



Distance Learning in Montana

A Survey-Based Assessment

June 2010

Prepared for:

The Office of the Commissioner
of Higher Education
Montana University System
Helena, MT 59620



**BUREAU OF
BUSINESS
AND ECONOMIC
RESEARCH**

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Background

The Montana University System eLearning Advisory Committee is composed of the primary eLearning representative from each of the eight MUS and the three community college campuses, eLearning leaders who, along with the MUS Director of eLearning Business Development, regularly communicate and collaborate to benefit learners and to align campus eLearning efforts. During each of the past several annual strategic planning sessions, the group identified some knowledge gaps surrounding eLearning. When the FY10 planning session was convened in June 2009, as one of the goals, the eLearning Advisory Committee believed strongly that it was time to find out from the consumer perspective, what the citizens of Montana were interested in from eLearning, whether they had ready access to eLearning from a technology perspective, whether they had accessed eLearning before and were interested in completing a certificate or degree via eLearning, and whether they had an interest in using eLearning for workforce training. With support from the eLearning Advisory Committee and the Deputy Commissioner for Academic & Student Affairs, the Commissioner's Office commissioned a survey of Montanans, intended to serve as a gap analysis for eLearning in Montana. Though the eLearning Advisory Committee involves multiple eLearning staff from each of the campuses in its frequent discussions, the official designated campus representatives who supported this survey included the following:

Jim Aspevig, UM-MT Tech

Keith Lynip – UM-Missoula

Kevin Brockbank – UM-Helena CoT

Tim Tirrell – MSU-Billings

Janice Brady – MSU-Northern

MaryAnn Vester – Dawson CC

Kim Obbink – MSU-Bozeman

Shelly Weight – Miles CC

Pat Pezzelle – Flathead Valley CC

Ryan Schrenk – MSU-Great Falls CoT

Anneliese Ripley – UM-Western

Thomas Gibson – OCHE

The MUS recognizes and appreciates the survey and analysis conducted by the Bureau of Business and Economic Research. The people of Montana will ultimately reap the rewards of this good work as the campuses embrace the results and respond to address the eLearning gaps in program and course delivery that have been identified in this report.

Acknowledgements

The authors at BBER greatly appreciate the assistance of the Montana Office of the Commissioner of Higher Education in all aspects of planning and administering this survey. Special thanks go to Commissioner Sheila Stearns, Deputy Commissioner Sylvia Moore, and Director of eLearning Business Development Tom Gibson of the Office of the Commissioner of Higher Education for their hard work, amazing patience, and good humor.

Janet Stevens of BBER worked diligently to supervise the data collection of this study. Finally, the authors are most grateful to the BBER telephone survey supervisors and interviewers. Their dedication to careful research and persistence made this study a success.

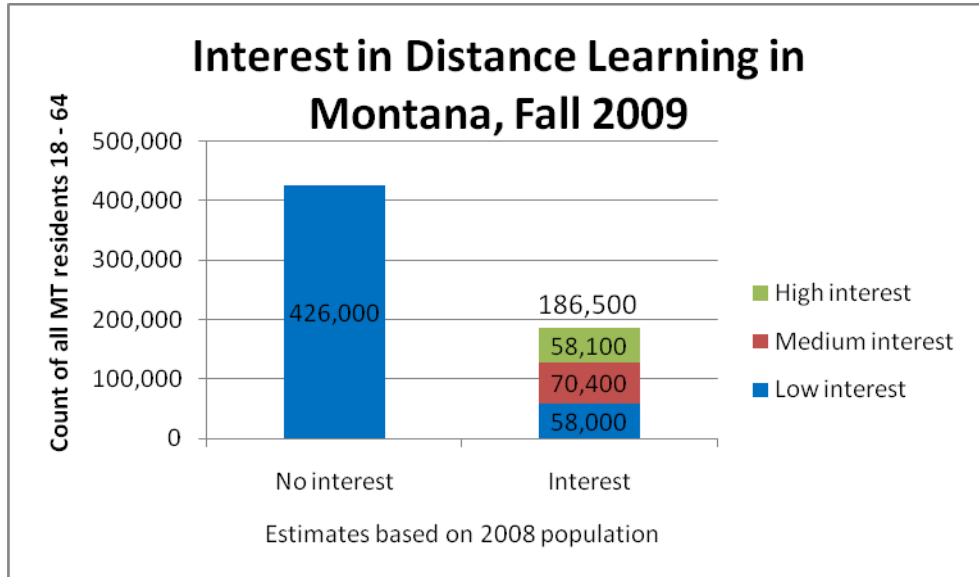
Distance Learning in Montana: A Survey-Based Assessment Executive Summary

In the fall of 2009 the Bureau of Business and Economic Research (BBER) at The University of Montana conducted a survey-based assessment of distance learning experiences, preferences, and capabilities of the Montana adult population. In this study

- The term “distance learning” was defined as educational course work that uses (i) the internet, (ii) interactive two-way television transmitted to a central learning site, or (iii) mostly mailed out materials in some combination.
- A random sample of 1,226 respondents, including both landline and cell phone-only households, was collected by survey researchers at the Bureau to assess (i) demand for distance learning, (ii) preferences for types of distance learning delivery systems, (iii) distance learning courses sought, barriers to distance learning access, and (iv) capacity of Montanans to access distance learning through the internet.
- Estimates for population totals were constructed by applying the proportions calculated from survey respondents to the most recent U.S. Census Bureau estimates of the relevant population.
- The sample was stratified by two age categories: persons age 18-64 and persons age 65 and older. This was performed to include older Montanans in the study while focusing the bulk of the study’s resources on the age group thought most likely to use distance learning. There were 1,164 respondents aged 18-64.

The report's key findings include:

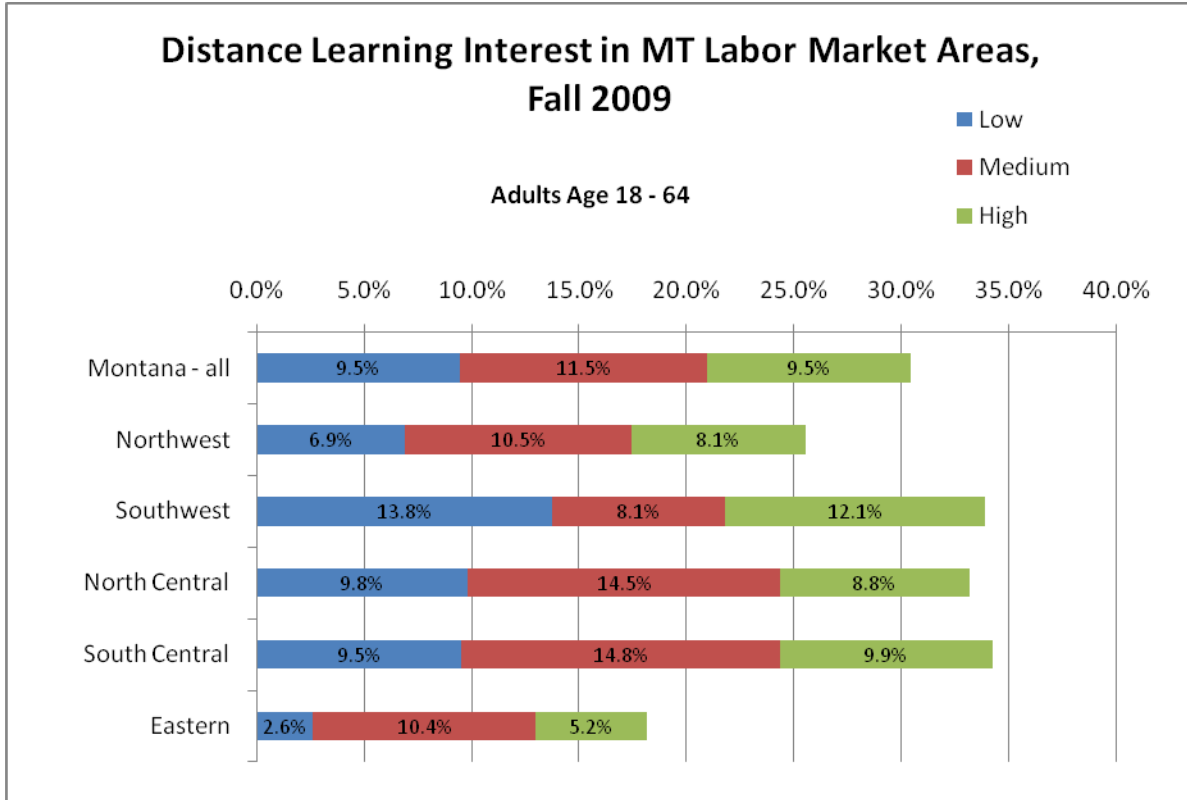
1. **There is considerable interest¹ in distance learning in Montana.**



- 186,500 (+/- 16,300) Montanans between the ages of 18 and 64 are estimated to have some level of interest in taking at least one distance learning course. This figure is calculated by applying the 30% of survey respondents aged 18-64 who indicated interest in the survey to the U.S. Census Bureau's 2008 estimate of Montana's population aged 18-64. The interval in parentheses is a 95% confidence interval for each estimate, which is computed from the sampling parameters.
- 58,100 (+/- 10,600) Montana residents are estimated to have a high level of interest in taking distance learning courses.
- 70,400 (+/- 11,100) are estimated to have a medium level of interest.
- We estimate that 58,000 (+/- 10,600) have some interest, but the intensity of their interest was lower than others.
- 426,000 (+/- 16,300) Montanans are estimated to have no interest in distance learning.

¹ The definition of high, medium, and low interest is presented in Appendix A.

2. Interest in distance learning by those aged 18-64 in Montana varies by region.



- Interest is proportionately highest in the southwest and south central regions of the state². It is lowest in eastern Montana.
- Estimates of the population between the ages of 18 and 64 who have an interest in distance learning by region are as follows:

Southwest Montana:	53,700 (+/- 8,300)
Northwest Montana:	49,700 (+/- 9,100)
South Central Montana:	45,500 (+/- 7,700)
North Central Montana:	29,600 (+/- 6,000)
Eastern Montana:	8,000 (+/- 3,800)

As in all population estimates, these figures were computed by applying the proportions obtained from respondents in each region to their respective populations aged 18-64 obtained from the U.S. Census Bureau.

² MT Department of Labor and Industry Labor Market Regions: Region 1 (Northwest) Lincoln, Sanders, Mineral, Missoula, Ravalli, Flathead and Lake. Region 2 (Southwest) Granite, Powell, Lewis and Clark, Meagher, Broadwater, Jefferson, Silver Bow, Deer Lodge, Beaverhead, Madison and Gallatin. Region 3 (North Central) Glacier, Toole, Liberty, Hill, Blaine, Phillips, Pondera, Teton, Chouteau and Cascade. Region 4 (South Central) Judith Basin, Fergus, Petroleum, Wheatland, Golden Valley, Musselshell, Park, Sweet Grass, Stillwater, Carbon, Yellowstone. Region 5 (Eastern) Valley, Daniels, Roosevelt, Sheridan, Garfield, McCone, Richland, Dawson Prairie, Wibaux, Rosebud, Custer, Fallon, Treasure, Powder River, Carter.

3. **There is considerable internet capacity overall in Montana, particularly in the population who indicate interest in distance learning.**

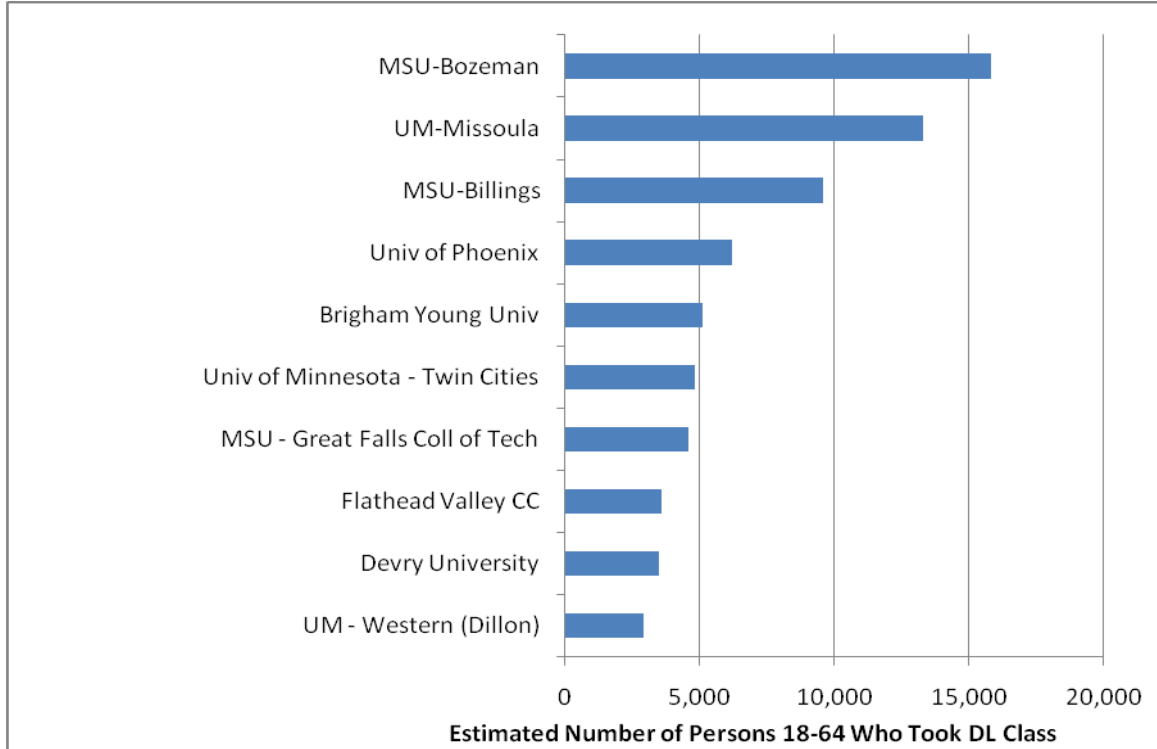
- Survey responses indicate that nine out of ten Montanans aged 18-64 who have an interest in distance learning have a working internet connection in their homes. This represents a total of 167,500 (+/- 15,800) people statewide.
- 158,000 (+/- 15,200) adults who are interested in distance learning most frequently use a high speed connection like a digital subscriber line (DSL) or a cable television connection to access the internet.
- Only 3.1 percent of Montanans aged 18-64 who are interested in distance learning say that they do not use the internet.
- American Indians and low income households have significantly lower internet access from their homes than the general population. Whether this is due to cost, preferences, or availability is unknown.

4. **Courses in business oriented topics are the most frequently taken via distance learning in Montana.**

- Using the proportions of respondents indicating their distance learning experiences applied to the Montana population aged 18-64, we estimate that 19,000 Montana adults have taken a business course via distance learning. Course titles classified as business represented a broad spectrum of subjects including insurance, business communications, property management, marketing, customer service, and business operations.
- The next most frequently mentioned distance learning subject, finance and accounting, was taught to an estimated 11,100 Montana adults (individual respondents could indicate multiple course subjects taken). These included personal finance and tax courses.
- The estimated 10,900 Montana adults who have taken a computer science course via distance learning represented the third most frequent subject. These topics ranged from web design, information services, primers on internet use, computer languages, and use of popular computer programs.
- The next most popular subjects, in descending order of frequency, reported as having been delivered by distance learning were: mathematics, education, nursing, English, trades, psychology, communications and medical science.

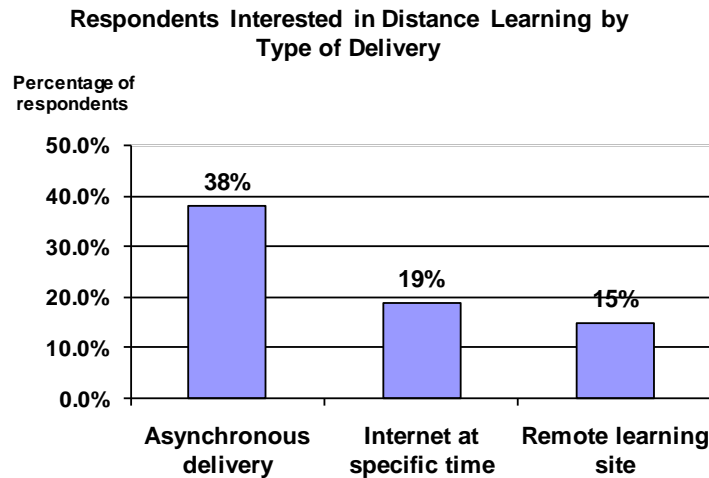
5. **MSU-Bozeman, UM-Missoula, and MSU-Billings students account for 55 percent of distance learning students statewide.**

Number of Distance Learning Students by Institution



- Using survey-based proportions applied to the adult population in Montana, an estimated 15,800 people have taken a distance learning class from MSU-Bozeman.
- By the same method, the estimated numbers of Montana adults aged 18-64 who have taken classes from UM-Missoula and MSU-Billings are 13,300 and 9,600, respectively.
- There is considerable penetration of out-of-state educational institutions in the distance learning market in Montana.

6. Interest is highest for asynchronous delivery options, where students can access course material when it suits their individual schedules.



- Approximately 30 percent of survey respondents aged 18-64 indicated an interest in distance learning courses. However, important variations in interest were found for different distance delivery methods.
- When asked specifically about different content delivery methods, delivery of instruction and course material via internet that students can access at times of their own choosing (asynchronous delivery) scored significantly higher in terms of interest with Montana adults aged 18-64 than either of two alternatives: delivery via internet at a specific time of the day/week, and delivery via two-way interactive television at a remote learning site.

There is significant additional detail on interest, experience, and distance learning capability among Montana adults aged 18-64 broken down by age, race, educational attainment and region presented in the main body of the report. The information obtained in this study represents a rich resource for planning and decision-making on remote delivery of instruction in Montana that should prove useful for years to come.

1. Introduction

Project Overview

The Montana Office of the Commissioner of Higher Education contracted with the Bureau of Business and Economic Research (BBER) at The University of Montana to assess demand for distance learning statewide and in major labor markets throughout Montana. Using a random sample of 1,226 respondents, including both landline and cell phone-only households, survey researchers at the Bureau assessed demand for distance learning, preferences for types of distance learning delivery systems, distance learning courses sought, barriers to distance learning access, and capacity of Montanans to access distance learning through the internet.

