The relationship between Internet identification, Internet anxiety and Internet use

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Abstract

This paper reports a study investigating the relationship between Internet identification, Internet anxiety and Internet use. The participants were 446 students (319 females and 127 males) from two universities in the UK and one university in Australia. Measures of Internet identification and Internet anxiety were developed. The majority of participants were NOT anxious about using the Internet, although there were approximately 8% who showed evidence of Internet anxiety. There was a significant and negative relationship between Internet anxiety and Internet use. Those who were more anxious about using the Internet used the Internet less, although the magnitude of effect was small. There was a positive and significant relationship between Internet use and Internet identification. Those who scored high on the measure of Internet identification used the Internet more than those who did not. There was also a significant and negative relationship between Internet anxiety and Internet identification. Finally, males had a significantly higher Internet identification score than females. Implications of these findings are discussed.

Keywords: Internet anxiety; Internet identification; Internet use

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1. Introduction

The Internet has become part of everyday life (Jackson, 1999; Jackson, Ervin, Gardner, & Schmitt, 2001a; US Department of Commerce, NTIA, 1995, 1997, 1999, 2002). Changes in education are likely to mean that information communication technology (ICT) skills will become indispensable for modern life and a tool for lifelong learning (Russell & Stafford, 2002). However, research has shown certain social groups are under-represented on the Internet (Hoffman & Novak, 1998; Jackson, 1999; Sax, Ceja, & Teranishi, 2001; Schofield, 1997), not simply due to a lack of access, but more because of cognitive, motivational and affective factors (Jackson et al., 2001a). Therefore, as Jackson, Ervin, Gardner, and Schmitt (2001b) argued, ‘Psychology has an important role in advancing understanding of why people choose to use or not use the Internet’ (p. 15). Cooper and Weaver (2003) have developed a model of computer use, which provides a useful heuristic ‘road map’ to study this question. The main focus of Cooper and Weaver’s model is the individual, and there are four inter-related factors that influence an individual’s uses of, and attitudes towards, computers. These factors are computer identification, computer anxiety, performance attributions, and expectations. While these factors are related to each other in several ways, Cooper and Weaver recommend thinking of the processes operating within the individual as somewhat distinct, with each contributing to attitudes towards and uses of computers and technology in direct and distinct ways.

The crux of this model is that anything that increases a person’s computer anxiety leads them to doubt their ability or causes them to disidentify with computers will lead the individual to form negative attitudes about computers and technology. Negative attitudes, in turn, will mean that the individual is more likely to avoid activities, contexts and careers involving computers.

The current study extends this model of computer use to explore attitudes towards and uses of the Internet. We focus specifically on Internet anxiety and Internet identification, and the relationships between them.

1.1. Computer and Internet anxiety

An important factor in Cooper and Weaver’s (2003) model is computer anxiety. Computer anxiety has been defined as ‘an irrational anticipation of fear evoked by the thought of using (or actually using) computers, the effects of which result in avoiding, or minimising, computer usage’ (Brosnan, 1998a, p. 17). Cooper and Weaver predict that computer anxiety is inversely related to computer experience. This prediction is based on research conducted over the last 20 years. Chua, Chen, and Wong (1999), for example, conducted a meta-analysis of 19 studies published between 1990 and 1996. These studies reported that computer anxiety was inversely related to computer experience. Recently, the UCLA Internet Project (2003) surveyed 2000 households across the United States and compiled the responses of Internet users and non-users. They reported that, in 2002, 30.3% of new Internet
users and 10.8% of experienced Internet users (users with more than six years of experience) were moderately to highly technophobic. Thus, whilst computer anxiety consistently has been found to be inversely related to computer experience for the majority of individuals, this is confounded by a small proportion that remain highly anxious (Rosen & Maguire, 1990).

There have been a number of studies using a broad range of samples that have explored the relationship between computer anxiety and Internet use. Jackson et al. (2001a, 2001b) conducted a study on a group of Anglo-American undergraduates. She found that computer anxiety was negatively related to students’ use of the Internet. Durndell and Haag (2002) surveyed a group of Romanian university students and reported that computer anxiety was inversely proportional to the students’ self-reported use of the Internet. Barbiete and Weiss (2004), using an online sample, found that the number of years spent using the Internet was lower for students who scored high on computer anxiety than for students who scored low on the same measure. Cody, Dunn, Hoppin, and Wendt (1999) surveyed a group of older adults (average age 80) and found that computer anxiety predicted time on-line.

