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ABSTRACT

The report presents the findings of the PC and Internet Survey, administered to Northern Virginia Community College (NVCC) students in spring 1999. The survey examined NVCC students' access and use of personal computers, e-mail, and the Internet, both at home and at work. The report presents the findings by the gender and race of the respondents. The survey found that a larger percentage of white respondents (89%) had computer access than black respondents (79%). However, the differences among different racial groups at NVCC were not as marked as those observed in some national studies. Male respondents were more likely to have access to a home computer. Additionally, male respondents used a home computer more frequently and for more hours during the week than female respondents did. However, female respondents who had computer access at home were more likely to have e-mail access than were male respondents. Black respondents had the largest percentage of access to a computer at work (69%). Of students with computers at home, Hispanic males had the largest percentage of Internet access (100%), followed by Asian female respondents (91%). Black male respondents had the lowest Internet access (73%). (Contains 31 tables.) (JA)

DIGITAL DIVIDE: GENDER AND RACE VARIATIONS OF COMPUTER USE BY NVCC STUDENTS

OIR Report No. 4-00

Office of Institutional Research

Northern Virginia Community College

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NORTHERN VIRGINIA COMMUNITY COLLEGE

COLLEGE MISSION AND GOALS

The mission of Northern Virginia Community College is to respond to the educational needs of its dynamic and diverse constituencies through an array of comprehensive programs and services that facilitate learning and workforce development in an environment of open access and through lifelong educational opportunities.

To achieve this mission, the following strategic goals for 1999-2001 are established:

I. Sustain and Strengthen Academic Quality and Teaching Excellence.

II. Enhance the Quality of Services to Students.

III. Expand the Integration of Technology in Instruction and Administration.

IV. Increase Access to College Programs and Services.

V. Improve the Quality of Institutional Communication.

VI. Strengthen Programs That Help Build a World Class Workforce.

VII. Promote Responsiveness to Diversity of Students and Employees.

VIII. Strengthen and Develop Additional Linkages with Community Groups.

IX. Integrate College Planning and Facility Requirements.

X. Enhance the Overall Wellness of Our Working and Living Environments.

The Office of Institutional Research (OIR) would like to thank the NVCC students who participated in the PC and Internet Survey. OIR would also like to thank the faculty and staff at the five NVCC campuses who administered the survey and assisted in the data collection process.

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Executive Summary

This report presents the findings of the PC and Internet Survey, administered to NVCC students in Spring 1999. The PC and Internet Survey examined NVCC students' access and use of personal computers, e-mail, and the Internet, both at home and at work. The survey was divided into two parts. Part A of the survey consisted of questions on computer technology usage at home, and Part B consisted of questions on computer technology usage at work. Twenty-one NVCC classes were randomly selected for this survey, with a total of 540 enrolled students. Approximately 400 students were expected to be present in these classes during the administration of the survey. A total of 290 students responded to the survey.

An earlier report detailed the results of the PC and Internet Survey for all of the respondents and by the five NVCC campuses. This report presents similar information, only by the gender and race of the respondents.

Data from national studies, which measured computer access, have demonstrated a technology gap or "digital divide" across different racial groups. The differences among different racial groups at NVCC were not as marked as those observed in the national studies. For example, a study conducted in 1998 by the Department of Commerce found that 40% of the surveyed White respondents had a computer compared to 19% of the Black respondents.* At NVCC, the PC and Internet Survey found that a larger percentage of White respondents had computer access than Black respondents. However, the difference between the two groups was only 10% (89% computer access for White respondents and 79% for Black respondents). In addition, a very large proportion of NVCC students had access to a computer regardless of race.

There were differences in computer access and use between male and female respondents. Male respondents were more likely to have access to a home computer. In addition, male respondents used a home computer more frequently as well as for more hours during the week than female respondents. However, female respondents, who had computer access at home, were more likely to have e-mail access than male respondents.

Unlike home computer use, male and female respondents had comparable access to computers and e-mail at work. Male respondents, however, used e-mail at work more frequently than female respondents. In addition, a larger percentage of male respondents had Internet access at work. However, of those respondents who had access to the Internet at work, females were more likely to use the Internet than males.

The majority of the respondents, regardless of race, had access to computer technology at home. However, there were differences in access to computers, e-mail, and the Internet by race. Eighty-nine percent of the White respondents had computer access at home compared to 79% of the Black respondents. Black respondents had the smallest percentage of computer access, e-mail access, and Internet access at home. Hispanic respondents had the largest percentage of e-mail and Internet access on a home computer.

Regardless of race, respondents had less access to computers, e-mail, and the Internet at work than at home. Unlike computer access at home, Black respondents had the highest computer access rate at work (69%) followed by White respondents (66%). Hispanic respondents had the largest percentage of e-mail access and usage at work.

Major differences emerged in computer access when the survey data was analyzed by both the gender and race of the respondents. For male respondents, there were considerable differences across the racial groups. White male respondents had the largest percentage of computer access at home (95%) compared to Black male respondents (75%), a difference of 20%. Female respondents, regardless of race, had similar levels of computer access at home.

As far as e-mail access was concerned, the differences across the racial groups were not as pronounced among the female respondents as in the case of male respondents. There was a 27% difference between Hispanic male respondents who had e-mail access (100%) and Black male respondents (73%). Among female respondents there was a 4% difference between Asian respondents (91%) and White respondents (87%).

Internet access at home had a similar pattern to that of e-mail access. Of those male respondents with computer access, all of the Hispanic male respondents had Internet access. This compares to 73% of the Black male respondents with Internet access. Among the female respondents, Asian students had the largest percentage of Internet access at home (91%), while Black students had the smallest (84%).

In conclusion, the results of the study indicated that rates of access and availability of computers, e-mail, and the Internet are very high among NVCC students. The study also revealed that a "digital divide" exists to a certain degree in some areas. In particular, NVCC female and minority students had less access to a computer at home compared to male and non-minority students. However, in the use of e-mail and the Internet, the "digital divide" was less apparent.

