. Eleven percent consider catalog shopping to be just as convenient.

Online Health Research

Another focus of the survey was to ascertain the extent to which Marylanders utilize the Internet to obtain health information. The results indicate the majority of Marylanders with a home Internet connection use it to research health information (57%). Figure 7 lists the percentage frequency of respondents who use the Internet when searching for various health-related topics.

[3] Some common responses to the "Other" category were: electronics, computer equipment and software, household items, sporting goods and equipment, and gifts

[4] Local businesses are defined as within a one hour drive of the respondent's home

Figure 7

Topic	Frequency
Locate a health provider	21%
Information on diseases and treatment	84%
Information on prescription and non-prescription drugs	53%
Alternative therapies	30%
Medical opinions	31%
Health insurance	18%
Health policy	12%

The following figure provides further information on Marylanders utilizing the Internet for health research. The percentages in the right column are those who are researching that particular health issue online

Figure 8

Topic	Frequency
Cancer	40%
Heart Disease	33%
Stroke	26%
Diet and Nutrition	56%
High Blood Pressure	33%
Addiction	14%
Immunization	16%
STDs	8%
Physical Fitness	42%

Personal Web Sites

Sixteen percent of the respondents who are using the Internet reported having a personal web site. Survey respondents were also asked about web sites related to activities from a home office. Nineteen percent of survey respondents reported having a household member who works from an office in the home. Twenty percent of those respondents have a web site related to the work activities (the more important fact to note here is that 80% do not).

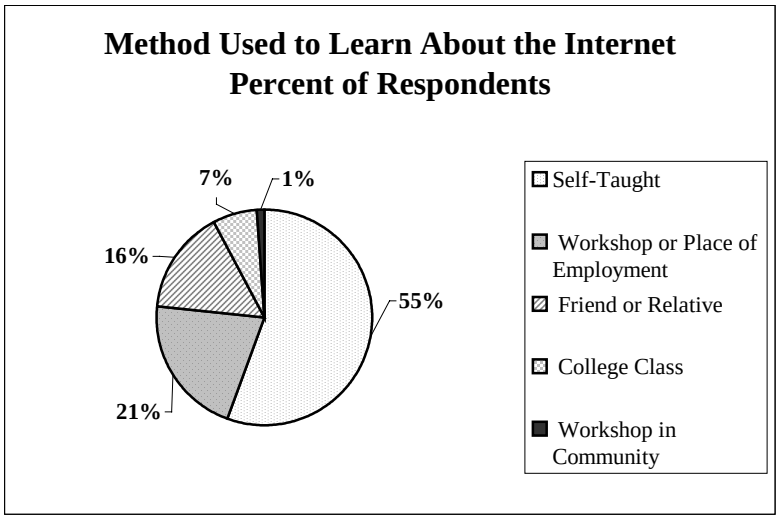
Children and the Internet

Fully 23% of respondents who access the Internet from home have children that are old enough to use the computer. More than half this population (53%) personally monitor their children on the Internet, while 13% use filtering or lockout software. Twenty-three percent of these families allow their children to access the Internet freely, and 9% do not allow their children to access the Internet at all.

Telecommuting
A question related to work and the Internet was whether their employer would permit telecommuting. Again, out of those who are using the Internet, 44% indicated their employer would permit telecommuting while 41% of the respondents' employers' would not. The other 15% stated that they were not employed. Thus, looking only at those who are employed, over half have employers who are open to telecommuting.

Learning to Use the Internet
When asked how they learned how to use the Internet, over half claimed to have taught themselves. Nineteen percent said they learned through a workshop at their place of employment, and 14% reported learning through a friend or relative. Only 6% learned through a college class, and 1% from a workshop in the community.

Figure 9



How Marylanders Would Change Their Internet Experience
Respondents yielded little, if any, vision when asked what they would change about the Internet. The most common response, 23%, said change nothing- its fine the way it is. Twenty-two percent want it to be faster. Twelve percent said they did not know, 8% want to upgrade their connection, and 6% want the Internet to be less expensive, or free.

Why Marylanders aren't utilizing the Internet
A significant portion of respondents who do not access the Internet from home (26%) feel no interest or need to do so. Eighteen percent of this population said it was too expensive. Fully 16% do not utilize Internet access at home because they do not own a computer.

The vast majority of this population (71%) has never used the Internet for any purpose. When asked why, the most common reply (47%) was because they did not have access to the Internet; 14% said they had no access to a computer, and 18% have no interest or need.

B. Regional Analysis

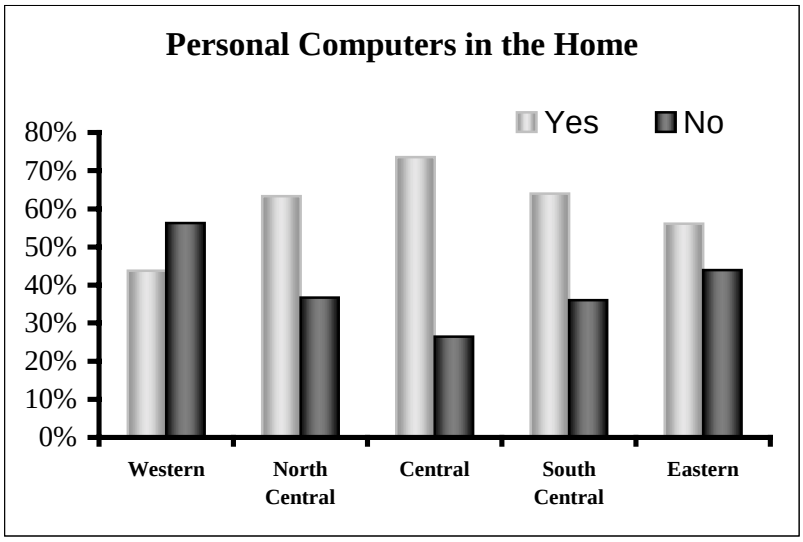
The data amassed by the TEDCO E-Commerce Household Survey is the first of its kind. Because of this, RESI desired to do more than simply summarize the data at the state level. In order to fully characterize the nature of Maryland's Digital Divide, it was necessary to delve deeper and perform a comparative regional analysis.

The regions considered in this analysis are: Western Maryland (comprised of Garrett, Allegany, and Washington Counties), North Central Maryland (comprised of Baltimore City and Frederick, Carroll, Baltimore, and Harford Counties), Central Maryland (comprised of Howard, Montgomery, and Anne Arundel Counties), South Central Maryland (comprised of Calvert, Charles, and St. Mary's Counties), and Eastern Maryland (comprised of Cecil, Kent, Queen Anne's, Caroline, Talbot, Dorchester, Wicomico, Somerset, and Worcester Counties).

Regional Computer Usage

In terms of computer ownership rates, respondents from Maryland's Central regions (North Central, Central, and South Central) boast the highest rates of ownership by far. Central Maryland, for instance, has a 74% computer ownership rate, while South Central and North Maryland follow with a 64% and 63% rate, respectively. This compares to rates of 56% and 44% in Eastern and Western Maryland.

Figure 10

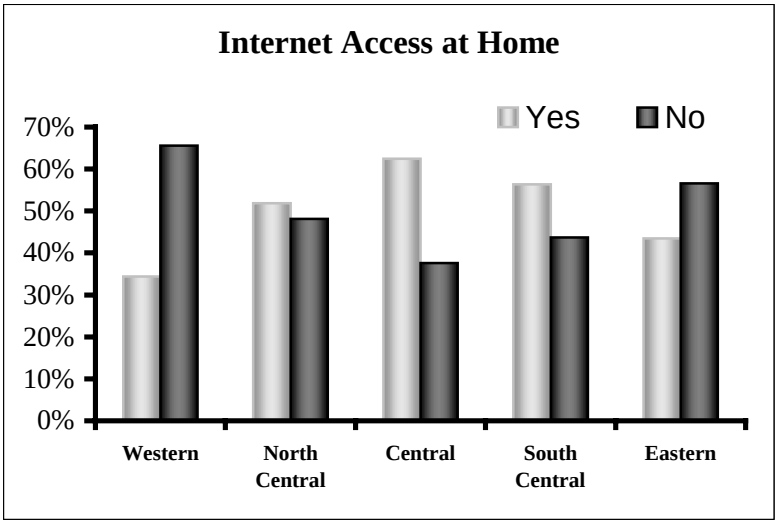


Fully 46% of computer owners from Central Maryland own more than one computer. Western Maryland follows with 37%. The corresponding figures for Northern Central, Southern Central, and Eastern Maryland are 34%, 30%, and 28%.

The vast majority of respondents with more than one computer have their computers connected through network. This was true across all regions, ranging from a high of 79% in Eastern Maryland to a low of 71% in Central Maryland.

Thirty-two percent of respondents South Central Maryland plan on getting a personal computer within the next six months. The corresponding figures for the other four regions fall between 9-11%.

Figure 11

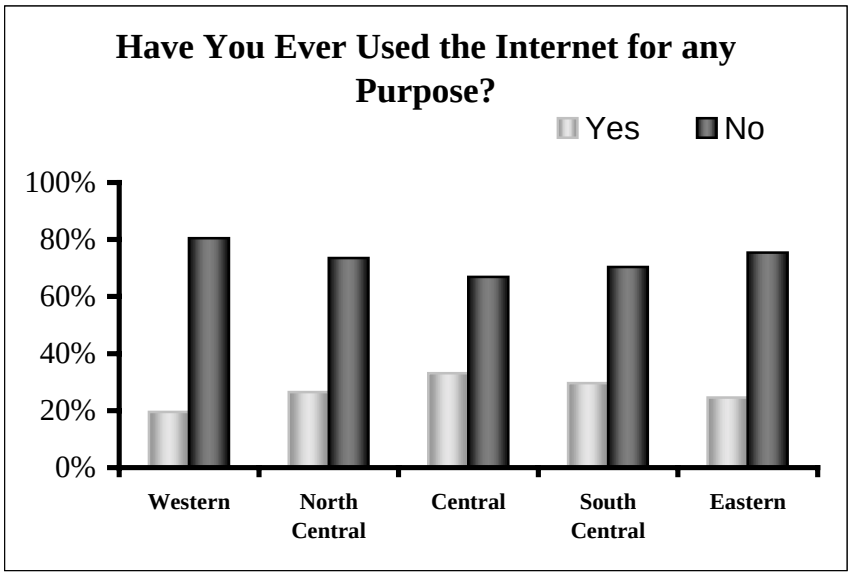


Regional Internet Utilization

Survey findings indicate that, in terms of Internet access, significant disparities exist among Maryland's regions. Central Maryland boasts the highest rate of respondents with Internet access set up at home (62%). The Western region rate of home Internet utilization is a scant 34%.

Respondents who reported not having home Internet access were asked if they have ever used the Internet for any purpose. Not surprisingly, only one out of every five people in Western Maryland has used the Internet, while in Central Maryland one out of three respondents has used the Internet.