There have also been a small number of studies that have investigated the relationship between Internet anxiety and Internet use. Chou (2003) developed a new scale of Internet anxiety and found that it was related to self-reported use of the Internet. This raises the question of whether Internet anxiety is the same as computer anxiety. Chou (2003) and Presno (1998) argue that although Internet anxiety shares some of the same concepts as computer anxiety, it has a number of constructs that are unique to it. Presno (1998) outlines four anxieties people have with the Internet: Internet terminology anxiety; Internet search anxiety; Internet time delay anxiety; and general fear of Internet failure.

The current study similarly focuses on Internet-related anxiety, conceptualised in more generic terms as measured by Brosnan and Thorpe (2001; Thorpe and Brosnan, 2001).

1.2. Internet identification

Identity is an important factor in computer use and experience (Cooper & Weaver, 2003; Facer, Furlong, Furlong, & Sutherland, 2003; Holloway & Valentine, 2003). Research in this area, however, conceptualises identity in a number of ways. Facer et al. (2003), for example, conceptualised it in terms of consumption (Giddens, 1991), while Holloway and Valentine focused on social identity. Following Cooper and Weaver’s (2003) model of computer use, we do not focus on identity per se, but instead focus on domain identification. Derived from the research of Claude Steele and colleagues (Spencer, Steele, & Quinn, 1999; Steele, 1997; Steele & Aronson, 1995), this approach provides a link between social identity and the performance of some skill or ability. It is therefore highly suited to the study of Internet use.
A domain is defined as a performance context (Aronson et al., 1999). It is a context in which one can put a skill or a set of skills into practice. To identify with a domain is to have one’s self-esteem bound up with one’s ability to perform successfully in that domain (Aronson et al., 1999; Cooper & Weaver, 2003). Examples of domains include mathematics (Aronson et al., 1999; Spencer et al., 1999; Steele, 1997; Steele & Aronson, 1995), sports (Stone, Perry, & Darley, 1997; Stone, Lynch, Sjomeling, & Darley, 1999), and computers and technology (Cooper & Weaver, 2003). We use the term ‘Internet identification’ to refer to the extent to which an individual’s self-concept is bound up with his or her perceived ability to use the Internet. One of the aims of the current study is to examine the relationship between Internet identification and actual Internet use.

Identification with a domain such as the Internet serves a variety of functions (Cooper & Weaver, 2003). First, it provides a means of self-definition or self-esteem, making the person feel better about him- or herself. Second, it is a means of identifying with others who share the same values and goals, providing a reference group orientation and shared activities. Third, it serves as a means of defining oneself in contrast to others who identify with other domains. Finally, domain identification has implications for behaviour. The higher one’s identification with a particular domain, the more likely one is to participate within this domain. Recent research has shown that identification has a strong influence on behaviour in a variety of domains (Ethier & Deaux, 1994; Ethier, 1995; Reicher, 1986); the stronger the identification, the stronger the influence. Conversely, as Cooper and Weaver suggest, those who disidentify with a particular domain are less likely to participate in that domain.

If we apply this to the Internet, an individual with a high degree of Internet identification would need to be able to use the Internet effectively to maintain their sense of self-worth. Consequently, he or she would be likely to have a high degree of experience using the Internet; would have positive attitudes towards the Internet; would be motivated to spend time learning how to use it; and might take courses on using the Internet. If he or she performs badly using the Internet this would be likely to make him or her feel anxious because it would threaten a sense of self-worth.

Finally, Cooper and Weaver (2003) speculated that identification with the computer would be inversely related to computer anxiety. If computers are not relevant to a person’s self-worth, then that person’s actual or expected experiences in this domain should relate to lower levels of anxiety than a person whose self-worth is relevant to performance in this domain. Applied to the Internet, the model would predict that Internet identification is inversely related to Internet anxiety.

The aim of this paper is to apply Cooper and Weaver’s (2003) model of computer use to Internet use. Focusing on two of the factors in this model, this study has three hypotheses. First, Internet anxiety will be inversely related to Internet use. Second, identification with the Internet will be positively related to Internet use. Finally, Internet identification will be inversely related to Internet anxiety.
2. Method

2.1. Participants

The participants were 446 undergraduate students from the University of Bath and University of Greenwich in the UK, and Macquarie University in Australia. There were 319 females and 127 males and the average age was 22 years (age range was 18–48 years).

