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Actual versus Perceived Online Abilities: The Difference Gender Makes

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Abstract

The literature on gender and technology use finds that women and men differ significantly in their attitudes toward their technological abilities. Concurrently, existing work on science and math abilities of students suggests that such perceived differences do not always translate into actual disparities. There has been little work exploring gender differences with respect to Internet use ability, especially based on a diverse sample of adult users. We use new data on Web-use skill to test empirically whether there are differences in men's and women's abilities to navigate online content. Findings suggest that men and women do not differ greatly in their online abilities. However, we find that women's self-assessed skill is significantly lower than that of men. We discuss the implications of these findings for social inequality with respect to Internet use.

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Introduction

There is an increasing body of literature on the social implications of the Internet (DiMaggio, Hargittai, Neuman, and Robinson 2001; Tyler 2002). Millions of people access the Web daily for financial, health and government information, for job searches, entertainment and numerous other activities (Howard, Rainie, and Jones 2002). An increasingly popular topic of inquiry in the literature on Internet use addresses the "digital divide" or the differences between haves and have nots with respect to new digital technologies (Ident Ref 2004). Work among academic researchers (Bucy 2000; DiMaggio, Hargittai, Celeste, and Shafer 2004) and in policy circles (Benton and Leadership Conference on Civil Rights Education Fund 2002; National Telecommunications and Information Administration 2002) indicates that Internet use has spread across the population unevenly leading to a potential digital divide that could exacerbate the differences between those already in advantageous positions and the disadvantaged.

One focus for scholars researching Internet inequality has been on potential differences between men's and women's access to and uses of the medium (Bimber 2000; Denis and Ollivier 2002; Ono and Zavodny 2003). Although gender inequalities in *access to the Internet* are no longer a concern in the United States (Ono and Zavodny 2003), this shrinking gap does not necessarily imply, as some have argued, that "there is little reason for concern about sex inequalities in Internet access and usage now" (Ono and Zavodny 2003, p.111). A simple dichotomization between those that use the medium and those that do not disregards important factors beyond mere connectivity that need to be considered when discussing the potential implications of the Internet for inequality. We may find important differences in how attitudes to the Internet, the intensity and frequency of use, and user skill differ by gender, all factors relevant to how much different groups may benefit from Internet use (Ident Ref 2003). In short, our definition of technology use must be refined.

Internet use by itself does not necessarily suggest gender equality vis-à-vis the Web and resulting outcomes. Rather, we must also consider data on one's ability to use the medium efficiently.

By "skill", we refer to users' ability to locate content online effectively and efficiently. There are a myriad of ways in which one may use the Internet (e.g. computer-mediated communication manifested by email use or instant messaging; information retrieval that takes advantage of existing material online; content creation that allows the user to contribute to material available on the Web). Many of these activities are contingent upon the ability to find different types of resources (e.g. necessary software, access to relevant communities). That is, even if a user's primary interest is in communicating with people who share similar interests, the user must have the know-how to find such communities.

Finding information on the Web—whether mailing lists, online stores or the latest news—can involve a myriad of actions from the use of search engines to typing Web addresses in the location bar of the browser or clicking on directory listings on a portal site (Ident Ref 2004). A user may possess very different levels of know-how with respect to these various online actions. We choose to focus on people's ability to draw on these various types of online actions for efficient information retrieval on the Web. Are there differences in online skill based on gender? Are men and women similarly able to make the most of the myriad of services and information made available by the Internet?

As an increasing number of daily activities move online, people's aptitude in using the medium may be linked to stratification. Those who are unable to look for better deals on the Web, to conduct financial transactions, to access government services, to learn about health information, to seek out political information and voice their own viewpoints may lose out in various realms of life. Not being able to use the medium may result in less effective political participation, less knowledge about government services and less useful

information-seeking with respect to human capital enhancing activities (e.g., job searches, educational opportunities, health concerns). The Web makes a myriad of information available to users, but if some people are more apt at accessing online materials than others, those with higher-level abilities are better positioned to benefit from the medium.