*Source: "Falling Through the Net II: New Data on the Digital Divide." National Telecommunications and Information Administration (1998): 1-5.

DIGITAL DIVIDE: GENDER AND RACE VARIATIONS OF COMPUTER USE BY NVCC STUDENTS

Introduction

This report presents the findings from a survey administered to NVCC students in Spring 1999. The PC and Internet Survey examined NVCC students' access and use of personal computers, e-mail, and the Internet, both at home and at work. The Office of Institutional Research (OIR) at NVCC conducted the survey to gain information so that the College can plan and provide the latest technology to students and to anticipate students' computer needs. In addition, the survey was administered to determine if there is a computer technology gap or "digital divide" among students at NVCC based on gender and/or race.

Methodology:

This report is the second in a series based on the PC and Internet Survey. The first report, titled "NVCC Student Use of Personal Computers and Internet, No. 17-99" detailed the results of the survey for all of the respondents and according to the five NVCC campuses. This report presents similar information, only by the gender and race of the respondents. For some survey questions, the number of respondents was small. The information was analyzed accordingly, regardless of the number of respondents. This report does not make any inferences about the general population based on the results of this study. It is important to note that the purpose of this report was to present the findings of the PC and Internet Survey.

Five-hundred and forty surveys were randomly distributed to students at NVCC during the Spring 1999 semester.** The surveys were distributed in 21 NVCC classes from all five campuses. Of these 21 classes, 8 were night classes and 13 were day classes. The classes were from twelve randomly chosen disciplines: business management and administration, English as a Second Language, information systems technology, speech and drama, legal assisting, psychology, English, history, math, economics, physical education and recreation, and marketing. A total of 540 students were enrolled in these classes and approximately 400 students were expected to be present during the administration of the survey. A total of 290 students responded to the survey. It is important to note that the number of responses varied for each question because not all students answered each survey question.

The survey was divided into two parts.*** Part A of the survey consisted of questions on students' personal computer usage at home. This area included questions on access and usage of personal computers and the Internet, and access to e-mail. Part B of the survey pertained to students' computer usage at work. This section of the survey asked students if they had access to and used a computer, e-mail, and the Internet at work. The questionnaire concluded by allowing students to write comments concerning the survey topic.

Literature:

Several national studies have been conducted pertaining to computer access and usage according to gender and race. One such study, "Falling through the Net II: New Data on the Digital Divide", was conducted by the National Telecommunications & Information Administration of the Department of Commerce. This study found that over 40% of the surveyed White households owned a computer, compared to 19% of surveyed Black households and 19% of surveyed Hispanic households.

Other national studies have revealed similar information regarding technology gaps. The national survey report titled "Bridging the Racial Divide on the Internet" by Donna Hoffman and Thomas Novak also examined computer access and usage according to race. This report found that White

respondents had higher percentages of computer ownership compared to Black respondents (44% and 29% respectively). In addition, this study found that White respondents were more likely to use the Web (26%) than Black respondents (22%).****

A recent article by Lawrence Gladieux and Watson Swail titled "The Digital Divide and Educational Opportunity" stated that schools with higher proportions of minority students have less access to computers. Specifically, data from a survey conducted by the University of California at Los Angeles stated that students in public Black colleges were approximately half as likely to use e-mail compared to students in private, predominately White colleges.***** The findings of these studies and a vast amount of related literature provided the context for the NVCC study.

This report is divided into three sections. Section I presents information from the PC and Internet Survey analyzed by the gender of the respondents, and Section II presents information analyzed by the race of the respondents. Section III presents information on computer access and usage at home, which was analyzed by both the gender and race of the respondents. Lastly, a summary section is presented at the end of the report.

** In order to obtain a representative sample, a technique known as "stratified random sampling" was used in selecting the students for the survey.

*** A copy of the survey instrument is attached at the end of the report.

**** Source: Hoffman, Donna and Thomas Novak. "Bridging the Racial Divide on the Internet.'Science 17 April 1998: 1-13.

*****Source: Gladieux, Lawrence and Watson Swail. "The Digital Divide and Educational Opportunity.'The College Board Review August 1999: 28-30.

Section I – Computer and Internet Usage According to Gender of Respondents

Computer and Internet Usage at Home

Part A of the PC and Internet Survey asked questions pertaining to computer access and usage at home. Two hundred and ninety students responded to the question "Do You Have Access To a Personal Computer (PC) at Home?" A larger percentage of male respondents had access to a computer at home (92%) compared to female respondents (83%) (see Table 1).

Table 1: PC Access at Home, By Gender

PC Access	Respondents					
	Male		Female		Total	
	#	%	#	%	#	%
Yes	100	91.7	151	83.4	251	86.6
No	9	8.3	30	16.6	39	13.4
Total	**109**	**100.0%**	**181**	**100.0%**	**290**	**100.0%**

Students were asked if they had access to an e-mail account on their home computer. The majority of the respondents, regardless of gender, had access to an e-mail account (see Table 2). A larger percentage of female respondents (89%) had access to e-mail accounts compared to male respondents (86%).

Table 2: Availability of E-mail on Home Computer, By Gender

Access to E-mail	Respondents					
	Male		Female		Total	
	#	%	#	%	#	%
Yes	86	86.0	133	88.7	219	87.6
No	14	14.0	17	11.3	31	12.4
Total	**100**	**100.0%**	**150**	**100.0%**	**250**	**100.0%**

Two hundred and fifty-one students responded to the survey question, "Is Your Home Computer Connected to the Internet?" The majority of both female (86%) and male students (87%) had access to the Internet from a home computer (see Table 3).