Figure 12



The vast majority of respondents who do access the Internet from home utilized the Internet almost everyday in the period four weeks prior to responding to the Internet. This was true across almost all regions in the state. The following figure lists the frequency

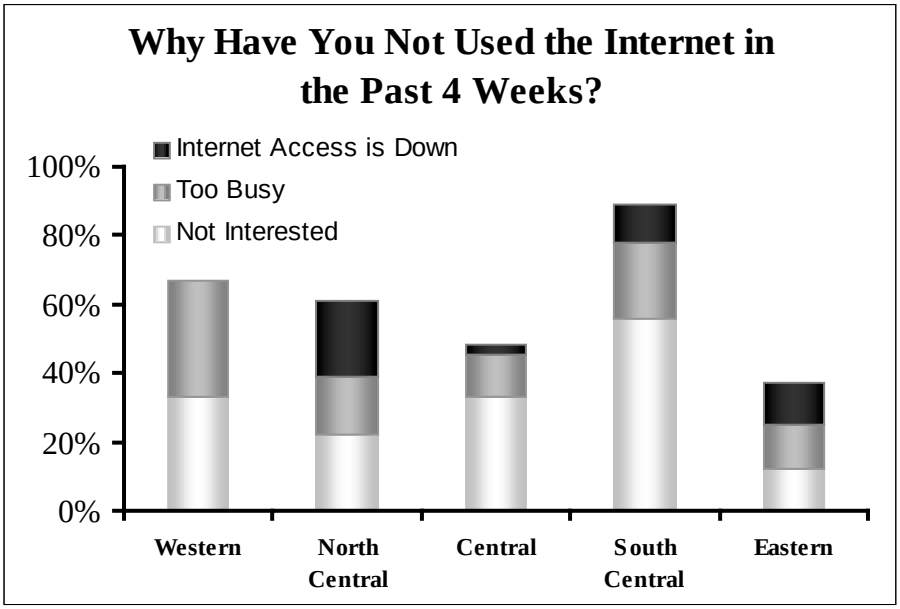
with which respondents indicated how often they had utilized the Internet, by region. As the figure reveals, approximately one in five respondents in Western Maryland who have an Internet connection at home did not use the Internet at all during that four week period.

Figure 13

REGION	*Not at all*	*Almost everyday*	*Several times a week*	*Once or twice a week*	*Once or twice a month*
Western	19%	52%	11%	11%	7%
North Central	11%	57%	18%	9%	5%
Central	7%	64%	14%	11%	3%
South Central	16%	48%	16%	10%	10%
Eastern	13%	55%	14%	9%	9%

The most common factor deterring those respondents who did not use the Internet in the weeks prior to the survey was "not interested" (29%).

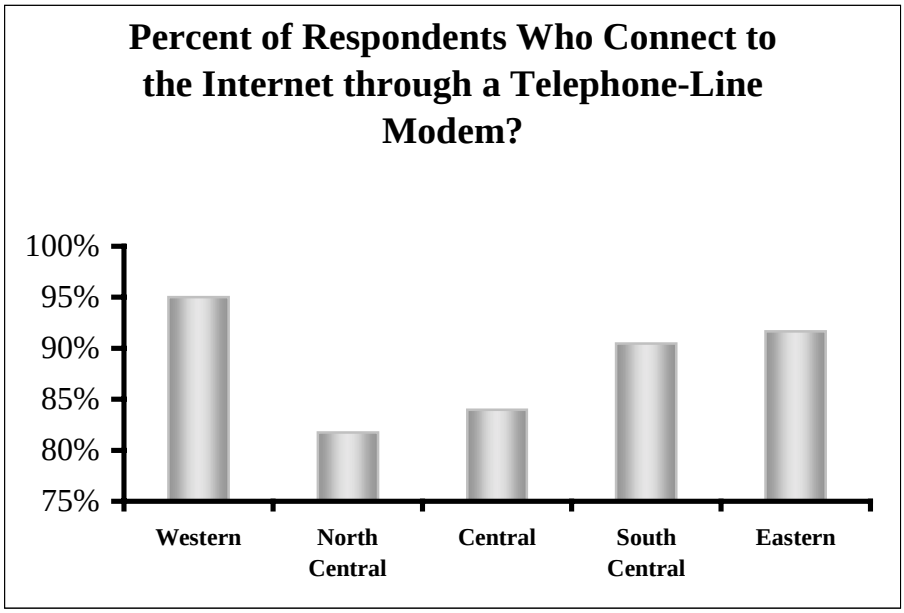
Figure 14



Regional Internet Access

Nearly all the respondents in the sample with a home Internet connection use a telephone/ modem.

Figure 15

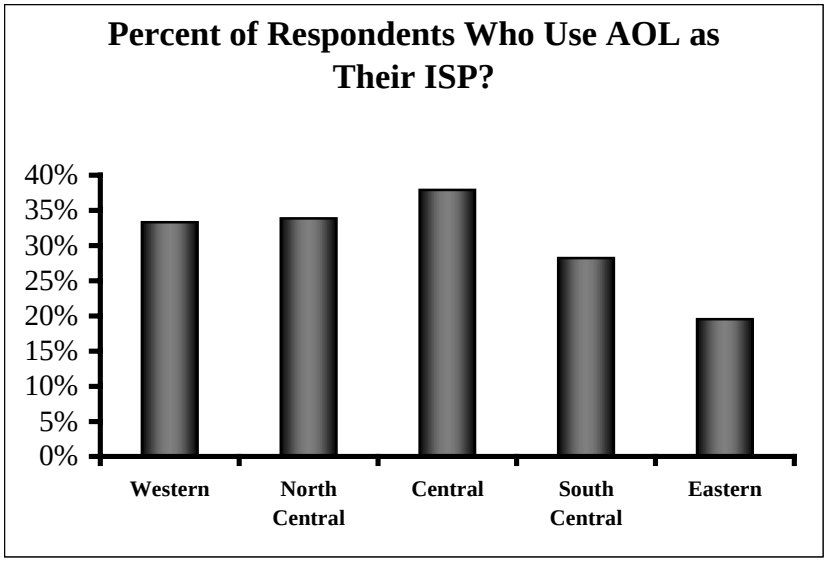


The only other mode that respondents reported using was the DSL; 6% of Central Maryland respondents have a DSL line and 5% of North Central Maryland have one as well.

Second telephone lines for Internet service were common throughout the state, ranging from 27% in South Central Maryland to 41% in both Central and Eastern Maryland.

Internet Service Providers

Figure 16



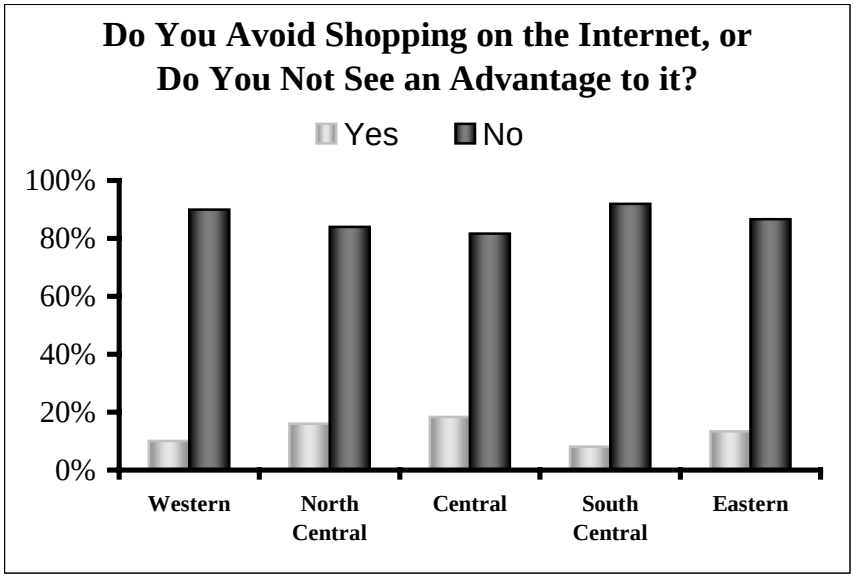
AOL ranks as the most popular ISP across all five regions. AOL subscribers comprise 38% of household Internet connections in Central Maryland with 38% (the highest in the state), and 20% in Eastern Maryland (the lowest). Alternatively, Erols is used by 8% of respondents in the North Central and Central Maryland. Delmarva Online was popular in the Eastern

region, with 15% of the respondents subscribing.

Online Shopping

In all five regions, the majority of the respondents avoid purchasing goods and/or services on the Internet. The regional percentages range from 82% in South Central Maryland to 64% in Western Maryland.

Figure 17



Respondents who do buy products/ services online revealed that what they liked best across all Maryland regions was shopping from home, and the overall convenience (e.g., shopping online enables people to buy purchases quickly and easily, without the hassles of parking and crowds).

Survey respondents provided additional information regarding the types of companies they are buying from- whether they are new companies to the customer, and whether they are local companies. The results indicate that respondents do use companies online that they used in the traditional brick-and-mortar settings. In Eastern Maryland 36% of online shoppers buy from firms they have dealt with prior to their online shopping experience. Figure 18 lists the estimated number of companies that were used before the shopping on the Internet.

Figure 18

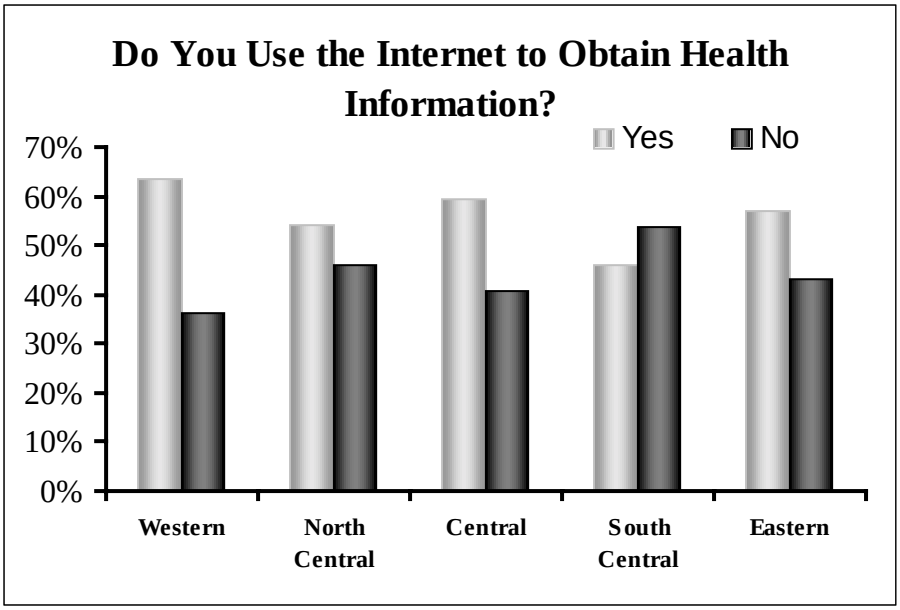
REGION	*Almost all*	*More than half*	*Less than half*	*None*
Western	13%	27%	40%	20%
North Central	23%	26%	35%	17%
Central	22%	26%	38%	14%
South Central	24%	24%	24%	29%
Eastern	36%	11%	29%	25%

Furthermore, when asked about whether the Internet had ever been used to purchase a product or service from a local business (defined as being within a one hour drive), the majority of the respondents across all five regions have not; the percentages range from 78% (Central) to 92% (Eastern) for those who have not purchased items or products from local businesses on the Internet.

Computer/ Internet Operations across the Regions
In Western Maryland, at least 70% of survey respondents indicate that the person who is responsible for dealing with home computer and Internet operations is at least somewhat familiar with the techniques related to secure purchasing transactions over the Internet. The Central region reported the highest percentage of people somewhat or very familiar with transaction techniques (82%) versus 18% who reported only knowing basic programs or nothing at all.

Online Health Research
Survey results indicate that the majority of survey respondents with a home Internet connection use the Internet to search for health information, with the exception of South Central Maryland, where 54% do not. The following figure lists the percentage frequency of respondents who use the Internet to research health-related topics.

Figure 19



Personal Web Sites
Central Maryland leads all Maryland regions in terms of percentage of respondents with personal web sites (18%). South Central Maryland lags behind the other regions with a scant 8% of respondents with personal web sites.

When asked about web sites related to work activities in the home, it is necessary to first look at respondents who work from home. The following table lists the percentage of people who work from home. The far right column indicates the percentage of respondents who have a work-related web site.