BBER surveyed residents of Montana who were 18 years old or older and had a working landline or cellular telephone. Interviews were conducted in October and November 2009. This study population should not be confused with all adult residents because it excludes residents who do not have telephones, the institutional population, and those who were absent during the study period. The survey was administered using Computer-Assisted Telephone Interview (CATI) techniques. The study completed a total of 1,226 interviews.

The sample was stratified by two age categories: persons age 18-64 and persons age 65 and older. This was done to include older Montanans in the study while focusing the bulk of the study's resources on the age group thought most likely to use distance learning. The landline portion of the sample was selected by random digit dial and within household respondent selection was made using the Kish method. The cellular telephone sample was selected randomly from a list provided by Survey Samples International, Inc. The overall rate of sampling error for this survey is +/- 2.8 %. This means that if the survey were repeated 100 times, in 95 of the replications the estimates found would be within +/- 2.8 % of those published here. Sampling error rates for sub-samples of this study are higher.

The data presented in this report are weighted by age and sex using the 2008 U.S. Census Bureau population estimates for the study area of persons age 18 and older. Post-stratification weighting of this type is a standard data processing technique that has been shown to improve the accuracy of survey-based estimates.

Key Findings

This study represents a comprehensive assessment of the interests, preferences, and capabilities of the Montana adult population concerning the delivery of education electronically. Its most important findings include:

- Approximately one third of Montanans aged 18-64, or 186,500 (+/- 16,300) individual, indicated an interest in distance learning (figures in parentheses represent the margin of error in survey estimates);

- Overall interest varies regionally, with south central, southwest, and north central Montanans showing higher than average interest, and northwest and eastern Montanans indicating interest in distance learning lower than the overall average;
- Interest is higher for asynchronous course delivery options, where the student can access course material when it suits his or her individual schedule, as well as for options that do not require students to travel to specific facilities;
- Almost half of those with interest in distance learning courses are not interested in pursuing any formal degree or certification;
- Courses in business oriented topics are the most frequently taken via distance learning in Montana, with MSU-Bozeman, UM-Missoula, and MSU-Billings jointly accounting for 55 percent of distance learning students statewide;
- Access to high speed internet connections from home is high but not universal in Montana, particularly for lower income and American Indian households;
- 83.9 percent of survey respondents overall said that high speed internet was available where they live;
- Home is the place where Montanans most frequently use internet, particularly white, educated, more affluent individuals;
- Nine out of every ten Montanans who indicated interest in distance learning have internet access in their homes;
- Internet access for sub-populations - such as lower income, American Indian, or less educated individuals - is different from the population as a whole. Dial-up access and internet use away from home is more prevalent in these groups. This may reflect preferences, costs, or availability;
- Scheduling and coordination with other activities rank high among the barriers cited as reasons for not taking distance learning courses.

Survey Response Rate

BBER documented survey case status in a manner that allowed reporting an interview response rate using the American Association for Public Opinion Research (2008) standard definition (RR3). The response rate for this survey was 41.8 %. This response rate is typical for rigorously conducted RDD surveys. The following is a detailed description of this survey's interview outcomes:

- 1,226 completions
- 1,136 refusals
- 122 unresolved appointments
- 119 illnesses, language problems, other non-completions
- 330 estimated valid respondents among "always busy, no answer, or ambiguous answering machine" phone numbers
- 2,933 Total Sample

Organization of This Report

The remainder of this report presents and discusses the results in greater detail. The next section presents results on overall interest in distance learning. Section three gives information on the current experiences with distance learning from Montanans who are taking or have taken electronically delivered courses. This is followed by a brief discussion concerning interest in dual credit (high school and college) programs for teens. Section five details findings on internet access in Montana, with particular emphasis on higher bandwidth access required for video and other applications common to distance instruction. Section six summarizes barriers to participation in distance learning as seen through the eyes of actual and potential students. In the conclusion we present key findings and summarize the methods used to produce them. Appendix A presents the details in the measurement of distance learning interest intensity. The interest of Montana's senior citizens in distance learning is described in Appendix B. Full survey result tables and the questionnaire are included in Appendices C and D at the end of the report.

2. Overall Interest in Distance Learning

There is considerable interest in distance learning education in Montana. (See Appendix A for the definition of interest). The 30.5 percent of Montanans aged 18-64 who indicated a high, medium, or low interest in distance learning reported in Table 2.1 below represent approximately 186,500 (+/- 16,300) actual or potential students. This is more than five times the total enrollment of students on all MUS campuses during academic year 2009. There are several characteristics of this sub-population of Montana adults which we find to be statistically significant and worthy of note.

Table 2.1: Overall Interest in Distance Learning

	Distance Learning Interest				Total Respondents
	High Interest	Medium Interest	Low Interest	No Interest	
Total	9.5%	11.5%	9.5%	69.5%	1,164
Sex of respondent*					
Female	10.8%	13.0%	7.5%	68.8%	554
Male	8.3%	10.2%	11.3%	70.2%	610
Age of respondent					
18 - 24	10.2%	13.6%	10.6%	65.7%	292
25 - 39	11.6%	13.2%	11.5%	63.6%	296
40 - 49	7.6%	9.3%	6.5%	76.5%	237
50 +	8.3%	9.7%	8.8%	73.2%	339
Race of respondent					
American Indian	12.9%	10.7%	9.2%	67.2%	77
White	9.7%	11.2%	9.7%	69.3%	1,016
Educational attainment*					
Less than HS diploma	.0%	9.1%	13.0%	77.9%	66
HS diploma, GED, some college	8.5%	9.9%	10.5%	71.2%	712
BA +	13.6%	15.3%	6.8%	64.3%	367
2009 household income*					
< 20k	4.0%	15.8%	17.6%	62.6%	148
20k - 34k	7.4%	7.9%	9.1%	75.7%	128
35k - 49k	6.3%	16.1%	8.5%	69.1%	163
50k - 74k	16.5%	8.8%	6.0%	68.6%	222
75k - 99k	10.7%	9.9%	13.7%	65.7%	147
100k +	10.2%	14.9%	5.3%	69.6%	158
Disability status*					
Yes	4.6%	9.3%	10.8%	75.4%	188
No	10.4%	11.9%	9.2%	68.4%	976
MT Labor Market Areas*					
Northwest	8.1%	10.6%	6.9%	74.5%	333
Southwest	12.0%	8.0%	13.9%	66.1%	298
North Central	8.9%	14.4%	9.9%	66.7%	193
South Central	9.9%	14.9%	9.5%	65.7%	264
Eastern	5.8%	10.2%	2.4%	81.6%	77

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Those interested in distance learning are:

- slightly more likely to be female, particularly those indicating higher degrees of interest;
- more likely to be educated beyond high school;
- slightly more likely belong to be middle-high income households earning between \$35,000 and \$100,000 per year;
- less likely to classify themselves as disabled;
- less likely to come from eastern Montana.

Table 2.2: Are you, yourself, currently interested, not sure, or not interested in taking a distance learning course that is taught mostly on the internet at a specific time each week?

	Interest in Internet Class At Specific Time			Total Respondents
	Interested	Not Sure	Not Interested	
Total	19.0%	15.1%	65.9%	1,162
Sex of respondent				
Female	19.1%	15.2%	65.7%	554
Male	18.9%	15.0%	66.1%	608
Age of respondent*				
18 - 24	17.5%	23.0%	59.5%	292
25 - 39	24.5%	10.6%	64.9%	296
40 - 49	15.8%	14.8%	69.4%	236
50 +	17.7%	12.3%	70.0%	338
Race of respondent*				
American Indian	23.2%	30.9%	46.0%	77
White	18.7%	14.2%	67.1%	1,014
Educational attainment*				
Less than HS diploma	7.0%	33.1%	59.9%	66
HS diploma, GED, some college	18.5%	14.6%	66.9%	711
BA +	22.5%	13.5%	63.9%	367
2009 household income				
< 20k	29.4%	14.5%	56.2%	147
20k - 34k	15.0%	11.4%	73.6%	128
35k - 49k	19.3%	11.7%	68.9%	163
50k - 74k	19.5%	18.3%	62.2%	222
75k - 99k	20.8%	13.0%	66.2%	147
100k +	17.2%	13.5%	69.2%	158
Disability status				
Yes	13.4%	16.0%	70.6%	187
No	20.1%	14.9%	65.0%	975
MT Labor Market Areas*				
Northwest	19.4%	14.2%	66.3%	333
Southwest	21.9%	15.9%	62.2%	297
North Central	17.2%	6.6%	76.2%	192
South Central	18.9%	16.4%	64.7%	264
Eastern	11.0%	32.2%	56.8%	77

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

All of these tendencies are matters of degree. Within the nearly one third of adult Montanans aged less than 65 who report themselves as having some degree of interest in distance learning, there are undoubtedly significant numbers of those on the “less likely” side of each of these criteria.

We investigated potential interest in three specific delivery methods for distance learning education: (i) synchronous course delivery via internet, where students “meet” via internet at a regular, specific time, (ii) asynchronous internet delivery, which can be accessed by students at times of their own choosing, and (iii) delivery at a specific physical site using interactive television. Our findings on these methods are presented in Tables 2.2, 2.3 and 2.4, respectively.

Table 2.3: What about a distance learning class that is taught entirely on the internet and that can be accessed by you whenever you have time?

	Interest in Internet Class At Any Time			Total Respondents
	Interested	Not Sure	Not Interested	
Total	38.0%	16.2%	45.8%	1,164
Sex of respondent				
Female	38.2%	17.7%	44.1%	554
Male	37.9%	14.7%	47.4%	610
Age of respondent*				
18 – 24	42.1%	21.5%	36.4%	292
25 – 39	43.0%	9.2%	47.9%	296
40 – 49	33.9%	18.8%	47.3%	237
50 +	33.1%	15.8%	51.1%	339
Race of respondent				
American Indian	40.4%	25.4%	34.2%	77
White	38.6%	15.8%	45.5%	1,016
Educational attainment				
Less than HS diploma	38.0%	8.9%	53.1%	66
HS diploma, GED, some college	36.7%	17.2%	46.1%	712
BA +	42.1%	15.6%	42.3%	367
2009 household income*				
< 20k	43.3%	23.2%	33.4%	148
20k - 34k	32.0%	10.7%	57.4%	128
35k - 49k	42.4%	16.3%	41.3%	163
50k - 74k	37.7%	16.5%	45.8%	222
75k - 99k	41.2%	13.9%	44.9%	147
100k +	42.9%	13.8%	43.3%	158
Disability status*				
Yes	28.6%	17.4%	54.0%	188
No	39.8%	15.9%	44.2%	976
MT Labor Market Areas				
Northwest	39.1%	16.5%	44.4%	333
Southwest	41.2%	14.0%	44.8%	298
North Central	37.9%	17.1%	45.0%	193
South Central	37.2%	15.4%	47.4%	264
Eastern	24.0%	23.2%	52.9%	77

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

There is a clear distinction in interest between asynchronous internet delivery, on the one hand, and the other two methods considered. 38 percent of respondents said that they were interested in courses that they could access via internet at times of their own choosing, whereas the synchronous delivery of material via internet or via television at a central learning site were attractive to only 19.0 and 15.2 percent of adult Montanans, respectively. Most of the differences between interest according to age, sex, disability status, educational attainment, income, and region were the same for the different delivery categories as shown in Table 2.1 for distance learning education overall. An exception is the stronger preference of the young for asynchronous internet delivery.

Table 2.4: And what about a distance learning class that is taught using interactive (two-way) television at a central learning center site?

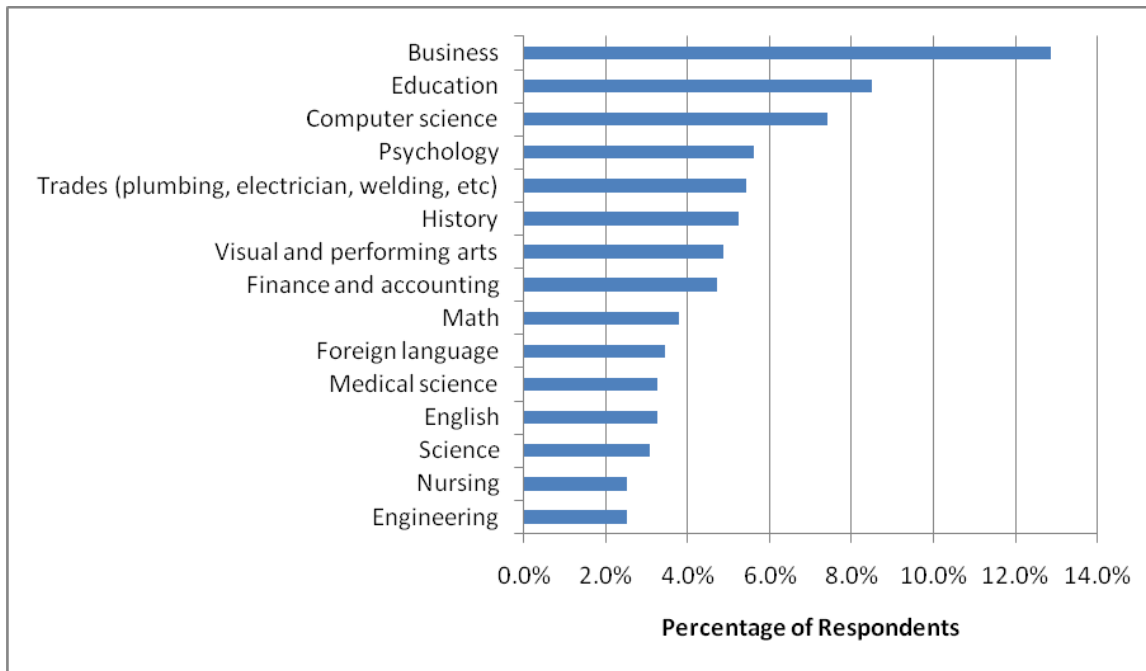
	Interest in Internet Class At A Central Learning Center			Total Respondents
	Interested	Not Sure	Not Interested	
Total	15.2%	20.8%	64.1%	1,159
Sex of respondent				
Female	13.3%	20.3%	66.4%	553
Male	16.8%	21.2%	61.9%	605
Age of respondent*				
18 – 24	18.0%	28.4%	53.6%	292
25 – 39	16.1%	18.2%	65.7%	293
40 – 49	10.7%	19.9%	69.5%	236
50 +	15.0%	17.1%	67.9%	338
Race of respondent*				
American Indian	16.8%	34.3%	49.0%	77
White	13.7%	20.7%	65.6%	1,013
Educational attainment				
Less than HS diploma	22.1%	17.1%	60.8%	66
HS diploma, GED, some college	13.4%	23.0%	63.6%	709
BA +	17.4%	18.2%	64.4%	367
2009 household income*				
< 20k	12.9%	34.2%	52.9%	148
20k - 34k	16.1%	18.8%	65.1%	128
35k - 49k	13.8%	24.3%	61.9%	162
50k - 74k	19.9%	19.4%	60.6%	221
75k - 99k	15.9%	17.4%	66.7%	146
100k +	14.1%	13.4%	72.5%	158
Disability status				
Yes	14.9%	22.8%	62.3%	187
No	15.2%	20.4%	64.4%	971
MT Labor Market Areas				
Northwest	17.5%	20.5%	62.0%	331
Southwest	19.2%	20.3%	60.5%	295
North Central	11.6%	22.4%	66.0%	192
South Central	12.3%	21.4%	66.3%	263
Eastern	8.3%	17.7%	74.0%	77

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Those who were interested in distance learning were given an opportunity to indicate what subject areas were of greatest interest to them. The highest number (12.8 %) picked business as a subject area of interest, followed by education, computer science, psychology and trades. As can be seen from Figure 2.1 depicting the top fifteen scoring subject areas, the differences between preferences beyond the highest three scoring subjects were not large.

Figure 2.1: Interest by Top Subject Areas



Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Almost half of those who indicated interest in distance learning report that they are simply interested in the classes themselves, rather than as part of the pursuit of a degree or certification. As shown in Table 2.5, 48.5 percent of those interested in distance learning say they are interested in the classes by themselves. There is also a substantial percentage (14.4%) who report that they don't know whether or not they are interested in pursuing certification or degree. Older, more affluent individuals are more likely to say that they are not pursuing a degree or certification.

Table 2.5: Now, are you interested in earning a degree or certification using only a distance learning program, or are you interested in taking a few courses using a distance learning program and then finishing your degree or certification using a traditional learning program, or are you just interested in taking a few distance learning courses?

	Type of Degree or Certification			Don't Know	Total Respondents
	Complete a degree or certification using only a distance learning program	Complete a traditional degree or certification program taking both	Just interested in taking a few distance learning courses		
Total	20.8%	16.1%	48.7%	14.4%	688
Sex of respondent					
Female	23.0%	16.8%	48.2%	12.0%	318
Male	18.9%	15.5%	49.2%	16.4%	370
Age of respondent*					
18 – 24	13.4%	23.1%	49.3%	14.2%	224
25 – 39	30.0%	20.1%	30.0%	19.9%	165
40 – 49	29.8%	13.5%	45.0%	11.7%	127
50 +	14.9%	5.2%	68.7%	11.3%	171
Race of respondent					
American Indian	24.9%	17.8%	38.7%	18.6%	59
White	20.5%	15.7%	49.9%	13.9%	591
Educational attainment*					
Less than HS diploma	4.4%	26.9%	64.6%	4.0%	42
HS diploma, GED, some college	19.4%	17.2%	45.6%	17.8%	423
BA +	27.1%	12.5%	51.8%	8.6%	219
2009 household income*					
< 20k	13.8%	22.6%	50.2%	13.3%	107
20k - 34k	25.5%	10.7%	47.9%	15.8%	70
35k - 49k	21.7%	12.5%	43.8%	22.0%	99
50k - 74k	32.1%	9.8%	48.7%	9.4%	125
75k - 99k	14.1%	16.1%	61.0%	8.8%	89
100k +	18.8%	18.7%	53.2%	9.3%	92
Disability status*					
Yes	13.2%	11.5%	48.2%	27.2%	103
No	22.1%	17.0%	48.8%	12.1%	585
MT Labor Market Areas*					
Northwest	20.7%	11.4%	51.9%	15.9%	193
Southwest	23.6%	18.1%	42.1%	16.2%	186
North Central	17.5%	25.3%	45.6%	11.6%	109
South Central	22.7%	11.0%	55.9%	10.4%	148
Eastern	12.7%	21.8%	46.6%	18.9%	53

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Roughly three of every ten adults have previously taken a DL course, as reported in Table 2.6 below, and thus have demonstrated past interest in distance learning. A second informative group is those who express interest in distance learning but have not yet taken a distance learning course. The largest difference between these groups is among those with different degrees of educational attainment. A very small percentage of those without a high school degree have previously taken a DL course, whereas almost 1 out of every 5 non-high school graduates who have not taken distance learning are interested in doing so.