We use data from a project in which we collected information about people's Web-use skills to assess whether people's ability to navigate online content differs based on gender. First, we review the literature on gender and technology use focusing on work that explores differences between male and female attitudes toward technology, and differences in computer and Internet uses. Then, we outline the methods used in the project for studying people's online information-seeking behavior. Next, we report the findings about people's online abilities drawing on data from 100 in-person observations conducted with a diverse sample of Internet users. In particular, we focus on gender differences. Finally, we discuss the implications of our findings for social inequality and outline questions for future research.

Gender and Technology Use

The extent to which human capital is fostered, employed and recognized is profoundly social and has often been examined along gender lines. A broad literature exists that looks at how the development and recognition of quantitative skills translates into educational and occupational inequalities for men and women (Cole 1986; Correll 2001; Eccles 1994; Etzkowitz, Kemelgor, and Uzzi 2000; Florentine and Cole 1992; Fox and Stephan 2001; Margolis and Fisher 2002). This research has focused on mathematical competence and performance in general (Benbow and Stanley 1980; Correll 2001; Hyde, Fennema, and Lamon 1990; Spencer, Steele, and Quinn 1999; Steele 1997) in addition to how supply and demand-side decisions across the life-course structure the gender gap in medical school (Cole 1986; Florentine and Cole 1992), the physical sciences, engineering and

mathematics (Eccles 1994; Etzkowitz, Kemelgor, and Uzzi 2000), as well as computer science (Margolis and Fisher 2002). This literature has sought to understand how and when gendered processes influence social institutions and social and cultural perceptions of male and female abilities and preferences; and what this may imply for social inequality (Tang 2003).

On the demand side, gender differences in educational and occupational attainment have been linked to organizational and cultural factors that discriminate against women in both overt and covert ways (Eccles 1994; Etzkowitz, Kemelgor, and Uzzi 2000; Margolis and Fisher 2002). Supply-side arguments have focused on the ways in which cultural beliefs and socialization affect choices and valuations, both individual and collective, regarding women's competencies vis-à-vis men (Bandura, Barbaranelli, Caprara, and Pastorelli 2001; Cole 1986; Correll 2001; Eccles 1994). This line of research suggests that the extent to which men and women make career-related decisions based on cultural beliefs about gender may guide them into different career paths (Correll 2001).

One of the paradoxes that this research has highlighted involves whether or not actual differences in skill evolve out of this entanglement of gendered behaviors and decisions. As Correll (2001) notes, "cultural beliefs about gender are argued to bias individuals' perceptions of their competence at various career-relevant tasks, *controlling for actual ability*" (p. 1691, emphasis added). In other words, gendered perceptions of competency may diverge from actual skill levels. While a burgeoning literature has investigated self-assessment of computer skill (Brosnan 1998a; Corston and Colman 1996; Denis and Ollivier 2002; Dinev and Koufteros 2002; Durndell, Haag, Asenova, and Laithwaite 2000; Miura 1987; Torkzadeh and Van Dyke 2002; Whitley 1997) no research to date has looked at people's assessments of their Internet abilities *and* their relationship to users' actual online skill. Although any detailed analysis of inequality must investigate both

supply and demand side of this gendered equation, here we focus on the determinants of Web-use skill. Do men and women diverge in online skill? Do their perceptions of online competencies differ? How are the two related? Answers to these questions will help us understand better the implications of Internet use for social inequality.

There is a large body of literature on gender and technology use spanning several disciplines and a multitude of methodologies. Here, we review the existing literature on user attitudes regarding computer use and what we now know about actual computer uses and Internet uses in particular focusing on user skill. Our goal is to extend the literature on *computer use* to examine how perceptions about *Internet use* relate to actual online abilities.