Figure 20

Region	*% who work at home*	*% those who have a work-related web site*
Western	10%	0%
North Central	18%	7%
Central	22%	10%
South Central	20%	3%
Eastern	16%	9%

Children and the Internet

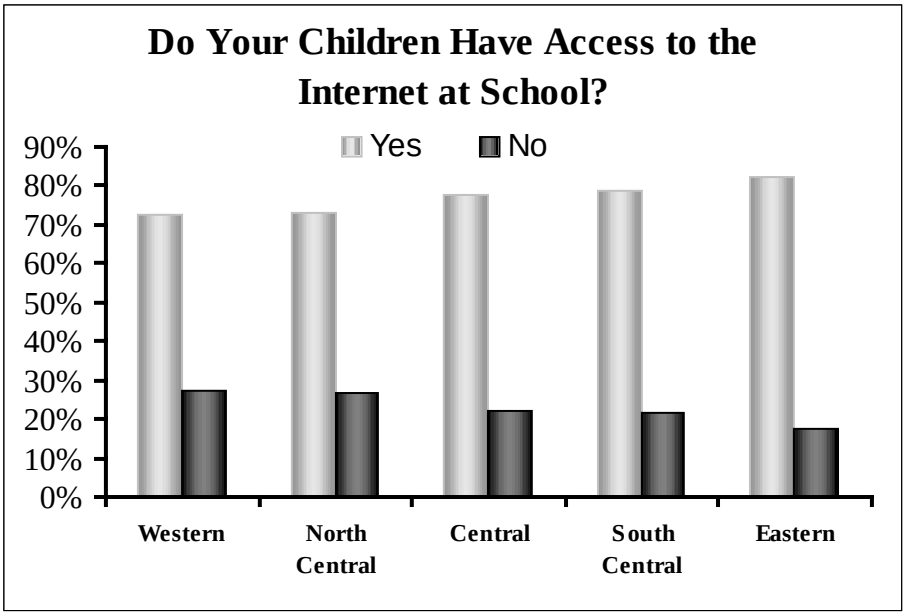
The majority of respondents from all five regions regions personally monitor their children's Internet use. Eastern Maryland trails all other Maryland regions in this respect with 33%, although this region boasts the highest level of respondents (14%) who use filtering software.

Figure 21

Region	*Do not allow children on Internet*	*Use filtering software*	*Monitor what they view*	*Allow free Access*	*Children are not old enough to use the Internet*
Western	10%	10%	50%	20%	10%
North Central	10%	13%	51%	15%	11%
Central	6%	10%	42%	22%	20%
South Central	11%	11%	47%	16%	16%
Eastern	5%	14%	33%	33%	14%

Moreover, the majority of respondents report that their children use the Internet during school. Almost three out of four people in the Western and North Central regions state their children are using the Internet at school. In the Central, South Central and Eastern regions, about 80% of the respondents' children are using the Internet at school.

Figure 22



Telecommuting

On a per region basis, the majority of respondents indicated that their employee would not permit telecommuting, with the exception of Central Maryland. In Central Maryland, 48% indicated that their employer would allow them to telecommute. It is important to note that a large percentage of people in each region reported not being employed, especially in the South Central region. 25% of the respondents in that region indicated that they were not employed.

Figure 23

Region	*Yes*	*No*	*Not employed*
Western	32%	53%	16%
North Central	42%	46%	12%
Central	48%	37%	15%
South Central	33%	42%	25%
Eastern	31%	38%	31%

Learning to use the Internet

The vast majority of respondents are self-taught users. This is true among all regions, especially in the Western region where 70% of the respondents taught themselves to use the Internet. This percentage is slightly lower among other regions, ranging from 50% to 60%. One in five in the Central region learned from a workshop at work, and one in four in the Western region learned from a friend or relative.

Figure 24

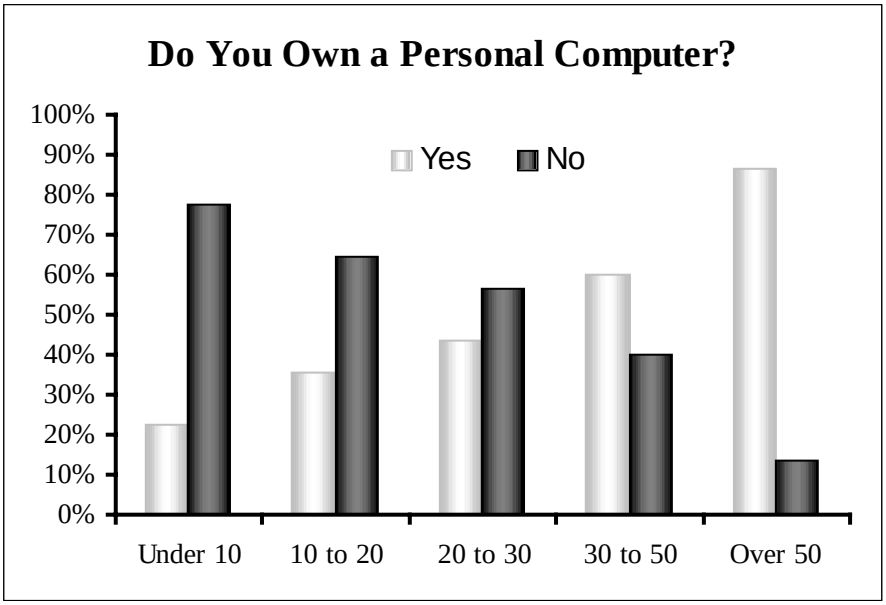
Region	*Self taught*	*College class*	*Workshop at work*	*Friend or relative*	*Workshop in community*	*Other*
Western	70%	0%	5%	25%	0%	0%
North Central	51%	8%	17%	17%	2%	5%
Central	58%	5%	22%	11%	0%	4%
South Central	59%	5%	16%	11%	0%	8%
Eastern	52%	4%	17%	15%	4%	7%

C. Income Analysis

When analyzing survey responses according to income levels, RESI used five categories of pre-tax incomes for comparison purposes. The categories are as follows: under 10 ($10,000), 10 to 20 ($10,000 to $20,000), 20 to 30 ($20,000 to $30,000), and 30 to 50 ($30,000 to $50,000), and over 50 (over $50,000 a year). This section relies upon the 1,093 survey respondents who answered survey questions related to income.

Computer Ownership
Not surprisingly, computer ownership rates are higher for more affluent respondents. While 23% of those respondents making less than $10,000 a year own a personal computer, the corresponding figure for those respondents making more than $50,000 a year is 87%.

Figure 25



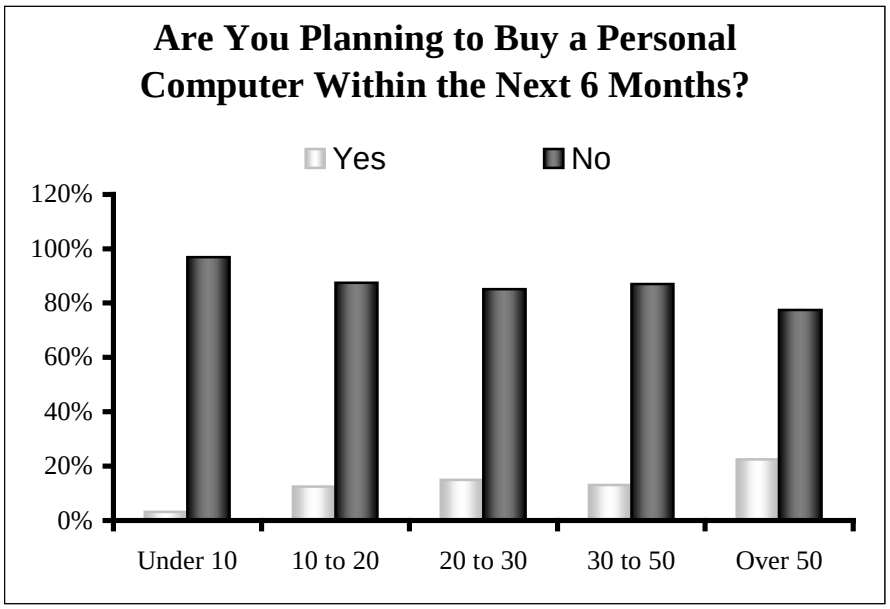
Nearly all survey respondents who own personal computers have desktop models. Fully 89% of the respondents making less than $10,000 have desktops. Survey results also indicate that wealthier households are more likely to own laptops. The income group making $50,000 or more per year leads all other income brackets in this respect with fully 22% of respondents who own laptops.

Also not surprisingly, respondents who fit into the highest income bracket considered in this study (more than $50,000), were most likely to own more than one personal computer (45%). Perhaps somewhat intuitively, households within the two highest

income brackets ($30,000 - $50,000 and more than $50,000) were most likely to have their home computers connected through a network.

Of respondents making less than $10,000 per year, a scant 3% of respondents indicated that they planned on obtaining a personal computer within the next six months. The corresponding figure for those respondents in the highest income bracket is 23%.

Figure 26



Survey results also indicate that the biggest single factor indicated by respondents when asked why they are not planning on obtaining a personal computer is a complete lack of interest. This was true across all income brackets. Respondents from the two highest income brackets considered in this analysis ($30,000 - $50,000 and more than $50,000) feel that they have enough access at work and for this reason do not plan on obtaining a computer. Of course, cost also acted as a deterrent for some respondents, especially among the lower income brackets.

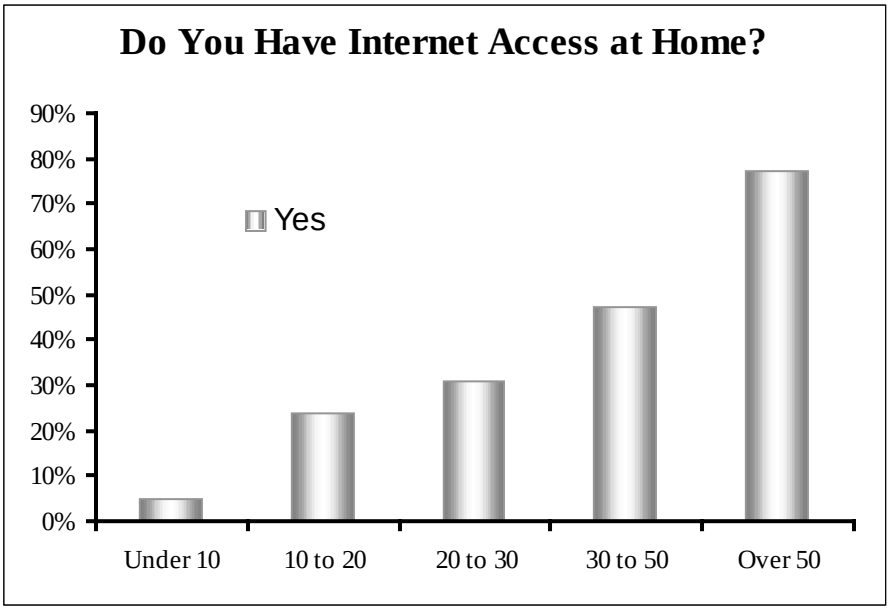
Figure 27

Income	No interest	Can't learn how	Enough access at work	Enough access at school	Cost	Saving up, but will take longer than 6 months	Other	Too old
>10	53%	7%	0%	0%	20%	0%	3%	17%
10-20	47%	7%	2%	0%	19%	2%	12%	12%
20-30	54%	0%	2%	2%	32%	2%	4%	5%
30-50	52%	4%	10%	1%	13%	4%	9%	6%
50+	65%	0%	23%	0%	2%	0%	5%	6%

Internet Access

Survey results also indicate that respondents among higher income brackets are more likely to have home Internet access. Three out of four respondents in the over $50,000 income bracket have home Internet access set up.