Table 2.6: Possible Distance Learning Students

	Possible Distance Learning Students			Total Respondents
	Interested but not previously taken a DL course	Previously taken a DL course	Not interested and not taken a DL course	
Total	13.5%	27.8%	58.7%	1,164
Sex of respondent*				
Female	11.0%	31.6%	57.4%	554
Male	15.8%	24.3%	59.9%	610
Age of respondent*				
18 – 24	13.6%	28.5%	57.9%	292
25 – 39	17.1%	33.4%	49.5%	296
40 – 49	9.1%	26.8%	64.1%	237
50 +	13.4%	22.9%	63.7%	339
Race of respondent				
American Indian	12.7%	27.3%	60.0%	77
White	13.3%	28.6%	58.1%	1,016
Educational attainment*				
Less than HS diploma	20.0%	3.0%	77.0%	66
HS diploma, GED, some college	14.0%	24.0%	62.0%	712
BA +	11.6%	40.3%	48.1%	367
2009 household income*				
< 20k	24.9%	24.3%	50.8%	148
20k - 34k	11.9%	23.8%	64.3%	128
35k - 49k	14.9%	26.9%	58.2%	163
50k - 74k	9.9%	32.8%	57.3%	222
75k - 99k	16.3%	30.7%	53.0%	147
100k +	10.3%	29.8%	59.9%	158
Disability status				
Yes	14.7%	22.0%	63.3%	188
No	13.3%	28.9%	57.8%	976
MT Labor Market Areas*				
Northwest	13.0%	24.3%	62.8%	333
Southwest	18.1%	24.4%	57.5%	298
North Central	12.5%	32.8%	54.7%	193
South Central	12.2%	32.7%	55.1%	264
Eastern	5.2%	26.5%	68.3%	77

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Conclusion

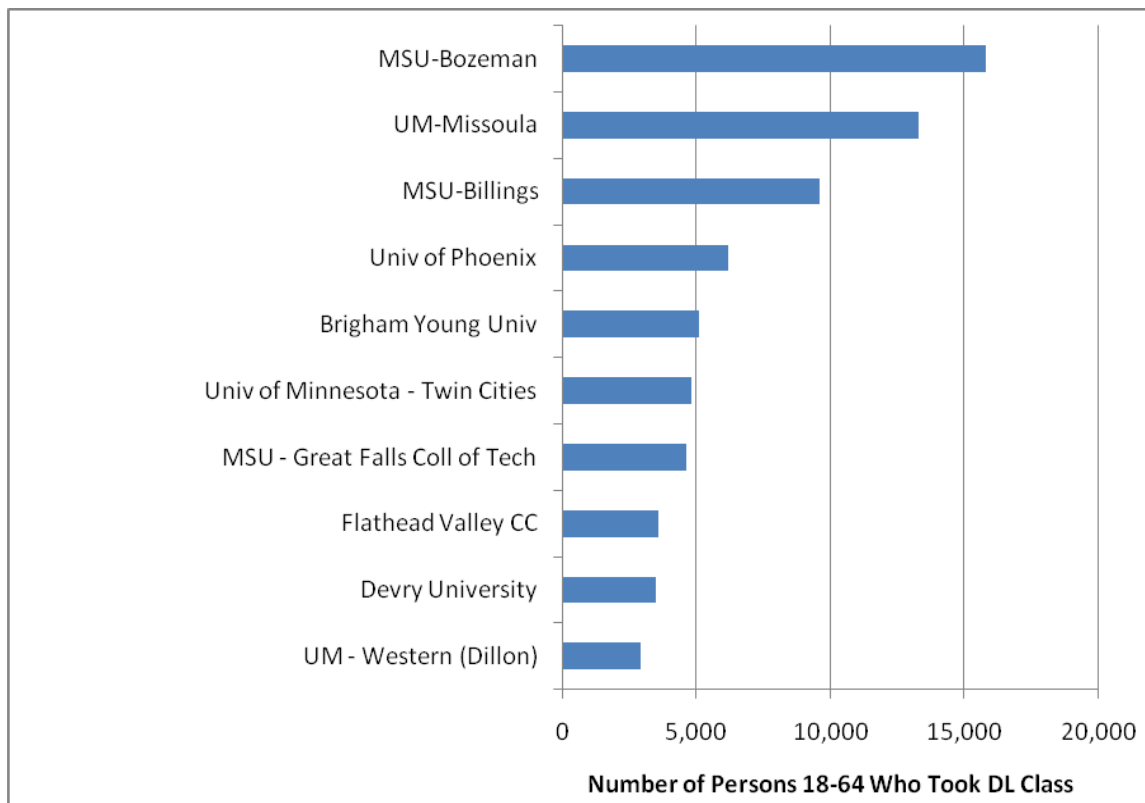
The number of Montanans interested in distance learning is sizeable. While differences in degree of interest exist between individuals in different age, sex, education, income and regional categories, most differences are of modest magnitude. There is a marked preference among Montanans for asynchronous internet delivery of course content, allowing students to access material at times of their own choosing, over more structured course delivery. The subject preferences of potential distance learning students are quite broad; with business, education, and computer science subject ranking the highest. A substantial proportion of those interested in distance learning say that they are more interested in the courses themselves than in pursuing a degree or certification.

Next, we examine survey responses concerning students' actual experiences with distance learning in Montana.

3. Current Experiences with Distance Learning

BBER estimates that there are 69,400 Montanans who are taking or have taken at least one distance learning course in their lifetimes. As shown in Figure 3.1 below, Montana’s three largest higher education institutions – MSU-Bozeman, UM-Missoula and MSU-Billings – have had the largest number of distance learning students as well. They jointly account for almost 56 percent of all individuals served by distance learning.

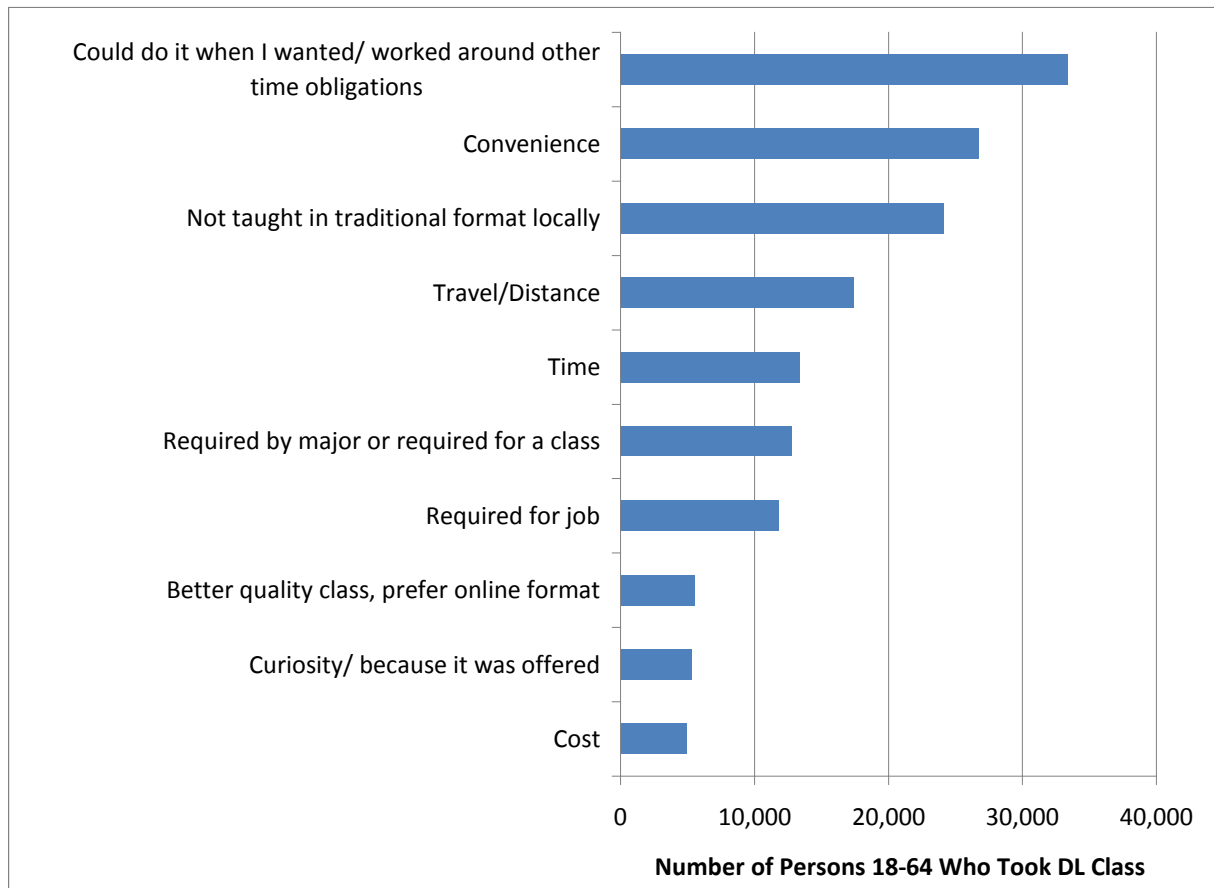
Figure 3.1: Number of Distance Learning Students by Institution



Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

BBER asked those students about their experiences with distance education. Perhaps not surprisingly, most cited greater convenience and shorter travel as a main motivation, as shown in Figure 3.2. Almost half of them said that the ability to schedule the class around their other commitments was their motivation for taking a distance learning course. More than a third said that the course they took was not available in a traditional format where they lived. Much smaller numbers said that lower cost or simple curiosity were drivers of their decision to take a distance learning class.

Figure 3.2: Motivations for Taking Distance Learning Class



Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

The most popular subject areas of classes actually taken, shown in Table 3.1, are broadly similar to the subject preferences reported in the previous section, but with some important differences. Business once again tops the list, with more than 28 percent of students saying that they took courses in this area. Computer science also ranks highly. Education courses, on the other hand, are less frequently taken than the preferences reported in the previous section would suggest. Trades and psychology are also relatively more preferred, and less taken, course subjects. The situation for finance and accounting, as well as math, is the opposite, with enrollment percentages higher than preferences would suggest. Nursing ranks seventh among courses taken, but only 14th among all subjects in which potential distance learning students are interested.

Table 3.1: Top 20 Courses Taken via Distance Learning

Rank	Course	Number of Students
1	Business	19,600
2	Finance and accounting	11,100
3	Computer science	10,900
4	Math	7,700
5	Education	7,600
6	Nursing	7,300
7	English	6,400
8	Trades (plumbing, electrician, welding, etc)	6,000
9	Psychology	5,800
10	Communications	4,500
11	Medical science	3,400
12	Personal fulfillment	3,200
13	History	2,800
14	Health and human performance	2,800
15	Political science	2,500
16	Foreign language	2,400
17	Real estate	2,400
18	Religious studies	2,300
19	Public health	2,200
20	Astronomy	2,100

There are also some important differences between the “interested” and “experienced” distance learning education populations. Women are only slightly more interested in distance learning than men (Table 2.1), but 31.6 percent of women have taken a DL course, compared to 24.3% of men, as shown in Table 3.2. The contrast between interest and experience is also pronounced for educational attainment categories, with more of the less educated expressing interest, but with much lower fractions actually taking DL classes.

Table 3.2: Previously taken a DL course

	Previously taken a DL course	Total Respondents
Total	27.8%	1,164
Sex of respondent		
Female	31.6%	554
Male	24.3%	610
Age of respondent		
18 – 24	28.5%	292
25 – 39	33.4%	296
40 – 49	26.8%	237
50 +	22.9%	339
Race of respondent		
American Indian	27.3%	77
White	28.6%	1,016
Educational attainment		
Less than HS diploma	3.0%	66
HS diploma, GED, some college	24.0%	712
BA +	40.3%	367
2009 household income		
< 20k	24.3%	148
20k - 34k	23.8%	128
35k - 49k	26.9%	163
50k - 74k	32.8%	222
75k - 99k	30.7%	147
100k +	29.8%	158
Disability status		
Yes	22.0%	188
No	28.9%	976
MT Labor Market Areas		
Northwest	24.3%	333
Southwest	24.4%	298
North Central	32.8%	193
South Central	32.7%	264
Eastern	26.5%	77

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

In fact, the profile of DL students presented in Table 3.2 supports the notion that distance learning courses are an integral part of obtaining a college degree. The experience profile is more heavily represented by those of a young enough age to have attended college after completing high school, and the likelihood that a Montanan with a bachelors degree has taken a DL course is much higher than the other educational attainment categories.

Finally, we note that while interest in distance learning was proportionately lower in eastern Montana (Table 2.1), the experience profile is much more balanced regionally. In fact, a higher proportion of eastern Montana adults aged less than 65 have taken DL courses than is the case in southwest Montana, the region that had the highest score in terms of interest.

Another contrast between stated preferences and actual experience can be seen from Table 3.3, which records total responses to the question of whether or not the student’s distance learning course was part of a completed program resulting in a degree or certification. Approximately 37 percent of potential students said they were interested in applying a distance learning course towards a terminal degree or certification, but a significantly higher fraction (57.6%) of those who have actually taken DL courses have applied it towards that outcome. Not surprisingly, those who have a 4-year college degree are much more likely to report a certificate or degree as part of their DL experience.

Table 3.3: Now, do you happen to remember whether or not you completed the distance learning degree or certification? (Asked only of those taking distance learning class)

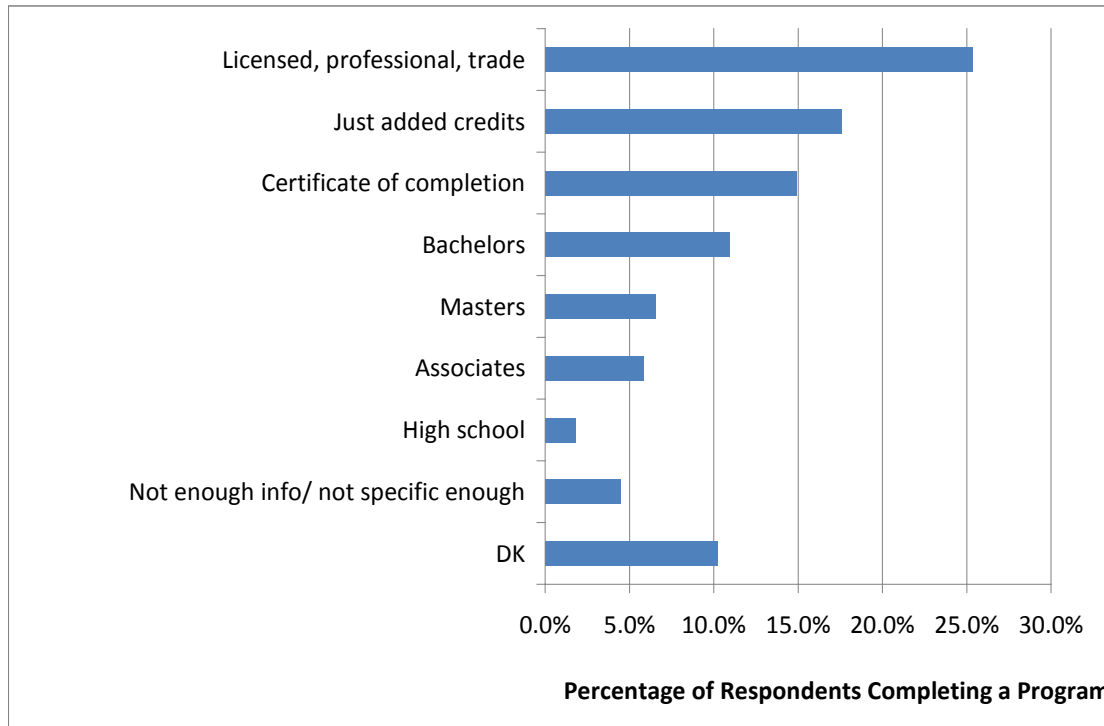
	Completed Program	Did Not Complete Program	Don't Know	Total Respondents
Total	57.6%	24.8%	17.6%	319
Sex of respondent				
Female	57.3%	28.0%	14.7%	171
Male	57.9%	21.1%	21.1%	148
Age of respondent*				
18 – 24	34.6%	39.8%	25.6%	82
25 – 39	59.0%	26.0%	15.0%	97
40 – 49	64.9%	17.0%	18.1%	63
50 +	74.1%	13.7%	12.3%	77
Race of respondent*				
American Indian	47.9%	48.2%	3.8%	21
White	58.1%	23.3%	18.7%	286
Educational attainment*				
Less than HS diploma	29.1%	70.9%	.0%	2
HS diploma, GED, some college	48.3%	36.4%	15.2%	168
BA +	68.7%	11.1%	20.3%	146
2009 household income*				
< 20k	31.0%	52.3%	16.7%	36
20k - 34k	66.7%	28.2%	5.1%	30
35k - 49k	68.9%	20.8%	10.3%	42
50k - 74k	58.5%	13.8%	27.7%	73
75k - 99k	63.4%	21.2%	15.4%	44
100k +	61.5%	27.4%	11.1%	47
Disability status				
Yes	60.1%	25.1%	14.8%	41
No	57.2%	24.7%	18.1%	277
MT Labor Market Areas*				
Northwest	59.2%	28.4%	12.4%	81
Southwest	60.9%	12.6%	26.4%	73
North Central	57.8%	29.6%	12.6%	62
South Central	54.9%	22.6%	22.5%	83
Eastern	48.9%	48.3%	2.8%	20

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Yet, as Figure 3.3 makes clear, a high proportion of those who have earned a degree or certificate applied their DL course towards a professional credential. Just over 10 percent said that the credential that resulted (in part) from their distance learning course was a bachelor’s degree, whereas more than twice that fraction said a license or professional or trade certificate was the ultimate result. The latter included nursing (LPN), carpentry, plumbing, and welding certification.