Attitudes toward technologies and technical competencies

The gender dynamics relating attitudes about the Internet and actual utilization of the medium have not been adequately studied to date (for an exception, see Busselle, Reagan, Pinkleton, and Jackson 1999). Nevertheless, research regarding computer use more generally has highlighted the significance of interest and stereotyping about computers, as well as self-perception of ability (self-efficacy) in explaining gendered patterns of behavior vis-à-vis this technology (Campbell 1990; Levin and Gordon 1989; Reinen and Plomp 1997; Shashaani 1993). Investigations with elementary and high school students as well as adults reveal a significant gulf between male and female interest in computers (Campbell 1990; Levin and Gordon 1989; Reinen and Plomp 1997; Shashaani 1993). For example, drawing on representative national samples of elementary, lower and upper secondary school students from twenty countries in 1989 and ten countries in 1992, Reinen and Plomp (1997) find that females enjoy using the computer less than male students. In addition, research has found that men and boys have significantly more positive attitudes towards computers and more stereotyped attitudes regarding who is capable of using them (Levin and Gordon 1989;

Whitley 1997), while female students' attitudes and attributions toward computers discourage them from using the technology (Campbell 1990). The inference drawn is that gendered attitudes are central to discrepancies in use.

Beyond attitudes, the literature points to another important factor that influences technology use: self-efficacy. Coined and initially elaborated by Bandura (1977), self-efficacy beliefs revolve around "one's capability to organize and execute the courses of action required to manage prospective situations" (1977, p.2) and includes both anxiety and enactive and vicarious experience regarding task specific competencies (for a review of the current state and prospects of the concept see Pajares [1997]). Computer-related self-efficacy has been an important extension of this concept. In a wide variety of research settings, men have been found to exhibit higher self-efficacy scores (Corston and Colman 1996; Durndell, Haag, Asenova, and Laithwaite 2000; Miura 1987; Torkzadeh and Van Dyke 2002; Whitley 1997). Women, on the other hand, generally display less confidence and more discomfort (Brosnan 1998b; Dickhäuser and Stiensmeier-Pelster 2002; Schumacher and Morahan-Martin 2000; Shashaani 1993).

Experience using computers and the Web

Although initial research on Internet use found differences in the rates of men and women online with the former more connected, (Bimber 2000; Denis and Ollivier 2002), more recent data indicate that this gender gap in basic connectivity has disappeared (Ono and Zavodny 2003). Previous research on differences in Internet use by gender has tended to focus on how men and women differ in their use of the medium for interpersonal communication (Boneva, Kraut, and Frohlich 2001; Kennedy, Wellman, and Klement 2003a). This body of work has found that women spend more time corresponding with personal ties than their male counterparts. Although some of this research has also looked at

differences in information retrieval by gender that discussion has not been linked to a consideration of online abilities (Kennedy, Wellman, and Klement 2003a).

Regardless of the amount of time spent on email, broad consensus suggests that men of all ages and across contexts spend more time online than women (Busselle, Reagan, Pinkleton, and Jackson 1999; Durndell and Thomson 1997; Kelsey 2002; Kennedy, Wellman, and Klement 2003b; Schumacher and Morahan-Martin 2000) and are more intense users of the medium (Ono and Zavodny 2003). Some have argued that the reason for these differences reflects a gender gap in leisure time (Green 2000; Kelsey 2002; Kennedy, Wellman, and Klement 2003a; Lally 2002). Moreover, users' perceived self-efficacy in using computer technologies, relative anxiety toward computers and lesser familiarity with the underlying technology have all been causally implicated in use (Jackson, Ervin, Gardner, and Schmitt 2001).

These factors may in turn affect women's computer and Internet skills. Because women have less time at home to devote to leisurely Web use, they have less opportunity to familiarize themselves with the medium (Kelsey 2002; Lally 2002). In so far as home use allows for the most freedom in exploring sites of interest to the user, having less free time in the home to browse the Web may affect women's Web-use skills negatively. Given the persistence of popular stereotypes of male superiority (and the concomitant image of female inferiority) in mathematics, science, and with computer technologies (Anderson 1987), the question arises whether these images reflect actual skill discrepancies.