2.2. Procedure

The questionnaires were handed out at the end of a lecture and the students were asked to complete them before they left. The questionnaire contained a section on the students’ ownership of a computer; how old they were when they first used the Internet; who showed them how to use it and four purposely designed scales: two scales that measured Internet use, an Internet anxiety scale and an Internet identification scale. The students were also asked how many hours they spend on the Internet in a week and how many hours they spent on the Internet per week for studying.

2.3. Measures

To assess the students’ Internet use we used three measures. The students were first asked how many hours a week they spent on the Internet. They answered using an eight-point scale (0 = 0 h, 1 = 1–5 h, 2 = 6–10 h, 3 = 11–15 h, 4 = 16–20 h, 5 = 21–25 h, 6 = 26–30 h and 7 = over 30 h). Two scales were developed to measure students’ use of the Internet. The first was a measure of students’ use of the Internet generally, in which seven items identified use of e-mail, chat, newsgroups, online games, sex sites, shopping and downloading/listening to music. They answered using a five-point scale (0 = never, 1 = rarely, 2 = sometimes, 3 = often and 4 = very often). Reliability was adequate (Cronbach $\alpha = 0.77$). The final question was an open-ended question that asked students to specify any other uses they made of the Internet.

The second measure of use was designed to measure how often students used the Internet for university coursework. The students answered six items concerning how often they searched the library website for references, contacted university staff via e-mail for information, contacted external experts via e-mail for information, downloaded relevant material from course web pages, used WWW for searching for relevant material and posted questions to newsgroups and message boards. They answered using the same five-point scale used in the general Internet use scale ($0 = \text{never}, 1 = \text{rarely}, 2 = \text{sometimes}, 3 = \text{often} \text{ and} 4 = \text{very often}$). Reliability was adequate (Cronbach $\alpha = 0.77$).

A scale was developed to measure Internet anxiety and was based on a scale designed to measure computer anxiety (Brosnan & Thorpe, 2001; Thorpe & Brosnan, 2001). The students were asked six questions (shown below) and answered using a five-point Likert Scale (Cronbach $\alpha = 0.77$).
1. I always feel anxious when using the Internet.
2. I go out of my way to avoid using the Internet.
3. It is easy for me to use the Internet.
4. It is important for me to be able to use the Internet.
5. My anxiety about using the Internet bothers me.
6. I am more anxious about using the Internet than I should be.

An Internet identification scale was developed from an identity scale used for measuring school, peer and family identity in relation to students’ motivation, learning and behaviour in school (Maras, 2002). The students responded to 10 statements (shown below) using a five-point Likert type scale (Cronbach $\alpha = 0.76$). These items were based on previous work (Maras, 2002) and used items typically found in identity scales, such as similarity and affect relative to the target identification (Tajfel, 1979).

1. I would describe myself as an Internet user.
2. I am very similar to other Internet users.
3. Other Internet users are very like me.
4. I am very different from Internet users.
5. I feel very emotionally attached to other Internet users in general.
6. I feel a part of an Internet users community.
7. When there is an opportunity I always get involved in using the Internet.
8. Whenever I can, I tell people I am an Internet user.
9. I like people who use the Internet frequently.
10. Using the Internet is a very important aspect of being a student.

3. Results

Descriptive analysis of the data revealed that the measures were all highly and positively skewed. Therefore, we employed non-parametric statistics throughout the statistical analysis. Most students (42%) used the Internet between 1 and 5 h a week and 18% used it between 6 and 10 h a week. Two students did not use the Internet and 31 students used it for over 30 h a week. The descriptive statistics for the students’ general use of the Internet are shown in Table 1. Interestingly the activities that most students used regularly were e-mail and shopping. Most students did not use the Internet for any other purposes. These findings were indicated by the fact that for all questions, except email use, the modal response was 0 (i.e., never), whilst e-mail use has a modal score of 4 (i.e., very often).