Figure 28



A lack of interest, access at work, cost and a lack of a home computer were all answers respondents indicated as reasons they do not have home Internet access. Cost was most prohibitive for those respondents in lower income brackets.

Figure 29: Internet access is too expensive

Income Group	% Response
Under 10	28%
10 to 20	27%
20 to 30	25%
30 to 50	17%
Over 50	5%

Figure 30: Have enough Internet access at work

Income Group	% Response
Under 10	0%
10 to 20	5%
20 to 30	4%
30 to 50	11%
Over 50	19%

Figure 31: No need or interest in setting up the Internet at home

Income Group	% Response
Under 10	25%
10 to 20	15%
20 to 30	20%
30 to 50	30%
Over 50	21%

Figure 32: Too old

Income Group	% Response
Under 10	14%
10 to 20	15%
20 to 30	4%
30 to 50	6%
Over 50	2%

Figure 33: No computer

Income Group	% Response
Under 10	8%
10 to 20	12%
20 to 30	24%
30 to 50	16%
Over 50	16%

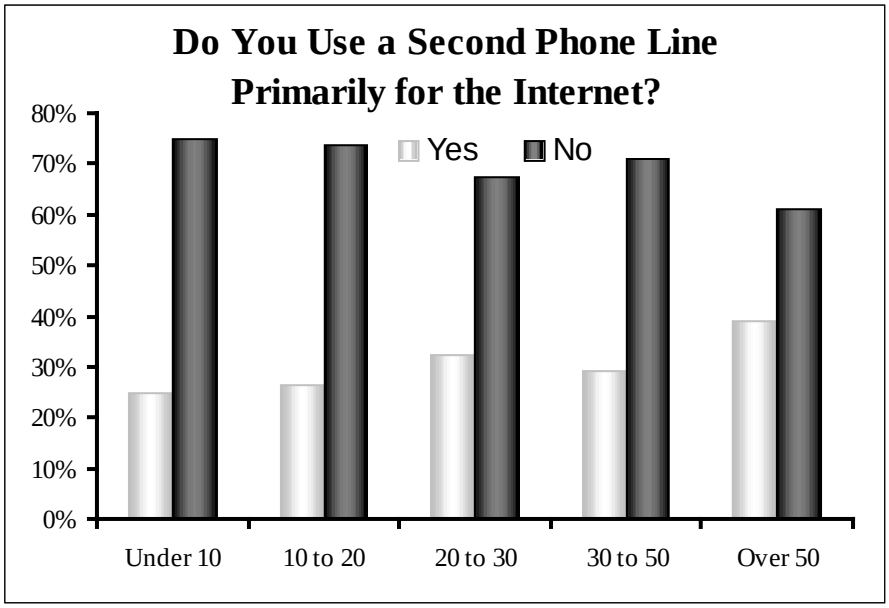
Figure 34: Live alone

Income Group	% Response
Under 10	17%
10 to 20	5%
20 to 30	1%
30 to 50	5%
Over 50	5%

In terms of modes of Internet access, telephone modem ranks as the most popular mode across all income groups. For the lower income brackets, however, additional types of access were lacking or even nonexistent for those respondents in lower income brackets. For instance, the telephone modem was reported as the only mode of access for respondents making less than $20,000 per year. Respondents in higher income brackets did indicate additional modes of access including television modems, DSLs, and direct Internet connections on T1 lines.

Survey results also indicate that one in four respondents making less than $10,000 has a secondary phone line used primarily for Internet access. The corresponding figure for respondents making more than $50,000 is 40%.

Figure 35



Online Shopping

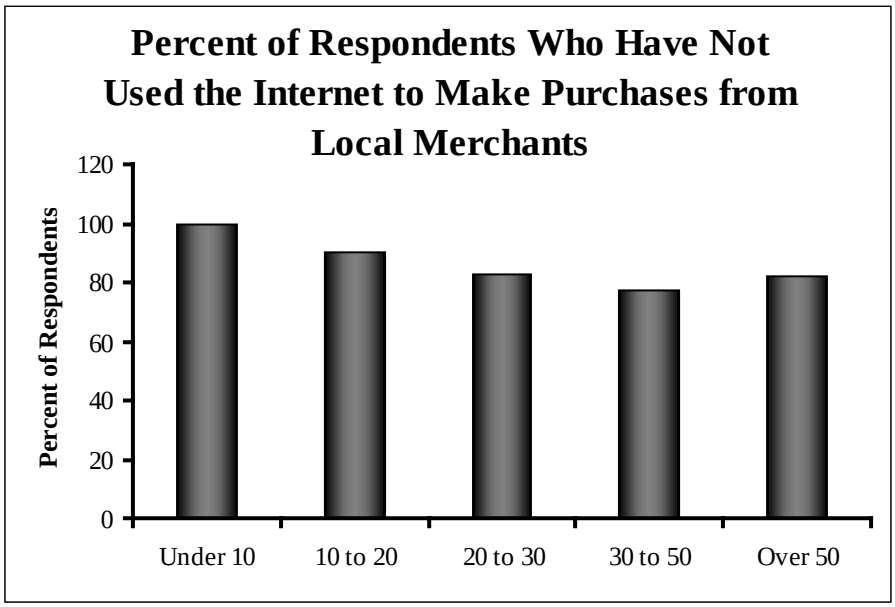
Survey results indicate that a substantial percentage of respondents who purchase goods online buy from companies they have dealt with prior to their Internet shopping experience. This is especially true for those respondents in the $10,000 - $20,000 income bracket, where 44% of respondents reported making nearly all of their online purchases from stores they have dealt with in traditional brick-and-mortar settings. Respondents in the $30,000 - $50,000 income bracket are most likely to buy exclusively from firms they have dealt with in an Internet setting only. Fully 21% of online shoppers from this income bracket fit into this category.

Figure 36

Income Group	Almost all	More than half	Less than half	None
Under 10	0%	0%	100%	0%
10 to 20	44%	11%	33%	11%
20 to 30	18%	36%	36%	9%
30 to 50	13%	29%	38%	21%
Over 50	26%	25%	35%	14%

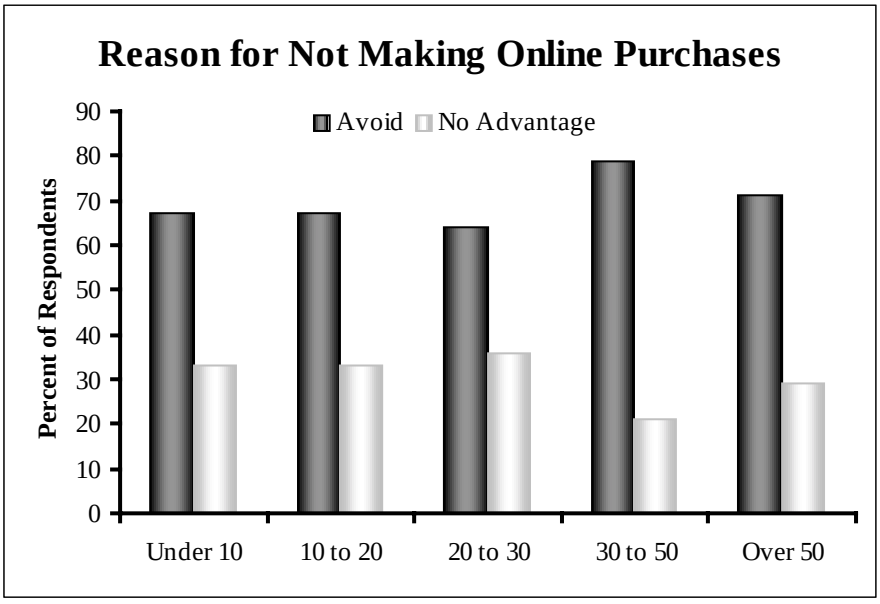
The majority of respondents who shop online tend to make online purchases from non-local firms (defined as firms more than one-hour driving distance from the respondent). This was true across all income brackets.

Figure 37



The vast majority of respondents who do not shop online actively avoid making online purchases.

Figure 38



Online Health Research
Respondents across all income brackets indicate that they utilize the Internet when seeking and obtaining health information. One in four respondents in the lowest income bracket (less than $10,000) have performed online health research and one in two respondents making between $30,000 - $50,000 have obtained health information online. Those respondents in the highest income bracket were most likely to use the Internet in order to obtain health information. Fully 60% of respondents making more than $50,000 per year perform health research online.

When asked how familiar the person in charge of home computer/Internet operations was with secure purchasing techniques, responses varied across all income groups.

Figure 39

Income Group	*Very familiar*	*Somewhat familiar*	*Basic programs*	*Not at all familiar*
Under 10	33%	0%	33%	33%
10 to 20	40%	20%	15%	25%
20 to 30	32%	42%	16%	11%
30 to 50	43%	36%	8%	13%
Over 50	43%	40%	7%	10%

Children and the Internet
The following figure illustrates responses by income bracket regarding household monitoring of children's use of the Internet.

Figure 40

Income Group	*Do not allow children to Use the Internet*	*Use filtering software*	*Monitor what they view*	*Allow free access*	*Children are not old enough to use Internet*
Under 10	0%	0%	0%	50%	50%
10 to 20	0%	29%	29%	43%	0%
20 to 30	17%	6%	39%	28%	11%
30 to 50	4%	11%	57%	11%	17%
Over 50	8%	10%	46%	19%	17%

Personal Web pages
Survey results also reveal that those respondents in the lowest income bracket (less than $10,000) do not have personal web pages, while one in five respondents in the $10,000-$20,000 income bracket do possess personal web pages. Approximately 17% of those making in excess of $20,000 have a personal web page.

When asked about web pages devoted to a business or work that is located in the home, respondents were first asked if they had a household member working from home. Fully 29% of respondents who make more than $50,000 work from home. Yet only 25% (of

the 29%) have a web site related to those work activities. Thirty-three percent respondents who make between $30,000 - $50,000 and work from home have a web site dedicated to work activities. None of the respondents who work from home and make less than $20,000 have work-related web sites.

Figure 41

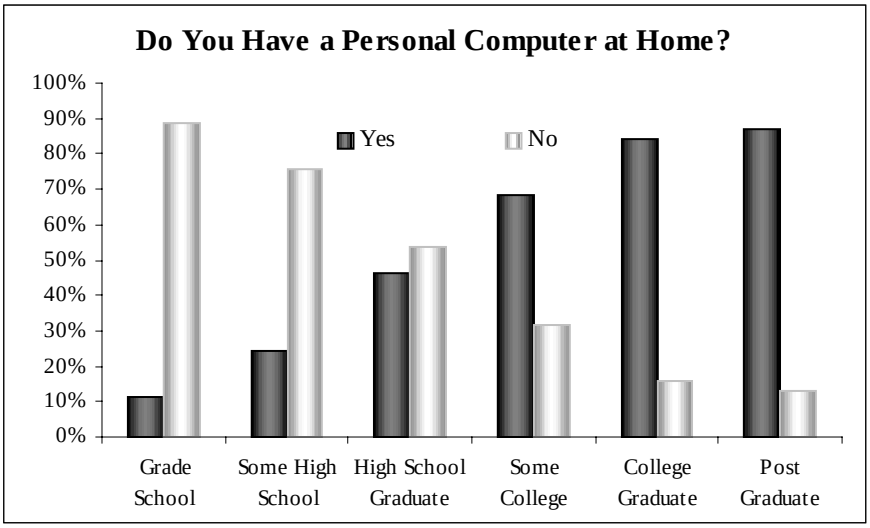
Income Group	***% of respondents who work at home***	***% of those who work at home who have web sites***
Under 10	13%	0%
10 to 20	4%	0%
20 to 30	13%	7%
30 to 50	10%	33%
Over 50	29%	25%

D. Educational Attainment Analysis

This section analyzes survey responses according to six educational attainment categories. These categories include: grade school, some high school, high school graduate, some college, college graduate, and post-graduate. There were a total of 1,349 responses to educational attainment related survey questions.