Figure 3.3: Degree or Certificate Earned Though Distance Learning



Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Another issue addressed in Montanans actual experience with distance learning courses is the extent to which DL courses substitute for, or add to, traditional face to face delivery of education. 62.6 percent of current and former distance learning students said that they would have taken their DL course in a traditional format if the latter were the only option, as detailed in Table 3.4. This leaves a significant number of courses which would not have been taken at all without the option of distance learning. Those of traditional college age were much more likely to say that they would have taken their DL course in a traditional format if distance learning were not offered, whereas older students were much less likely to have said this.

Table 3.4: Would you have taken the course(s) you just named if it was only offered in a traditional format where you go to class for a certain amount of time each week, or not?

	Percentage of Respondents Taking Distance Learning Class		Total Respondents
	Yes	No	
Total	62.6%	37.4%	309
Sex of respondent			
Female	60.8%	39.2%	165
Male	64.7%	35.3%	144
Age of respondent*			
18 – 24	91.2%	8.8%	82
25 – 39	58.0%	42.0%	91
40 – 49	47.4%	52.6%	62
50 +	49.4%	50.6%	74
Race of respondent			
American Indian	70.5%	29.5%	20
White	62.8%	37.2%	278
Educational attainment			
Less than HS diploma	70.9%	29.1%	2
HS diploma, GED, some college	65.9%	34.1%	163
BA +	58.8%	41.2%	142
2009 household income*			
< 20k	88.8%	11.2%	36
20k - 34k	79.3%	20.7%	27
35k - 49k	52.6%	47.4%	39
50k - 74k	53.0%	47.0%	71
75k - 99k	60.1%	39.9%	44
100k +	66.1%	33.9%	46
Disability status			
Yes	60.8%	39.2%	41
No	62.9%	37.1%	268
MT Labor Market Areas			
Northwest	64.8%	35.2%	80
Southwest	70.2%	29.8%	71
North Central	58.0%	42.0%	58
South Central	55.1%	44.9%	80
Eastern	69.9%	30.1%	20

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Conclusion

The marketplace for distance learning education, like higher education in general, is quite diverse. Montanans aged 18-64 have taken DL courses from a sizable number of institutions, and have received a wide range of credentials partially as a result. Not surprisingly, it is the convenience, both in terms of coordination with other activities as well as shorter travel requirements that rank highest in terms of their motivation for taking DL courses. However some said that DL courses were not available in traditional format where they lived and this motivated their enrollment. Although a majority of DL students would have taken their course via traditional in-person instruction if the DL option were not available (particularly for the college-age individuals), there was a sizable fraction (37.4%) whose said that DL courses added to, rather than substituted for, traditional instruction. There are also important differences between the population of those who say they are interested in distance learning and those who have actually had DL courses, with the latter group being more female, more educated, and more equally dispersed regionally than interests alone would indicate.

In the next section we address a special issue in distance learning education, namely, the interest in pursuing dual credit courses for high school aged students.

4. Dual Credit Courses

A topic of special interest that was addressed in this project was the interest in dual-credit, high school/college level course work. As reported in Table 4.1, roughly two-thirds of Montanans with teenaged children in their households expressed an interest in these courses. White households were much more likely to be interested in such courses for their children than American Indian households, although almost half of the latter indicated interest. There is evidence that interest grows with household income, although small numbers of respondents for individual categories makes the estimates less reliable.

Table 4.1: Are you, yourself interested in having your teen take dual-credit, high school/ college-level course work?

	Yes	No	Don't Know	Total Respondents
Total	64.9%	26.9%	8.1%	212
Sex of respondent				
Female	66.2%	26.9%	6.9%	116
Male	63.3%	27.0%	9.7%	96
Age of respondent				
18 – 24	36.9%	63.1%	.0%	8
25 – 39	63.2%	23.0%	13.8%	43
40 – 49	65.8%	30.0%	4.3%	107
50 +	68.6%	19.0%	12.4%	54
Race of respondent				
American Indian	47.2%	42.5%	10.3%	17
White	66.7%	25.6%	7.6%	184
Educational attainment				
Less than HS diploma	79.9%	10.8%	9.3%	5
HS diploma, GED, some college	58.9%	29.8%	11.3%	129
BA +	74.0%	23.3%	2.7%	78
2009 household income				
< 20k	68.0%	14.9%	17.2%	10
20k - 34k	50.7%	41.6%	7.7%	21
35k - 49k	54.9%	31.4%	13.7%	24
50k - 74k	58.8%	28.2%	13.0%	51
75k - 99k	65.0%	32.7%	2.3%	34
100k +	83.0%	13.7%	3.3%	47
Disability status				
Yes	50.3%	40.0%	9.7%	28
No	67.1%	25.0%	7.9%	184
MT Labor Market Areas				
Northwest	59.5%	24.2%	16.4%	60
Southwest	68.4%	29.3%	2.3%	51
North Central	65.4%	29.1%	5.5%	35
South Central	72.9%	20.2%	6.9%	50
Eastern	47.2%	47.6%	5.2%	15

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

The “interested” fraction of the population drops to just under a half when the question asks respondents to assess interest from the point of view of their teenaged child. As was the case for parent interest, teen interest may be positively correlated with household income.

Table 4.2: Is your teen interested in taking dual-credit, high school/ college-level course work?

	Yes	No	Don't Know	Total Respondents
Total	47.5%	32.5%	19.9%	212
Sex of respondent				
Female	49.3%	32.2%	18.5%	116
Male	45.5%	32.9%	21.7%	96
Age of respondent				
18 – 24	66.4%	33.6%	.0%	8
25 – 39	45.0%	31.9%	23.1%	43
40 – 49	44.7%	33.9%	21.5%	107
50 +	52.6%	30.2%	17.3%	54
Race of respondent				
American Indian	48.6%	38.8%	12.6%	17
White	48.7%	31.3%	20.0%	184
Educational attainment				
Less than HS diploma	37.1%	15.6%	47.3%	5
HS diploma, GED, some college	45.6%	35.8%	18.6%	129
BA +	51.5%	28.3%	20.2%	78
2009 household income				
< 20k	56.2%	38.1%	5.8%	10
20k - 34k	44.0%	41.3%	14.7%	21
35k - 49k	38.7%	39.2%	22.1%	24
50k - 74k	46.5%	27.8%	25.7%	51
75k - 99k	38.4%	47.5%	14.1%	34
100k +	61.2%	20.1%	18.6%	47
Disability status				
Yes	37.0%	37.6%	25.4%	28
No	49.1%	31.7%	19.1%	184
MT Labor Market Areas				
Northwest	39.0%	31.9%	29.1%	60
Southwest	50.9%	25.7%	23.4%	51
North Central	55.8%	26.9%	17.3%	35
South Central	47.0%	39.6%	13.4%	50
Eastern	52.7%	47.3%	.0%	15

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

In the next section we assess internet access in the Montana adult population, a necessary condition for distance learning delivery in many circumstances.

5. Internet Access

Effective delivery of education electronically requires more than student demand and the readiness of institutions to meet it. Internet delivery typically requires hardware, knowledge, and access to a high speed internet connection. Just the last item – high speed internet availability – is a surprisingly hard piece of information to quantify in Montana. An important product of this project is a high quality estimate of internet availability.

Table 5.1: Do you happen to know whether high speed internet service is available where you currently live or stay?

	Montana Adults Ages 18 – 64 Fall 2009			Total Respondents
	Yes	No	Don't Know	
Total	83.9%	8.8%	7.3%	1164
Sex of respondent				
Female	81.8%	10.6%	7.5%	554
Male	85.8%	7.1%	7.2%	610
Age of respondent				
18 – 24	82.2%	8.1%	9.7%	292
25 – 39	83.5%	11.0%	5.6%	296
40 – 49	85.9%	7.1%	7.0%	237
50 +	84.3%	8.6%	7.0%	339
Race of respondent*				
American Indian	73.0%	11.9%	15.1%	77
White	84.5%	8.5%	6.9%	1016
Educational attainment*				
Less than HS diploma	74.9%	2.8%	22.3%	66
HS diploma, GED, some college	81.9%	10.3%	7.8%	712
BA +	89.2%	6.9%	3.9%	367
2009 household income*				
< 20k	74.3%	10.8%	14.9%	148
20k - 34k	81.0%	13.2%	5.7%	128
35k - 49k	85.0%	8.6%	6.4%	163
50k - 74k	87.7%	8.3%	4.0%	222
75k - 99k	90.7%	4.9%	4.4%	147
100k +	89.9%	6.1%	4.1%	158
Disability status				
Yes	85.8%	5.9%	8.2%	188
No	83.5%	9.3%	7.2%	976
MT Labor Market Areas*				
Northwest	86.6%	6.7%	6.6%	333
Southwest	83.7%	11.2%	5.1%	298
North Central	84.3%	8.9%	6.8%	193
South Central	82.7%	9.1%	8.2%	264
Eastern	76.0%	7.0%	17.0%	77

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Not all Montanans access the internet most from their homes. But high speed internet access from one's residence clearly allows for the flexibility and convenience that are cited as high motivators for pursuing distance education. Almost 84% of Montanans aged 18-64 said that high speed internet is available where they live, as shown in Table 5.1. Specifically, when asked

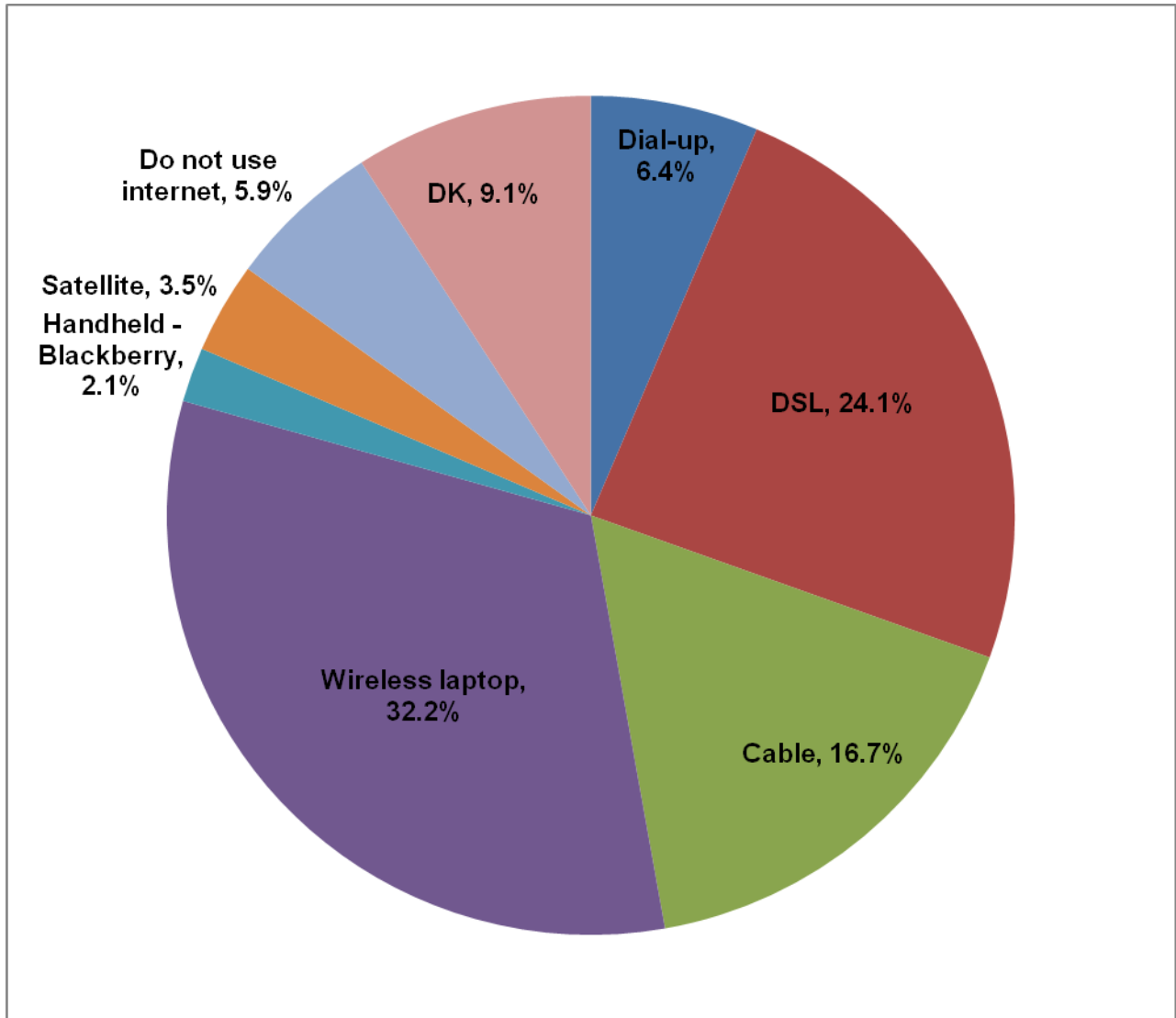
“Do you happen to know whether high speed internet service is available where you currently live or stay? High speed internet service is usually delivered using a digital subscriber line (DSL) delivered by a telephone company or a cable connection delivered by a cable TV company,”

these respondents indicated yes. Another 7.3 percent reported that they did not know if high speed internet was available. 8.8 percent said that high speed internet service was not available at their residence, which represents approximately 54,500 people in the state population.

There are certain categories of individuals that have markedly lower high speed internet availability at their homes. The fraction of American Indian households with high speed availability in their residences is more than 10 percentage points lower than white households, although a higher fraction of American Indian households said they didn't know whether they had availability or not. Lower income and less educated households also were more likely to not have high speed service available. There is also less high speed internet access in eastern Montana than in other regions of the state.

Internet is seemingly everywhere these days – in homes, cafes, workplaces, and libraries. We asked Montanans about the type of internet connections that had in the place where they used internet the most, with their responses reported in Figure 5.1. Only 5.9 percent of adult Montanans aged less than 65 said that they did not use internet. More than three out of every four (76.5%) said that they access internet through a high speed connection (DSL, cable, wireless or satellite). The “wireless laptop” category comprises those who use a laptop or netbook in combination with a wireless router. Since an additional 9.1 percent said that they did not know the type of internet connection they used, actual high speed internet access is likely to be slightly higher.

Figure 5.1: Connection type or connection device reported



More than internet accessibility is needed for delivery of distance learning – basic familiarity with internet and computers is also necessary. As shown in Table 5.2, the “don’t use internet” population is overrepresented by older, American Indian, lower income, eastern, disabled, and male Montanans. In some cases the differences between these subgroups is statistically significant. Dialup access is slightly more common for lower income, less educated respondents. DSL use is highest in northwest Montana. Younger Montanans are less likely to use dialup access.

Table 5.2: Connection type or connection device - most often used

Montana Adults Ages 18 – 64 Fall 2009									
	Dial-up	DSL	Cable	Wireless laptop	Handheld - Blackberry	Satellite	Do not use internet	Don't Know	Total Respondents
Total	6.4%	24.1%	16.7%	32.2%	2.1%	3.5%	5.9%	9.1%	1,148
Sex of respondent									
Female	6.5%	23.2%	15.0%	33.2%	2.5%	3.9%	4.4%	11.2%	543
Male	6.4%	24.8%	18.3%	31.2%	1.7%	3.2%	7.3%	7.1%	605
Age of respondent*									
18 – 24	3.2%	15.3%	15.3%	48.4%	2.1%	1.8%	3.2%	10.6%	287
25 – 39	6.4%	28.9%	15.2%	31.6%	2.9%	2.8%	3.9%	8.1%	293
40 – 49	5.3%	27.3%	18.0%	27.7%	2.4%	3.1%	7.6%	8.7%	233
50 +	10.1%	25.1%	18.4%	21.8%	1.0%	5.8%	9.0%	8.8%	335
Race of respondent									
American Indian	7.4%	19.1%	12.3%	32.7%	1.4%	2.2%	10.6%	14.3%	73
White	6.6%	25.0%	15.8%	32.9%	2.2%	3.4%	5.3%	9.0%	1,006
Educational attainment*									
Less than HS diploma	8.7%	9.4%	6.6%	57.1%	.0%	1.2%	7.6%	9.3%	66
HS diploma, GED, some college	6.9%	23.1%	14.7%	30.3%	2.9%	3.5%	7.9%	10.7%	701
BA +	5.5%	29.1%	21.8%	31.8%	1.0%	4.2%	1.2%	5.4%	363
2009 household income*									
< 20k	5.2%	25.6%	11.6%	29.4%	2.4%	4.4%	10.1%	11.4%	146
20k - 34k	7.6%	24.6%	18.7%	19.0%	2.2%	6.7%	10.7%	10.5%	125
35k - 49k	11.8%	22.7%	14.8%	33.7%	1.6%	1.1%	5.0%	9.3%	163
50k - 74k	7.1%	29.9%	16.9%	32.0%	3.8%	2.4%	2.2%	5.6%	219
75k - 99k	3.2%	26.1%	25.6%	31.8%	2.7%	3.9%	1.4%	5.2%	144
100k +	2.8%	26.9%	18.4%	40.2%	1.3%	3.1%	1.1%	6.2%	158
Disability status*									
Yes	9.5%	15.4%	12.9%	29.3%	1.4%	3.8%	9.1%	18.7%	184
No	5.9%	25.8%	17.5%	32.7%	2.2%	3.5%	5.3%	7.2%	964
MT Labor Market Areas*									
Northwest	5.0%	32.9%	12.1%	34.3%	1.6%	1.4%	6.2%	6.4%	329
Southwest	7.4%	23.5%	20.1%	25.8%	2.0%	3.7%	5.1%	12.4%	292
North Central	9.8%	18.0%	16.3%	34.4%	1.4%	5.2%	4.6%	10.2%	189
South Central	5.8%	18.3%	21.9%	31.4%	3.8%	5.1%	6.4%	7.3%	260
Eastern	2.9%	23.1%	7.2%	44.5%	.0%	2.3%	9.5%	10.6%	77

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Table 5.3: What method do you most often use to connect to the internet?