Table 2 shows the students’ use of the Internet for coursework. The most frequent use of the Internet for coursework was to download course material, searching the library website and searching the Internet for course materials. Most students did not report contacting external experts via e-mail or contacting newsgroups.
The mean score for Internet anxiety was 13.2 and SD = 3.3. Using a one sample Wilcoxon Signed Rank Test with a predicted mean = 18, the obtained mean was significantly lower than the predicted mean (Wilcoxon Signed Rank Test, \( z = 16.7 \), \( p < 0.05 \)). Therefore, the students were not anxious about using the Internet. Thirty-four students had scores of above 18. The anxiety scores ranged from 8 to 27 with 92% scoring 18 or less and 8% scoring more than 18. The mean score for Internet identification was 29.3 and SD = 5.1. Using a one sample Wilcoxon Signed Rank Test with a predicted mean = 30, the obtained mean was significantly lower than the predicted mean (Wilcoxon Signed Rank Test, \( z = 3.0 \), \( p < 0.01 \)). The Internet identification scores ranged from 13 to 45 with 60% scoring 30 or lower and 40% scoring above 30.

Table 3 shows the correlations between Internet identification, Internet anxiety and the various measures of Internet use. Non-significant correlations are not

<table>
<thead>
<tr>
<th>Table 1</th>
<th>General Internet use</th>
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<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Email use</td>
<td>3.4</td>
</tr>
<tr>
<td>Chatroom use</td>
<td>1.3</td>
</tr>
<tr>
<td>News group use</td>
<td>0.8</td>
</tr>
<tr>
<td>Online game use</td>
<td>0.7</td>
</tr>
<tr>
<td>Pornography use</td>
<td>0.6</td>
</tr>
<tr>
<td>Shopping on the WWW</td>
<td>1.2</td>
</tr>
<tr>
<td>Download music</td>
<td>1.6</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Table 2</th>
<th>Experience using the Internet for coursework</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Searching library website</td>
<td>2.7</td>
</tr>
<tr>
<td>Contact staff via e-mail</td>
<td>1.8</td>
</tr>
<tr>
<td>Contact external expert via e-mail</td>
<td>0.7</td>
</tr>
<tr>
<td>Downloading material</td>
<td>3.3</td>
</tr>
<tr>
<td>Searching WWW for material</td>
<td>3.0</td>
</tr>
<tr>
<td>Contacting news group</td>
<td>0.6</td>
</tr>
</tbody>
</table>

The mean score for Internet anxiety was 13.2 and SD = 3.3. Using a one sample Wilcoxon Signed Rank Test with a predicted mean = 18, the obtained mean was significantly lower than the predicted mean (Wilcoxon Signed Rank Test, \( z = 16.7 \), \( p < 0.05 \)). Therefore, the students were not anxious about using the Internet. Thirty-four students had scores of above 18. The anxiety scores ranged from 8 to 27 with 92% scoring 18 or less and 8% scoring more than 18. The mean score for Internet identification was 29.3 and SD = 5.1. Using a one sample Wilcoxon Signed Rank Test with a predicted mean = 30, the obtained mean was significantly lower than the predicted mean (Wilcoxon Signed Rank Test, \( z = 3.0 \), \( p < 0.01 \)). The Internet identification scores ranged from 13 to 45 with 60% scoring 30 or lower and 40% scoring above 30.

Table 3 shows the correlations between Internet identification, Internet anxiety and the various measures of Internet use. Non-significant correlations are not

<table>
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<tr>
<th>Table 3</th>
<th>Correlation matrix for Internet identification, Internet anxiety, and Internet use</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1 Hours per week</td>
<td>0.73**</td>
</tr>
<tr>
<td>2 General Internet use</td>
<td></td>
</tr>
<tr>
<td>3 Internet use for coursework</td>
<td></td>
</tr>
<tr>
<td>4 Identification</td>
<td></td>
</tr>
<tr>
<td>5 Anxiety</td>
<td></td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.001 level (two-tailed).
shown. We found that Internet identification was positively related to hours per
week using the Internet ($\rho = 0.52$, $p < 0.01$), general Internet use ($\rho = 0.49$,
$p < 0.01$) and using the Internet for coursework ($\rho = 0.20$, $p < 0.01$). There was a sig-
nificant and negative relationship between Internet identification and Internet anxi-
ety ($\rho = -0.14$, $p < 0.01$), Internet anxiety was negatively related to general Internet
use ($\rho = -0.17$, $p < 0.05$) and Internet anxiety was negatively related to hours per
week using the Internet ($\rho = -0.13$, $p < 0.01$).