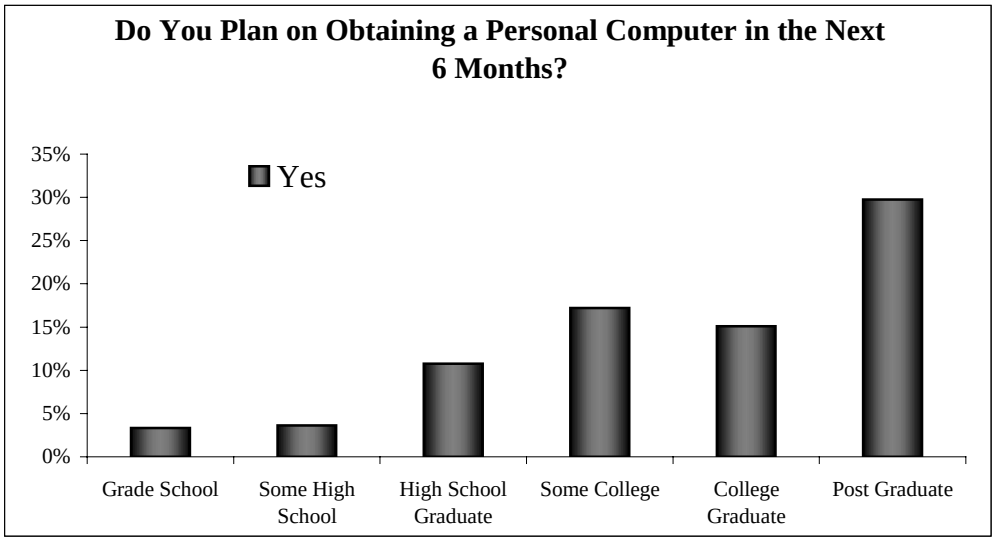
Computer Ownership
A primary survey finding from this section of the analysis reveals that those respondents with a higher level of educational attainment are more likely to own a personal computer. One in four respondents with at least some high school experience own a personal computer. The disparity between respondents in this category and those respondents with a high school diploma is stark; merely having a high school diploma doubles the likelihood that respondents are computer owners.

Figure 42



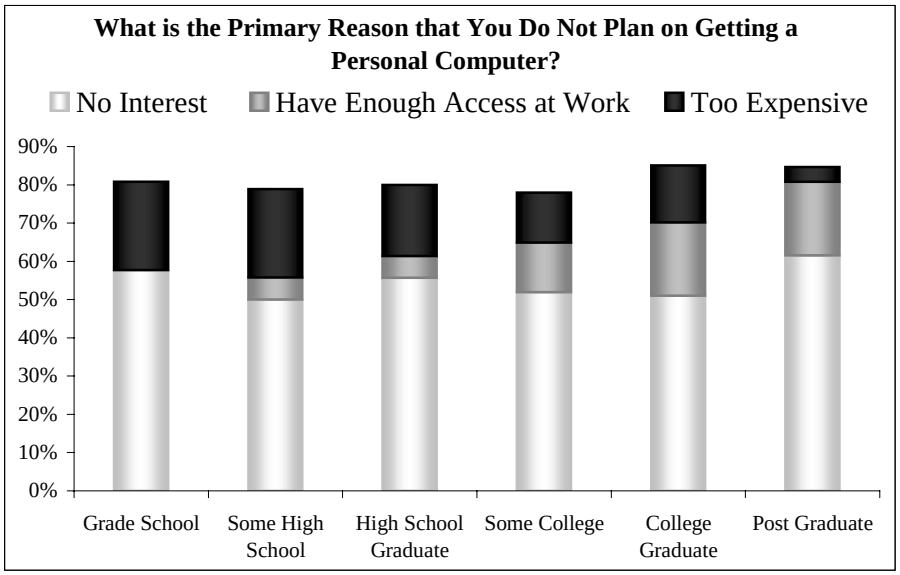
The majority of non-personal computer owners do not plan on obtaining a computer within the next six months. However, those respondents with higher levels of educational attainment were more likely to have plans for obtaining a computer vis-à-vis respondents with lower levels of educational attainment. Fully 30% of post graduate respondents plan on getting a personal computer. The corresponding figure for respondents with less than a high school degree is a mere 4%.

Figure 43



A lack of interest was by far the most common response given for those who do not intend to obtain a personal computer. This was true across all levels of educational attainment. Cost was another prohibitive factor indicated by respondents, though not surprisingly respondents with higher levels of educational attainment were less concerned with cost (4% of respondents from this group indicated costs as the reason they do not plan on obtaining a computer).

Figure 44



The biggest single deterrent, in terms of purchasing a computer, for those respondents with higher levels of educational attainment tends to be sufficient work access. Fully 19% of post-graduate respondents indicated work access as the reason they are not planning on obtaining a personal

computer. The corresponding figures for college graduates and respondents with at least some college education was 19% and 13%, respectively.

Computer owners across all educational attainment levels indicated that desktop models are, by far, the most common type of personal computers owned. Laptops follow and are especially popular among those respondents with higher levels of educational attainment. The following figure illustrates computer ownership by educational attainment level.[5]

Figure 45

Educational Level	***Desktop***	***Laptop***	***WEB TV***	***Game Device with a modem***
Grade school	75%	0%	0%	0%
Some high school	79%	15%	6%	0%
High school graduate	97%	6%	0%	1%
Some college	95%	13%	1%	0%
College graduate	92%	23%	0%	1%
Post graduate	95%	25%	1%	0%

The following table takes a look at the percentages of respondents who own more than one computer. College graduates were most likely to have multiple computers connected through a network post graduates were least likely.

Figure 46

Education Level	***Not networked***	***Networked***
Some grade school	50%	50%
Some high school	100%	0%
High school graduate	73%	28%
Some college	76%	24%
College graduate	68%	32%
Post graduate	82%	18%

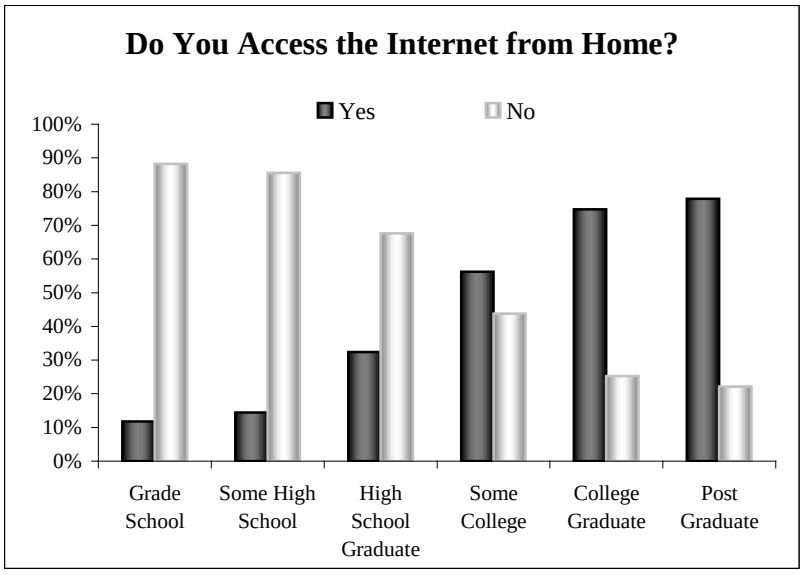
[5] Please note that the respondents were instructed to mark all types of computer models they owned. Many respondents in the survey did in fact own more than one computer.

Internet Access

Not surprisingly, survey results indicate that those respondents with higher levels of educational attainment were most likely to have home Internet access.

Again, a lack of interest or need was the most common response given when asked why respondents did not have Internet access. This was true regardless of educational attainment level. Cost ranks as a concern as well, especially for respondents with lower levels of educational attainment. Cost was a concern, particularly for those who have less than a high school education, and those who have a high school diploma.

Figure 47



For respondents who have used the Internet for some purpose, the question "how often in the past four weeks" was asked. More than half of all the respondents were using the Internet almost everyday. There was a significant percentage of people who had not used the Internet at all in the period four weeks prior to the survey.

Online Shopping

As stated in the statewide analysis section, purchasing products and services online was examined more closely than other activities. For those who do not use the Internet to purchase items, the question was asked about whether it was because they avoided shopping online, or simply did not see the advantage to it. Figure 48 lists the results of that question.

Figure 48

Education Level	***Avoid shopping online***	***No advantage to it***
Grade school	0%	100%
Some high school	82%	18%
High school graduate	69%	31%
Some college	82%	18%
College graduate	75%	25%
Post graduate	52%	48%

For those who do shop online, respondents were asked what they liked best about it. Again, the most common response across the educational levels was they enjoyed shopping from home, which received between 33% (grade school) and 50% (some high school) of responses.

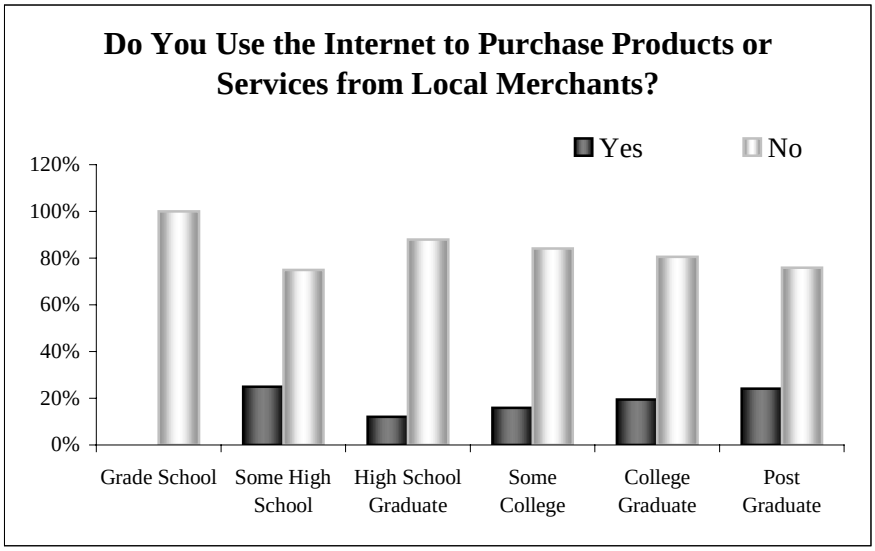
Responses were evenly distributed across educational levels when asked what proportion of companies had been used prior to the Internet.