Table 3: Internet Connection on Home Computer, By Gender

Access to Internet	Respondents					
	Male		Female		Total	
	#	%	#	%	#	%
Yes	87	87.0	130	86.1	217	86.5
No	13	13.0	20	13.2	33	13.1
Don't Know	0	0.0	1	0.7	1	0.4
Total	**100**	**100.0%**	**151**	**100.0%**	**251**	**100.0%**

Table 4 presents the number of times per week that students used their home computer, according to gender. In general, male respondents used a home computer more frequently than female respondents. The majority of the respondents, both male and female, used a home computer between 1 to 9 times per week (60% for male respondents and 70% for female respondents). However, there was a larger percentage of female respondents that did not use a home computer at all (3% for females versus 1% for males). In addition, there was a larger percentage of male respondents who used a home computer 40 or more times per week (7% for male respondents, 3% for female respondents).

Table 4: Times Per Week Using Home Computer, By Gender

Times Per Week	Respondents					
	Male		Female		Total	
	#	%	#	%	#	%
Did Not Use	1	1.0	5	3.4	6	2.5
1-9 Times	58	59.8	104	70.3	162	66.1
10-19 Times	21	21.7	19	12.8	40	16.3
20-39 Times	10	10.3	15	10.1	25	10.2
40+ Times	7	7.2	5	3.4	12	4.9
Total	**97**	**100.0%**	**148**	**100.0%**	**245**	**100.0%**

Table 5 presents the number of hours per week that respondents used a home computer. Overall, the majority of male respondents used a home computer 10 or more hours per week (59%), while the majority of the female respondents used a home computer less than 10 hours per week (57%). However, the largest proportion of male respondents (40%) used a home computer between 1 to 9 hours per week. Similarly, the largest proportion of female respondents (53%) used a home computer between 1 to 9 hours per week.

In addition, there was a larger percentage of female respondents (4%) who did not use a home computer compared to male respondents (1%). There was also a larger percentage of male respondents who used a home computer more than 40 hours per week compared to female respondents (9% versus 4%).

Table 5: Hours Per Week Using Home Computer, By Gender

Hours Per Week	Respondents					
	Male		Female		Total	
	#	%	#	%	#	%
Did Not Use	1	1.1	5	3.5	6	2.6
1-9 Hours	37	39.8	76	53.1	113	47.9
10-19 Hours	27	29.0	37	25.9	64	27.1
20-29 Hours	13	14.0	12	8.4	25	10.6
30-39 Hours	7	7.5	7	4.9	14	5.9
40+ Hours	8	8.6	6	4.2	14	5.9
Total	**93**	**100.0%**	**143**	**100.0%**	**236**	**100.0%**

Two hundred and seventeen students responded to the question, "Do You Access the Internet From Home?" The majority of the students, regardless of gender, used the Internet from a home computer (see Table 6). A slightly larger percentage of male respondents (95%) used the Internet from a home computer compared to female respondents (92%).

Table 6: Usage of Internet on Home Computer, By Gender

Use of Internet on Home Computer	Respondents					
	Male		Female		Total	
	#	%	#	%	#	%
Yes	83	95.4	120	92.3	203	93.5
No	4	4.6	10	7.7	14	6.5
Total	**87**	**100.0%**	**130**	**100.0%**	**217**	**100.0%**

The majority of respondents accessed the Internet between 1 to 9 times per week. Specifically, 68% of the female respondents and 56% of the male respondents accessed the Internet between 1 to 9 times per week from a home computer (see Table 7). Male respondents, however, were more likely to access the Internet 10 or more times per week (39%) than female respondents (25%).

In addition, there was a larger percentage of female respondents (8%) who did not use the Internet from a home computer compared to male respondents (5%). Correspondingly, there was a larger percentage of male respondents (6%) who used the Internet 30 or more times per week compared to female respondents (3%) (see Table 7).

Table 7: Times Per Week Accessing the Internet on Home Computer, By Gender

Times per Week Accessing Internet	Respondents					
	Male		Female		Total	
	#	%	#	%	#	%
Did Not Use	4	4.6	10	7.7	14	6.5
1-9 Times	49	56.3	88	67.7	137	63.1
10-19 Times	23	26.4	17	13.1	40	18.4
20-29 Times	6	6.9	11	8.5	17	7.8
30+ Times	5	5.8	4	3.0	9	4.2
Total	**87**	**100.0%**	**130**	**100.0%**	**217**	**100.0%**

Computer and Internet Usage at Work

Part B of the PC and Internet Survey asked questions regarding computer and Internet usage at work. This information was then analyzed by the gender of the respondents. As the information presented in Table 8 through Table 14 shows, there were some differences between male and female respondents in access and usage of computers, e-mail, and the Internet at work.

There were 269 responses to the question, "Do You Have Access to a Computer at Work?" (see Table 8). There was a very small difference according to gender, with 61% of the male and 63% of the female respondents having access to a computer at work.

Table 8: PC Access at Work, By Gender

PC Access	Respondents					
	Male		Female		Total	
	#	%	#	%	#	%
Yes	62	61.4	105	62.5	167	62.1
No	39	38.6	63	37.5	102	37.9
Total	**101**	**100.0%**	**168**	**100.0%**	**269**	**100.0%**

The majority of both the male and female respondents had access to e-mail from a work computer (71% and 72% respectively) (see Table 9).

Table 9: Availability of E-mail on Work Computer, By Gender

Access to E-mail	Respondents					
	Male		Female		Total	
	#	%	#	%	#	%
Yes	44	71.0	76	72.4	120	71.9
No	16	25.8	21	20.0	37	22.2
Don't Know	2	3.2	8	7.6	10	5.9
Total	**62**	**100.0%**	**105**	**100.0%**	**167**	**100.0%**

Table 10 presents information regarding access to the Internet from a work computer, by gender. There was a larger percentage of male respondents (74%) that had access to the Internet on a work computer compared to female respondents (66%).