Contrary to common perception, the empirical literature regarding math and science abilities shows minimal differences between men and women (Anderson 1987; Hyde, Fennema, and Lamon 1990), findings which are supported in the domain of computer skills in the U.S. (Reinen and Plomp 1997; Shashaani 1993). Little substantive work, however, has investigated *Internet*-related skills by gender. Extant research in this area is scarce and

exploratory in nature (McDonald and Spencer 2000). For example, McDonald and Spencer (2000) find that while male participants expressed a significantly higher degree of confidence in Web navigation, overall differences between males and females in efficiency were absent. Utilizing a non-random sample of twenty student volunteers, nonetheless, severely undermines the internal and external validity of their findings. Not only is there a gap in the research on gender and online skill, but also there has been a conspicuous absence of empirical work relating self-perception of skill to actual skill, a commonly speculated mechanism highlighted in the literature reviewed above (Durndell et al. 2000). We now turn to the data and methodology we used to collect information on Web-use skill and self-perceived ability among men and women.

Data and Methodology

Sampling

We collected data on Web-use experiences and online skill using survey instruments and in-person observations with a diverse sample of one hundred Internet users from Mercer County, New Jersey between the summers of 2001 and 2002.[i] Respondents were asked to come to a university location for participation and were offered $40 for their time and effort (with additional compensation offered for babysitting or transportation costs). Because there exists no comprehensive listing of Internet users, we used a random sample of all county addresses for contacting potential respondents. We obtained a random sample of residential addresses for the county from Survey Sampling, Inc. that was checked against the National Change of Address Database maintained by the U.S. Postal Service.

We followed up the letters by telephone calls to 383 households where we used the next-birthday method to sample randomly from within the household. Using the standards of the American Association for Public Opinion Research our final response rate was 58.5 percent considerably high given the type of active participation required on the part of

respondents including up to thirty minutes of travel to and from the study location and one and a half hours on average spent with the researcher. In fact, such rigorous sampling methodology is unprecedented in the literature for studies of this kind that usually rely on convenience samples most often restricted to university members. Moreover, unlike most related studies, which either limit their sample size to a few dozen respondents (e.g., McDonald and Spencer 2000) or collect survey data only (e.g., Corston and Colman 1996; Shashaani 1994), this project has in-depth data on one hundred respondents.

Study session

At the study sessions, first, the researcher orally administered a questionnaire to collect background information about subjects' usual Web-use experiences and to establish a rapport with respondents.[ii] Next, participants were asked to sit at a computer and perform a variety of tasks online by looking for various types of content. Here, we report people's ability to find information about (a) job or career opportunities, (b) a site that compares different presidential candidates' views on abortion, (c) tax forms, (d) a used car for purchasing, (e) information about local cultural events (movie time listings, theatre shows), (f) music to listen to online, (g) children's art, and (h) a museum's or gallery's Web site.

Subjects were given the choice of using a PC or a Mac, both of which were loaded with the three most popular browsing software applications (Internet Explorer, America Online, and Netscape Communicator) to allow respondents to replicate their usual online experience.[iii] The computers connected to the Internet on a high-speed university network line. The sessions were recorded with a screen capture program that generated audio-visual files of the entire search session.

The researcher sat behind the respondent and refrained from influencing the respondents' actions. Participants were encouraged to look for the information until they found it. No one was cut off from pursuing a search. In some cases when respondents

looked frustrated or agitated they were given the option of moving on to another task. However, when a subject simply stated that he or she was unable to perform a certain task, that person was encouraged to try several times before moving on to the next task. After the observation session, data on demographic background were collected through an online survey.

We measure skill by seeing whether people are able to complete a task successfully given unlimited amount of time to look for the material. The first author watched all audio-visual tapings of the sessions to examine whether participants were able to complete the various tasks. There is a binary outcome of success versus failure for each of the eight tasks.