Figure 49

Educational Level	*Almost all*	*More than half*	*Less than half*	*None*
Grade school	33%	33%	33%	0%
Some high school	25%	0%	50%	25%
High school graduate	27%	24%	27%	22%
Some college	21%	26%	37%	16%
College graduate	23%	22%	41%	14%
Post graduate	24%	26%	33%	17%

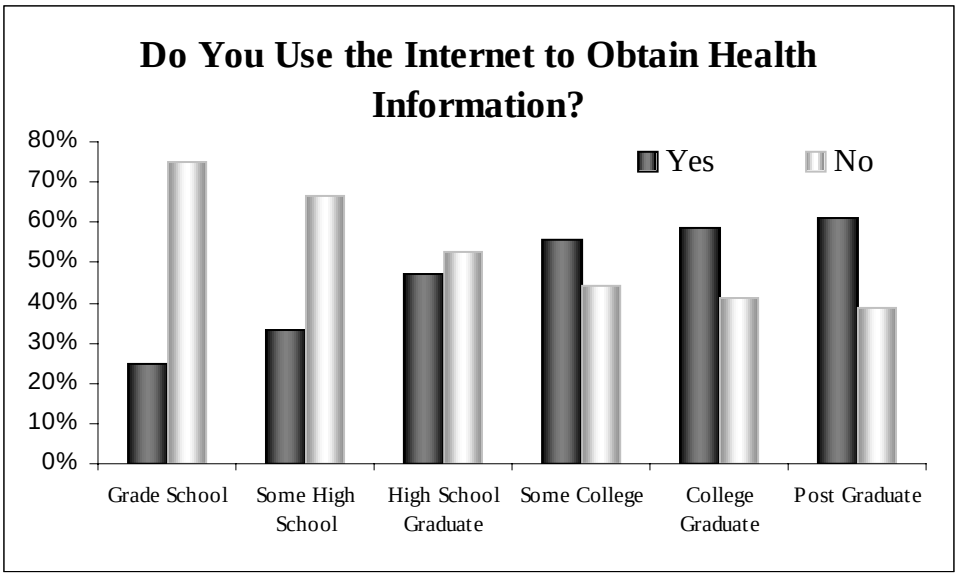
The other question related to shopping on the Internet was whether they had ever used the Internet to purchase products or services from local merchants (defined as within one hour driving distance). Figure 50 illustrates the responses.

Figure 50



Using the Internet to obtain health information is evident across all education groups- more so with the higher education levels. As the chart shows, the percentage of respondents who use the Internet increased with each education level, those with post-graduate educations having the greatest percentage of respondents who search online for health information.

Figure 51



Computer/ Internet Operations

Familiarity with secure purchasing transactions was an issue that was addressed in this survey. The responses disaggregated by educational attainment level are in Figure 52.

Figure 52

Educational Level	***Very familiar***	***Somewhat familiar***	***Basic programs***	***Not at all familiar***
Grade school	50%	50%	0%	0%
Some high school	0%	50%	17%	33%
High school graduate	35%	33%	13%	20%
Some college	38%	41%	7%	14%
College graduate	42%	43%	7%	8%
Post graduate	51%	32%	6%	12%

Modes of Access

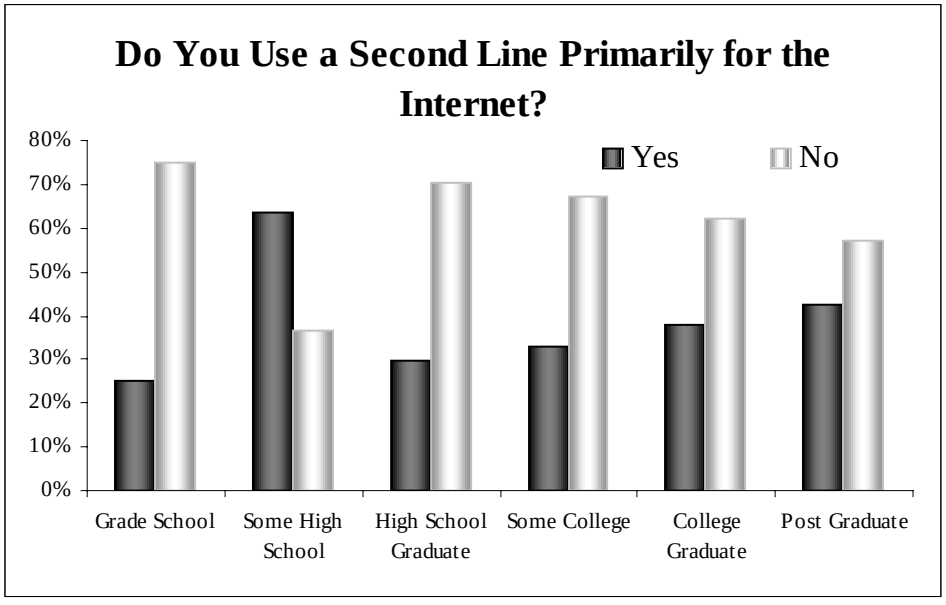
The primary mode of access based on educational level was still the modem for the telephone line, although as educational attainment levels increased, the percentage of respondents using the modem for the telephone line decreased.

Figure 53

Educational Level	*Modem for telephone line*	*Modem for television*	*DSL*	*ISDN line*	*Direct Internet*	*Wireless connection*
Grade school	100%	0%	0%	0%	0%	0%
Some high school	91%	9%	0%	0%	0%	0%
High school graduate	85%	4%	2%	0%	2%	0%
Some college	83%	3%	3%	1%	3%	0%
College graduate	86%	2%	6%	0%	0%	0%
Post graduate	83%	3%	7%	0%	1%	0%

When asked if they had a second line used primarily for the Internet, there were a significant number of respondents who do.

Figure 54



Children and the Internet

The most common method of monitoring children on the Internet is to simply monitor what they view. About half of all the respondents in each educational group personally monitor what their children look at on the Internet, with the exception of the grade school group. There was only one respondent in this category. This respondent allowed his/her children free access to the Internet.

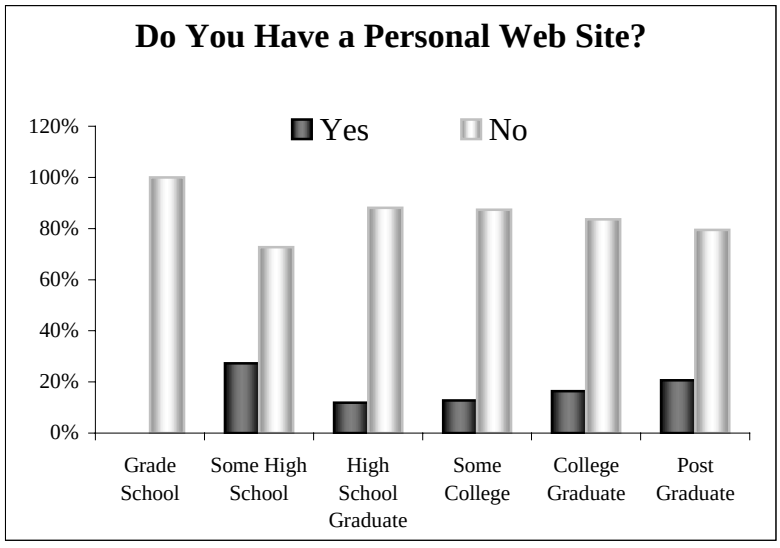
Figure 55

Educational Level	*Do Not Allow Children to Use Internet*	*Use Filtering Software*	*Monitor What They View*	*Allow Free Access*	*Children Are Not Old Enough to use Internet*
Grade school	0%	0%	0%	100%	0%
Some high school	0%	17%	50%	17%	17%
High school graduate	7%	14%	45%	25%	9%
Some college	8%	15%	49%	20%	8%
College Graduate	11%	8%	44%	18%	20%
Post Graduate	4%	13%	48%	16%	20%

Personal Web Sites

Survey results do not appear to reveal any association between having a web site and educational attainment level.

Figure 56



In terms of a web site dedicated to work that is from a home office, respondents were first asked whether there was someone in the household who worked out of the home. As the education level increased, so did the percentage of people who work out of the home. One in four respondents with a college degree or more have someone in the household who works from home. When asked whether there was a web site related to work activities out of the home, a very small percentage of respondent replied affirmatively.

Figure 57

Educational Level	***% households where someone works out of home***	***% who have a web site related to work activity out of the home***
Grade school	0%	0%
Some high school	7%	10%
High school graduate	14%	3%
Some college	19%	7%
College graduate	27%	8%
Post graduate	25%	15%

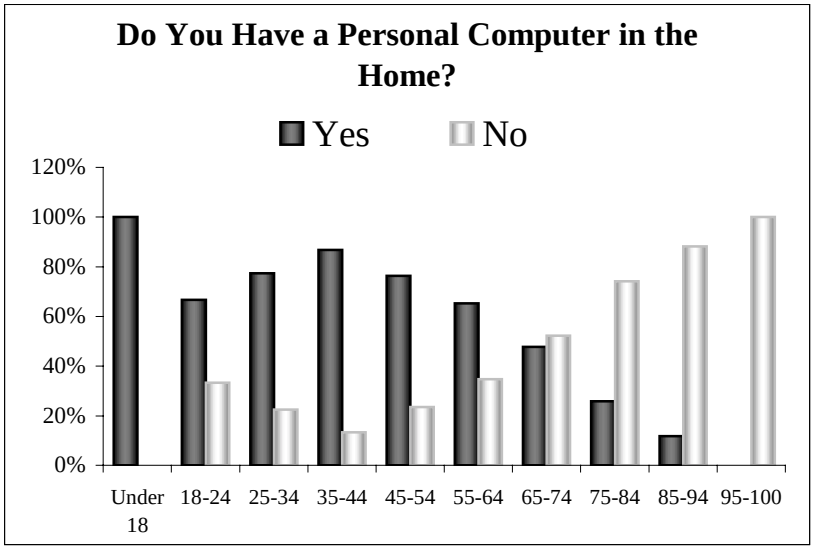
Learning to Use the Internet

More than half of all respondents in each educational attainment category learned to use the Internet on their own. This was particularly true of respondents with a grade school education, where 100% of respondents indicated that they are self-taught Internet users. The corresponding figures for respondents among the remaining five educational attainment levels considered in this analysis ranged from 50 to 58%. On-the-job workshops and friends and/or relatives were also a popular response to this question. One out of four (25%) of the post graduate respondents and one out of five college graduates (20%) learned to use the Internet in a workshop at work. Fully 40% of the respondents with some high school experience and 23% of high school graduates learned from a friend or relative.

E. Age Group Comparison

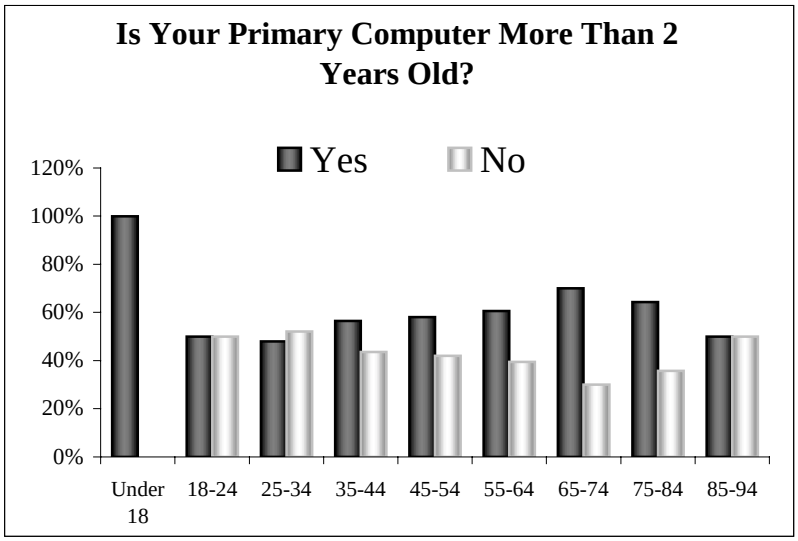
The respondents' ages were disaggregated into six categories: 17-24, 25-34, 35-44, 45-54, 55-64, and 65 and older. Out of the 1,422 respondents, 1,280 provided their birth year. The following data is based upon those 1,280 respondents.

Figure 58



Personal Computers
The only age group that proportionately had a majority of respondents claiming they did not own a computer was the 65 and older group. Sixty-four percent of those respondents reported not having a personal computer, while 36% did.

Figure 59



For those of who responded positively to the previous question, the percentage of people who have a computer more than two years old increases with each age group.