Table 10: Internet Connection on Work Computer, By Gender

Access to Internet	Respondents					
	Male		Female		Total	
	#	%	#	%	#	%
Yes	46	74.2	69	65.7	115	68.9
No	13	21.0	24	22.9	37	22.2
Don't Know	3	4.8	12	11.4	15	8.9
Total	**62**	**100.0%**	**105**	**100.0%**	**167**	**100.0%**

The majority of both male and female respondents used e-mail at work. A larger percentage of male respondents (89%) used e-mail at work compared to female respondents (87%) (see Table 11). In addition, while over 70% of the male and female respondents acknowledged the availability of e-mail on their work computer, fewer of the respondents actually used e-mail at work (see Table 9 and Table 11).

Table 11: Usage of E-mail at Work, By Gender

Use of E-mail at Work	Respondents					
	Male		Female		Total	
	#	%	#	%	#	%
Yes	39	88.6	66	86.8	105	87.5
No	5	11.4	10	13.2	15	12.5
Total	**44**	**100.0%**	**76**	**100.0%**	**120**	**100.0%**

Table 12 shows Internet use at work for both genders. Eighty-six percent of the female respondents and 78% of the male respondents used the Internet from a work computer. Similar to e-mail usage, there was a higher number of both male and female respondents who had access to the Internet compared to those who actually used the Internet at work (see Table 10 and Table 12). In addition, while females were less likely than males to have an Internet connection on their work computer, those female respondents who did have an Internet connection were more likely to use it.

Table 12: Usage of the Internet at Work, By Gender

Use of Internet at Work	Respondents					
	Male		Female		Total	
	#	%	#	%	#	%
Yes	36	78.3	59	85.5	95	82.6
No	10	21.7	10	14.5	20	17.4
Total	**46**	**100.0%**	**69**	**100.0%**	**115**	**100.0%**

Table 13 presents the number of times per week that respondents used a work computer, according to the gender of the respondents. The majority of both male and female students used a work computer between 1 to 9 times per week (68% of male respondents and 76% of female respondents). There was a larger percentage of male respondents who used a work computer between 20 to 29 times per week compared to female respondents. In addition, a larger percentage of male respondents used a work computer 30 times or more per week.

Table 13: Times Per Week Using Work Computer, By Gender

Times Per Week	Respondents					
	Male		Female		Total	
	#	%	#	%	#	%
Did Not Use	5	8.1	5	4.8	10	5.9
1-9 Times	42	67.7	80	76.2	122	73.1
10-19 Times	4	6.5	7	6.6	11	6.6
20-29 Times	3	4.8	2	1.9	5	3.0
30+ Times	8	12.9	11	10.5	19	11.4
Total	**62**	**100.0%**	**105**	**100.0%**	**167**	**100.0%**

Table 14 presents the hours per week that male and female respondents used a work computer. The largest percentage of both male and female respondents used a work computer for 30 or more hours per week (46% of male and 51% of female respondents). This was followed by 25% of the male respondents and 21% of the female respondents using a work computer between 1 to 9 hours per week.

The majority of the female respondents used a work computer 30 or more hours per week, while the majority of the male respondents used a work computer less than 30 hours per week. In addition, approximately 8% of the male respondents did not use a computer at work compared to 5% of the female respondents. So, while it appears that men used the computer more times per week than females (see Table 13), female respondents used the computer for more hours per week than male respondents (see Table 14).

Table 14: Hours Per Week Using Work Computer, By Gender

Hours Per Week	Respondents					
	Male		Female		Total	
	#	%	#	%	#	%
Did Not Use	5	8.2	5	4.8	10	6.1
1-9 Hours	15	24.6	22	21.1	37	22.4

10-19 Hours	3	4.9	10	9.6	13	7.8
20-29 Hours	10	16.4	14	13.5	24	14.6
30+ Hours	28	45.9	53	51.0	81	49.1
Total	**61**	**100.0%**	**104**	**100.0%**	**165**	**100.0%**

Section II – Computer and Internet Usage According to Race of Respondents

Computer and Internet Usage at Home

Responses pertaining to computer technology access and usage at home were analyzed by the race of the respondents. Please note that Native American students were placed in the "Other" category due to low enrollment numbers. In addition, some of the information presented in this section should be interpreted with caution due to the small number of respondents (less than 20 respondents per category).

Table 15 presents access to a home computer according to the race of the respondent. The majority of the respondents, regardless of race, had access to a computer at home. The percent of respondents that had access to a computer at home ranged from 79% for Black students to 89% for White students.

Table 15: PC Access at Home, By Race

PC Access	Race of Respondents											
	White		Black		Asian		Hispanic		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Yes	153	89.0	30	78.9	35	85.4	20	83.3	13	86.7	251	86.6
No	19	11.0	8	21.1	6	14.6	4	16.7	2	13.3	39	13.4
Total	**172**	**100.0%**	**38**	**100.0%**	**41**	**100.0%**	**24**	**100.0%**	**15**	**100.0%**	**290**	**100.0%**

Over 83% of the respondents, in all racial categories, had access to e-mail on a home computer. Hispanic respondents had the largest percentage of access to e-mail on home computers (95%) compared to Black respondents who had the smallest percentage (83%) of e-mail access (see Table 16).

Table 16: Availability of E-mail on Home Computer, By Race

Access to E-mail	White		Black		Asian		Hispanic		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Yes	133	86.9	25	83.3	31	88.6	19	95.0	11	91.7	219	87.6
No	20	13.1	5	16.7	4	11.4	1	5.0	1	8.3	31	12.4
Total	**153**	**100.0%**	**30**	**100.0%**	**35**	**100.0%**	**20**	**100.0%**	**12**	**100.0%**	**250**	**100.0%**

Table 17 presents student access to the Internet from a home computer. The majority of students, regardless of race, had access to the Internet from home. Hispanic respondents had the largest percentage of Internet access (95%) followed by students who identified themselves as belonging to the "Other" group (92%), and Asian students (89%). Black respondents had the smallest percentage of Internet access from a home computer (80%).