Sample descriptives

Unlike other studies that look at people's computer and Internet uses in depth (McDonald and Spencer 2000; Wang, Hawk, and Tenopir 2000), the participants in this project represent a diverse sample of Internet users. Fifty-one percent of respondents are women; forty-nine percent are men resulting in a nearly even representation of the two genders. Participants include Internet users from varying points of the life course ranging in age from 18-81 (see Table 1 for details).[iv] Participants' occupations vary widely from real-estate agents, environmental policy analysts, and blue-collar workers to office assistants, teachers, service employees and medical professionals in addition to students, unemployed and retired persons. The group is also diverse regarding Web-use frequency with some people spending just a few minutes a week online compared to others who are online for several hours daily.

This county's population is more highly educated and has higher family income than the national average. It is important to keep this in mind when attempting to make generalizations from the study at the national level. The implications of these demographics for this study are that findings regarding the effects of education and income are likely to be

conservative given that at the national level we will find more users with lower levels of education and income. However, the focus of this article is on gender and so these are not severe limitations in the case of this exploration. Regarding gender and Web use, we have no reason to believe that men and women in this county are different from men and women in other parts of the United States with respect to their use of the Internet when controlling for all the additional demographic characteristics we include in the analyses.

Findings

Differences in Web-use skill

Table 2 shows the percentage of respondents who completed the different tasks successfully and the range of time they spent on each task (data on time were coded in seconds). Given unlimited amounts of time, the majority of people can find most types of content online. However, given that people were allowed to pursue a task as long as they wanted, it is noteworthy that as much as 15 percent or more failed on three of the tasks and there is not one type of content that everyone can find (i.e. at least five percent of people failed on each task). This is considerable given that people could look as long as they wanted, were in a situation where they had no time constraints and were not being distracted by other obligations and activities. The tasks were not trick questions and there were numerous sites online that have the requested material. However, the fact that people cannot find various types of content suggests that simply having *technical access* to the Internet does not guarantee *efficient access* (Wilson 2000), that is, access which allows people to locate diverse types of material from which they may benefit.

Differences in online abilities between men and women

To test whether there are gender differences in Web-use abilities, we use OLS regression to explain differences in overall success rate (see the sixth row of Table 1 for descriptive statistics about this variable). We control for age, education, race and family

income. The model also includes information on the amount of time respondents spend on the Web on a weekly basis, whether they use a computer at work and a control variable for number of days into the study (to account for any possible system-wide changes in the Web over time).

The results presented in Table 3 suggest that there is no statistically significant difference between men's and women's ability to find content on the Web once we control for their socio-economic background, and computer and Internet use experiences. Rather, age, level of education and experience with the medium are important predictors. Younger users, those with more years of schooling, those with more Web-use experience and users with a computer at work are better at finding content online.

We also collected data on people's self-assessed skill level by asking respondents how they rated their own Internet skills on a five-point scale (not at all skilled, not very skilled, fairly skilled, very skilled and expert).[v] The majority of respondents (58 percent) rated themselves in the middle of the road as fairly skilled. The gender breakdown of self-assessed skill reported on the last three rows of Table 1 suggests that men are more likely to think of themselves as better skilled than women. In fact, not one woman thought of herself as an "expert" user, and not one man thought of himself as a complete novice.

We tested the importance of self-perceived skill on actual skill by adding the former variable to the OLS regression model described above. Column A in Table 4 presents the results of this model and suggests that gender is a very strong predictor of how one rates one's online abilities; being female leads to a significantly lower self-assessment of skill.[vi] Of course, it is possible that this discrepancy in self-assessment is simply a reflection of actual differences in skill. However, we know from the analysis presented earlier that gender is not a significant predictor of actual skill.

To double check, we also ran an OLS regression on self-assessment including information on actual skill measured as percentage of tasks completed successfully. Column B in Table 4 reports the results of this model. Here, we find that net of actual ability—a factor significantly related to self-perception of skill—women tend to rate themselves as lower skilled than men. Moreover, while gender strongly influences self-perceived skill age, education and family income do not.

