

# **“It’s me or the website!” Investigating people’s confidence with Internet use**

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## **Introduction**

Whether at work or play, more people than ever encounter the Internet on a daily basis. In June 2010, there were an estimated 1.5 billion Internet users worldwide. This widespread interest has emerged as a result of extensive use of the Internet within social contexts, the workplace, education and many other environments. With such prevalent use of the Internet today, it is important to understand how people interact with it.

Some recent observations of Internet users have identified differences between men and women in their confidence with Internet use. While men tend to attribute difficulties navigating a website to a poorly designed website, women often assign these difficulties to personal lack of ability. In Psychology, this belief or confidence in personal ability is known as self-efficacy.

In addition to this, it is also thought that people’s attitudes affect behaviour. Thus, it is important to take one’s attitude towards the Internet into consideration when measuring self-efficacy. Taking the above observations into account, my research investigates and measures people’s attitudes and self-efficacy with using the Internet. This paper will particularly focus on the self-efficacy element of my research.

## **Measuring attitudes**

In Psychology, attitudes are typically measured by a questionnaire or scale. Generally, methods of attitude measurement are based on the assumption that attitudes can be measured by the opinions or beliefs of people regarding the attitude objects. Likert’s method of summated ratings is the most commonly used scale for measuring attitudes. A Likert type scale involves asking participants to indicate the extent to which they agree or disagree with each statement on the scale.

There have been a number of attempts at developing an Internet attitude scale in the past decade. However, none of these attempts have resulted in satisfactory means of measuring Internet attitudes. The most significant problem which occurs is confusion and lack of clarity between the terms “attitude” and “self-efficacy”. Within the discipline of Psychology, attitudes and self-efficacy are identified as separate concepts. However, much of

the research in the area of Internet attitudes carried out to date includes self-efficacy as a subscale, or a component of, an attitude. An Internet attitude can be described as one’s evaluation of and/ or feelings toward the Internet. Internet self-efficacy is described as one’s belief in their capabilities to achieve specific goals with the Internet. A crucial difference between these two terms is that an Internet attitude refers to a person’s *feelings* about the Internet, while Internet self-efficacy focuses on how a person evaluates their personal *capabilities* to successfully complete tasks on the Internet. Self-efficacy and attitudes are independent of one another, and the difference between feelings and capabilities suggests that self-efficacy should not be regarded as a component of an attitude. Therefore, in my studies, attitudes and self-efficacy are identified separately in their application to Internet research.

## Measuring self-efficacy

Research which has looked exclusively at measuring Internet self-efficacy has also encountered problems. In particular, the major problem lies with the methodology employed to measure self-efficacy. Self-efficacy is measured through the use of psychometric scales. However, unlike many attitude scales which require participants to indicate whether they agree or disagree with a statement, the standard methodology for measuring self-efficacy is to ask participants to indicate the strength of their belief on an interval scale rather than “agreeing” or “disagreeing” with the statement. To date, however, Internet self-efficacy scales have incorporated the former method, that is, the use of a Likert type scale.

The methodology for measuring Internet self-efficacy requests participants to indicate the strength of their belief that they can complete a range of tasks on the Internet. In addition to this, it is vital that participants are asked to judge their operative capabilities as *of now*, and not their past capabilities, potential capabilities or their expected future capabilities. Bandura, the principal researcher on self-efficacy in Psychology, maintains that when participants have rated their sense of capability on all the tasks specified on the scale, the efficacy scores should then be summed and divided by the total number of statements. Bandura proposes that this then indicates the strength of the individual’s self-efficacy. However, it is possible that the results of such tests may say more about the amount of exposure a person has had to the Internet than about their assessment of their own capabilities with the Internet. It makes sense that the more a person works with the Internet, the better that person hopes they will be at using the functions provided by it, and the more functions they will be familiar with. Therefore, my research suggests that in such studies self-efficacy is actually confounded with *frequency of use*. In other words, self-efficacy scores are largely dependent on how much or how little a person has completed the tasks in question. If this is the case, then previous experience with Internet tasks also needs to be taken into account when determining self-efficacy scores. Thus, the current measurement of self-efficacy needs to be re-examined and a new measurement

which takes frequency of use into account should be applied to Internet research.

## **Aims of my research**

This current paper outlines a study which was carried out to investigate whether or not frequency (experience) of use is a significant predictor of Internet self-efficacy.

