NEBRASKA BROADBAND

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INTERNET CONNECTIVITY AND USE IN NEBRASKA: A FOLLOW UP STUDY

A RESEARCH REPORT

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Executive Summary

The Nebraska Public Service Commission was awarded a grant from the Department of Commerce's National Telecommunications and Information Administration (NTIA) for conducting a study of broadband use and needs in Nebraska. The University of Nebraska-Lincoln first conducted a survey for the Commission in 2010. The Nebraska Information Technology Commission (NITC) Community Council, the AIM Institute and Nebraska Department of Economic Development (DED) collaborated with the Commission on this survey. A follow-up survey was conducted in 2014 to see if any changes have occurred in the previous four years. The survey included questions about Nebraskans' current use of technology, their opinions about community technology resources, and technology training needs. Some of the findings include:

Almost nine in ten households in Nebraska (86%) have Internet access at home. This has increased over the past four years, from 81 percent in 2010.

- ✓ Older persons, persons with lower household incomes, persons with lower education levels, households without children, and households in the nonmetropolitan areas of the state continue to be the groups less likely to have Internet service in their home.
- ✓ However, some of these groups considerably increased their Internet use during the past four years. Persons age 65 and older having Internet access at home increased from 56 percent in 2010 to 69 percent this year. And, the proportion of residents in the Central Nebraska region with Internet service at home increased from 62 percent in 2010 to 75 percent.

More than eight in ten Nebraska households (82%) currently have broadband Internet service. In 2010, 76 percent of Nebraska households had broadband service.

- ✓ Similar to Internet access, the groups less likely to have broadband service include: older persons, persons with lower incomes, persons with lower education levels, and households without children.
- ✓ However, during the past four years the proportion of persons age 65 and older having broadband service at home increased from 48 percent to 64 percent. And, the proportion of persons with the lowest household incomes having broadband service at home increased from 44 percent to 53 percent.
- ✓ Persons living in metropolitan areas are more likely than persons living in nonmetropolitan areas to have broadband. Ninety percent of persons living in the Lincoln area and 87 percent of persons living in the Omaha area have broadband service at home. In comparison, 73 percent of persons living in the Central Nebraska area have broadband service.

- ✓ However, residents of the Central Nebraska region had a significant increase in broadband service compared to four years ago, from 56 percent to 73 percent.

Most non-Internet users don't have a computer (65%). Over one-third of the non-users (36%) say it is too expensive and approximately one-third (34%) say they have no interest in using the Internet/don't need it.

Common Internet activities for households with Internet access include: sending or receiving e-mail, doing research or searching for information, getting news/weather information, looking for health information, using a social networking site, and online banking or bill pay.

- ✓ Some of these items had considerable increases in use compared to four years ago: use a social networking site (from 69% to 80%); watch a video (from 72% to 79%); online banking or bill pay (from 72% to 79%); VoIP, Skype, magicJack (from 19% to 37%); and two-way audio/video meetings (from 15% to 27%).

Nebraska households are generally satisfied with the reliability, speed and support of their Internet service. However, they are less satisfied with the price of their service.

- ✓ Overall, fiber users are the group most likely to be satisfied with their Internet service (72%) and DSL users are the group least likely to be satisfied (59%).

Nebraskans' opinions are somewhat mixed about the types of Internet services available in their community or area. Many households (37%) are somewhat or very satisfied with the types of services available. However, just over one-quarter (28%) are somewhat or very dissatisfied with the services in their area.

- ✓ Residents living outside city limits are more likely than residents living within city limits to express dissatisfaction with the types of Internet services available in their area.

Most Nebraska households (77%) have access to a local place, such as a library or school, in their neighborhood or community where they can use an Internet-accessible computer for free. Thirty-two percent of the households without Internet access use the computer resources at the public use facility.

- ✓ Some minority groups are more likely than whites to use the computer resources at the public use facility. Over one-half of both Asians/Pacific Islanders (54%) and American Indians/Alaska Natives (56%) use the computer resources at these facilities.

Most Nebraska households (77%) agree that it is important to have free public Internet 'hotspots' available in the community. And, just under one-half (46%) of Nebraskans agree or strongly agree that they are more likely to frequent businesses that offer free Internet 'hotspots'.

Many Nebraskans are interested in certain information technology courses such as website development and basic computer networking. And most prefer traditional delivery methods for this

training such as: CD or DVD, face to face workshops with hands-on computer work, online courses and videos.

Most Nebraska households believe the following broadband applications are important: exchanging health information so that providers have a complete health record when treating you (82%), purchasing goods online (80%), online banking (79%), taking advantage of distance learning opportunities (78%), using telehomecare to monitor chronic health conditions (76%), using telemedicine to consult with health care providers (75%), and using government services online (paying for taxes or applying for licenses online) (75%).

Table of Contents

Introduction

The Nebraska Public Service Commission was awarded a grant from the Department of Commerce's National Telecommunications and Information Administration (NTIA) for conducting a study of broadband use and needs in Nebraska. The University of Nebraska-Lincoln first conducted a survey for the Commission in 2010. The Nebraska Information Technology Commission (NITC) Community Council, the AIM Institute and Nebraska Department of Economic Development (DED) collaborated with the Commission on this survey. A follow-up survey was conducted in 2014 to see if any changes have occurred in the previous four years. The survey included questions about Nebraskans' current use of technology, their opinions about community technology resources, and technology training needs. This report details 2,798 responses to the survey.

Survey Methodology

Nebraskans were surveyed about their computer and Internet usage, community technology resources and technology training needs through a mail survey conducted in January and February 2014 by the University of Nebraska-Lincoln Department of Agricultural Economics. The 14-page survey was mailed to approximately 8,000 households (8,024 deliverable households out of the 9,000 initial list).

Households were sampled equally from eight regions across the state, using economic development districts as approximate guides (for this study Dakota County is included with the Northeast Nebraska district). Lancaster County was sampled separately to approximate the Lincoln metropolitan area. However, three areas were oversampled because of their lower levels of broadband adoption found in the initial 2010 survey: South Omaha, North Omaha and part of the North Central region of the state. See Appendix Figure 1 for the counties included in each region.

A 35% response rate was achieved using the total design method (Dillman, 1978). The sequence of steps used follow:

1. A pre-notification letter was sent requesting participation in the study.
2. The questionnaire was mailed with an informal letter signed by the Commission Chair approximately seven days later.
3. A reminder postcard was sent to the entire sample approximately seven days after the questionnaire had been sent.
4. Those who had not yet responded within approximately 14 days of the original mailing were sent a replacement questionnaire.

In addition to the regional comparisons, data will be analyzed by location of residence (outside city limits compared to those living in communities), education level, income level, age, and presence of children in the household.

The data presented throughout this paper are weighted to correct for the oversampling of some regions of the state. The margin of error for the results based on the entire sample is plus or minus 1.85 percentage points.