Discussion and Conclusion

As more and more services move online, the ability to navigate the Web's content efficiently becomes increasingly crucial for maintaining a competitive edge and guaranteeing equal opportunity. As such, Web-use skills have become an important component of people's human capital. Inasmuch as effective and efficient Web use can lead to positive outcomes, less-developed skills can have drastic effects on returns to Internet use. Adeptness at navigating the Web not only allows people to garner material resources through utilization of the technology at home and in school, but also fits into skill sets that may make individuals more viable in the labor market. The contentions that have guided this paper, then, are two-fold: on the one hand, mere access is not coterminous with effective use; and on the other, Web-use skills have become an important component of human capital and must be investigated to understand fully the implications of the Internet for inequality.

Our data suggest that overall men and women do not differ significantly in their abilities to find various types of information online. However, we do find that women are much more likely to shortchange themselves when it comes to self-perception of their online skills. The gender effects appear to be significant with respect to self-perceived skill levels. Our findings are consistent with Correll's (2001) work, which found that net of actual skills young women are less likely to perceive themselves as skilled in these domains, which in turn biases their propensity to pursue math and science-related careers. Similarly, we find that net

of actual skills, women tend to rate their online skills lower than men. Women's lower self-assessment vis-à-vis Web-use ability may affect significantly the extent of their online behavior and the types of uses to which they put the medium.

Research on what types of content people tend to access on the Web has found differences among men and women (Howard, Rainie, and Jones 2001; Kennedy, Wellman, and Klement 2003a). However, such research assumes that online behavior simply mirrors preferences for types of content accessed. An important contribution of this paper is to highlight that decisions about what content to view online may also reflect perceived abilities. Since women are more likely to question their online competence, it follows that they may be less likely to take advantage of the myriad of services made available by the medium.

Some users—and our findings suggest these are more likely to be women—may not be looking for certain types of material on the Web *because* they do not think they would be successful. Consequently, women may be less likely to take advantage of online content that may improve their life chances such as enrollment in online courses, accessing government services, informing themselves about political candidates or gathering information about health conditions. This may explain findings by others (Busselle, Reagan, Pinkleton, and Jackson 1999; Kelsey 2002; Ono and Zavodny 2003) according to which men are more intense users of the Internet.

The skill with which users navigate the billions of pages of content on the Web is an important concern for stratification. Technical access to the Internet is an important facet of technological inequities, but by no means the only component that should be considered when assessing potential sources of inequality with respect to this new medium (Ident Ref 2001). Merely crossing the digital divide and using the Web does not erase the possibilities for disparities in utilization of the Internet (Ident Ref 2002b, Ident Ref 2003). As we have

argued, binary conceptualization of use is misleading for our understanding of gender and inequities in using communication and information technologies; rather, we must turn to refined measures of use such as Web-use skill and self-perception of technology use.

Results from our project suggest that men may be poised to benefit more from the Web than women because of their higher self-assessed abilities. This study allows us to expand our knowledge about the gendered aspects of differences between people's perceived and actual abilities from the realm of science and math skills among students to the realm of everyday acts in which a much wider segment of the population engages. It is an important step in understanding the sources of inequalities between men and women with respect to technology use.

In this paper, we have focused on the user side of the equation. Some of the literature about the construction of the Internet suggests that the supply side of content is male-biased—the way the medium is structured and presented may favor male users—and future research should investigate this side of the puzzle as well. Moreover, we need more work exploring whether the observed differences in self-efficacy exist in other domains of everyday tasks. We also need more research to understand why it is that women rank their skills lower than men, a finding that seems to be robust across many technology and science-related activities.

Our project has expanded the existing literature examining discrepancies in men's and women's actual and self-perceived abilities from academic activities to everyday tasks. Because Web uses can influence so many aspects of one's life, the finding that women are significantly more likely to exhibit lower self-perception of their actual online skills than men has widespread implications for the potential benefits—or lack thereof—that female users may reap from this important medium.