The most common type of computer that respondents own is the desktop model, followed none too closely by the laptop model.

Figure 60

Age Group	*Own Desktops*	*Own Laptops*
17-24	68%	0%
25-34	67%	19%
35-44	83%	18%
45-54	74%	14%
55-64	61%	14%
65+	33%	2%

When asked if the respondent owns more than one personal computer, those respondents that fall within the ages of 35-64 replied alike (44% for 35-44, 45% for 45-54 and 43% for 55-64).

Figure 61

Age Group	*Percent of those who have more than one computer*	*Percent of those who have more than one, which are connected by network*
17-24	40%	0%
25-34	26%	11%
35-44	44%	25%
45-54	45%	37%
55-64	43%	21%
65 +	22%	27%

In regards to those respondents who do not own a personal computer, the majority of the respondents in all age groups do not plan on getting one within the next six months. Thirty-three percent of the respondents between the ages of 17 and 34 plan on obtaining one, and 22% of the 45-54 year olds plan to acquire one as well. Only 15% of the 35 to 44 year olds and 55 to 65 year olds plan on purchasing a computer. Six percent of those over the age of 65 will obtain one.

The most common reason why 17-24 year olds and 25-34 year olds are not getting a personal computer is because they are too expensive (67% and 45%, respectively). Thirty-four percent of the 35-44 year olds are not planning on obtaining a computer because they are not interested or do not feel the need to purchase one. Moreover, 28% of the 35-44 year olds say it is too expensive and 19% say they have enough access at work.

Forty-three percent of the 45-54 year olds are not interested in purchasing a computer, 23% say it is too expensive, and 21% of the age group have enough access at work. Likewise, 55% of the 55-64 year olds have no interest, 15% have enough access at work, and 13% believe that it is too expensive. Lastly, for those in the 65 years and over group, 64% are not interested, 5% feel they are too old, and 7% say it is too expensive.

The results for "other" were not quantifiable.

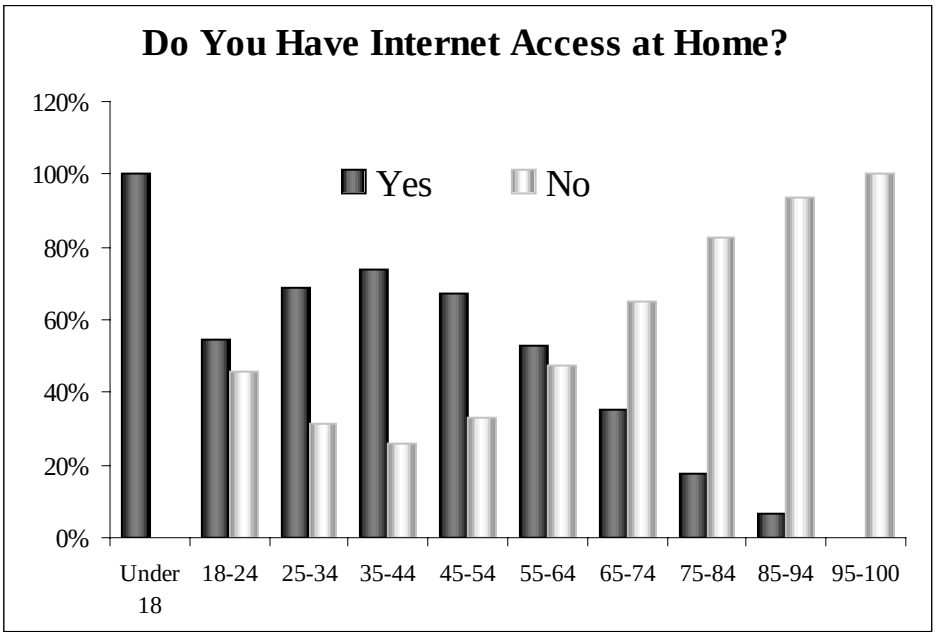
Figure 62

Age group	*No interest*	*Feel can't learn how*	*Enough access at work*	*Enough access at school*	*Too expensive*	*Saving up*	*Too old*
17-24	17%	0%	17%	0%	67%	0%	0%
25-34	35%	0%	10%	5%	45%	0%	0%
35-44	34%	0%	19%	0%	28%	13%	0%
45-54	43%	5%	21%	0%	23%	0%	2%
55-64	55%	6%	15%	0%	13%	0%	3%
65+	64%	2%	2%	0%	7%	1%	15%

Internet Access

Three out of four respondents between the ages of 35 and 44 have access to the Internet at home; three out of four respondents 65 years and older do *not* have Internet access at home.

Figure 63



For the 17-24 year olds who do not have the Internet, the most common response was that it was too expensive (44%). Thirty-three percent of that age group stated it was because they had no computer, and 11% have enough access at work.

The most common reason that 25-34 year olds do not have Internet access at home was because they had no computer (28%). Twenty-three percent of the age group felt it was too expensive, and 13% have no interest in using the Internet at home. Ten percent have enough access at work.

For the 35-44 age group, 32% do no have Internet access at home due to cost, 20% have no need or interest in the service, and 13% have enough access at work. Ten percent reported not having a computer as the reason.

In regards to the 45 to 55 age group, the most common reason they do not have access to the Internet at home was that they have enough access at work (22%). Nineteen percent do not have a computer, 17% are not interested, and 16% say it is cost prohibitive.

Twenty-nine percent of the 55-64 year olds say they have no interest in the Internet at home. Nineteen percent say the reason why they don't have the Internet set up is because they don't have a computer, and 15% say it is too expensive. Ten percent have enough access at work.

The most common reason why respondents 65 years old and over do not have the Internet set up at home is because they do not need it or are not interested (31%). Seventeen percent say they are too old, and 14% say it is because they do not have a computer. Ten percent think it is too expensive and 8% live alone.

For those who do not have the Internet set up at home, they were asked whether they had ever used the Internet for any purpose. The age group with the largest percentage of respondents who said no was the 25-34 group (81%). The smallest group was the 55-64 year old group; only 60% of them had never used the Internet.

The most common reason for not ever using the Internet was no access, except for the 65 and older group. The most common reason for that age group was no interest in using the Internet. The next most frequent responses were no access (21%) and age (13%).

Using the Internet

The respondents who use the Internet were asked how often they had used the Internet in the past four weeks. Approximately 65% of the 25-34 year olds, 45-54 year olds, and 55-64 year olds are using the Internet almost everyday. Fifty-nine percent of the 35-44 year olds are using it everyday, and 45% of 25-34 year olds and 65 an older are using it daily also.

Twenty percent of the 65+ age group and 15% of the 25 to 34 year olds have not used it at all in the past four weeks.

The reasons why people have not used the Internet in the past four weeks are differ across age groups. The most common reason for 17-24 year olds is that either the Internet is down or unavailable right now, or they lost access due to a job or school change. For 25-34 year olds, the most common reason was that their Internet access was unavailable (43%) or they simply were not interested (29%). The 35-44 age group had a number of different reasons; there was no common response for this group. For example, 22% said no interest, 17% did not have Internet access because it was down or unavailable, and 11% were too busy to use it.

The most common response from 45-54 year olds was that they were too busy (38%), and another 25% said they were not interested. The 55-64 year olds were either not interested (22%), they were having computer problems (17%), their Internet access was down or unavailable (17%), or they were too busy (11%). Lastly, the 65 year olds and older were primarily not interested (56%). However, 14% did state that their Internet access was down or unavailable.

The most common activity on the Internet for all age groups is sending/ receiving personal emails. Casual browsing, checking news, and searching for products and services were popular activities as well. Buying products or services online was one of the main issues of this survey. The 35-44 year olds had the highest percentage of respondents who bought items online (55%).

For those who do not use the Internet to purchase products or services, the majority of respondents, other than the 17 to 24 year olds, avoid shopping online altogether.

Figure 64

The survey respondents who purchase items online were asked about the companies they purchase from. Specifically, they were asked to estimate the number of Internet companies had they

used before buying from them online, and whether they use the Internet to purchase products or services from a local business (defined as within one hour driving distance).

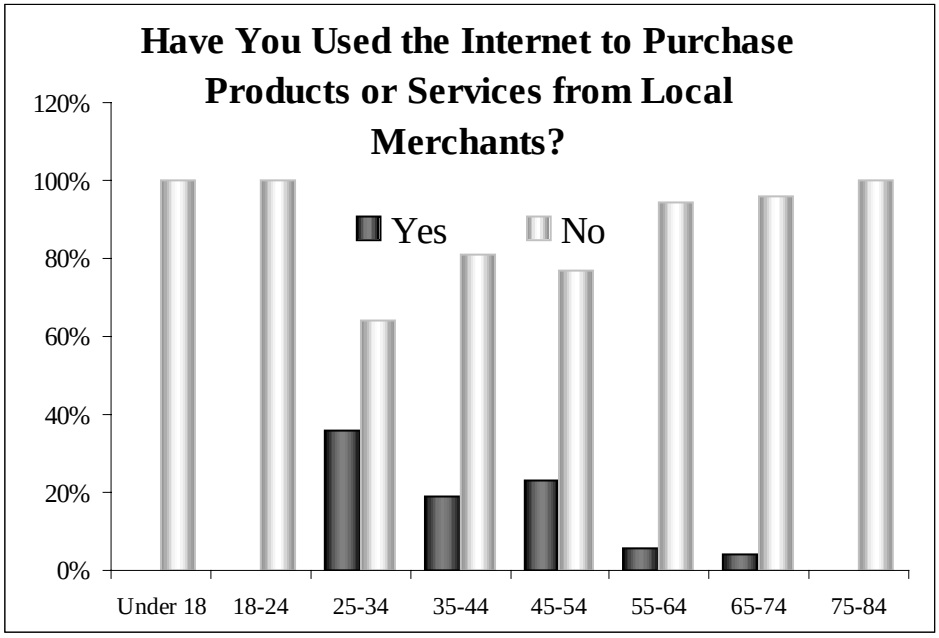
When asked about the proportion of companies they used before purchasing from them on the Internet, the most common response was "less than half".

Figure 65

Age Group	***Almost all***	***More than half***	***Less than half***	***None***
17-24	0%	17%	67%	17%
25-34	24%	27%	29%	21%
35-44	24%	25%	38%	14%
45-54	27%	28%	34%	11%
55-64	24%	17%	41%	18%
65+	21%	18%	36%	25%

When asked if they had ever used the Internet to purchase products / services with a local business, the predominant answer was no. The group who had the highest response rate of "Yes" was the 25-34 age group at 36%.

Figure 66



Additionally, those surveyed were asked what they liked best about shopping online. Shopping from home was the most common response for all age groups, although the percentage of respondents decreased with each age group (50% of the 17-24 year olds like shopping from home, versus 24% of the 65 and older group). A number of the respondents answered "other," which they typically specified as simply liking the convenience of shopping from home; namely, it is quick and there are no crowds.

Figure 67

Age Group	*Shopping from home*	*Shopping anytime*	*Being able to look for best price*	*Other*
17-24	0%	17%	67%	17%
25-34	24%	27%	29%	21%
35-44	24%	25%	38%	14%
45-54	27%	28%	34%	11%
55-64	24%	17%	41%	18%
65+	21%	18%	36%	25%

Most of the respondents who shop online feel that the person who is most responsible for their computer operations is fairly familiar with secure purchasing transactions, although it decreases with each age group. Almost three out of four (71%) of 17-24 year olds feel that the responsible person is very familiar with the transactions, but only one out of four of the 65 and older group feels the same. At least 65% of all age groups feel that person is somewhat familiar or very familiar with the secure purchasing transaction techniques.