Table 17: Internet Connection on Home Computer, By Race

Access to Internet	Race of Respondents											
	White		Black		Asian		Hispanic		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Yes	131	85.6	24	80.0	31	88.6	19	95.0	12	92.3	217	86.5
No	21	13.7	6	20.0	4	11.4	1	5.0	1	7.7	33	13.1
Don't Know	1	0.7	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4
Total	**153**	**100.0%**	**30**	**100.0%**	**35**	**100.0%**	**20**	**100.0%**	**13**	**100.0%**	**251**	**100.0%**

The majority of the respondents, regardless of race, accessed their home computer between 1 to 9 times per week. Hispanic students had the largest percentage (24%) of accessing a home computer more than 30 times per week. Black students were the largest percentage of respondents who did not use a home computer (7%) (see Table 18).

Table 18: Times Per Week Using Home Computer, By Race

Times Per Week	Race of Respondents											
	White		Black		Asian		Hispanic		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Did Not Use	3	2.0	2	6.9	0	0.0	1	5.9	0	0.0	6	2.5
1-9 Times	102	66.6	22	75.9	17	51.5	9	52.9	12	92.3	162	66.1
10-19 Times	28	18.3	3	10.4	8	24.3	1	5.9	0	0.0	40	16.3
20-29 Times	17	11.1	1	3.4	4	12.1	2	11.8	1	7.7	25	10.2
30+ Times	3	2.0	1	3.4	4	12.1	4	23.5	0	0.0	12	4.9
Total	**153**	**100.0%**	**29**	**100.0%**	**33**	**100.0%**	**17**	**100.0%**	**13**	**100.0%**	**245**	**100.0%**

Table 19 presents the number of hours per week that respondents used a home computer. In

general, the majority of Asian respondents (65%) and Hispanic respondents (75%) used their home computers ten or more hours per week, while the majority of the White, Black, and "Other" respondents used their home computers less than 10 hours per week (51%, 66%, and 77% respectively).

Specifically, the largest percentage of White respondents (49%), Black respondents (59%), and Asian respondents (36%) used their home computers between 1 to 9 hours per week. The largest percentage of Hispanic respondents (38%) used their home computer between 10 to 19 hours per week. Hispanic respondents were also the largest percentage of students who used a home computer 40 hours or more per week (19%).

Table 19: Hours Per Week Using Home Computer, By Race

Hours Per Week	Race of Respondents											
	White		Black		Asian		Hispanic		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Did Not Use	3	2.0	2	6.9	0	0.0	1	6.3	0	0.0	6	2.6
1-9 Hours	72	49.0	17	58.6	11	35.5	3	18.7	10	76.9	113	47.9
10-19 Hours	42	28.6	6	20.7	9	29.0	6	37.6	1	7.7	64	27.1
20-29 Hours	11	7.5	2	6.9	8	25.8	3	18.7	1	7.7	25	10.6
30-39 Hours	9	6.1	2	6.9	2	6.5	0	0.0	1	7.7	14	5.9
40+ Hours	10	6.8	0	0.0	1	3.2	3	18.7	0	0.0	14	5.9
Total	147	100.0%	29	100.0%	31	100.0%	16	100.0%	13	100.0%	236	100.0%

The majority of the respondents, regardless of race, used the Internet from a home computer (see Table 20). Approximately 96% of the White respondents, Black respondents, and Asian respondents who had access to the Internet, used the Internet on a home computer.

Table 20: Use of Internet on Home Computer, By Race

Use of Internet on Home Computer	Race of Respondents											
	White		Black		Asian		Hispanic		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Yes	126	96.2	23	95.8	30	96.8	16	84.2	8	66.7	203	93.5
No	5	3.8	1	4.2	1	3.2	3	15.8	4	33.3	14	6.5
Total	131	100.0%	24	100.0%	31	100.0%	19	100.0%	12	100.0%	217	100.0%

Table 21 presents the number of times per week that respondents used the Internet on a home computer. The largest percentage of respondents in each racial group used the Internet between 1 to 9 times per week. The second largest percentage of all White, Black, and Asian respondents used the Internet between 10 to 19 times per week on a home computer. Hispanic respondents had the largest percentage of those who used the Internet 30 times or more per week (16%).

Table 21: Times Per Week Accessing the Internet on Home Computer, By Race

Times Accessing Internet Per Week	Race of Respondents											
	White		Black		Asian		Hispanic		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Did Not Use	5	3.8	1	4.2	1	3.2	3	15.8	4	33.3	14	6.5
1-9 Times	87	66.4	17	70.8	16	51.6	10	52.6	7	58.3	137	63.1
10-19 Times	25	19.1	4	16.7	10	32.2	1	5.3	0	0.0	40	18.4
20-29 Times	12	9.2	0	0.0	2	6.5	2	10.5	1	8.4	17	7.8
30+ Times	2	1.5	2	8.3	2	6.5	3	15.8	0	0.0	9	4.2
Total	**131**	**100.0%**	**24**	**100.0%**	**31**	**100.0%**	**19**	**100.0%**	**12**	**100.0%**	**217**	**100.0%**

Computer and Internet Usage at Work

Access to a computer at work, according to the race of the respondents, is presented in Table 22. The majority of White, Black, Asian, and Hispanic respondents had access to a computer at work. Black respondents had the largest percentage of computer access (69%) followed by White respondents (66%).

Table 22: PC Access at Work, By Race

PC Access	Race of Respondents											
	White		Black		Asian		Hispanic		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Yes	105	65.6	25	69.4	20	52.6	14	63.6	3	23.1	167	62.1
No	55	34.4	11	30.6	18	47.4	8	36.4	10	76.9	102	37.9
Total	**160**	**100.0%**	**36**	**100.0%**	**38**	**100.0%**	**22**	**100.0%**	**13**	**100.0%**	**269**	**100.0%**

The majority of White, Black, Asian, and Hispanic respondents had access to e-mail on a work computer (see Table 23). There was a 9% difference between e-mail access on a work computer for Hispanic respondents (79%) compared to Asian respondents (70%).