Montana Adults Ages 18 - 64, Fall 2009

	A landline or cable connection	A wireless connection	Never use internet	Don't Know	Total Respondents
Total	50.7%	39.5%	5.9%	4.0%	1,164
Sex of respondent					
Female	49.3%	41.9%	4.4%	4.5%	554
Male	51.9%	37.3%	7.2%	3.6%	610
Age of respondent*					
18 – 24	37.7%	53.3%	3.2%	5.9%	292
25 – 39	52.9%	38.5%	3.8%	4.7%	296
40 – 49	53.9%	36.4%	7.4%	2.3%	237
50 +	57.6%	30.5%	8.8%	3.0%	339
Race of respondent*					
American Indian	42.8%	37.4%	10.1%	9.6%	77
White	50.5%	40.4%	5.2%	3.9%	1016
Educational attainment*					
Less than HS diploma	24.8%	62.4%	7.6%	5.2%	66
HS diploma, GED, some college	48.9%	38.5%	7.7%	4.8%	712
BA +	58.2%	38.1%	1.2%	2.5%	367
2009 household income*					
< 20k	48.9%	37.2%	10.0%	4.0%	148
20k - 34k	52.5%	28.2%	10.5%	8.8%	128
35k - 49k	52.5%	40.8%	5.0%	1.7%	163
50k - 74k	56.2%	39.4%	2.2%	2.2%	222
75k - 99k	56.2%	39.2%	1.4%	3.3%	147
100k +	50.5%	46.9%	1.1%	1.6%	158
Disability status*					
Yes	41.4%	38.6%	8.9%	11.2%	188
No	52.5%	39.6%	5.3%	2.6%	976
MT Labor Market Areas*					
Northwest	52.7%	39.4%	6.1%	1.7%	333
Southwest	56.5%	33.0%	5.1%	5.4%	298
North Central	47.1%	43.4%	4.5%	5.0%	193
South Central	49.0%	41.2%	6.3%	3.5%	264
Eastern	33.8%	48.5%	9.5%	8.2%	77

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Since internet connectivity is a crucial link in distance learning, we asked the question a number of different ways. The most basic question – home internet connectivity – is reported in Table 5.4. Almost 84 percent of Montana adults aged less than 65 said they had working internet at home. Home connectivity is positively related to income and education, and is more prevalent for whites than American Indians. However, home access for even white, high earning respondents with a college degree is less than universal. Nearly one out of every ten college educated Montanans does not have internet access from home.

Table 5.4: Do you have a working internet connection where you currently live or stay?

	Montana Adults Ages 18 – 64 Fall 2009		Total Respondents
	Yes	No	
Total	83.8%	16.2%	1,164
Sex of respondent			
Female	86.0%	14.0%	554
Male	81.8%	18.2%	610
Age of respondent			
18 – 24	86.2%	13.8%	292
25 – 39	83.0%	17.0%	296
40 – 49	84.4%	15.6%	237
50 +	82.1%	17.9%	339
Race of respondent*			
American Indian	52.1%	47.9%	77
White	86.7%	13.3%	1,016
Educational attainment*			
Less than HS diploma	82.0%	18.0%	66
HS diploma, GED, some college	80.1%	19.9%	712
BA +	92.8%	7.2%	367
2009 household income*			
< 20k	74.9%	25.1%	148
20k - 34k	75.0%	25.0%	128
35k - 49k	85.1%	14.9%	163
50k - 74k	88.8%	11.2%	222
75k - 99k	93.1%	6.9%	147
100k +	94.7%	5.3%	158
Disability status*			
Yes	74.4%	25.6%	188
No	85.6%	14.4%	976
MT Labor Market Areas			
Northwest	84.7%	15.3%	333
Southwest	83.6%	16.4%	298
North Central	81.9%	18.1%	193
South Central	85.4%	14.6%	264
Eastern	80.0%	20.0%	77

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Home connectivity is important because, as shown in Table 5.5, home is the place where most (81%) Montana adults aged less than 65 use the internet. Other places, such as work, libraries, school, or other access points were reported much less frequently as primary access points. This

pattern is income and education sensitive. Table 5.5 portrays home internet access as more of a luxury than a necessity. Low income individuals are much less likely to have a connection at home, and are more likely to use public access points. Over a third of American Indians said that their primary connection to internet is at work, in libraries, or at internet cafes and schools and other “hot spots.”

Table 5.5: Where else do you most often access the internet, if not in your home?

Montana Adults Ages 18 - 64, Fall 2009							
	Use Internet at Home	Work	Library	Internet cafe, school, other	No Internet Use Past 30 Days	Do Not Use Internet	Total Respondents
Total	81.0%	5.3%	1.6%	3.2%	3.1%	5.9%	1,164
Sex of respondent							
Female	83.7%	5.4%	1.8%	2.4%	2.3%	4.4%	554
Male	78.5%	5.1%	1.4%	3.8%	3.9%	7.2%	610
Age of respondent*							
18 – 24	84.1%	4.2%	1.7%	3.9%	2.9%	3.2%	292
25 – 39	81.2%	6.7%	.9%	5.5%	1.8%	3.8%	296
40 – 49	81.6%	4.8%	1.4%	1.2%	3.5%	7.4%	237
50 +	77.7%	5.2%	2.2%	1.8%	4.2%	8.8%	339
Race of respondent*							
American Indian	51.1%	12.6%	11.5%	10.3%	4.4%	10.1%	77
White	83.7%	4.7%	.9%	2.6%	3.0%	5.2%	1,016
Educational attainment*							
Less than HS diploma	83.0%	.0%	.0%	6.5%	2.9%	7.6%	66
HS diploma, GED, some college	75.8%	5.7%	2.3%	4.1%	4.5%	7.7%	712
BA +	92.1%	5.0%	.7%	.3%	.7%	1.2%	367
2009 household income*							
< 20k	66.2%	1.4%	5.2%	7.9%	9.4%	10.0%	148
20k - 34k	71.7%	7.6%	2.4%	4.5%	3.4%	10.5%	128
35k - 49k	82.7%	4.6%	3.5%	1.8%	2.4%	5.0%	163
50k - 74k	86.3%	6.0%	.3%	2.9%	2.3%	2.2%	222
75k - 99k	92.2%	2.9%	.6%	2.0%	.9%	1.4%	147
100k +	92.0%	4.2%	.0%	.0%	2.7%	1.1%	158
Disability status*							
Yes	68.7%	9.0%	2.6%	3.5%	7.3%	8.9%	188
No	83.3%	4.5%	1.4%	3.1%	2.3%	5.3%	976
MT Labor Market Areas							
Northwest	82.3%	3.2%	1.3%	4.5%	2.6%	6.1%	333
Southwest	79.1%	8.4%	1.1%	1.8%	4.5%	5.1%	298
North Central	78.0%	6.6%	2.9%	4.0%	3.9%	4.5%	193
South Central	83.5%	4.4%	1.4%	2.3%	2.2%	6.3%	264
Eastern	81.9%	1.9%	1.9%	3.4%	1.5%	9.5%	77

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Table 5.6
Most Frequently Used Internet Connection by Adults Age 18 - 64
Interested in Distance Learning, Montana, Fall 2009

Type of access	Population	Percent	95% Confidence Interval (+/-)	
Landline	Dial-up	10,500	1.8%	4,700
	DSL, Cable, T1	86,700	14.2%	12,300
	DSL, Cable, T1 AND wireless router	60,800	9.9%	10,500
	Unsure type of landline	3,700	0.6%	3,500
	Total landline	161,700	26.5%	15,500
Wireless	Blackberry - other handheld	5,300	0.9%	3,500
	Satellite connection	7,900	1.3%	4,000
	Unsure type of wireless or other (air-card)	2,600	0.4%	3,500
	Total wireless	15,800	2.6%	5,600
Do not use internet	3,200	0.5%	3,500	
Don't know	5,800	0.9%	3,500	
MT 2008 population age 18 - 64 interested in distance learning	186,500	30.5%	16,300	

Sources: BBER, 2009 MT Distance Learning Survey; CEIC 2008 Population Estimates, MT Department of Labor and Industry; U.S. Census Bureau

It is extremely informative to break out the information on internet access with the population restricted to those who indicated an interest in distance learning (as described in Section 2). Of the 186,500 Montanans aged 18-64 who had some level of interest in DL courses, 177,500 (95.2%) use internet, predominantly high-speed internet, as reported in Table 5.6 above. In terms of home internet access, 89.8% of those interested in DL courses are connected to internet at their homes or residences.

Conclusion

This section presents a valuable snapshot of internet availability and usage by Montanans that is useful in its own right. It also comprises a key link between distance learning preferences and desires, and actual content delivery. In terms of availability, 84 percent of respondents said that high speed internet is available where they live, with another 7.9 percent saying that they did not know. Thus it is reasonable to suppose that the actual fraction of residences in markets where high speed internet is available is slightly higher than 84 percent.

Although internet is seemingly everywhere, access at home is arguably the most important for distance learning, for two reasons. First, home access is most consistent with the convenience and coordination with other activities that those interested in DL courses cite as main motivations. The second reason is that 84 percent of respondents said that home is the place where they use internet the most.

Patterns of internet access and usage differ markedly across sub-populations. Lower income Montanans, American Indians, and individuals with lower levels of educational attainment are less likely to have home internet access. Older Montanans are more likely to not use internet, or to have dial-up access only. Eastern Montana has slightly less high speed internet than other regions. More than 10 percent of individuals earning \$35,000 per year or less say that they don't use internet, whereas only 1.1% of those making \$100,000 or more report that they don't use the internet.

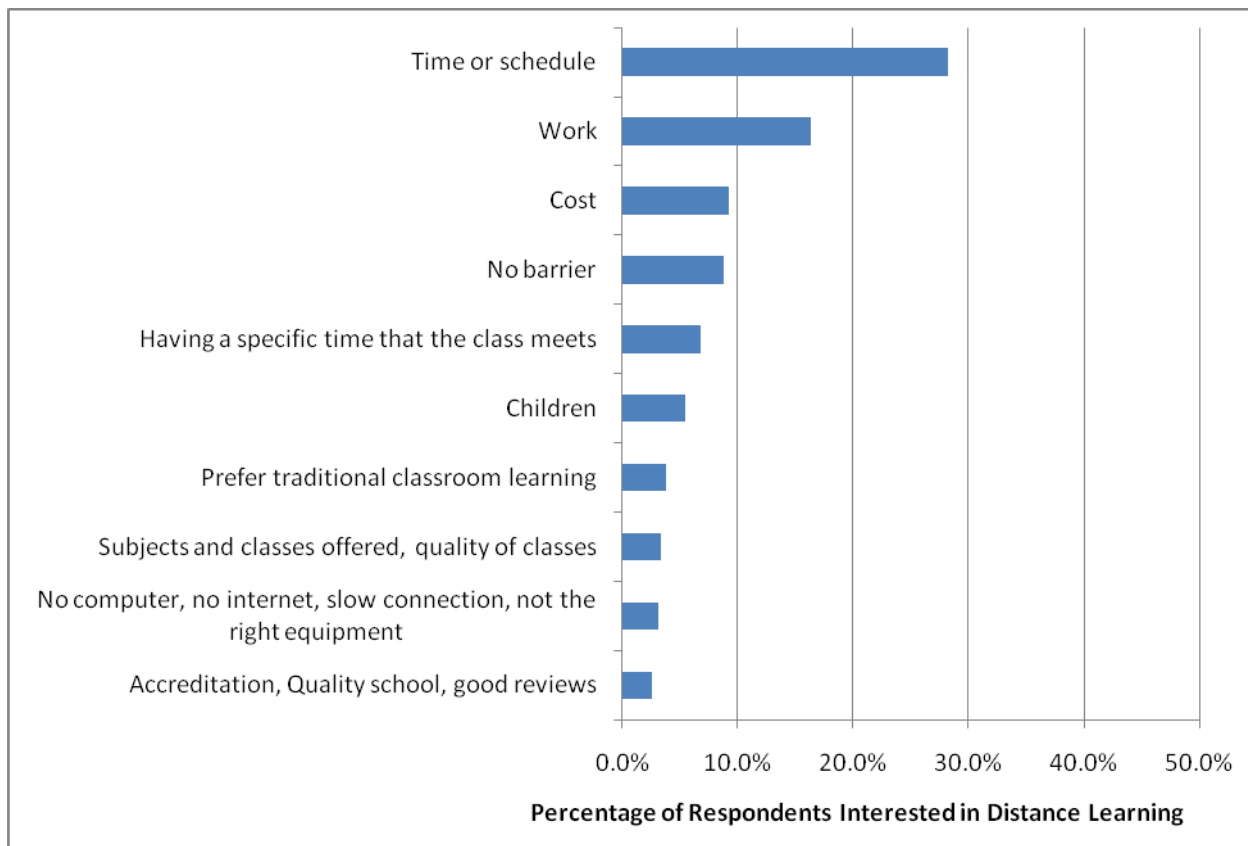
Now we will discuss the barriers to distance learning courses, as seen from the eyes of actual and potential students.

6. Barriers to Taking Distance Learning Courses

Given the large number of Montanans who indicate they have at least some interest in distance learning courses on the one hand, and the actual numbers of people enrolled in these courses on the other, it is natural to ask what the impediments or barriers are to more people taking DL courses. We asked this question for three types of content delivery: synchronous delivery via internet, asynchronous internet, and instruction using two-way television offered at a distance learning site.

The most frequently cited barrier that kept people from taking an internet course that was taught at a specific time each week was time and schedule, followed by coordination with work, and then cost. Over 8 percent said that there was no barrier, as shown in Figure 6.1 below. This was followed by a range of other concerns, from the presence of children to concerns over quality. Only 3.2 percent cited a lack of computer and/or internet connectivity as an impediment to taking a DL course.

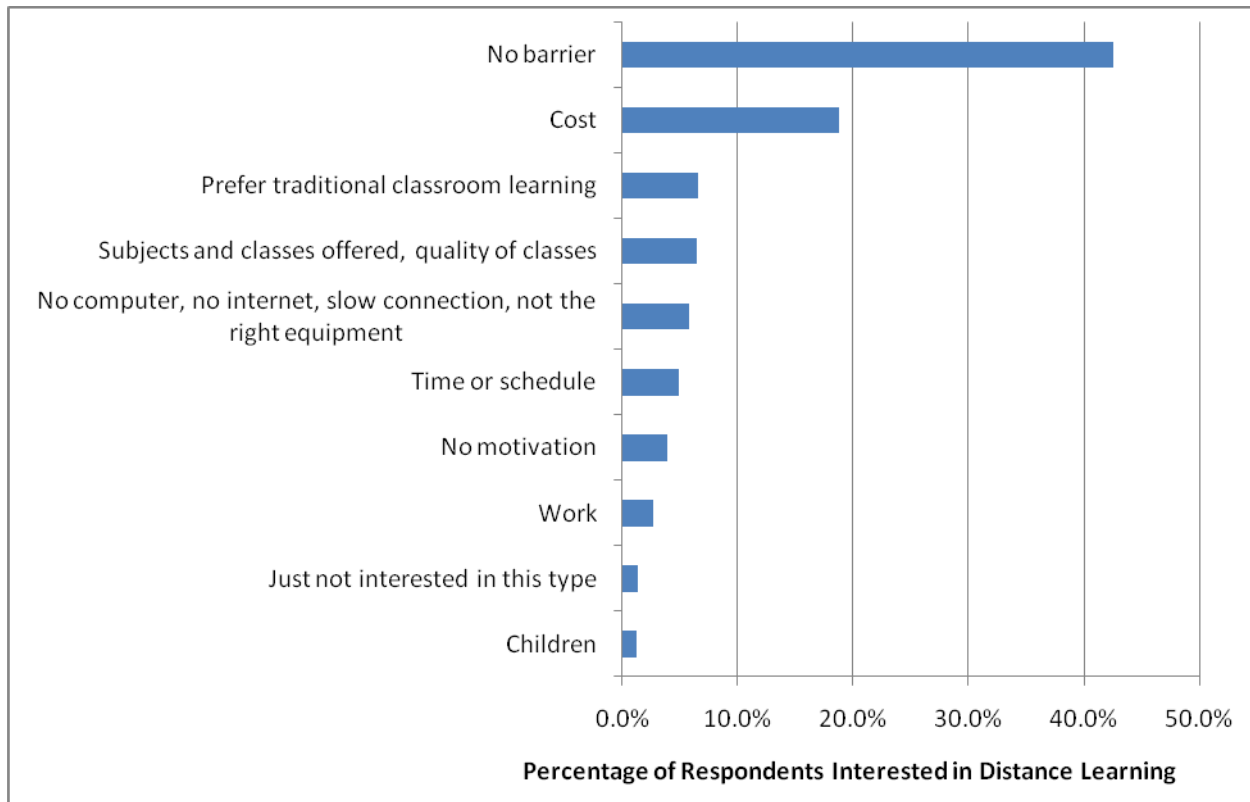
Figure 6.1: Barriers to Taking a Distance Learning Course Mostly On the Internet at a Specific Time?



Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

The situation for asynchronous internet delivery, where students can access course instruction materials at any time, is strikingly different, as shown in Figure 6.2. For these types of courses, 42% said that there was no barrier. With timing and scheduling conflicts removed by the delivery technology, issues of cost, quality, and computer capability loom larger. There remains a population that does not have adequate time, motivation, or capability for a distance learning course, but the answers shown below are consistent with the much stronger preference for asynchronous internet delivery reported in Section 2.