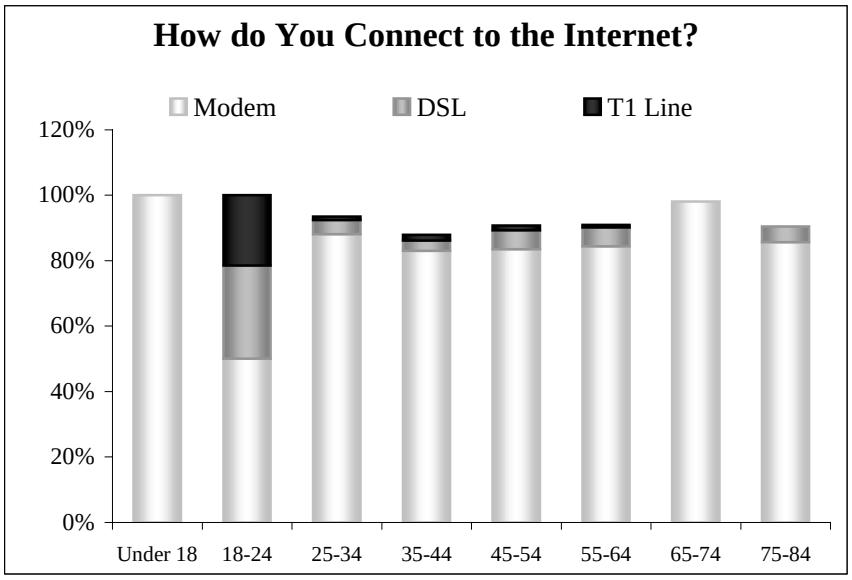
Figure 68

Age Group	*Very familiar*	*Somewhat familiar*	*Basic programs only*	*Not at all familiar*
17-24	71%	29%	0%	0%
25-34	50%	38%	4%	8%
35-44	47%	38%	5%	10%
45-54	43%	38%	9%	9%
55-64	34%	40%	8%	17%
65+	24%	40%	10%	26%

Modes of Access

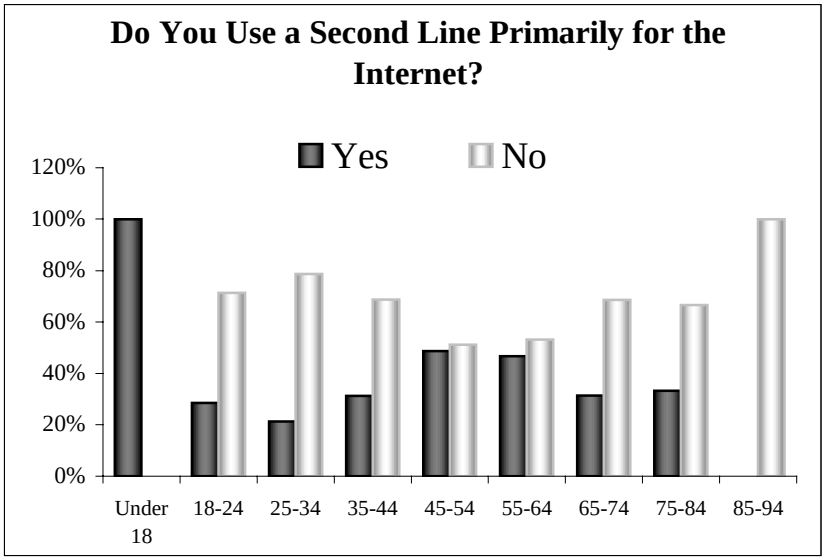
Almost all age groups have a modem for their telephone line. The only exception to that response is the 17-24 age group - 27% of them have DSLs, and 20% have a direct Internet connection on a T1 line.

Figure 69



When asked whether they had a second line used primarily for the Internet, the most common response for all the age groups was no, but for those 45 years old and over, it was almost half and half.

Figure 70



The most common ISP for all age groups was AOL. The following table lists a few of the more popular companies and the percentages of how many respondents use them.

Figure 71

Age group	*AOL*	*WorldNet*	*Earthlink*	*Verizon*	*Comcast*	*Erols*
17-24	36%	7%	7%	21%	0%	0%
25-34	27%	3%	7%	6%	7%	5%
35-44	32%	4%	2%	4%	9%	8%
45-54	40%	3%	2%	3%	10%	5%
55-64	33%	4%	4%	6%	9%	9%
65+	31%	3%	3%	6%	3%	12%

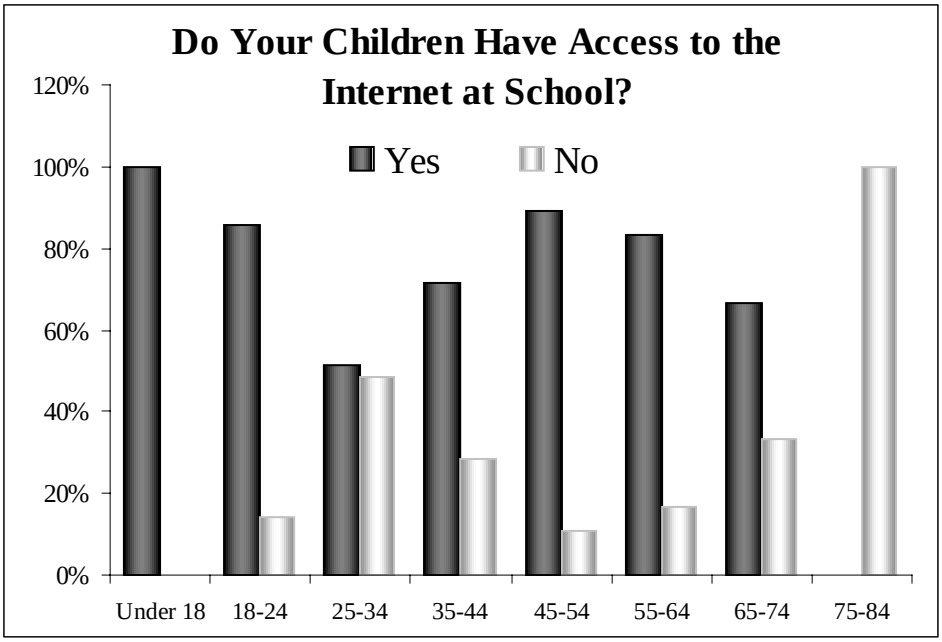
Children and the Internet
When asked if and how they monitor what their children view on the Internet, the age groups that contained the most respondents with children who use the Internet were the 25-34, 35-44, and the 45-54 year olds.

Figure 72

Age Group	*Do not allow children to use Internet*	*Use filtering software*	*Monitor what they view*	*Allow free access*	*Children are not old enough to use Internet*
17-24	0%	13%	50%	25%	13%
25-34	21%	6%	31%	2%	40%
35-44	8%	10%	54%	13%	17%
45-54	4%	13%	48%	33%	3%
55-64	0%	29%	0%	59%	12%
65+	50%	0%	50%	0%	0%

The other question related to children and the Internet was whether their children use the Internet at school.

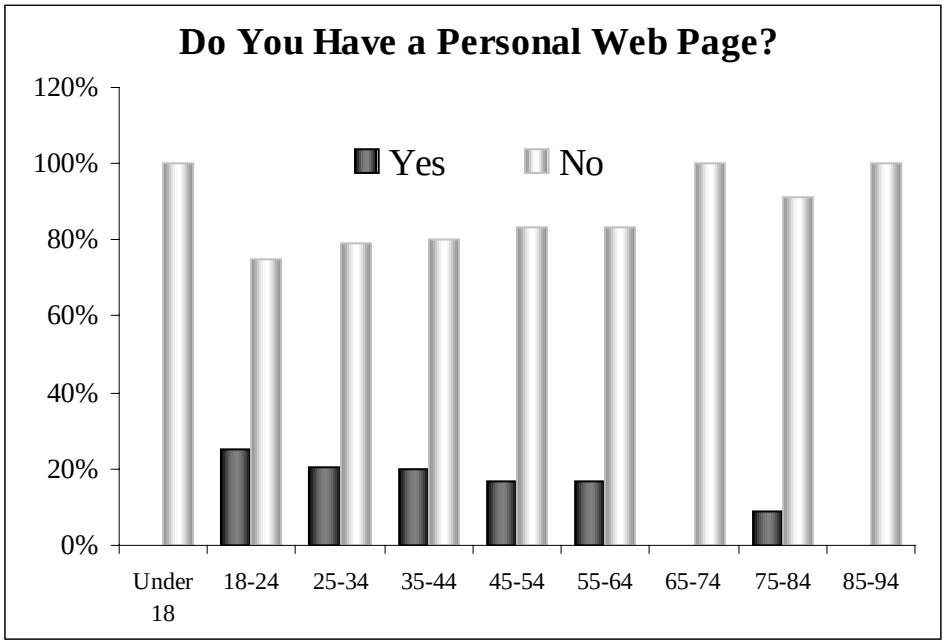
Figure 73



Personal and Business Web Pages

The percentage of respondents who have a web page decreased a few percentage points as the respondents got older, up to the 55-64 year olds. Of the 65 years old and older, only 3% had personal web pages.

Figure 74



The respondents were asked in the survey whether there was anyone in the household who works from a home office. They were then asked if there was a web site related to those work activities (from the home office).

Figure 75

Age Group	*% respondents who work from home*	*% of those who have web sites related to work from home*
17-24	4%	7%
25-34	19%	4%
35-44	29%	8%
45-54	23%	11%
55-64	23%	10%
65+	7%	5%

Another work related question was if the respondents' employers would allow them to telecommute. This question was affected by whether or not the respondent was employed. Unemployed respondents represented a significant portion of the respondents as the age groups increased.

Figure 76

Age group	*Yes*	*No*	*Not employed*
17-24	29%	71%	0%
25-34	48%	43%	9%
35-44	56%	39%	5%
45-54	43%	48%	10%
55-64	44%	39%	17%
65+	16%	14%	70%

V. Conclusion

Survey results paint a detailed picture of the extent of Maryland's Digital Divide. In many instances, survey data lend credence to prevailing perceptions regarding household computer and Internet penetration. For instance, prior to this survey, one would have anticipated that rural regions would register lower rates of penetration than would suburban and/or urban regions. This survey confirms those notions. For example, Central Maryland has a 74% computer ownership rate versus Western Maryland's 44%.

Of even more significance perhaps is that household computer ownership and utilization is closely associated with household income. Eighty-seven percent of those who make over $50,000 had an Internet access connection at home, versus 23% of the respondents who make less than $10,000. This has significant policy ramifications for the State of Maryland. To the extent that computers allow citizens to access knowledge and to learn, and to the extent that knowledge determines income, low income households in Maryland that do not currently utilize computers are likely to continue to suffer slow personal income growth. This dynamic sets the stage for growing disparities between upper and lower income households.

Policymakers and other interested parties must discern and implement innovative programs that counter this unhealthy dynamic. To the extent that Marylanders can diffuse computer technology into low-income households, the state stands to benefit from a more learned workforce, rising income levels, and potentially fewer social expenditures.

Appendices

A copy of the survey can be found in Appendix A.

The Appendices that follow (Appendix B- F) display survey results for each individual region, along with a brief summary. Results in this appendix are *not weighted* as regional results discussed in the Regional Analysis section of this report (IV. Analysis & Synthesis of Survey Data, B. Regional Analysis).

The survey results are listed by question. The **Frequency** refers to the number of responses for a particular response option and the **Percent** refers to the ratio of the response frequency to the total number of responses. The **Valid Percent** refers to the ratio of the response frequency to the total number of responses defined in the question as a valid response (allows computer to omit missing values/ skipped values during analyses), and the **Cumulative Percent** refers to the percent of the response frequency added to the preceding response percent.