In order to investigate whether self-efficacy may be confounded with previous experience; it was decided to carry out a preliminary study to see if frequency of use of a task was reflected in confidence scores in the ability to complete that task. The website which was chosen for this study was the Blackboard Learning System at University College Cork. The objective was to develop a method of measuring self-efficacy that would show differences between groups on various demographic indicators that have been mentioned as possibly associated with differences in self-efficacy. For example, my observations (as earlier outlined) suggest that men demonstrate more confidence in their use of the Internet than women. Other research also suggests that prior Internet experience, outcome expectancies and Internet use are related to Internet self-efficacy judgments.

## **Participants**

The participants were recruited for this study using ad hoc sampling methods. All students were Applied Psychology students attending University College Cork. The final sample consisted of 140 students, 37 (26.4%) of whom were male, and 103 (73.6%) of whom were female. The ages ranged from 17-59. Students were recruited from first, second and third year Applied Psychology classes.

## **Materials**

The final questionnaire consisted of two main sections. Participants’ demographic information including gender, age, length of time using Blackboard, frequency of Internet use, and uses of the Internet was obtained. The second section listed all possible twenty-one tasks that can be performed on the Blackboard Learning System. The Blackboard Learning System was specifically chosen for the purpose of this part of the study as all participants had equal exposure to the website and all participants were expected to be familiar with the website.

## **Procedure**

The Blackboard Self-Efficacy Survey was distributed to students at the beginning of lectures and tutorials within the School of Applied Psychology, University College Cork. I indicated the nature of the study to each of the groups and requested that all Applied Psychology students in the class fill out the questionnaire. Participants were reassured that the questionnaires were completely anonymous and no participant could be identified in

any way from the data collected. Questionnaires were subsequently distributed to all participants and they were instructed to rate how frequently they performed each task and how confident they felt about achieving each task. Students were given approximately ten minutes to complete the survey. Questionnaires were returned to me upon completion and participants were thanked for their participation and co-operation.

## My Results

Participants’ ratings on frequency of use and confidence ratings of tasks were scored in the following way:

Table 1: Scoring of task ratings for frequency of use and confidence

Frequency of use	Confidence	Task Score
Never	Not at all confident	<b>1</b>
Once a month or less	Slightly confident	<b>2</b>
Once a week or more	Moderately confident	<b>3</b>
Once a day	Very confident	<b>4</b>
Several times a day	Extremely confident	<b>5</b>

The median confidence rating of all tasks was computed and generated the results in the table below (the median was used as a measure of central tendency for this data set as it was the most appropriate for this data, and was used instead of the mean value. The median is the middle number in the data when the data is ranked in order from lowest to highest).

Table 2: Summary table of median confidence ratings

Median Confidence score	Task Number
5	1, 4, 8, 12, 15
4	16, 20
3	7, 9, 10, 13, 19
2	2, 3, 5, 6, 11, 18, 21
1	14, 17

The highest median confidence rating for tasks was a score of 5 indicating a confidence level of ‘extremely confident’. There were five tasks which achieved a median score of 5. These tasks, 1, 4, 8, 12 and 15, achieved the highest confidence ratings from participants. There were two tasks which achieved a median score of 1, indicating a confidence level of

‘not at all confident’; tasks 14 and 17. The following table gives examples of tasks which achieved median scores of 1 and 5.

Table 3: Examples of statements which achieved extreme median values

Task Number	Description	Median confidence score
1	Viewing announcements	5
4	Viewing, downloading or printing documents	5
14	Creating ‘to-do’ lists for myself	1
17	Participating in or viewing ‘Wikis’	1

The median frequency rating of all tasks was calculated (Table 4):

Table 4: Summary table of median frequency ratings

Median Frequency rating	Task Number
3	1, 4, 8
2	7, 10, 12, 15
1	2, 3, 5, 6, 9, 11, 13, 14, 16, 17, 18, 19, 20, 21

The highest median frequency score for tasks was a score of 3, indicating a frequency of ‘once a week or more’. There were three tasks which obtained a median score of 3. These tasks were 1, 4, and 8. Many tasks achieved a median score of 1, indicating a frequency of ‘never’.

## Conclusions

From the initial self-efficacy data analysis, it is evident that frequency of use plays a key role in the ratings of confidence in ability to perform tasks. When tasks were rated as being frequently completed, these tasks also tended to obtain high confidence ratings from participants. Similarly, tasks on which participants indicated they had little or no experience also tended to achieve lower confidence scores from participants. The initial assumptions that there is a direct relationship between frequency of use and self-efficacy scores has been supported. The next stage of my research explores the implications of this relationship.

Thanks to my supervisor, Dr. Jurek Kirakowski, School of Applied Psychology, UCC and to all participants who partook in this study.