Respondent Profile

The average age of respondents is 55 years. Seventy-nine percent live within the city limits of a town or village. Ninety-seven percent have attained at least a high school diploma.

Thirty percent of the respondents report their 2013 approximate household income from all sources, before taxes, as below $40,000. Sixty-one percent report incomes over $50,000. Three percent are of Hispanic ethnicity. Ninety-four percent are White and three percent are African American.

Seventy-one percent were employed in 2013 on a full-time, part-time, or seasonal basis. Forty-six percent of those employed reported working in a management, professional, or education occupation.

Nebraskans' Technology Use

Most Nebraska households use either a desktop (60%) or laptop computer (64%). Over one-half of Nebraska households (57%) also use a smart phone. Many households use other devices: tablet computer (43%), regular cell phone (42%), iPod or other MP3 player (32%), game consoles (30%), e-book reader (28%), blu-ray player (28%), and smart TV (18%).

The use of portable devices has increased in the past four years. The percentage of households using a laptop computer increased from 52 percent in 2010 to 64 percent. The percentage of households using a desktop computer *decreased* from 71 percent in 2010 to 60 percent. Similarly, smart phone use increased from 24 percent to 57 percent and use of e-book readers increased from 3 percent to 28 percent.

Most households using a desktop computer access the Internet with it (95%). Similarly, 96 percent of households using a laptop computer use it to access the Internet. Users of other devices that access the Internet using them include: tablet computers (95%), smart phones (92%), e-book readers (74%), smart TVs (74%), game consoles (65%), iPod or MP3 players (47%), blu-ray players (44%), and regular cell phones (10%).

Internet Access at Home

Almost nine in ten households in Nebraska (86%) have Internet access at home, compared to 81 percent in 2010. Different subgroups of the population have higher Internet adoption rates than others.

Age

While younger persons continue to be more likely than older persons to have Internet access at home, the gap between these two age groups has shrunk in the past four years. In 2010, 93 percent of persons age 19 to 39 had Internet access, compared to 98 percent this year. Similarly, persons age

65 and older having Internet access at home increased from 56 percent in 2010 to 69 percent this year.

Household Income

Households with higher incomes are more likely than those with lower incomes to have Internet access at home. Ninety-nine percent of households with incomes of $75,000 or more have Internet access at home, compared to 60 percent of persons with household incomes under $20,000.

Education Level

Persons with higher education levels are more likely than persons with less education to have Internet access. Ninety-four percent of persons with at least a four year college degree have Internet access at home, compared to 51 percent of persons with less than a high school education. However, there was a considerable increase in home Internet use for persons with less than a high school education during the past four years, from 41 percent in 2010 to 51 percent.

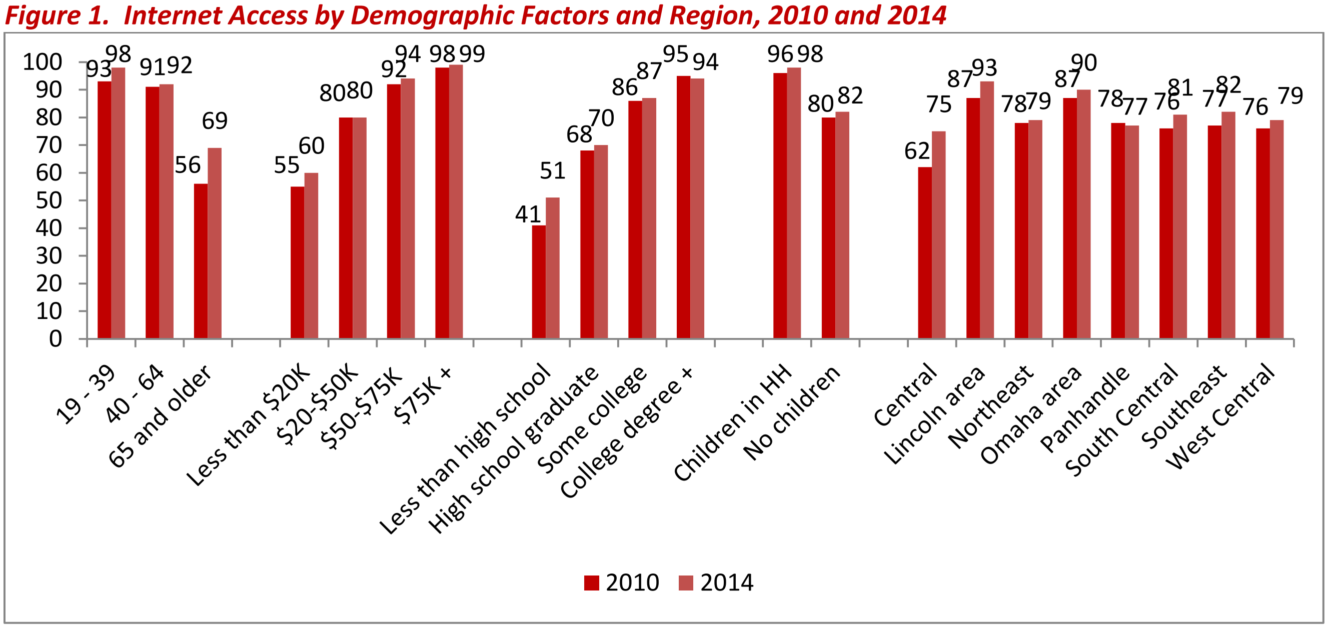
Families

Households with children are more likely than households without children to have Internet access. Ninety-eight percent of households with children have Internet access at home, compared to 82 percent of households without children.

Within City Limits

There are no statistically significant differences in Internet access between persons living outside city limits and persons living within city limits. Eighty-eight percent of persons living outside city limits have Internet service at home, compared to 86 percent of persons living within city limits.

Figure 1. Internet Access by Demographic Factors and Region, 2010 and 2014



Region

Households in the metropolitan areas are more likely than households in the nonmetropolitan areas of the state to have Internet service at home. Ninety-three percent of persons living in the Lincoln metropolitan area and 90 percent of persons in the Omaha metropolitan area have Internet service at home. In comparison, 75 percent of persons living in the Central Nebraska area have home Internet service. However, the proportion of residents in the Central Nebraska region with Internet service at home increased during the past four years, from 62 percent in 2010 to 75 percent.

Broadband Service at Home

Nebraskans were asked what type of Internet service they have at their home. They were allowed to select more than one answer. It should be noted that the respondents may not know the details of their home Internet connection. For example, some respondents may have confused a home wireless network with a fixed wireless provider.

Over four in ten households (43%) have a cable modem connection and 19 percent have Internet through a DSL-enabled phone line. Fifteen percent have Internet connection through a wireless mobile card or cellular service. Only 1.5 percent of households have a dial-up connection.