Factor analysis (principal components analysis, varimax rotation with Kaiser nor-
malisation) was used to examine the relationships between the items in the Internet
identification scale. The rotated component matrix for the three factors is presented in
Table 4. Coefficients less than 0.5 are not shown. A three-factor solution emerged
after five iterations and explained 64% of the variance. The first factor explained
34% of the variance (eigenvalue = 3.4) and loaded with the students’ awareness of being
part of an Internet community. The second factor explained 20% of the variance (eigen-
value = 2.0) and loaded on the questions concerned with similarity to other Internet
users. The final factor explained 10% of the variance (eigenvalue 1.0) and was one ques-
tion concerned with the importance of using the Internet in being a student.

Table 5 shows the correlations between the three different factors of Internet iden-
tification, Internet anxiety, and the three measures of Internet use. Non-significant

<table>
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<tr>
<th>Table 4</th>
<th>Internet identification factor matrix</th>
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<tbody>
<tr>
<td>Components</td>
<td>1</td>
</tr>
<tr>
<td>I would describe myself as an Internet user</td>
<td></td>
</tr>
<tr>
<td>I am very similar to other Internet users</td>
<td>0.89</td>
</tr>
<tr>
<td>Other Internet users are very like me</td>
<td>0.89</td>
</tr>
<tr>
<td>I am very different from Internet users</td>
<td></td>
</tr>
<tr>
<td>I feel very emotionally attached to other Internet users in general</td>
<td>0.78</td>
</tr>
<tr>
<td>I feel a part of an Internet users community</td>
<td>0.84</td>
</tr>
<tr>
<td>When there is an opportunity I always get involved in using the Internet</td>
<td>0.73</td>
</tr>
<tr>
<td>Whenever I can, I tell people I am an Internet user</td>
<td>0.72</td>
</tr>
<tr>
<td>I like people who use the Internet frequently</td>
<td>0.56</td>
</tr>
<tr>
<td>Using the Internet is a very important aspect of being a student</td>
<td></td>
</tr>
</tbody>
</table>

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<tr>
<th>Table 5</th>
<th>Correlation matrix for Internet identification factors, Internet anxiety, and Internet use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification components</td>
<td>1</td>
</tr>
<tr>
<td>Hours per week</td>
<td>0.48**</td>
</tr>
<tr>
<td>General Internet use</td>
<td>0.50**</td>
</tr>
<tr>
<td>Internet use for coursework</td>
<td>0.19**</td>
</tr>
<tr>
<td>Internet anxiety</td>
<td></td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (two-tailed).
statistical correlations are not shown. Factor 1 was significantly correlated with hours per week using the Internet ($\rho = 0.48$, $p < 0.01$), general Internet use ($\rho = 0.50$, $p < 0.01$) and using the Internet for coursework ($\rho = 0.19$, $p < 0.01$). Factor 2 was significantly correlated with hours per week using the Internet ($\rho = 0.19$, $p < 0.01$) and general Internet use ($\rho = 0.16$, $p < 0.01$). Factor 3 was significantly correlated with using the Internet for coursework ($\rho = 0.18$, $p < 0.01$). Factor 3 was significantly and negatively related to Internet anxiety ($\rho = -0.15$, $p < 0.01$). It is important to note that principal components analysis was used to prevent the need for unnecessarily repetitive statistical analysis, and it is not believed that either factor represents a ‘stable’ underlying dimension.

Comparison of males and females in terms of Internet identification revealed a number of significant gender differences (see Table 6). Males’ identification with the Internet was significantly higher than females (Mann–Whitney, $z = 2.3$, $p < 0.01$). In particular, males were significantly more likely to feel part of an Internet community than females (Mann–Whitney, $z = 3.1$, $p < 0.01$). Furthermore, males were significantly less anxious about the Internet than females (Mann–Whitney, $z = 3.6$, $p < 0.01$).

### Table 6
Gender differences and Internet identification

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>SD</td>
</tr>
<tr>
<td>Factor 1</td>
<td>12.7</td>
<td>3.8</td>
</tr>
<tr>
<td>Factor 2</td>
<td>9.4</td>
<td>2.3</td>
</tr>
<tr>
<td>Factor 3</td>
<td>3.8</td>
<td>0.9</td>
</tr>
<tr>
<td>Identity total</td>
<td>30.3</td>
<td>5.2</td>
</tr>
<tr>
<td>Anxiety</td>
<td>12.4</td>
<td>3.0</td>
</tr>
</tbody>
</table>

* $p < 0.01$.