Table 23: Availability of E-mail on Work Computer, By Race

Access to E-mail	Race of Respondents											
	White		Black		Asian		Hispanic		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Yes	76	72.4	19	76.0	14	70.0	11	78.6	0	0.0	120	71.9

No	24	22.9	4	16.0	5	25.0	1	7.1	3	100.0	37	22.2
Don't Know	5	4.7	2	8.0	1	5.0	2	14.3	0	0.0	10	5.9
Total	**105**	**100.0%**	**25**	**100.0%**	**20**	**100.0%**	**14**	**100.0%**	**3**	**100.0%**	**167**	**100.0%**

The majority of the respondents had access to the Internet from a work computer (except for students who identified themselves in the "Other" racial category). Black respondents had the largest percentage (80%) of Internet access at work. Asian respondents had the smallest percentage of Internet access from a work computer (65%).

Table 24: Internet Connection on Work Computer, By Race

Access to Internet	Race of Respondents											
	White		Black		Asian		Hispanic		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Yes	71	67.6	20	80.0	13	65.0	11	78.6	0	0.0	115	68.9
No	20	19.1	4	16.0	7	35.0	3	21.4	3	100.0	37	22.2
Don't Know	14	13.3	1	4.0	0	0.0	0	0.0	0	0.0	15	8.9
Total	**105**	**100.0%**	**25**	**100.0%**	**20**	**100.0%**	**14**	**100.0%**	**3**	**100.0%**	**167**	**100.0%**

Table 25 presents the use of e-mail at work according to the race of the respondents. Hispanic respondents were the largest percentage of those who used e-mail at work (100%), followed by Asian respondents (93%). Fewer White, Black, and Asian respondents actually used e-mail at work compared to the number of respondents that had access to e-mail at work (see Table 23 and Table 25). Whereas, all of the Hispanic respondents who had access to e-mail on their work computer used e-mail on their work computer.

Table 25: Usage of E-mail at Work, By Race

Use of E-mail at Work	Race of Respondents											
	White		Black		Asian		Hispanic		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Yes	64	84.2	17	89.5	13	92.9	11	100.0	0	0.0	105	87.5
No	12	15.8	2	10.5	1	7.1	0	0.0	0	0.0	15	12.5
Total	**76**	**100.0%**	**19**	**100.0%**	**14**	**100.0%**	**11**	**100.0%**	**0**	**0.0%**	**120**	**100.0%**

Responses regarding the use of the Internet at work according to race are presented in Table 26. The majority of the respondents, except for students who identified themselves as belonging to the "Other" racial category, used the Internet on a work computer. For all respondents, there was a smaller number of students who used the Internet at work compared to those who had access to the Internet at work (see Table 24 and Table 26).

Table 26: Usage of the Internet at Work, By Race

Use of Internet at Work	Race of Respondents											
	White		Black		Asian		Hispanic		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Yes	60	84.5	15	75.0	11	84.6	9	81.8	0	0.0	95	82.6
No	11	15.5	5	25.0	2	15.4	2	18.2	0	0.0	20	17.4
Total	**71**	**100.0%**	**20**	**100.0%**	**13**	**100.0%**	**11**	**100.0%**	**0**	**0.0%**	**115**	**100.0%**

Students were asked how many times per week they used a computer at work. The responses are presented in Table 27 according to race. The majority of the respondents, regardless of race, used a work computer between 1 to 9 times per week.

Table 27: Times Per Week Using Work Computer, By Race

Times Per Week	Race of Respondents											
	White		Black		Asian		Hispanic		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Did Not Use	9	8.6	1	4.0	0	0.0	0	0.0	0	0.0	10	6.0
1-9 Times	75	71.4	18	72.0	17	85.0	10	71.4	2	66.7	122	73.0
10-19 Times	5	4.8	4	16.0	1	5.0	1	7.1	0	0.0	11	6.6
20-29 Times	4	3.8	1	4.0	0	0.0	0	0.0	0	0.0	5	3.0
30+ Times	12	11.4	1	4.0	2	10.0	3	21.5	1	33.3	19	11.4
Total	**105**	**100.0%**	**25**	**100.0%**	**20**	**100.0%**	**14**	**100.0%**	**3**	**100.0%**	**167**	**100.0%**

Table 28 presents the number of hours per week that respondents used a work computer, according to race. The largest percentage of White, Black, and Hispanic respondents used a work computer 30 hours or more per week (50%, 52%, and 57% respectively). The largest percentage of Asian respondents (45%) used a work computer between 1 to 9 hours per week. White respondents had the largest percentage of those respondents who did not use a computer at work (9%).

Table 28: Hours Per Week Using Work Computer, By Race

Hours Per Week	Race of Respondents											
	White		Black		Asian		Hispanic		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Did Not Use	9	8.7	1	4.0	0	0.0	0	0.0	0	0.0	10	6.1
1-9 Hours	20	19.4	4	16.0	9	45.0	3	21.4	1	33.3	37	22.4
10-19 Hours	9	8.7	3	12.0	1	5.0	0	0.0	0	0.0	13	7.9
20-29 Hours	14	13.6	4	16.0	2	10.0	3	21.4	1	33.3	24	14.5
30+ Hours	51	49.6	13	52.0	8	40.0	8	57.2	1	33.3	81	49.1
Total	**103**	**100.0%**	**25**	**100.0%**	**20**	**100.0%**	**14**	**100.0%**	**3**	**100.0%**	**165**	**100.0%**

Section III – Computer and Internet Usage According to Gender and Race of Respondents

Section III presents information from the PC and Internet Survey showing computer, e-mail, and Internet access at home. The information was analyzed according to both the gender and race of the respondents.

Table 29 presents access to a computer at home, by both the gender and race of the respondents. Among the male respondents, there were large differences in computer access according to race. White male respondents had the largest percentage of computer access at home (95%), followed by both Hispanic male respondents (92%) and Asian male respondents (92%). In comparison, only 75% of the Black male respondents had access to a computer at home (see Table 29).