When examining the combinations of responses, more than eight in ten Nebraska households (82%) have broadband service. For the purposes of this study, broadband Internet service is anything faster than dial-up service. One percent has only dial-up service. Three percent of the households don't know what type of Internet service they have. In 2010, 76 percent of Nebraska households had broadband service. Like Internet access, many demographic subgroups are more likely than other groups to have broadband service.

Table 1. Type of Internet Connection

Do not have Internet	14%
Dial up using a phone modem	1.5%
DSL-enabled phone line	19%
Satellite connection	4%
Fixed wireless connection	10%
Cable modem	43%
Fiber to the home	4%
Wireless mobile card or cellular service	15%
Don't know	3%
Other	0%*

*=Less than 1 percent.

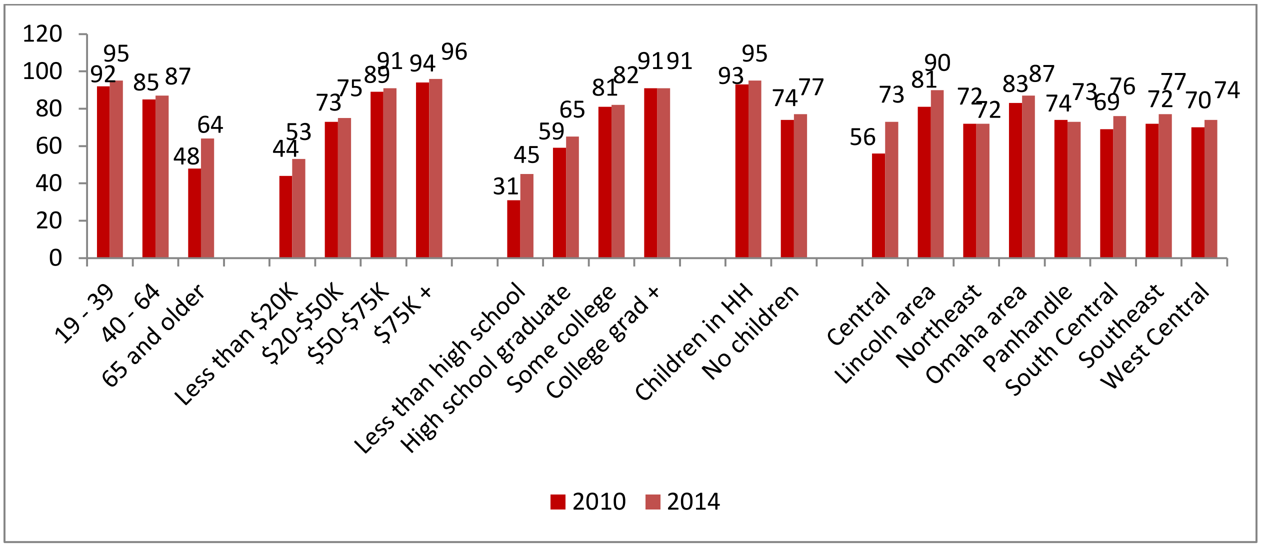
Age

Younger persons are more likely than older persons to have broadband service. Ninety-five percent of persons age 19 to 39 have broadband service, compared to 64 percent of persons age 65 and older. However, during the past four years the proportion of persons age 65 and older having broadband service at home increased from 48 percent to 64 percent.

Household Income

Persons with higher household incomes are more likely than persons with lower

Figure 2. Broadband Service by Demographic Factors and Region, 2010 and 2014



incomes to have broadband service. Ninety-six percent of persons with household incomes of $75,000 or more have broadband service, compared to 53 percent of persons with household incomes less than $20,000. During the past four years, the proportion of persons with the lowest household incomes having broadband service at home increased from 44 percent to 53 percent.

Education Level

Persons with higher education levels are more likely than persons with less education to have broadband service. Ninety-one percent of persons with at least a four year college degree have broadband, compared to 45 percent of persons with less than a high school education. The latter group had an increase in broadband use at home during the past four years, from 31 percent in 2010 to 45 percent.

Families

Persons with children in their household are more likely than persons without children to have broadband. Ninety-five percent of persons with children in their household have broadband service, compared to 77 percent of persons without children in the household.

Within City Limits

Eighty-two percent of persons living within city limits have broadband service, compared to 84 percent of persons living outside city limits.

Region

Persons living in metropolitan areas are more likely than persons living in nonmetropolitan areas to have broadband service. Ninety percent of persons living in the Lincoln area and 87 percent of persons living in the Omaha area have broadband service at home. In comparison, 73 percent of persons living in the Central Nebraska area have broadband service. Residents of the Central Nebraska region had a significant increase in broadband service compared to four years ago, from 56 percent in 2010 to 73 percent.

Non-Internet Users' Reasons for Not Adopting and Possible Motivations for Subscribing

Persons who do not have the Internet at home were asked why they don't have it. They were allowed to circle more than one response. Most non-Internet users don't have a computer (65%). Over one-third of the non-users (36%) say it is too expensive. Approximately one-third (34%) say they have no interest in using the Internet/don't need it. Twenty-two percent are worried about others getting access to their personal information and 22 percent don't know how to use the Internet.

Earlier, it was noted that older persons, persons with lower household incomes,

Table 2. Reasons for Not Currently Using the Internet at Home

Don't have a computer	65%
Too expensive	36%
No interest in using the Internet/don't need it	34%
Worried about others getting access to my personal information	22%
Don't know how to use the Internet	22%
My computer is too old	7%
Internet service is not available in my area	2%
Other	3%

n=328 for non-Internet users at home

persons with lower education levels and residents of the Central Nebraska area are the groups less likely to have Internet service at home. The main barriers to Internet use for older persons include: don't have a computer (69%), no interest in using the Internet/don't need it (37%), and too expensive (26%).

The primary barriers to Internet use at home for persons with lower household incomes include not having a computer (56%) and service is too expensive (48%). Not having a computer is the biggest barrier for persons with lower education levels (53%). Barriers for persons living in the Central Nebraska area include: don't have a computer (65%), too expensive (35%), and no interest (29%).

Non-Internet households were also asked which, if any, items would motivate them to subscribe to Internet service. They were allowed to circle more than one answer. Most of the non-users of the Internet (51%) say none of the listed items would motivate them to subscribe to Internet service. Over one-third (34%) would subscribe to Internet service to communicate with family and friends. Thirty percent of non-users say they would subscribe to Internet service to learn new information.

Two-thirds of the non-users age 65 and older (66%) say none of the items would motivate them to subscribe to Internet service. One-quarter (25%) of the oldest non-users say they would subscribe to

Table 3. Motivations to Subscribe to Internet Service

None of the above	51%
To communicate with family and friends	34%
For learning new information	30%
For entertainment	15%
For buying goods and services	15%
To manage my health care of the health care of others	7%
To be able to work from home	6%
Other	6%

n=328 for non-Internet users at home

communicate with family and friends. The primary motivations for subscribing to Internet service for lower household persons include: to communicate with family and friends (41%), none of the above (41%), and for learning new information (35%). The primary motivations for subscribing to Internet service for residents of the Central region include: none of the above (44%), to communicate with family and friends (38%), and for learning new information (31%).