4. Discussion

The overall aim of this study was to apply two of the factors in Cooper and Weaver’s (2003) model of computer use to Internet use. All three hypotheses based on this model were supported. We found a positive relationship between Internet identification and Internet use, a negative relationship between Internet identification and Internet anxiety and a negative relationship between Internet anxiety and Internet use.

On the whole, students were not anxious about using the Internet, although approximately 9% did show evidence of Internet anxiety. This result is consistent with the findings reported by the UCLA Internet Project (2003). We also found that there was a significant and negative relationship between Internet anxiety and Internet use. Those who were more anxious about using the Internet used the Internet
less. This finding is consistent with Cooper and Weaver’s (2003) model and previous research (Barbiete & Weiss, 2004; Chou, 2003; Cody et al., 1999; Durndell & Haag, 2002; Jackson et al., 2001a).

In terms of Internet identification, participants in this study did not identify with the Internet. However, there was a positive and significant relationship between all three measures of Internet use and Internet identification. Those who scored high on Internet identification used the Internet more than those who did not. This finding supports Cooper and Weaver’s (2003) model and is consistent with research concerning the strength of identification and behaviour. (Ethier & Deaux, 1994; Ethier, 1995). We extended this research by looking at some of the relationships between Internet use and the three aspects of identification with the Internet: awareness of group membership, similarity with other Internet users and the importance of using the Internet for being a student. Awareness of group membership was significantly and positively related to all three measures of Internet use, that is, hours per week spent using the Internet, general use of the Internet and use of the Internet for coursework. Similarity to other Internet users was positively and significantly related to hours per week spent using the Internet, and general use of the Internet, but not to the use of the Internet for coursework. Finally, the sole question of the identity questionnaire relating to the importance of the Internet for being a student was as predicted correlated with use of the Internet for coursework. Consistent with Cooper and Weaver’s (2003) model, we found a small but significant negative relationship between Internet anxiety and identification with the Internet. Those with high Internet identification experience less anxiety in using the Internet than those with low Internet identification.

Overall, most participants in this study did not identify with the Internet, and this raises a number of interesting questions. For example, what do people think identifies Internet users? What characteristics do they possess and why did the participants in this study not identify with them? We could make a number of speculations in answer to these questions. It is probable that the participants see Internet users as male, white and ‘geeky’ (see Duffield, Gavin, & Joiner, 2003). Holloway and Valentine (2003) identified groups of boys they labelled ‘techno boys’. These boys were highly technologically literate, but were labelled by their other classmates as ‘boffins’, ‘computer freaks’ and ‘nerds’. They were seen as socially inadequate, unmasculine and were generally marginalised. Thus, it is no surprise that our sample did not identify with Internet users. That males reported higher levels of Internet identification than females, and that in particular males identify more than females with an Internet community, is consistent with research and theory suggesting that the Internet is a masculinised domain (Bimber, 2000; Morehan-Martin, 1998), and the generally low levels of Internet identification by both males and females may reflect the varied and competing images of Internet users of both sexes (Duffield et al., 2003).

One problem with this study is its correlational nature and the inherent difficulty of drawing causal links between Internet identification, Internet anxiety and Internet-related behaviour. It is possible that a person’s strong identification with the Internet caused them to use the Internet more. However, it is equally likely that
the students may have identified more with the Internet because of their experiences with the Internet. Similarly, it is difficult to know whether Internet anxiety determines the pattern of Internet use or vice versa. Research on computer anxiety shows that it is a strong predictor of computer achievement (Marcoulides, 1988) and generalising this finding to the Internet would suggest that Internet anxiety is predictive of Internet use. Also Jackson et al. (2003) carried out a study which found that a person’s attitudes towards the Internet at time one was predictive of their actual use at time two. This indicates that self-reported measures of Internet attitudes can be predictive of future and actual behaviour. Further longitudinal research is needed to investigate whether Internet identification and Internet anxiety are predictive of Internet use.

In Section 1, we reported that, ‘Psychology has an important role in advancing understanding of why people choose to use or not use the Internet’ (Jackson et al., 2001b, argued p. 15). This research has shown that two psychological factors, namely Internet Identification and Internet anxiety, are both related to use of the Internet.

References