Among the female respondents, White respondents had the largest percentage of computer access (86%), followed by Black and Asian female respondents (82%) (see Table 29). Hispanic female respondents had the smallest percentage of access to a computer at home (75%). Although computer access varied according to the race of the female respondents, the differences were not as large as they were for male respondents.

In general, a smaller percentage of the female respondents had access to a computer at home than male respondents. The exception was Black female respondents who had a higher access rate to a home computer than Black male respondents. For White, Asian, and Hispanic female respondents, the access rate to a home computer was between 10% to 17% lower than for male respondents.

Table 29: PC Access at Home, by Gender and Race

Male Respondents						
Race	Yes		No		Total	
	#	%	#	%	#	%
White	58	95.1	3	4.9	61	100.0%
Black	12	75.0	4	25.0	16	100.0%
Asian	12	92.3	1	7.7	13	100.0%
Hispanic	11	91.7	1	8.3	12	100.0%
Female Respondents						
Race	Yes		No		Total	
	#	%	#	%	#	%

White	95	85.6	16	14.4	111	100.0%
Black	18	81.8	4	18.2	22	100.0%
Asian	23	82.1	5	17.9	28	100.0%
Hispanic	9	75.0	3	25.0	12	100.0%

Table 30 presents information on e-mail access on a home computer, by the gender and race of the respondents. One hundred percent of the Hispanic male respondents had e-mail access on a home computer. This was followed by 86% of the White male respondents who had e-mail access. Similar to computer access (see Table 29), there was a substantial difference in the proportion of White male respondents and Black male respondents who had access to e-mail at home (14% difference).

E-mail access according to race did not differ as greatly among the female respondents as the male respondents. Unlike male respondents, Asian female respondents had the largest percentage (91%) of e-mail access at home, followed by Black respondents (90%). White female respondents had the smallest percentage of e-mail access at home (87%) (See Table 30).

While there was a small percentage difference between White male (86%) and White female respondents (87%) who had e-mail access at home, there was a 17% difference between Black male (73%) and Black female respondents (90%) who had access to e-mail at home.

Table 30: E-mail Access at Home, By Gender and Race

Male Respondents						
Race	Yes		No		Total	
	#	%	#	%	#	%
White	51	86.4	8	13.6	59	100.0%
Black	8	72.7	3	27.3	11	100.0%
Asian	10	83.3	2	16.7	12	100.0%
Hispanic	11	100.0	0	0.0	11	100.0%
Female Respondents						
Race	Yes		No		Total	
	#	%	#	%	#	%
White	82	87.2	12	12.8	94	100.0%
Black	17	89.5	2	10.5	19	100.0%

Asian	21	91.3	2	8.7	23	100.0%
Hispanic	8	88.9	1	11.1	9	100.0%

Table 31 presents information on Internet access at home, by the gender and race of the respondents. All of the Hispanic male respondents had access to the Internet at home, followed by 88% of the White male respondents. Black male respondents had the smallest percentage of Internet access at home (73%) (see Table 31).

Over 84% of the female respondents had access to the Internet at home. The differences in Internet access for female respondents among the different racial categories were smaller compared to the male respondents. Ninety-one percent of the Asian female respondents had Internet access at home. This was followed by 89% of the Hispanic female respondents having Internet access at home (see Table 31). Black female respondents had the smallest percentage of Internet access (84%). The percentage of Black female respondents with Internet access at home far exceeded the percentage of Black male respondents who had Internet access at home (84% for Black females vs. 73% for Black males).

Table 31: Internet Access at Home, By Gender and Race

Male Respondents						
Race	Yes		No		Total	
	#	%	#	%	#	%
White	51	87.9	7	12.1	58	100.0%
Black	8	72.7	3	27.3	11	100.0%
Asian	10	83.3	2	16.7	12	100.0%
Hispanic	11	100.0	0	0.0	11	100.0%
Female Respondents						
Race	Yes		No		Total	
	#	%	#	%	#	%
White	80	85.1	14	14.9	94	100.0%
Black	16	84.2	3	15.8	19	100.0%
Asian	21	91.3	2	8.7	23	100.0%
Hispanic	8	88.9	1	11.1	9	100.0%

Summary

This report presents information collected from the PC and Internet Survey given to NVCC students in Spring 1999. The survey examined computer, e-mail, and Internet access and usage at both home and work. The survey results were analyzed according to the gender and race of the respondents.

Section I: Computer and Internet Usage: Gender Variations

- Although the majority of both male and female respondents had access to a computer at home, access was higher among male respondents. In addition, the majority of male and female respondents had e-mail and Internet access on their home computers.
- Male respondents used a home computer more frequently during a week than female respondents.
- Overall, the majority of male respondents used a home computer 10 or more hours per week (59%), while the majority of female respondents used a home computer less than 10 hours per week (57%).
- A larger percentage of male respondents used the Internet from a home computer compared to female respondents (95% males versus 92% females).
- There was almost no difference between male and female respondents in access to a computer and e-mail at work. Female respondents were less likely to be connected to the Internet on their work computer. However, females that were connected to the Internet were more likely to use the Internet than males.
- A smaller number of both male and female respondents actually used e-mail on their work computer compared to those respondents who had access to e-mail on a work computer.
- The majority of the respondents, both male and female, used a work computer between 1 to 9 times per week (68% for males, 76% for females). The majority of female respondents used a work computer 30 or more hours per week, while the majority of male respondents used a work computer less than 30 hours per week.

Section II: Computer and Internet Usage: Race Variations

- Although the majority of all of the students had access to a computer at home, Black respondents indicated less access than respondents from other racial categories.
- The majority of the respondents, regardless of race, had access to e-mail from a home

computer. Hispanic students had the largest percentage of e-mail access from home (95%).