Non-Broadband Users' Plans for Adoption and Reasons for Not Adopting

Persons who do not currently have a broadband connection were asked when they plan to acquire a broadband or high-speed connection. Most don't know when or if they will get a broadband connection.

Twelve percent plan to subscribe to broadband service as soon as it is available. Ten percent are planning to get a high-speed connection within 2 to 3 years. Almost one-half (48%) have no definite plans to get a broadband connection and 15 percent don't plan to ever get one. Twelve percent don't know when they plan to get a broadband connection and three percent answered other.

Persons without a current broadband connection were then asked why they don't have it. They were allowed to circle more than one response. Note that nonusers of the Internet did not answer this question, only those Internet users having dial-up service only. Over one-half (53%) say it is too expensive. One-quarter (25%) are satisfied with their current connection. Fourteen percent say broadband is not available and 27 percent say they don't know enough about it. Fifteen percent don't see the benefit of a broadband connection.

Earlier, it was noted that older persons and persons with lower household incomes, are the groups less likely to have broadband service. The main barriers to broadband subscribership for older persons include: don't know enough about it (38%), satisfied

Table 4. Reasons for Not Currently Having a Broadband Connection

It is not available	14%
It is too expensive	53%
I don't know enough about it	27%
I'm satisfied with my current connection	25%
I don't like choice of service providers available	14%
I can't see the benefit of a broadband connection	15%
I don't know	4%
Other	1%

n=118 for dial-up only users

with their current connection (25%), not available (25%), and can't see the benefit of a broadband connection (25%). The primary barriers to broadband subscribership for persons with lower household incomes include: don't know enough about it (75%), too expensive (50%), don't like the choice of service providers available (25%) and can't see the benefit of a broadband connection (25%).

Internet Use

The next set of questions were asked only of those respondents who have Internet access at home (n = 2324).

Most home Internet users (86%) have a home wireless network. This is a marked increase from 2010 when 60 percent of Internet households had a home wireless network.

Next households were asked how often anyone in their household uses their home Internet connection to do various items. Most households (92%) send or receive e-mail at least once a week. Over three-

Table 5. Internet Activities, 2010 and 2014

	2010	2014
	% of Households Doing Each Item	
Send or receive e-mail	98	99
Do research or search for information	NA	97
*For education or research	91	NA
Get news/weather information	NA	93
*Check weather reports and forecasts	93	NA
*Get news online	88	NA
Look for health information	NA	92
Buy a product online	86	89
Visit a government website	84	81
Use a social networking site like Twitter, LinkedIn, Facebook, Pinterest or blog	69	80
Watch a video on videosharing site like YouTube or GoogleVideo	72	79
Online banking or bill pay	70	77
Make travel arrangements	76	76
Listening to music	72	73
Monitor and manage health care	NA	66
Play games online	62	63
Watch a television show or movie	NA	63
Look online for job information	58	49
Make a donation to charity	36	41
Apply for a job online	47	40
Sell a product online	NA	39
VoIP, Skype, magicJack	19	37
Student homework and grade monitoring	NA	35
Taking online courses	31	30
Telework from home	NA	30
Use for home-based business	NA	28
*Work related activities	65	NA
Buy or sell stocks, mutual funds or bonds	23	27
Two-way audio/video meetings	15	27

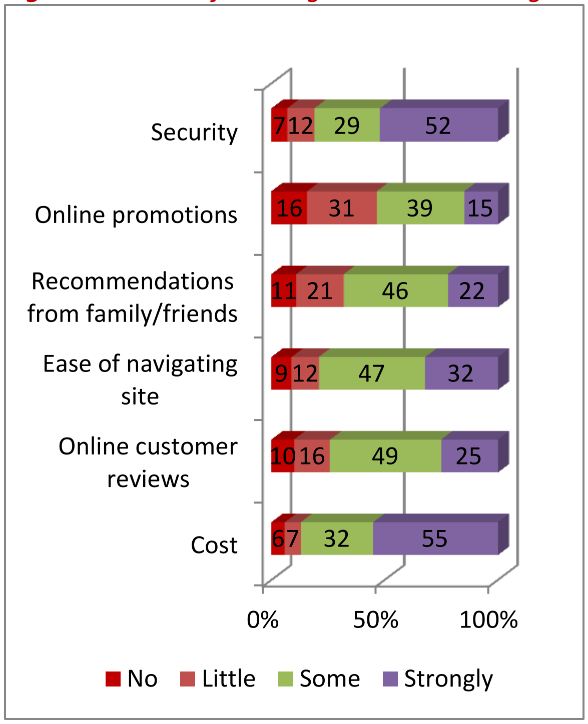
quarters (79%) use e-mail at least daily. Other Internet activities done at least weekly include: do research or search for information (82%), get news/weather information (81%), use a social networking site (72%), online banking or bill pay (53%), watch a video (46%), listen to music (40%) and play games (38%).

Some of these items had considerable increases in use compared to four years ago: use a social networking site (from 69% to 80%); watch a video (from 72% to 79%); online banking or bill pay (from 72% to 79%); VoIP, Skype, magicJack (from 19% to 37%); and two-way audio/video meetings (from 15% to 27%). See Appendix Table 1 for the complete listing of frequencies for these items.

Internet users were also asked two questions about online shopping. Most Internet households are using the Internet in various ways for online shopping, including more than just purchasing products. Most Internet households have done the following items in the past month: research/browse products (86%), purchase a product (79%), compare prices (73%), find/research information on local businesses (66%), find online or non-local businesses (61%), and find coupons or special deals (55%). Just over one-quarter (28%) have rated a product or service using an online rating system.

Next, they were asked to what extent various factors influence their household's online purchasing. Most Internet households say cost (55%) and security (52%) strongly influence their online purchasing. Almost one-third of Internet households (32%) say the ease of navigating the store's website strongly influences their online purchasing.

Figure 3. Items Influencing Online Purchasing



Satisfaction with Internet Service

Nebraska households appear to be generally satisfied with their Internet service. Most Internet households (62%) are very or somewhat satisfied with their Internet service overall. Furthermore, most Internet households are somewhat or very satisfied with the following aspects of their Internet service: reliability (69%), speed (60%), and customer service (56%). However, they are less satisfied with the price of their Internet service (36%). In fact, most Internet households (52%) are somewhat or very *dissatisfied* with the price of their service. And, although the majority of households are satisfied with the speed of their service, over one-quarter (26%) are very or somewhat *dissatisfied* with this aspect.