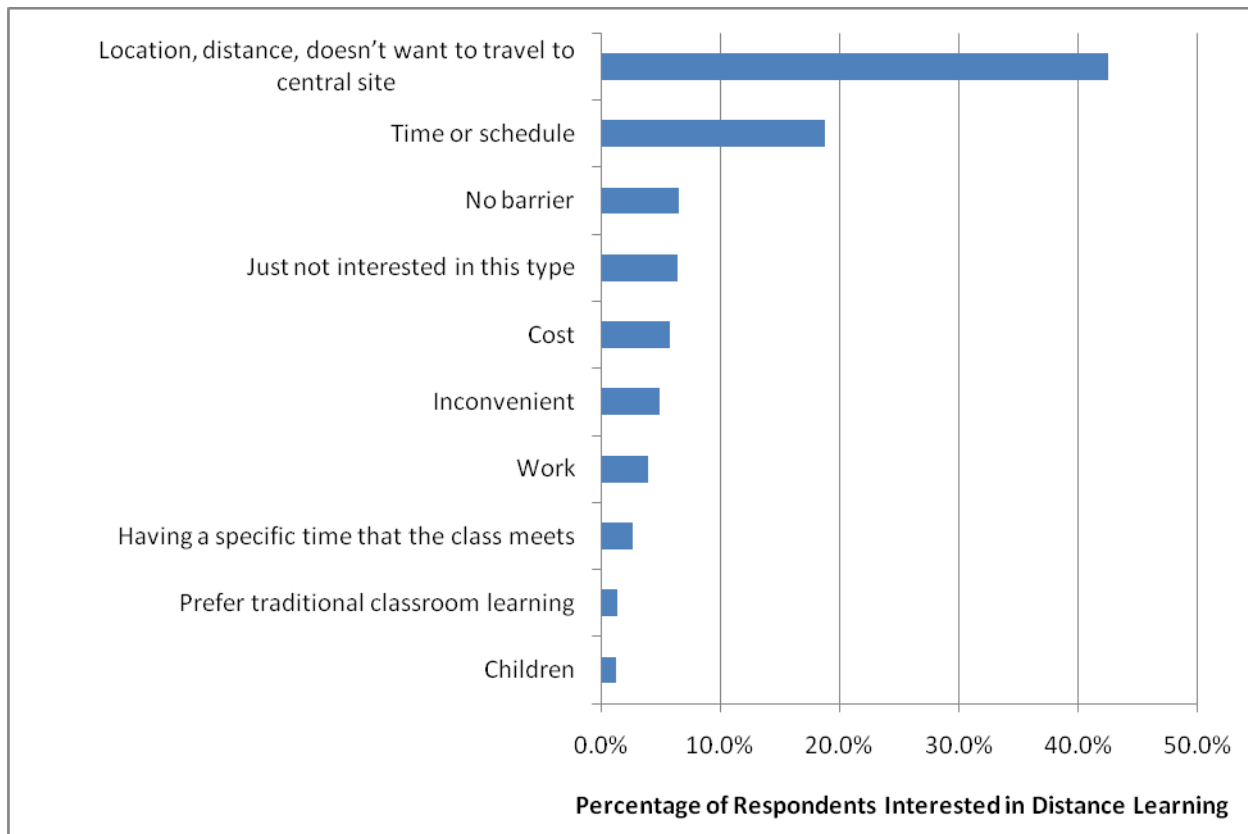
Figure 6.2: Barriers to Taking a Distance Learning Course Entirely on the Internet Accessed at Any Time?



Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Distance learning course delivery via two-way television at specific learning sites adds the cost of travel to the inconvenience of participating in classes at specific times. Perhaps not surprisingly, respondents reported that travel to the learning site was a significant barrier to their participation in this type of course, as reported in Figure 6.3. Responses dealing with time, travel and coordination with other activities dominated answers to this question, and concerns over costs and quality retreated to lesser importance.

Figure 6.3: Barriers to Taking a Distance Learning Course Using 2-Way TV at a Central Learning Site?



Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Conclusion

Since only a fraction of those who say they are interested in distance learning courses actually do so, the idea of asking people to identify the barriers to their participation makes sense. Courses delivered at specific times, either via internet, or via two-way television at specific learning sites present significant scheduling and time management issues for Montanans. Fewer than one in ten said there were no barriers or impediments for these delivery technologies. When asked about impediments for asynchronous internet delivery, which allows students to access course instruction at times of their own choosing, 42 percent said there were none.

7. Conclusion

This study analyzed and reported on attitudes, experiences, and capabilities of Montanans for taking distance learning (DL) courses. Using a random sample of 1,226 respondents, including both landline and cell phone-only households, survey researchers at the Bureau of Business and Economic Research assessed demand for distance learning, preferences for types of distance learning delivery systems, distance learning courses sought, barriers to distance learning access, and capacity of Montanans to access distance learning through the internet. The survey was conducted during the fall of 2009.

Key Findings

This study represents a comprehensive assessment of the interests, preferences, and capabilities of the Montana adult population concerning the delivery of education electronically. Its most important findings include:

- Approximately one third of Montanans aged 18-64, or 186,500 (+/- 16,300) individual, indicated an interest in distance learning (figures in parentheses represent the margin of error in survey estimates);
- Overall interest varies regionally, with south central, southwest, and north central Montanans showing higher than average interest, and northwest and eastern Montanans indicating interest in distance learning lower than the overall average;
- Interest is higher for asynchronous course delivery options, where the student can access course material when it suits his or her individual schedule, as well as for options that do not require students to travel to specific facilities;
- Almost half of those with interest in distance learning courses are not interested in pursuing any formal degree or certification;
- Courses in business oriented topics are the most frequently taken via distance learning in Montana, with MSU-Bozeman, UM-Missoula, and MSU-Billings jointly accounting for 55 percent of DL students statewide;
- Access to high speed internet connections from home is high but not universal in Montana, particularly for lower income and American Indian households. 83.9 percent of survey respondents overall said that high speed internet connectivity was available where they live;
- Home is the place where Montanans most frequently use internet, particularly white, educated, more affluent individuals;
- Internet access for sub-populations, such as lower income, American Indian, or less educated individuals, is different from the population as a whole, with dial-up access, as well as usage of internet away from home for these groups more prevalent;
- Scheduling and coordination with other activities rank high among the barriers cited as reasons for not taking distance learning courses.

APPENDIX A: MEASURING DISTANCE LEARNING INTEREST

High, medium, and low interest in distance learning were derived from a score calculated from responses to question 9 in the survey regarding respondent experience with distance learning courses, and questions 16-18, which asked if respondents were interested in DL courses delivered by internet at a specific time, internet accessed at time of student's own choosing, or by two-way television at a remote learning site, respectively. (The text of the questions can be found in Appendix D).

Defining Q9 as equal to one if respondents answered "yes" to past DL experience, and zero otherwise, and likewise defining Q16-Q18 as equal to one if respondents said "interested" to DL deliveries via the three methods described above, and zero otherwise, we defined

High Interest,	if $Q9 = 1$ and $Q16 + Q17 + Q18 \geq 2$,
Medium interest,	if $Q9 = 1$ and $Q16 + Q17 + Q18 = 1$, or if $Q9 = 0$ and $Q16 + Q17 + Q18 = 3$,
Low interest,	if $Q9 = 0$ and $Q16 + Q17 + Q18 = 2$.

Thus respondents had to respond affirmatively at least twice in the course of the interview to questions about DL experience and interest in order to be given the lowest non-zero interest score. In scoring the intensity of interest, experience with DL was given slightly more weight, since it indicated an action on the part of a respondent.

APPENDIX B: SENIOR CITIZEN'S INTEREST IN DISTANCE LEARNING

The bulk of resources in this project were used to assess interest, experiences and capabilities for distance learning on the part of Montanans aged 18-64 years. The results presented in the main body of this report pertain to this sub-population.

Another pool of potential and actual students for DL courses consists of seniors aged 65 years and older. Information was gathered for seniors as part of this project as well. Due to the sampling scheme, the precision of these estimates is lower than those presented in the main report. Thus we summarize and present them here.

On the basis of our survey completions, we estimate that:

- There are 9,500 (+/- 9,250) seniors who expressed an interest in distance learning courses (6.5% of the population aged 65 and older). Half of those expressed strong interest.
- 91,000 seniors (61% of the population aged 65 and older) have used internet in the last 30 days.
- 94,800 seniors have a working internet connection where they live or stay. Essentially all seniors who expressed interest in DL courses have an internet connection.
- Nearly all seniors who have an interest in distance learning are also interested in asynchronous course delivery.
- Seniors are interested in the following distance learning course topics:

- History
- Paleontology and Geology
- Agriculture
- Foreign Language
- Astronomy
- Law/Regulations

APPENDIX C: GALLUP TABLES

Demographic crosstabulation with question wording (Gallup Table)

		Have you, yourself, used the internet at all in the last 30 days, that is, since September XX, 2009?		
		Yes	No	Total
		Row N %	Row N %	Count
Sex of respondent*	Total	91.0%	9.0%	1164
	Female	93.4%	6.6%	554
	Male	88.8%	11.2%	610
Age*	18 - 24	93.9%	6.1%	292
	25 - 39	94.3%	5.7%	296
	40 - 49	89.0%	11.0%	237
	50 +	87.0%	13.0%	339
Race of respondent	American Indian	85.4%	14.6%	77
	White	91.8%	8.2%	1016
Educational attainment*	Less than HS diploma	89.5%	10.5%	66
	HS diploma, GED, some college	87.8%	12.2%	712
	BA +	98.1%	1.9%	367
2008 HH income*	< 20k	80.7%	19.3%	148
	20k - 34k	86.1%	13.9%	128
	35k - 49k	92.6%	7.4%	163
	50k - 74k	95.5%	4.5%	222
	75k - 99k	97.7%	2.3%	147
	100k +	96.2%	3.8%	158
Disability Status*	Yes	83.8%	16.2%	188
	No	92.4%	7.6%	976
MT Labor Market Areas	Northwest	91.3%	8.7%	333
	Southwest	90.4%	9.6%	298
	North Central	91.6%	8.4%	193
	South Central	91.5%	8.5%	264
	Eastern	89.0%	11.0%	77
Distance Learning Interest*	Interested	95.8%	4.2%	355
	Not interested	88.9%	11.1%	810

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Demographic crosstabulation with question wording (Gallup Table)

		Do you have a working internet connection where you currently live or stay?		
		Yes	No	Total
		Row N %	Row N %	Count
Sex of respondent	Total	83.8%	16.2%	1164
	Female	86.0%	14.0%	554
	Male	81.8%	18.2%	610
Age	18 - 24	86.2%	13.8%	292
	25 - 39	83.0%	17.0%	296
	40 - 49	84.4%	15.6%	237
	50 +	82.1%	17.9%	339
Race of respondent*	American Indian	52.1%	47.9%	77
	White	86.7%	13.3%	1016
Educational attainment*	Less than HS diploma	82.0%	18.0%	66
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Distance Learning Interest*	Interested	89.8%	10.2%	355
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* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Demographic crosstabulation with question wording (Gallup Table)

		Where else do you most often access the internet, if not in your home?							
		Use Internet at Home			Library	Internet cafe, school, other	No Internet Use Past 30 Days	Do Not Use Internet	Total
		Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Count	
Sex of respondent	Total	81.0%	5.3%	1.6%	3.2%	3.1%	5.9%	1164	
	Female	83.7%	5.4%	1.8%	2.4%	2.3%	4.4%	554	
	Male	78.5%	5.1%	1.4%	3.8%	3.9%	7.2%	610	
Age*	18 - 24	84.1%	4.2%	1.7%	3.9%	2.9%	3.2%	292	
	25 - 39	81.2%	6.7%	.9%	5.5%	1.8%	3.8%	296	
	40 - 49	81.6%	4.8%	1.4%	1.2%	3.5%	7.4%	237	
	50 +	77.7%	5.2%	2.2%	1.8%	4.2%	8.8%	339	
	American Indian	51.1%	12.6%	11.5%	10.3%	4.4%	10.1%	77	
Race of respondent*	White	83.7%	4.7%	.9%	2.6%	3.0%	5.2%	1016	
	Less than HS diploma	83.0%	.0%	.0%	6.5%	2.9%	7.6%	66	
Educational attainment*	HS diploma, GED, some college	75.8%	5.7%	2.3%	4.1%	4.5%	7.7%	712	
	BA +	92.1%	5.0%	.7%	.3%	.7%	1.2%	367	
	< 20k	66.2%	1.4%	5.2%	7.9%	9.4%	10.0%	148	
2008 HH income*	20k - 34k	71.7%	7.6%	2.4%	4.5%	3.4%	10.5%	128	
	35k - 49k	82.7%	4.6%	3.5%	1.8%	2.4%	5.0%	163	
	50k - 74k	86.3%	6.0%	.3%	2.9%	2.3%	2.2%	222	
	75k - 99k	92.2%	2.9%	.6%	2.0%	.9%	1.4%	147	
	100k +	92.0%	4.2%	.0%	.0%	2.7%	1.1%	158	
	Disability Status*	Yes	68.7%	9.0%	2.6%	3.5%	7.3%	8.9%	188
No		83.3%	4.5%	1.4%	3.1%	2.3%	5.3%	976	
MT Labor Market Areas	Northwest	82.3%	3.2%	1.3%	4.5%	2.6%	6.1%	333	
	Southwest	79.1%	8.4%	1.1%	1.8%	4.5%	5.1%	298	
	North Central	78.0%	6.6%	2.9%	4.0%	3.9%	4.5%	193	
	South Central	83.5%	4.4%	1.4%	2.3%	2.2%	6.3%	264	
	Eastern	81.9%	1.9%	1.9%	3.4%	1.5%	9.5%	77	
Distance Learning Interest*	Interested	87.3%	4.8%	.7%	3.1%	2.5%	1.7%	355	
	Not interested	78.2%	5.5%	2.0%	3.2%	3.4%	7.7%	810	

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Demographic crosstabulation with question wording (Gallup Table)

		What method do you most often use to connect to the internet? Do you use?					
		A wireless connection	A landline or cable connection	Never use internet	DK	Total	
		Row N %	Row N %	Row N %	Row N %	Count	
Sex of respondent	Total	39.5%	50.7%	5.9%	4.0%	1164	
	Female	41.9%	49.3%	4.4%	4.5%	554	
	Male	37.3%	51.9%	7.2%	3.6%	610	
Age*	18 - 24	53.3%	37.7%	3.2%	5.9%	292	
	25 - 39	38.5%	52.9%	3.8%	4.7%	296	
	40 - 49	36.4%	53.9%	7.4%	2.3%	237	
	50 +	30.5%	57.6%	8.8%	3.0%	339	
Race of respondent*	American Indian	37.4%	42.8%	10.1%	9.6%	77	
	White	40.4%	50.5%	5.2%	3.9%	1016	
Educational attainment*	Less than HS diploma	62.4%	24.8%	7.6%	5.2%	66	
	HS diploma, GED, some college	38.5%	48.9%	7.7%	4.8%	712	
	BA +	38.1%	58.2%	1.2%	2.5%	367	
2008 HH income*	< 20k	37.2%	48.9%	10.0%	4.0%	148	
	20k - 34k	28.2%	52.5%	10.5%	8.8%	128	
	35k - 49k	40.8%	52.5%	5.0%	1.7%	163	
	50k - 74k	39.4%	56.2%	2.2%	2.2%	222	
	75k - 99k	39.2%	56.2%	1.4%	3.3%	147	
	100k +	46.9%	50.5%	1.1%	1.6%	158	
Disability Status*	Yes	38.6%	41.4%	8.9%	11.2%	188	
	No	39.6%	52.5%	5.3%	2.6%	976	
MT Labor Market Areas*	Northwest	39.4%	52.7%	6.1%	1.7%	333	
	Southwest	33.0%	56.5%	5.1%	5.4%	298	
	North Central	43.4%	47.1%	4.5%	5.0%	193	
	South Central	41.2%	49.0%	6.3%	3.5%	264	
	Eastern	48.5%	33.8%	9.5%	8.2%	77	
Distance Learning Interest*	Interested	41.3%	53.9%	1.7%	3.0%	355	
	Not interested	38.6%	49.2%	7.7%	4.4%	810	

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Demographic crosstabulation with question wording (Gallup Table)

		Type of landline							Total
		Dial-up	DSL	Cable	T1	Wireless	Do not use internet	DK	Total
		Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Count
Sex of respondent*	Total	6.4%	23.8%	16.5%	1.4%	39.5%	5.9%	6.7%	1164
	Female	6.3%	22.8%	14.8%	2.0%	41.9%	4.4%	7.9%	554
	Male	6.4%	24.7%	18.1%	.8%	37.3%	7.2%	5.6%	610
Age*	18 - 24	3.1%	15.1%	15.1%	1.6%	53.3%	3.2%	8.7%	292
	25 - 39	6.4%	28.6%	15.1%	1.1%	38.5%	3.8%	6.5%	296
	40 - 49	5.2%	26.9%	17.8%	1.5%	36.4%	7.4%	4.9%	237
	50 +	10.0%	24.8%	18.1%	1.3%	30.5%	8.8%	6.5%	339
Race of respondent*	American Indian	7.1%	18.2%	11.8%	4.7%	37.4%	10.1%	10.7%	77
	White	6.5%	24.7%	15.6%	1.0%	40.4%	5.2%	6.5%	1016
Educational attainment*	Less than HS diploma	8.7%	9.4%	6.6%	.0%	62.4%	7.6%	5.2%	66
	HS diploma, GED, some college	6.8%	22.8%	14.5%	1.6%	38.5%	7.7%	8.1%	712
	BA +	5.4%	28.8%	21.5%	1.2%	38.1%	1.2%	3.8%	367
2008 HH income*	< 20k	5.1%	25.2%	11.4%	1.4%	37.2%	10.0%	9.7%	148
	20k - 34k	7.4%	24.0%	18.3%	2.4%	28.2%	10.5%	9.2%	128
	35k - 49k	11.7%	22.6%	14.7%	.6%	40.8%	5.0%	4.6%	163
	50k - 74k	7.0%	29.5%	16.7%	1.3%	39.4%	2.2%	3.9%	222
	75k - 99k	3.2%	25.5%	25.1%	2.0%	39.2%	1.4%	3.6%	147
	100k +	2.8%	26.9%	18.4%	.0%	46.9%	1.1%	4.0%	158
Disability Status*	Yes	9.3%	15.1%	12.6%	1.9%	38.6%	8.9%	13.6%	188
	No	5.8%	25.4%	17.3%	1.3%	39.6%	5.3%	5.4%	976
MT Labor Market Areas*	Northwest	4.9%	32.5%	12.0%	1.2%	39.4%	6.1%	3.8%	333
	Southwest	7.3%	23.0%	19.7%	1.7%	33.0%	5.1%	10.1%	298
	North Central	9.6%	17.7%	16.0%	1.9%	43.4%	4.5%	6.8%	193
	South Central	5.7%	18.1%	21.7%	1.2%	41.2%	6.3%	5.8%	264
	Eastern	2.9%	23.1%	7.2%	.0%	48.5%	9.5%	8.8%	77
Distance Learning Interest*	Interested	5.6%	27.4%	17.5%	1.6%	41.3%	1.7%	4.9%	355
	Not interested	6.7%	22.2%	16.1%	1.2%	38.6%	7.7%	7.5%	810