- At least 80% of the respondents, regardless of race, had access to the Internet from a home computer. Hispanic students had the largest percentage of Internet access from a home computer (95%). Black respondents had the smallest percentage of access to the Internet on a home computer (80%).

- The majority of the respondents, across all racial categories, accessed a home computer between 1 to 9 times per week. Hispanic students were the largest percentage of respondents who accessed a home computer 30 times or more per week (24%).

- Asian respondents had the largest percentage of Internet use from a home computer (97%), followed closely by both White respondents (96%) and Black respondents (96%).

- Black respondents had the largest percentage of access to a computer at work (69%). Asian respondents had the smallest percentage of access to a computer at work (53%).

- All of the Hispanic respondents who had access to e-mail at work, used e-mail at work (100%). In comparison to those who had access to e-mail at work, a smaller number of Black, White, and Asian respondents used e-mail at work.

- The majority of White (85%), Black (75%), Asian (85%), and Hispanic respondents (82%) used the Internet at work.

Section III: Computer and Internet Usage: Gender and Race Variations

- There were differences in computer access at home according to both gender and race of the respondents. White male respondents had the highest rate of computer access at home (95%). Hispanic female respondents (75%) and Black male respondents (75%) had the lowest rate of computer access at home.

- In general, females had lower access rates to home computers than males. The exception was Black females who had higher access rates to home computers than Black males. For White, Asian, and Hispanic female respondents, the rate of access was between 10% to 17% lower than for males.

- Hispanic male respondents had the largest percentage of e-mail access at home (100%) among male students. This was followed by White male respondents (86%) and Asian male respondents (83%) who had access to e-mail at home.

- Among female respondents, Asian females had the largest percentage of e-mail access at home (91%). This was followed by Black female respondents, who had a 90% e-mail access rate at home.

- While there was a small percentage difference between White male and female respondents with e-mail access at home, there was a large difference in e-mail access between Black male and Black female respondents (73% for male and 90% for female).

- Hispanic males had the largest percentage of Internet access at home (100%), followed by Asian female respondents (91%). Black male respondents had the smallest percentage of students with Internet access at home (73%).

Appendix

Computer Usage, By Gender

Table A1: Ability to Load Software on Home Computer, By Gender

Ability to Load Software	Respondents					
	Male		Female		Total	
	#	%	#	%	#	%
Yes	92	92.0	111	73.5	203	80.9
No	6	6.0	21	13.9	27	10.7
Don't Know	2	2.0	19	12.6	21	8.4
Total	**100**	**100.0%**	**151**	**100.0%**	**251**	**100.0%**

Table A2: Age of Home Computer, By Gender

Age of Home Computer	Respondents					
	Male		Female		Total	
	#	%	#	%	#	%
New	38	38.0	48	32.0	86	34.4
1-3 Years Old	42	42.0	66	44.0	108	43.2
Over 3 Years Old	20	20.0	28	18.7	48	19.2
Do Not Know	0	0.0	8	5.3	8	3.2
Total	**100**	**100.0%**	**150**	**100.0%**	**250**	**100.0%**

Table A3: Responses to the Survey Question, "Do You Use Your Home Computer?", By Gender

Use of Home Computer	Respondents					
	Male		Female		Total	
	#	%	#	%	#	%

Yes	96	98.0	144	95.4	240	96.4
No	2	2.0	7	4.6	9	3.6
Total	**98**	**100.0%**	**151**	**100.0%**	**249**	**100.0%**

Table A4: Ability to Load Software on Work Computer, By Gender

Ability to Load Software	Respondents					
	Male		Female		Total	
	#	%	#	%	#	%
Yes	40	64.5	42	42.0	82	50.6
No	21	33.9	47	47.0	68	42.0
Don't Know	1	1.6	11	11.0	12	7.4
Total	**62**	**100.0%**	**100**	**100.0%**	**162**	**100.0%**

Computer Usage, By Race

Table A5: Age of Home Computer, By Race

Age of Home Computer	Race of Respondents													
	White		Black		Asian		Hispanic		Native American		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
New	60	39.5	5	16.7	8	22.8	9	45.0	3	42.9	1	16.7	86	34.4
1-3 Years Old	64	42.1	13	43.3	15	42.9	9	45.0	3	42.9	4	66.6	108	43.2
Over 3 Years Old	24	15.8	11	36.7	9	25.7	2	10.0	1	14.2	1	16.7	48	19.2
Do Not Know	4	2.6	1	3.3	3	8.6	0	0.0	0	0.0	0	0.0	8	3.2
Total	**152**	**100.0%**	**30**	**100.0%**	**35**	**100.0%**	**20**	**100.0%**	**7**	**100.0%**	**6**	**100.0%**	**250**	**100.0%**

Table A6: Responses to the Survey Question, "Do You Use Your Home Computer?", By Race

Use of Home Computer	Race of Respondents													
	White		Black		Asian		Hispanic		Native American		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Yes	149	98.0	28	93.3	33	94.3	17	89.5	7	100.0	6	100.0	240	96.4
No	3	2.0	2	6.7	2	5.7	2	10.5	0	0.0	0	0.0	9	3.6
Total	**152**	**100.0%**	**30**	**100.0%**	**35**	**100.0%**	**19**	**100.0%**	**7**	**100.0%**	**6**	**100.0%**	**249**	**100.0%**

Table A7: Ability to Load Software on Work Computer, By Race

Ability to Load Software	Race of Respondents													
	White		Black		Asian		Hispanic		Native American		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Yes	53	53.0	15	60.0	8	40.0	6	42.9	0	0.0	0	0.0	82	50.6
No	38	38.0	10	40.0	11	55.0	7	50.0	0	0.0	2	66.7	68	42.0
Don't Know	9	9.0	0	0.0	1	5.0	1	7.1	0	0.0	1	33.3	12	7.4
Total	100	100.0%	25	100.0%	20	100.0%	14	100.0%	0	0.0%	3	100.0%	162	100.0%

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