Cable modem users are *less* likely than other Internet service users to be satisfied with the price of their Internet service (25% compared to 59% of fiber users). Dial-up users are the group least likely to be satisfied with the reliability of their Internet service (50%), while fiber users are most likely to be satisfied with their reliability (83%). Fiber users are also the group most likely to be satisfied with the speed of their service (75%), while dial-up and DSL users are the groups least likely to be satisfied with their speed (50%). Fixed wireless and fiber users are the groups most likely to be satisfied with the customer service of their Internet carrier (approximately 64%). Overall, fiber users are the group most likely to be satisfied with their Internet service (72%) and DSL users are the group least likely to be satisfied (59%).

Users of cellular phone data service are also generally satisfied with their service. Most cellular data service users are somewhat or very satisfied with their overall service (58%). Furthermore, most cellular data service users (69%) are somewhat or very satisfied with the coverage area of their service, the speed of their service (68%) and their customer service (52%). However, most (55%) express *dissatisfaction* with the price of their cellular phone data service. One-third (33%) are satisfied with the price of their service.

Community Technology Resources

When asked what types of Internet services are available in their area, the most common service is by cable modem (56%). Other services available include: DSL (48%), satellite connection (44%), wireless mobile card or cellular service (41%), dial up service (40%), fixed wireless connection (27%), and

Table 6. Satisfaction with Internet Service by Type of Service

	Overall	Price	Reliability	Speed	Customer service
		% very or somewhat satisfied			
All Internet Users	62	36	69	60	56
Dial-up Users	71	50	50	50	53
DSL Users	59	40	65	50	51
Satellite Users	63	45	60	59	58
Fixed Wireless Users	70	44	73	67	65
Cable Modem Users	61	25	72	64	56
Fiber Users	72	59	83	75	64
Wireless Mobile Users	66	40	72	69	55

fiber to the home (15%). A significant portion (35%) answered don't know.

Residents living within city limits are more likely than residents living outside city limits to say cable modem connections (63% compared to 29%) and fiber to the home (16% compared to 11%) are available in their area. Residents living outside city limits are more likely than residents living within city limits to have satellite services available (52% compared to 42%).

Panhandle residents are *less* likely than residents of other regions to have DSL service available (42%). Residents of the Central region are *less* likely than other regional groups to say they have the following services available in their area: satellite connection (37%), cable modem (23%), and wireless mobile (27%). West Central area residents are the regional group most likely to have fixed wireless service available (38%). Omaha area residents are the regional group most likely to have cable modem (68%) and fiber to the home (21%) available. Lincoln area residents are the group most likely to have DSL service available (55%).

Nebraskans' opinions are somewhat mixed about the types of Internet service available in their community or area. Many households (37%) are somewhat or very satisfied with the types of Internet service available in their community or area. However, just over one-quarter (28%) are somewhat or very dissatisfied with the services in their area. These proportions have not changed in the past four years.

Figure 4. Satisfaction with Types of Internet Services Available in Area

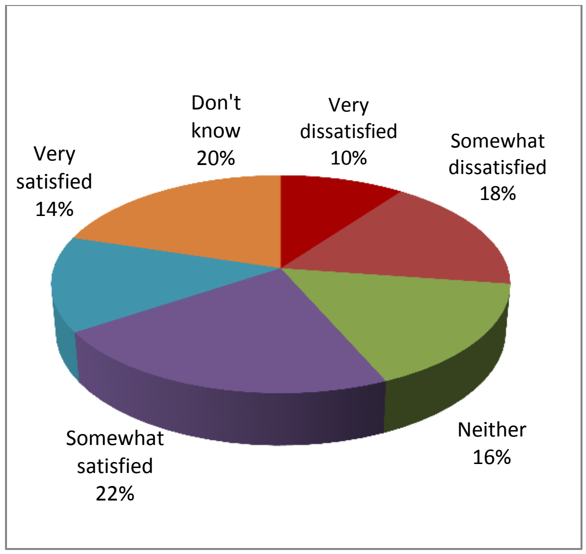


Table 7. Types of Internet Services Available in Area by Region

	Dial-up	DSL	Satellite	Fixed Wireless	Cable modem	Fiber to the home	Wireless mobile card or cellular service	Don't know
	% of households indicating service was available							
Central	41	48	37	27	23	12	27	36
Lincoln area	39	55	44	31	60	15	40	37
Northeast	44	46	46	24	45	8	38	35
Omaha area	36	45	40	26	68	21	43	35
Panhandle	44	42	45	29	42	12	37	34
South Central	45	51	46	28	54	7	46	34
Southeast	40	51	52	23	37	8	35	31
West Central	45	47	44	38	44	20	41	36
Statewide	*40*	*48*	*44*	*27*	*56*	*15*	*41*	*35*

Residents living outside city limits are more likely than residents living within city limits to express dissatisfaction with the types of Internet service available in their area. Thirty-six percent of persons living outside city limits are dissatisfied with the types of service available, compared to 25 percent of persons living within city limits.

Most Nebraska households believe that the Internet services available in their community or area are either somewhat or very adequate for their household (91%), current businesses (91%), for attracting new businesses (81%), for attracting new residents (82%) and for future generations (75%). However, while 44 percent believe the Internet services are very adequate for their household, only 24 percent believe they are very adequate for future generations. Furthermore, one-quarter (25%) of Nebraska households believe the Internet services available in their area are not at all adequate for future generations.

Central Nebraska residents are more likely than residents of other regions to believe the Internet services available in their community are not at all adequate for their household. Fourteen percent of Central Nebraska residents say the Internet services available are not at all adequate for their household, compared to five percent of Omaha area residents. Central Nebraska residents are also the regional group most likely to think the Internet services are not at all adequate for businesses in the community (14%).

Residents of the Omaha area are less likely than residents of the other regions to say the Internet services in their area are not at all adequate for attracting new businesses. Only 15 percent of Omaha area residents say the Internet services available in their area are not at all adequate for attracting new businesses. However, 29 percent of Southeast area residents think the Internet services available are not at all adequate for attracting new businesses. This same pattern holds when asked if services are adequate to attract new residents or for future generations. Only 14 percent of Omaha area residents say the Internet services available in their area are not at all adequate for attracting new residents. However, just over one-quarter (26%) of Southeast area residents think the Internet services available are not at all adequate for attracting new residents. And, 21 percent of Omaha area residents think the Internet services are not at all adequate for future generations, compared to 33 percent of Southeast area residents.