Table 1. Descriptive statistics of variables used in the analyses

	Mean	St. dev.	Median	Minimum	Maximum
Age	42.96	15.86	42	18	81
Education (in years)	16.21	2.72	16	8	22
Family income[a]	$98K	$57K	$85K	$18K	>$250K
Number of years since first use of the Internet	6.28	3.38	6	0	16
Web use hours/ week	8.62	9.39	7	.13	70
Success rate	84.2	20.6	87.5	18.75	100
Self-assessed Net skill	1.9	.7	2	0	4
Self-assessed Net skill – men	2.1	.8	2	1	4
Self-assessed Net skill – women	1.7	.6	2	0	3

(a) The average median household income in this county in 2000 was $56,613 (based on Census data) and the mode for household income was $75,000-99,999 so this sample is what we may expect for local Internet user demographics.

Table 2. Descriptive statistics about task success rate (overall and by task) in increasing order of difficulty.

	Success Rate (percent)
Overall (sum of 8 tasks)	84.2
Museum	94.3
Tax forms	92.7
Music online	91.2
Job search	88.5
Kids' art	88.4
Local cultural events	84.8
Car buying	82.1
Presidential comparison	56.7

Table 3. OLS regression predicting Web-use skill measured as percentage of tasks completed successfully (column A) and time spent on tasks (column B). Standard errors are reported in parentheses. (* p=<0.005; ** p=<0.01; * p=<0.05; two tailed)**

	Percentage of tasks completed successfully	
Gender (female = 1)	-3.89	(3.33)
Age	**-.51*****	(.13)
Family income (logged)	-.27	(2.73)
Education (in years)	**1.58***	(.68)
Time on Web/week (logged)	**6.41***	(2.53)
Computer use at work (=1)	**8.66***	(4.34)
Days into study	.03	(.01)
Constant	58.48	(33.83)
N	100	
Adjusted R^2	.411	

Table 4. OLS regression predicting level of self-assessed Internet skill. Standard errors are reported in parentheses. (* p=<0.005; ** p=<0.01; * p=<0.05; two tailed).**

	A) Self-assessed Net skill		B) Self-assessed Net skill net of actual skill	
Gender (female = 1)	**-.36*** **	(.12)	**-.33*** **	(.12)
Age	**-.01*** **	(.00)	-.01	(.00)
Family income (logged)	-.11	(.11)	-.11	(.10)
Education	.00	(.02)	-.02	(.03)
Time on Web/week (logged)	**32*** **	(.07)	**.27*** **	(.07)
Computer use at work (=1)	.23	(.15)	.16	(.16)
Actual skill (completion rate)			**.01** **	(.00)
Days into study	.00	(.00)	.00	(.00)
Constant	3.03	(1.30)	2.52	(1.25)
N	100		100	
Adjusted R^2	**.398**		**.434**	

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Endnotes

[i] Mercer County has a population of just over 350,000 in 2001 and includes rural, suburban and urban areas (the state capital Trenton is located in this county).

[ii] The first author conducted 80 of the interviews; two female research assistants administered the remaining twenty.

[iii] No default page was set on browsers in order not to influence respondents' initial actions once online. The sessions were started off by the researcher asking the respondent to recall —if possible—the default homepage on the computer he or she uses the most. Additionally, a program was used to erase the browser and URL history on each browser program so that respondents started out with a clean slate and were not influenced by previous users' actions.

[iv] Fourteen percent of respondents were minorities; seven African American, four Asian American, and three Hispanic people took part in the study. These numbers are too small to draw inferences about the effects of race and ethnicity on skill.

[v] We recognize the limitations of this measure but want to note that it is in line with the types of measures used in the literature summarized in this paper that assess people's self-perceptions of their abilities.

[vi] We also ran an ordered logit on self-assessed skill and the results are robust.