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Demographic crosstabulation with question wording (Gallup Table)

		Type of wireless						Total
		Wireless laptop	Blackberry	Satellite connection	Landline or cable	Do not use internet	DK	Total
		Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Count
Sex of respondent	Total	31.7%	2.0%	3.5%	50.7%	5.9%	6.2%	1164
	Female	32.6%	2.4%	3.8%	49.3%	4.4%	7.5%	554
	Male	30.9%	1.7%	3.2%	51.9%	7.2%	5.1%	610
Age*	18 - 24	47.7%	2.0%	1.8%	37.7%	3.2%	7.6%	292
	25 - 39	31.2%	2.9%	2.8%	52.9%	3.8%	6.3%	296
	40 - 49	27.2%	2.4%	3.1%	53.9%	7.4%	5.9%	237
	50 +	21.5%	1.0%	5.8%	57.6%	8.8%	5.3%	339
Race of respondent	American Indian	31.1%	1.3%	2.1%	42.8%	10.1%	12.6%	77
	White	32.6%	2.2%	3.3%	50.5%	5.2%	6.2%	1016
Educational attainment*	Less than HS diploma	57.1%	.0%	1.2%	24.8%	7.6%	9.3%	66
	HS diploma, GED, some college	29.8%	2.8%	3.4%	48.9%	7.7%	7.3%	712
	BA +	31.4%	.9%	4.1%	58.2%	1.2%	4.0%	367
2008 HH income*	< 20k	29.0%	2.3%	4.3%	48.9%	10.0%	5.5%	148
	20k - 34k	18.5%	2.1%	6.5%	52.5%	10.5%	9.8%	128
	35k - 49k	33.5%	1.6%	1.1%	52.5%	5.0%	6.3%	163
	50k - 74k	31.6%	3.8%	2.4%	56.2%	2.2%	3.9%	222
	75k - 99k	31.2%	2.6%	3.9%	56.2%	1.4%	4.8%	147
	100k +	40.2%	1.3%	3.1%	50.5%	1.1%	3.8%	158
Disability Status*	Yes	28.7%	1.4%	3.8%	41.4%	8.9%	15.8%	188
	No	32.3%	2.2%	3.4%	52.5%	5.3%	4.4%	976
MT Labor Market Areas*	Northwest	33.9%	1.6%	1.4%	52.7%	6.1%	4.2%	333
	Southwest	25.3%	2.0%	3.6%	56.5%	5.1%	7.5%	298
	North Central	33.7%	1.4%	5.1%	47.1%	4.5%	8.2%	193
	South Central	31.0%	3.7%	5.0%	49.0%	6.3%	4.9%	264
	Eastern	44.5%	.0%	2.3%	33.8%	9.5%	9.9%	77
Distance Learning Interest*	Interested	32.9%	2.8%	4.2%	53.9%	1.7%	4.5%	355
	Not interested	31.2%	1.7%	3.2%	49.2%	7.7%	7.0%	810

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Demographic crosstabulation with question wording (Gallup Table)

		Do you happen to know whether high speed internet service is available where you currently live or stay?			
		Yes	No	DK	Total
		Row N %	Row N %	Row N %	Count
Sex of respondent	Total	83.9%	8.8%	7.3%	1164
	Female	81.8%	10.6%	7.5%	554
	Male	85.8%	7.1%	7.2%	610
Age	18 - 24	82.2%	8.1%	9.7%	292
	25 - 39	83.5%	11.0%	5.6%	296
	40 - 49	85.9%	7.1%	7.0%	237
	50 +	84.3%	8.6%	7.0%	339
Race of respondent*	American Indian	73.0%	11.9%	15.1%	77
	White	84.5%	8.5%	6.9%	1016
Educational attainment*	Less than HS diploma	74.9%	2.8%	22.3%	66
	HS diploma, GED, some college	81.9%	10.3%	7.8%	712
	BA +	89.2%	6.9%	3.9%	367
2008 HH income*	< 20k	74.3%	10.8%	14.9%	148
	20k - 34k	81.0%	13.2%	5.7%	128
	35k - 49k	85.0%	8.6%	6.4%	163
	50k - 74k	87.7%	8.3%	4.0%	222
	75k - 99k	90.7%	4.9%	4.4%	147
	100k +	89.9%	6.1%	4.1%	158
Disability Status	Yes	85.8%	5.9%	8.2%	188
	No	83.5%	9.3%	7.2%	976
MT Labor Market Areas*	Northwest	86.6%	6.7%	6.6%	333
	Southwest	83.7%	11.2%	5.1%	298
	North Central	84.3%	8.9%	6.8%	193
	South Central	82.7%	9.1%	8.2%	264
	Eastern	76.0%	7.0%	17.0%	77
Distance Learning Interest*	Interested	89.6%	6.8%	3.6%	355
	Not interested	81.4%	9.7%	8.9%	810

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Demographic crosstabulation with question wording (Gallup Table)

		Have you, yourself, ever taken a class in which the teaching was done mostly over the internet; or a class using interactive, two-way television transmitted to a central site; or a class using mostly mailed-out materials; or a class using any combination of these methods?		
		Yes	No	Total
		Row N %	Row N %	Count
Sex of respondent*	Total	27.8%	72.2%	1164
	Female	31.6%	68.4%	554
	Male	24.3%	75.7%	610
Age*	18 - 24	28.5%	71.5%	292
	25 - 39	33.4%	66.6%	296
	40 - 49	26.8%	73.2%	237
	50 +	22.9%	77.1%	339
Race of respondent	American Indian	27.3%	72.7%	77
	White	28.6%	71.4%	1016
Educational attainment*	Less than HS diploma	3.0%	97.0%	66
	HS diploma, GED, some college	24.0%	76.0%	712
	BA +	40.3%	59.7%	367
2008 HH income	< 20k	24.3%	75.7%	148
	20k - 34k	23.8%	76.2%	128
	35k - 49k	26.9%	73.1%	163
	50k - 74k	32.8%	67.2%	222
	75k - 99k	30.7%	69.3%	147
	100k +	29.8%	70.2%	158
Disability Status*	Yes	22.0%	78.0%	188
	No	28.9%	71.1%	976
MT Labor Market Areas	Northwest	24.3%	75.7%	333
	Southwest	24.4%	75.6%	298
	North Central	32.8%	67.2%	193
	South Central	32.7%	67.3%	264
	Eastern	26.5%	73.5%	77
Distance Learning Interest*	Interested	55.6%	44.4%	355
	Not interested	15.6%	84.4%	810

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Demographic crosstabulation with question wording (Gallup Table)

		Would you have taken the course(s) you just named if it was only offered in a traditional format where you go to class for a certain amount of time each week, or not?			
		Yes	No	DK	Total
		Row N %	Row N %	Row N %	Count
Sex of respondent	Total	60.7%	36.3%	3.0%	319
	Female	58.7%	37.9%	3.4%	171
	Male	63.1%	34.5%	2.5%	148
Age*	18 - 24	91.2%	8.8%	.0%	82
	25 - 39	54.6%	39.6%	5.9%	97
	40 - 49	46.8%	51.9%	1.3%	63
	50 +	47.5%	48.7%	3.9%	77
Race of respondent	American Indian	67.8%	28.3%	3.8%	21
	White	60.9%	36.1%	3.0%	286
Educational attainment	Less than HS diploma	70.9%	29.1%	.0%	2
	HS diploma, GED, some college	63.7%	32.9%	3.3%	168
	BA +	57.2%	40.1%	2.7%	146
2008 HH income*	< 20k	88.8%	11.2%	.0%	36
	20k - 34k	71.2%	18.6%	10.2%	30
	35k - 49k	48.3%	43.5%	8.2%	42
	50k - 74k	51.7%	45.8%	2.4%	73
	75k - 99k	60.1%	39.9%	.0%	44
	100k +	64.5%	33.1%	2.4%	47
Disability Status	Yes	60.0%	38.7%	1.4%	41
	No	60.8%	35.9%	3.2%	277
MT Labor Market Areas	Northwest	63.9%	34.7%	1.5%	81
	Southwest	68.5%	29.0%	2.5%	73
	North Central	54.7%	39.6%	5.7%	62
	South Central	53.1%	43.3%	3.6%	83
	Eastern	69.9%	30.1%	.0%	20
Distance Learning Interest	Interested	62.8%	34.3%	2.9%	194
	Not interested	57.4%	39.4%	3.1%	124

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Demographic crosstabulation with question wording (Gallup Table)

		Now, do you happen to remember whether or not you completed the distance learning degree or certificate program you enrolled in?		
		Yes	No	Total
		Row N %	Row N %	Count
Sex of respondent	Total	69.9%	30.1%	262
	Female	67.2%	32.8%	146
	Male	73.3%	26.7%	116
Age*	18 - 24	46.5%	53.5%	61
	25 - 39	69.4%	30.6%	83
	40 - 49	79.3%	20.7%	51
	50 +	84.4%	15.6%	68
Race of respondent*	American Indian	49.8%	50.2%	20
	White	71.4%	28.6%	233
Educational attainment*	Less than HS diploma	29.1%	70.9%	2
	HS diploma, GED, some college	57.0%	43.0%	143
	BA +	86.1%	13.9%	117
2008 HH income*	< 20k	37.3%	62.7%	30
	20k - 34k	70.3%	29.7%	29
	35k - 49k	76.9%	23.1%	38
	50k - 74k	80.9%	19.1%	53
	75k - 99k	74.9%	25.1%	37
	100k +	69.2%	30.8%	42
Disability Status	Yes	70.5%	29.5%	35
	No	69.8%	30.2%	227
MT Labor Market Areas	Northwest	67.6%	32.4%	71
	Southwest	82.8%	17.2%	53
	North Central	66.2%	33.8%	54
	South Central	70.9%	29.1%	64
	Eastern	50.3%	49.7%	20
Distance Learning Interest*	Interested	64.1%	35.9%	157
	Not interested	78.6%	21.4%	105

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Demographic crosstabulation with question wording (Gallup Table)

		Are you, yourself, currently interested, not sure, or not interested in taking a distance learning course that is taught mostly on the internet at a specific time each week?				
		Interested	Not sure	Not interested	DK	Total
		Row N %	Row N %	Row N %	Row N %	Count
Sex of respondent	Total	19.0%	15.1%	65.8%	.2%	1164
	Female	19.1%	15.2%	65.7%	.0%	554
	Male	18.9%	14.9%	65.9%	.3%	610
Age*	18 - 24	17.5%	23.0%	59.5%	.0%	292
	25 - 39	24.5%	10.6%	64.9%	.0%	296
	40 - 49	15.7%	14.8%	69.2%	.3%	237
	50 +	17.6%	12.3%	69.7%	.3%	339
Race of respondent*	American Indian	23.2%	30.9%	46.0%	.0%	77
	White	18.6%	14.2%	67.0%	.2%	1016
Educational attainment*	Less than HS diploma	7.0%	33.1%	59.9%	.0%	66
	HS diploma, GED, some college	18.4%	14.6%	66.8%	.2%	712
	BA +	22.5%	13.5%	63.8%	.2%	367
2008 HH income	< 20k	29.2%	14.4%	55.9%	.5%	148
	20k - 34k	15.0%	11.4%	73.6%	.0%	128
	35k - 49k	19.3%	11.7%	68.7%	.3%	163
	50k - 74k	19.5%	18.3%	62.2%	.0%	222
	75k - 99k	20.8%	13.0%	66.2%	.0%	147
	100k +	17.2%	13.5%	69.2%	.0%	158
Disability Status*	Yes	13.3%	16.0%	70.3%	.4%	188
	No	20.1%	14.9%	64.9%	.1%	976
MT Labor Market Areas*	Northwest	19.4%	14.2%	66.2%	.2%	333
	Southwest	21.9%	15.9%	62.0%	.3%	298
	North Central	17.1%	6.6%	76.0%	.3%	193
	South Central	18.9%	16.4%	64.7%	.0%	264
	Eastern	11.0%	32.2%	56.8%	.0%	77
Distance Learning Interest*	Interested	60.9%	16.6%	22.5%	.0%	355
	Not interested	.6%	14.4%	84.8%	.2%	810

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Demographic crosstabulation with question wording (Gallup Table)

		What about a distance learning class that is taught entirely on the internet and that can be accessed by you whenever you have time? Would you say you are interested, not sure, or not interested?			
		Interested	Not sure	Not interested	Total
		Row N %	Row N %	Row N %	Count
Sex of respondent	Total	38.0%	16.2%	45.8%	1164
	Female	38.2%	17.7%	44.1%	554
	Male	37.9%	14.7%	47.4%	610
Age*	18 - 24	42.1%	21.5%	36.4%	292
	25 - 39	43.0%	9.2%	47.9%	296
	40 - 49	33.9%	18.8%	47.3%	237
	50 +	33.1%	15.8%	51.1%	339
Race of respondent	American Indian	40.4%	25.4%	34.2%	77
	White	38.6%	15.8%	45.5%	1016
Educational attainment	Less than HS diploma	38.0%	8.9%	53.1%	66
	HS diploma, GED, some college	36.7%	17.2%	46.1%	712
	BA +	42.1%	15.6%	42.3%	367
2008 HH income*	< 20k	43.3%	23.2%	33.4%	148
	20k - 34k	32.0%	10.7%	57.4%	128
	35k - 49k	42.4%	16.3%	41.3%	163
	50k - 74k	37.7%	16.5%	45.8%	222
	75k - 99k	41.2%	13.9%	44.9%	147
	100k +	42.9%	13.8%	43.3%	158
Disability Status*	Yes	28.6%	17.4%	54.0%	188
	No	39.8%	15.9%	44.2%	976
MT Labor Market Areas	Northwest	39.1%	16.5%	44.4%	333
	Southwest	41.2%	14.0%	44.8%	298
	North Central	37.9%	17.1%	45.0%	193
	South Central	37.2%	15.4%	47.4%	264
	Eastern	24.0%	23.2%	52.9%	77
Distance Learning Interest*	Interested	95.7%	3.2%	1.1%	355
	Not interested	12.8%	21.8%	65.4%	810

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Demographic crosstabulation with question wording (Gallup Table)

And what about a distance learning class that is taught using interactive (two-way) television at a central learning center site. There are 12 Montana University System central learning centers throughout the state. Would you say you are interested, not sure, or not interested?

		Interested	Not sure	Not interested	DK	Total
		Row N %	Row N %	Row N %	Row N %	Count
Sex of respondent	Total	15.1%	20.7%	63.8%	.4%	1164
	Female	13.3%	20.3%	66.3%	.2%	554
	Male	16.7%	21.1%	61.5%	.7%	610
Age*	18 - 24	18.0%	28.4%	53.6%	.0%	292
	25 - 39	15.9%	18.1%	65.0%	1.1%	296
	40 - 49	10.6%	19.8%	69.2%	.4%	237
	50 +	15.0%	17.0%	67.7%	.3%	339
Race of respondent*	American Indian	16.8%	34.3%	49.0%	.0%	77
	White	13.7%	20.6%	65.4%	.3%	1016
Educational attainment	Less than HS diploma	22.1%	17.1%	60.8%	.0%	66
	HS diploma, GED, some college	13.3%	22.9%	63.4%	.4%	712
	BA +	17.4%	18.2%	64.4%	.0%	367
2008 HH income*	< 20k	12.9%	34.2%	52.9%	.0%	148
	20k - 34k	16.1%	18.8%	65.1%	.0%	128
	35k - 49k	13.7%	24.1%	61.3%	.9%	163
	50k - 74k	19.9%	19.4%	60.3%	.5%	222
	75k - 99k	15.8%	17.3%	66.4%	.4%	147
	100k +	14.1%	13.4%	72.5%	.0%	158
Disability Status	Yes	14.9%	22.7%	62.1%	.3%	188
	No	15.1%	20.3%	64.1%	.5%	976
MT Labor Market Areas	Northwest	17.4%	20.4%	61.6%	.6%	333
	Southwest	19.1%	20.2%	60.1%	.7%	298
	North Central	11.5%	22.3%	65.8%	.3%	193
	South Central	12.3%	21.4%	66.1%	.2%	264
	Eastern	8.3%	17.7%	74.0%	.0%	77
Distance Learning Interest*	Interested	43.4%	22.2%	34.1%	.3%	355
	Not interested	2.7%	20.1%	76.8%	.5%	810

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Demographic crosstabulation with question wording (Gallup Table)

		Are you, yourself, the parent of a child who is between 13 and 19 years old?		
		Yes	No	Total
		Row N %	Row N %	Count
Sex of respondent*	Total	18.4%	81.6%	1154
	Female	21.0%	79.0%	552
	Male	16.0%	84.0%	602
Age*	18 - 24	2.7%	97.3%	289
	25 - 39	14.8%	85.2%	292
	40 - 49	45.7%	54.3%	234
	50 +	16.0%	84.0%	338
Race of respondent	American Indian	22.1%	77.9%	77
	White	18.1%	81.9%	1016
Educational attainment*	Less than HS diploma	8.2%	91.8%	66
	HS diploma, GED, some college	18.1%	81.9%	712
	BA +	21.2%	78.8%	367
2008 HH income*	< 20k	6.9%	93.1%	148
	20k - 34k	16.1%	83.9%	128
	35k - 49k	15.0%	85.0%	163
	50k - 74k	23.0%	77.0%	222
	75k - 99k	23.3%	76.7%	147
	100k +	29.9%	70.1%	158
Disability Status	Yes	14.7%	85.3%	188
	No	19.1%	80.9%	966
MT Labor Market Areas	Northwest	18.3%	81.7%	328
	Southwest	17.4%	82.6%	293
	North Central	18.3%	81.7%	193
	South Central	19.2%	80.8%	263
	Eastern	19.8%	80.2%	77
Distance Learning Interest	Interested	17.7%	82.3%	354
	Not interested	18.7%	81.3%	800