Persons living outside city limits are more likely than persons living within city limits to

Table 8. Satisfaction with Types of Internet Services Available by Location of Residence

	Dissatisfied	Neither	Satisfied	Don't know
Within city limits	25%	16%	38%	21%
Outside city limits	36	16	32	16
Statewide	*28*	*16*	*36*	*20*

Table 9. Inadequacy of Internet Services for Various Items by Region

	Your household	Current businesses	Attracting new businesses	Attracting new residents	Future generations
			% answering not at all adequate		
Central	14	14	25	23	30
Lincoln area	9	8	19	17	27
Northeast	10	12	22	22	24
Omaha area	5	7	15	14	21
Panhandle	13	12	24	24	30
South Central	11	7	16	16	30
Southeast	13	13	29	26	33
West Central	10	12	20	20	23
Statewide	*9*	*9*	*19*	*18*	*25*
Residents outside city limits	14	13	26	21	37
Residents within city limits	7	8	17	17	22

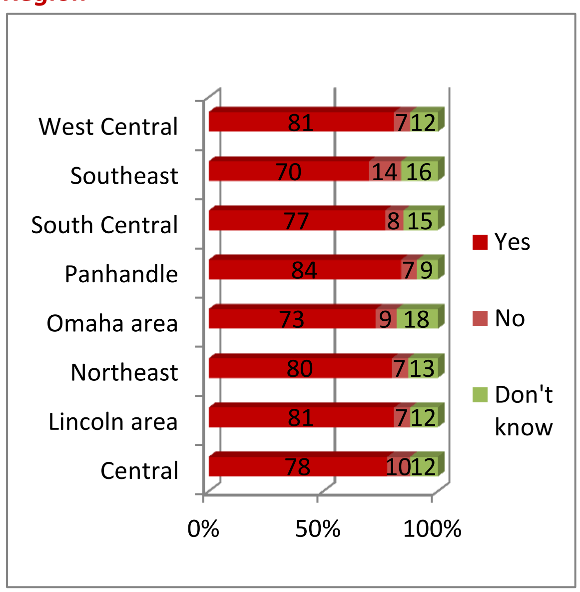
say the Internet services available in their area are not at all adequate for all of the items listed. As an example, over one-third (37%) of persons living outside city limits say the Internet services available are not at all adequate for future generations. This opinion is shared by just 22 percent of persons living within city limits.

Most Nebraska households (77%) have access to a public facility in their neighborhood or community, such as a library or school, where they can use an Internet-accessible computer for free. Eight percent say they don't have access to such a place and 15 percent don't know if such a place is available locally.

Southeast region residents are less likely than the residents of other regions to have access to a public use facility. Seventy percent of Southeast area residents say they have access to a public use facility. In comparison, 84 percent of Panhandle residents have access to a public use facility.

American Indians or Alaska natives are the racial group *least* likely to have access to a public use facility. Two-thirds (67%) of

Figure 5. Access to Public Use Facility by Region



American Indians/Alaska natives have access to a public use facility, eight percent report having no access to such a facility and 25 percent don't know if such a place is available. Most African Americans (93%) report having access to a public use facility as do Hispanics (82%) and Asians or Pacific Islanders (83%).

Households without Internet service are less likely than households with Internet service to say they have access to a public use facility. Two-thirds (67%) of non-Internet households have access to a public use facility, compared to 78 percent of Internet households.

The households that have access to a public use facility were then asked how often they use the computer resources at the facility. Most households (69%) never use the computer resources at the public use facility. Four percent use the computer resources more than once a week, two percent use them about once a week, two percent use them about twice a month and two percent use them about once a month. Six percent of households use the computer resources about once every few months and 16 percent use them less often.

Persons with no Internet access at home use the computer resources at the public use facility more often than households with Internet at home. Thirty-two percent of the households without Internet access use the computer resources at the public use facility. Six percent of households without Internet access use the computer resources more than once a week and an additional 13 percent use the computers at least once a month. One-half (50%) of dial-up only households and 30 percent of broadband households use the computer resources at the public facility.

Some minority groups are more likely than whites to use the computer resources at the public use facility. Over one-half of both Asians/Pacific Islanders (54%) and American Indians/Alaska Natives (56%) use the computer resources at these facilities. In comparison, 30 percent of both whites and African Americans use the computer resources at the public use facilities. Nineteen percent of Asians/Pacific Islanders use the computers at the facilities more than once a week.

Most persons who use the computer resources at the public use facility are very or somewhat satisfied with the hours the computers are available (59%), the number of available computers (52%), the location of the facility (66%), and building accessibility (67%). However, only one-third (33%) of users are very or somewhat satisfied with the availability of technical training. But, most of the users (54%) said they were neither satisfied nor dissatisfied with the availability of technical training. Fourteen percent are very or somewhat dissatisfied with the availability of technical training.

Next, respondents were asked the extent to which they agree or disagree with two statements about public Internet 'hotspots'

(Wi-Fi access points or areas for connecting to the Internet such as at airports, coffee shops, restaurants, etc.). Most Nebraskans (77%) agree or strongly agree that it is important to have free public Internet 'hotspots' available in the community. Only seven percent disagree or strongly disagree with this statement and 16 percent neither agree nor disagree.

Just under one-half (46%) of Nebraskans agree or strongly agree that they are more likely to frequent businesses that offer free Internet 'hotspots'. Seventeen percent disagree or strongly disagree and over one-third (37%) neither agree nor disagree.

Younger persons are more likely than older persons to agree that is important to have free public Internet 'hotspots' in the community. Eighty-seven percent of persons age 19 to 39 agree that having free public Internet 'hotspots' in the community is important, compared to 65 percent of persons age 65 and older. And, younger persons are more likely to frequent businesses that offer free Internet 'hotspots' (57 percent compared to 31 percent of persons age 65 and older).

Lincoln area residents are more likely than residents of other regions of the state to agree that it is important to have free public Internet 'hotspots' available in the community. Eighty-five percent of Lincoln area residents agree with this statement, compared to 66 percent of Central Nebraska area residents. Omaha area residents are more likely than residents of other regions to frequent businesses that offer free Internet 'hotspots' (52 percent compared to 37 percent of Central Nebraska residents).

Technology Training Needs

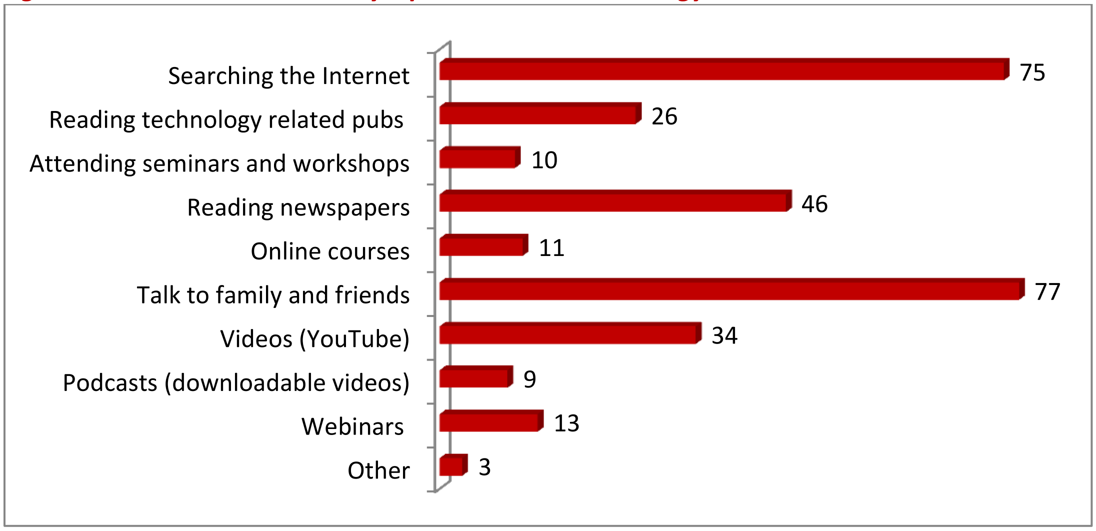
Most Nebraskans talk to family and friends (77%) and search the Internet (75%) to stay up to date on technology. Forty-six percent read newspapers to stay current on technology.

Younger persons are more likely than older persons to use the following items to stay up to date on technology: searching the Internet, reading technology related publications and popular magazines, online courses, talking to family and friends, videos, podcasts, and webinars. But, persons age 65 and older are the group most likely to read newspapers to stay up to date.

Many Nebraskans are interested in certain information technology courses. Over one-third (37%) of Nebraskans are somewhat or very interested in courses on website development and computer networking.

The proportions interested in other courses include: using the Internet (31%), audio/video production (31%), social media (31%), basic computer use (30%), e-mail use (24%), and writing for the Web (21%).

Figure 6. How Nebraskans Stay Up to Date on Technology



Certain groups are more likely than others to express interest in some of these courses. Older persons are more likely than younger persons to be interested in basic computer courses, such as basic computer use, e-mail use and using the Internet. Over four in ten persons age 65 and older (44%) are interested in a course on using the Internet, over one-third (38%) are somewhat or very interested in a basic computer use course, and 36 percent are interested in an e-mail use course.

Younger persons are more likely than older persons to be interested in courses on website development, basic computer networking, audio/video production, and writing for the Web. Forty-four percent of persons age 19 to 39 are interested in a course on website development, compared to 22 percent of persons age 65 and older. Forty-four percent of persons age 40 to 64 are interested in a basic computer networking course, compared to 28 percent of persons age 65 and older. Over one-third of persons under the age of 40 (38%) are interested in a course on audio/video production, compared to 18 percent of persons age 65 and older. And, approximately one-quarter (25%) of persons under the age of 65 are interested in a course on writing for the Web, compared to nine percent of persons age 65 and older.

Persons age 40 to 64 are the age group most likely to be interested in a course on social media. Thirty-seven percent of persons in this age group are somewhat or very interested in a social media course.

Residents of the Central Nebraska area are more likely than residents of other regions to be interested in courses on e-mail use and using the Internet. Thirty-two percent of persons living in the Central area of the state are interested in an e-mail use course, compared to 18 percent of persons living in the Lincoln area. And, 38 percent of Central area residents are interested in a course on using the Internet, compared to 24 percent of Lincoln area residents.

Omaha area residents are the regional group most interested in classes on website development, audio/video production, and writing for the Web. Forty-three percent of Omaha residents are interested in a website development course, compared to 28 percent of Southeast area residents. Over one-third (35%) of Omaha area residents are interested in a class on audio/video production, compared to 22 percent of West Central area residents. And, just over one-quarter (26%) of Omaha area residents are interested in a writing for the Web class, compared to 13 percent of Southeast area residents.

Panhandle residents are the regional group most interested in a class on basic computer networking. Forty-three percent of Panhandle residents are interested in a basic computer networking course, compared to 28 percent of Southeast area residents.

Hispanics are more likely than non-Hispanics to be interested in the following courses: basic computer use, email use, audio/video production, and writing for the Web. As an example, 45 percent of Hispanics are very or somewhat interested in a course on basic computer use, compared to 29 percent of non-Hispanics.

Asians or Pacific Islanders are the racial group most likely to be interested in taking most of the courses listed.

When asked about delivery options for training, Nebraskans prefer more conventional methods. Most Nebraskans rate the following as very or somewhat useful: face to face half-day workshops with hands-on computer work (78%), CD or DVD (76%), face to face all day workshops with hands-on computer work (74%), online courses (72%), and videos (71%). The proportions rating other methods as somewhat or very useful include: Webinar format (64%); delivery of information via a newsletter (63%); and delivery of information via a blog, wiki, social network (52%).

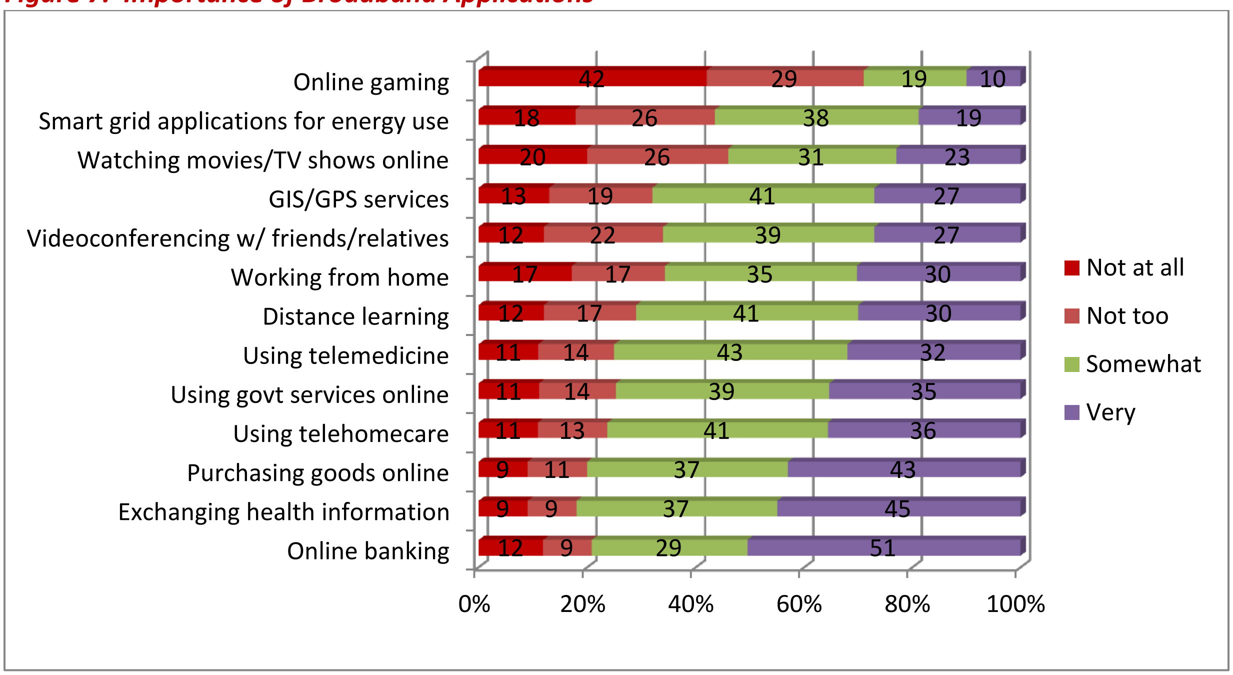
Younger persons are more likely than older persons to rate the following delivery options for training as useful: delivery of information via a blog, wiki, social network; online courses; webinar format; face to face workshops (both half day and full day); and videos. Persons age 40 to 64 are the age group most likely to rate CD or DVD as a useful delivery option for training. Older persons are more likely than younger persons to rate delivery of information via a newsletter as a useful option for training.