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Demographic crosstabulation with question wording (Gallup Table)

		Are you, yourself interested in having your teen take dual-credit, high school/ college-level course work?			
		Yes	No	DK	Total
		Row N %	Row N %	Row N %	Count
Sex of respondent	Total	64.9%	26.9%	8.1%	212
	Female	66.2%	26.9%	6.9%	116
	Male	63.3%	27.0%	9.7%	96
Age	18 - 24	36.9%	63.1%	.0%	8
	25 - 39	63.2%	23.0%	13.8%	43
	40 - 49	65.8%	30.0%	4.3%	107
	50 +	68.6%	19.0%	12.4%	54
Race of respondent	American Indian	47.2%	42.5%	10.3%	17
	White	66.7%	25.6%	7.6%	184
Educational attainment	Less than HS diploma	79.9%	10.8%	9.3%	5
	HS diploma, GED, some college	58.9%	29.8%	11.3%	129
	BA +	74.0%	23.3%	2.7%	78
2008 HH income	< 20k	68.0%	14.9%	17.2%	10
	20k - 34k	50.7%	41.6%	7.7%	21
	35k - 49k	54.9%	31.4%	13.7%	24
	50k - 74k	58.8%	28.2%	13.0%	51
	75k - 99k	65.0%	32.7%	2.3%	34
	100k +	83.0%	13.7%	3.3%	47
Disability Status	Yes	50.3%	40.0%	9.7%	28
	No	67.1%	25.0%	7.9%	184
MT Labor Market Areas	Northwest	59.5%	24.2%	16.4%	60
	Southwest	68.4%	29.3%	2.3%	51
	North Central	65.4%	29.1%	5.5%	35
	South Central	72.9%	20.2%	6.9%	50
	Eastern	47.2%	47.6%	5.2%	15
Distance Learning Interest*	Interested	80.4%	12.8%	6.8%	63
	Not interested	58.5%	32.9%	8.7%	150

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Demographic crosstabulation with question wording (Gallup Table)

		Is your teen interested in taking dual-credit, high school/ college-level course work?			
		Yes	No	DK	Total
		Row N %	Row N %	Row N %	Count
Sex of respondent	Total	47.5%	32.5%	19.9%	212
	Female	49.3%	32.2%	18.5%	116
	Male	45.5%	32.9%	21.7%	96
Age	18 - 24	66.4%	33.6%	.0%	8
	25 - 39	45.0%	31.9%	23.1%	43
	40 - 49	44.7%	33.9%	21.5%	107
	50 +	52.6%	30.2%	17.3%	54
Race of respondent	American Indian	48.6%	38.8%	12.6%	17
	White	48.7%	31.3%	20.0%	184
Educational attainment	Less than HS diploma	37.1%	15.6%	47.3%	5
	HS diploma, GED, some college	45.6%	35.8%	18.6%	129
	BA +	51.5%	28.3%	20.2%	78
2008 HH income	< 20k	56.2%	38.1%	5.8%	10
	20k - 34k	44.0%	41.3%	14.7%	21
	35k - 49k	38.7%	39.2%	22.1%	24
	50k - 74k	46.5%	27.8%	25.7%	51
	75k - 99k	38.4%	47.5%	14.1%	34
	100k +	61.2%	20.1%	18.6%	47
Disability Status	Yes	37.0%	37.6%	25.4%	28
	No	49.1%	31.7%	19.1%	184
MT Labor Market Areas	Northwest	39.0%	31.9%	29.1%	60
	Southwest	50.9%	25.7%	23.4%	51
	North Central	55.8%	26.9%	17.3%	35
	South Central	47.0%	39.6%	13.4%	50
	Eastern	52.7%	47.3%	.0%	15
Distance Learning Interest*	Interested	66.2%	15.0%	18.9%	63
	Not interested	39.7%	39.8%	20.4%	150

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Demographic crosstabulation with question wording (Gallup Table)

		Have you, yourself, ever attended a school in the Montana University System? The Montana University System includes the colleges and universities funded by the State of Montana, but does not include private institutions like Rocky Mountain College or tribal institutions like Salish Kootenai College.		
		Yes	No	Total
		Row N %	Row N %	Count
Sex of respondent*	Total	45.0%	55.0%	1145
	Female	49.3%	50.7%	549
	Male	41.1%	58.9%	596
Age	18 - 24	45.9%	54.1%	284
	25 - 39	42.9%	57.1%	290
	40 - 49	46.0%	54.0%	233
	50 +	45.5%	54.5%	338
Race of respondent	American Indian	37.6%	62.4%	77
	White	46.2%	53.8%	1014
Educational attainment*	Less than HS diploma	2.2%	97.8%	66
	HS diploma, GED, some college	37.7%	62.3%	711
	BA +	67.4%	32.6%	365
2008 HH income*	< 20k	50.2%	49.8%	148
	20k - 34k	37.1%	62.9%	128
	35k - 49k	44.6%	55.4%	161
	50k - 74k	49.8%	50.2%	221
	75k - 99k	57.4%	42.6%	147
	100k +	45.1%	54.9%	157
Disability Status	Yes	39.3%	60.7%	188
	No	46.2%	53.8%	957
MT Labor Market Areas*	Northwest	38.3%	61.7%	323
	Southwest	48.7%	51.3%	293
	North Central	54.3%	45.7%	193
	South Central	48.7%	51.3%	261
	Eastern	23.3%	76.7%	75
Distance Learning Interest*	Interested	56.2%	43.8%	349
	Not interested	40.2%	59.8%	797

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

Demographic crosstabulation with question wording (Gallup Table)

		Did you complete a degree program or certification you were seeking at a Montana University System school, or not?			
		Yes	No	DK	Total
		Row N %	Row N %	Row N %	Count
Sex of respondent	Total	54.1%	45.9%	.0%	516
	Female	54.9%	45.1%	.0%	270
	Male	53.2%	46.8%	.0%	245
Age*	18 - 24	34.1%	65.9%	.0%	131
	25 - 39	58.9%	41.1%	.0%	124
	40 - 49	62.1%	37.9%	.0%	107
	50 +	61.5%	38.5%	.0%	154
Race of respondent	American Indian	37.4%	62.6%	.0%	29
	White	56.1%	43.9%	.0%	468
Educational attainment*	Less than HS diploma	.0%	100.0%	.0%	1
	HS diploma, GED, some college	26.9%	73.1%	.0%	268
	BA +	84.1%	15.9%	.0%	246
2008 HH income*	< 20k	25.7%	74.3%	.0%	74
	20k - 34k	49.9%	50.1%	.0%	47
	35k - 49k	56.1%	43.9%	.0%	72
	50k - 74k	52.9%	47.1%	.0%	110
	75k - 99k	69.9%	30.1%	.0%	84
	100k +	72.8%	27.2%	.0%	71
Disability Status	Yes	52.5%	47.5%	.0%	74
	No	54.3%	45.7%	.0%	442
MT Labor Market Areas	Northwest	57.2%	42.8%	.0%	124
	Southwest	50.2%	49.8%	.0%	143
	North Central	56.6%	43.4%	.0%	105
	South Central	51.4%	48.6%	.0%	127
	Eastern	66.9%	33.1%	.0%	18
Distance Learning Interest*	Interested	46.1%	53.9%	.0%	196
	Not interested	58.9%	41.1%	.0%	320

* Difference between two or more demographic categories significant at .05 level.

Source: 2009 Montana Distance Learning Survey, Bureau of Business and Economic Research, The University of Montana-Missoula.

APPENDIX D: QUESTIONNAIRE

Hello, my name is _____ and I am calling from Bureau of Business and Economic Research in Missoula. We are doing a survey on important education issues in Montana on behalf of the Montana University System.

First, though, I need to be sure I have dialed the right number. Is this ____ - _____?

In order to do the survey, I have to follow a specific selection procedure. For this survey only people aged 18 and older are to be interviewed. So of all the people living in your household, including yourself, how many are 18 years of age and older?

And how many of these persons are female?

According to the selection procedure, I need to interview _____. Is he/she available? Or is that you?

IF R NOT AVAILABLE, MAKE APPOINTMENT

Before we start, I want to assure you that this interview is completely confidential and voluntary. If we should come to a question you don't want to answer; just let me know and we'll go on to the next question. This interview will take about 10 minutes.

1. Only people age 18 and older may participate in this survey. So, for eligibility purposes, how old were you on your last birthday?

_____ years

2. Have you, yourself, used the internet at all in the last 30 days, that is, since August 30, 2009?

Yes	1
No	0
DK	8

3. Do you have a working internet connection where you currently live or stay?

Yes	1
No	0
DK	8

4. IF NO INTERNET AT HOME: Where else do you most often access the internet, if not in your home?

Don't ever use the internet (don't read)	0
Work	1
Library	2
Internet café	3
Other (specify)	4

5. IF EVER USE THE INTERNET: **What method do you most often use to connect to the internet? Do you use?**

- | | |
|------------------------------------|---|
| A landline or cable connection, or | 1 |
| A wireless connection | 2 |

6. IF LANDLINE CONNECTION: **Do you use:**

- | | |
|----------------------------------------------------------------------------------------------|---|
| Dial-up (slower connection often provided by a telephone company) | 1 |
| DSL (higher speed connection often provided by a telephone company, Digital Subscriber Line) | 2 |
| Cable (higher speed connection often provided by a cable TV company), or | 3 |
| T1 (very high speed connection at a large institution, school, work) | 4 |

7. IF WIRELESS CONNECTION: **Do you use:**

- | | |
|------------------------------------------------------------|---|
| A wireless laptop or notebook computer | 1 |
| A Blackberry, iPhone, or other small, hand-held device, or | 2 |
| A satellite connection | 3 |

8. **Do you happen to know whether high speed internet service is available where you currently live or stay? High speed internet service is usually delivered using a digital subscriber line (DSL) delivered by a telephone company or a cable connection delivered by a cable TV company.**

- | | |
|-----|---|
| Yes | 1 |
| No | 0 |
| DK | 8 |

Next I am going to ask some questions about using distance learning services. Distance learning is a way of delivering educational course work that uses the internet, interactive, two-way television transmitted to a central learning site, mailed-out materials, or a combination of these methods.

9. **Have you, yourself, ever taken a class in which the teaching was done mostly over the internet; or a class using interactive, two-way television transmitted to a central site; or a class using mostly mailed-out materials; or a class using any combination of these methods?**

- | | |
|-----|---|
| Yes | 1 |
| No | 0 |
| DK | 8 |

10. IF YES: **What is the name of the organization(s) that taught your (most recent) distance learning class?**

_____ organization name

_____ organization name

11. What was the main reason you chose to take a distance learning course as opposed to a course taught in a traditional format where you go to class for a certain amount of time each week?

_____ main reason

12. What was the name(s) of the distance learning course(s) you took?

_____ course name

_____ course name

13. Would you have taken the course(s) you just named if it was only offered in a traditional format where you go to class for a certain amount of time each week, or not?

Yes	1
No	0
Not sure	8

14. Now, do you happen to remember whether or not you completed the distance learning degree or certificate program you enrolled in?

Yes	1
No	0
Not sure	8

15. IF COMPLETED A DEGREE OR CERTIFICATE PROGRAM: What degree or certification did you earn by completing the distance learning program?

_____ degree/certification

16. ALL: Are you, yourself, currently interested, not sure, or not interested in taking a distance learning course that is taught mostly on the internet at a specific time each week?

Interested	2
Not sure	1
Not interested	0

17. What about a distance learning class that is taught entirely on the internet and that can be accessed by you whenever you have time? Would you say you are interested, not sure, or not interested?

Interested	2
Not sure	1
Not interested	0

18. And what about a distance learning class that is taught using interactive (two-way) television at a central learning center site. There are 12 Montana University System central learning centers throughout the state. Would you say you are interested, not sure, or not interested?

Interested	2
Not sure	1
Not interested	0

Now I'm going to ask you about things that might keep you from taking a distance learning class.

19. What, if anything, might keep you from taking a distance learning course that is taught mostly on the internet at a specific time each week?

_____ barrier

20. What, if anything, might keep you from taking a distance learning course that is taught entirely on the internet and that can be accessed by you whenever you have time?

_____ barrier

21. And what, if anything, might keep you from taking a distance learning course that is taught using interactive (two-way) television at a central learning center site.

_____ barrier

23. IF INTERESTED: What subject-area(s) are you most interested in studying using a distance learning program?

_____ subject-area

24. IF INTERESTED: Now, are you interested in earning a degree or certification using only a distance learning program, or are you interested in taking a few courses using a distance learning program and then finishing your degree or certification using a traditional learning program, or are you just interested in taking a few distance learning courses?

Complete a degree or certification using only a distance learning program	3
Complete a traditional degree or certification program taking a combination of distance learning courses and traditional courses	2
Just interested in taking a few distance learning courses	1

25. IF INTERESTED: What level of degree or certification are you interested in earning using a distance learning program?

_____ degree/certification	
General interest but don't know yet, not sure	8

26. ALL: Are you, yourself, the parent of a child who is between 13 and 19 years old?

Yes	1
No	0
DK	8

28. IF YES: Are you, yourself interested in having your teen take dual-credit, high school/ college-level course work?

Yes	1
No	0
DK	8

29. IF YES: Is your teen interested in taking dual-credit, high school/ college-level course work?

Yes	1
No	0
DK	8

30. ALL: Have you, yourself, ever attended a school in the Montana University System? The Montana University System includes the colleges and universities funded by the State of Montana, but does not include private institutions like Rocky Mountain College or tribal institutions like Salish Kootenai College.

Yes	1
No	0
DK	8

31. Did you complete a degree program or certification you were seeking at a Montana University System school, or not?

Yes	1
No	0
DK	8

Now we have some questions just for classification purposes...

32. What is the highest grade or year of regular school you have ever attended?

- 01 Grade School
- 02 Grade School
- 03 Grade School
- 04 Grade School
- 05 Grade School
- 06 Grade School
- 07 Grade School
- 08 Grade School
- 09 High School
- 10 High School
- 11 High School
- 12 High School
- 13 College
- 14 College
- 15 College
- 16 College
- 17 College
- 18 College
- 19 College
- 20 College (20 or more)
- 98 DK
- 99 Refused

33. Did you finish that grade (year) and get credit for it?

- Now attending this grade (year) 2
- Finished this grade (year) 1
- Did not finish this grade (year) 0
- DK 8

34. Did you receive a high school diploma or pass a high school equivalency test?

- Yes 1
- No 0
- DK 8

35. What degree or degrees did you receive?

Less than high school	1
High school diploma or equivalency	2
Associate, two-year, junior college	3
Bachelor's degree	4
Master's degree	5
Doctorate	6
Professional (MD, JD, DDS, etc.)	7
DK	8

36. IF GREATER THAN NO HS DIPLOMA OR GED: Do you happen to recall your grade point average for the degree you received?

_____._____ GPA

37. Do you, yourself, have serious difficulty hearing?

Yes	1
No	0
DK	8

38. Do you, yourself, have serious difficulty seeing even when wearing glasses?

Yes	1
No	0
DK	8

39. Because of a physical, mental, or emotional condition, do you, yourself, have serious difficulty concentrating, remembering, or making decisions?

Yes	1
No	0
DK	8

40. Do you, yourself, have serious difficulty walking or climbing stairs?

Yes	1
No	0
DK	8

41. Are you Spanish or Hispanic or Latino?

Yes	1
No	0

42. **What is your race?** Mark one or more races (X).

- | | |
|----------------------------------|---|
| American Indian or Alaska Native | 1 |
| African Am., Black, or Negro | 2 |
| White | 3 |
| Asian or Pacific Islander | 4 |
| Some other race | 5 |

43. **What is the name of the city, town, or community you live in now or live closest to?**

_____ city/town/place

44. **What is the zip code for your street address where you live?**

_____ zip code

45. **Are you currently working for wages or a salary, or not?**

- | | |
|-----|---|
| YES | 1 |
| NO | 0 |

46. IF NOT WORKING: **When was the last time you worked for wages or a salary?**

- | | |
|--------------------------|---|
| NEVER | 0 |
| LESS THAN 6 MONTHS AGO | 1 |
| MONTHS TO 1 YEAR AGO | 2 |
| PAST YEAR TO 2 YEARS AGO | 3 |
| MORE THAN 2 YEARS AGO | 4 |
| DK | 8 |

47. **Are you ...** (READ FIRST 6 RESPONSES)

- | | |
|---------------------------------|---|
| self employed | 1 |
| a homemaker | 2 |
| a student | 3 |
| retired, | 4 |
| disabled, and unable to work or | 5 |
| currently unemployed | 6 |
| NONE OF THESE / SOMETHING ELSE | 7 |
| DK | 8 |

48. **What was your last held occupation?**

_____ occupation

49. Are you currently looking for a paying job?

Yes	1
No	0
DK	8

50. Do you plan to look for work within the next year?

Yes	1
No	0
DK	8

51. IF WORKING: What is your current occupation?

52. ALL: Was your TOTAL HOUSEHOLD INCOME for 2008?

100 thousand dollars or more?	10
Between 75 and 100 thousand dollars, or	9
Between 50 and 75 thousand	8
Between 40 and 50 thousand	7
Between 30 and 40 thousand	6
Between 25 and 30 thousand	5
Between 20 and 25 thousand	4
Between 15 and 20 thousand	3
Between 10 and 15 thousand	2
Less than 10,000 dollars	1
DK	98

Thank you very much for your help, that's all of the questions I have.

53. After interviewer hangs up, enter respondents Sex:

Male	1
Female	2