Finally, households were asked how important they feel various broadband applications are. Most Nebraska households feel each of these applications is important. At least three-quarters of households rate the following as very or somewhat important: exchanging health information so that providers have a complete health record when treating you (82%), purchasing goods online (80%), online banking (79%), taking advantage of distance learning opportunities (78%), using telehomecare to monitor chronic health conditions (76%), using telemedicine to consult with health care providers (75%), and using government services online (paying for taxes or applying for licenses online) (75%).

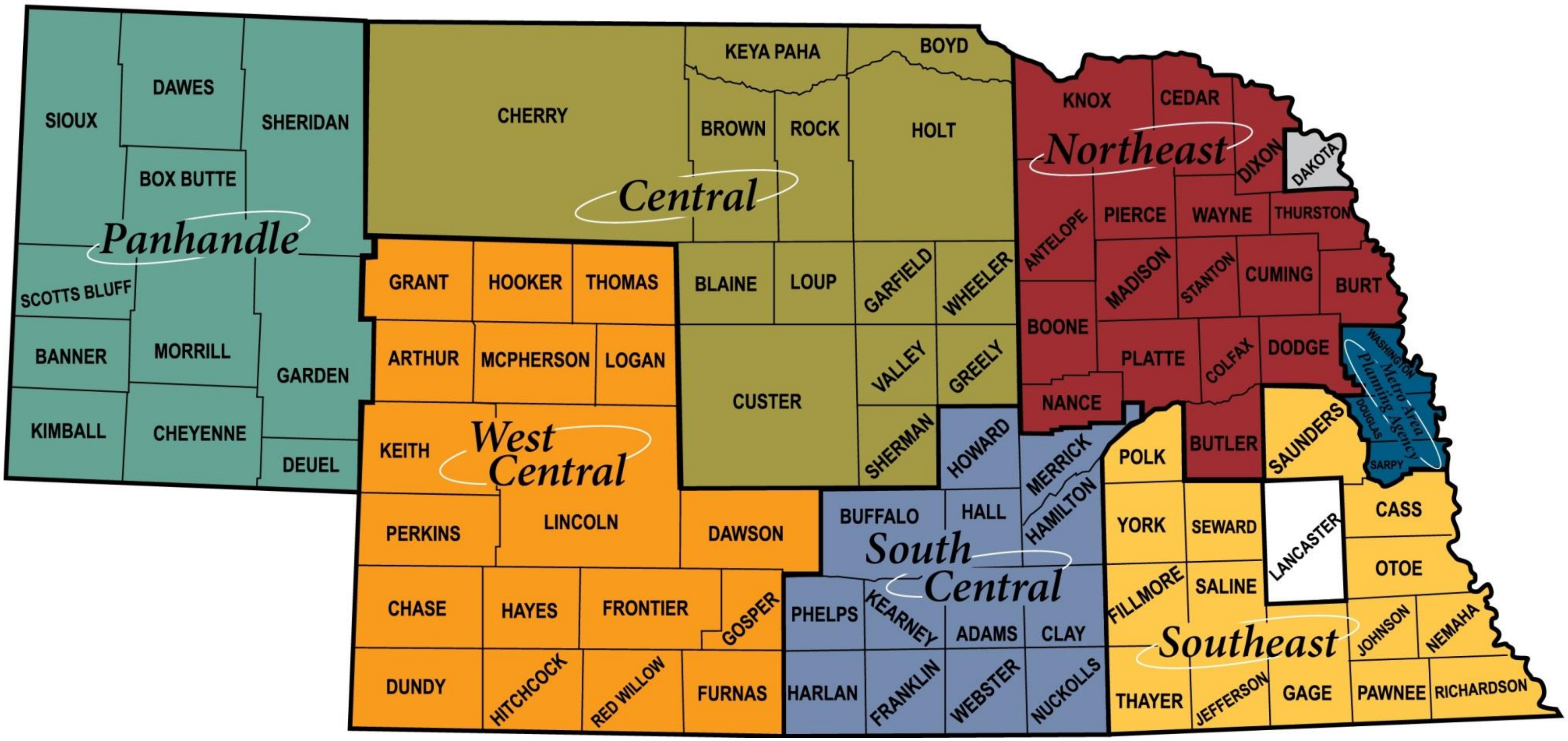
The proportions rating other items as very or somewhat important include: taking advantage of distance learning opportunities (71%), using GIS/GPS services (68%), using videoconferencing for visiting with distant friends and relatives (66%), using broadband applications to work from home (66%), monitoring and adjusting energy use through smart grid applications (56%), watching movies/TV shows online (54%), and online gaming (29%).

Younger persons are more likely than older persons to view each of the applications as important.

Figure 7. Importance of Broadband Applications



Appendix Figure 1. County Regions



Appendix Table 1. How Frequently Do Internet Activities

	Daily	*Weekly*	*Every few weeks*	*Less often*	*Never*
Send or receive e-mail	79%	13%	4%	2%	1%
Use a social networking site like Twitter, LinkedIn, Facebook, Pinterest or blog	59	13	3	5	21
VoIP, Skype, magicJack	4	8	8	17	63
Two-way audio/video meetings	2	5	5	14	73
Get news/weather information	63	18	7	6	7
Do research or search for information	50	31	11	5	3
Look for health information	14	22	31	24	8
Monitor and manage health care	5	9	21	31	34
Visit a government website	5	9	22	46	19
Student homework and grade monitoring	12	11	6	7	65
Taking online course	5	3	2	20	70
Look online for job information	4	7	9	28	51
Apply for a job online	3	4	5	28	60
Telework from home	8	8	6	9	70
Use for home-based business	9	7	6	7	72
Buy a product online	5	23	37	24	11
Sell a product online	2	3	8	26	61
Make travel arrangements	1	4	17	54	24
Make a donation to charity	1	3	9	29	59
Online banking or bill pay	16	37	18	6	23
Buy or sell stocks, mutual funds or bonds	2	3	5	17	74
Watch a video on videosharing site like YouTube or GoogleVideo	18	27	18	15	21
Watch a television show or movie	14	18	12	19	37
Listening to music	19	22	14	19	27
Play games online	22	16	12	14	37