

Litteratur	Moment	36	37	38	39	40	41	42	43	44	45
MUX	Metodik	Introduktion	Initiering: kap. 1-3; Mätmetoder 1				Mätmetoder 2			Minitentamen metodik; examination	
MUX	Projektplan		Initiering: problem		Detaljering: sökning; bakgrund			Preparering: paper; presentation			Workshop: presentation; examination
Artiklar	Seminarium			Instruktion seminarium & workshop			Workshop: presentation; examination				
Statistics anteckn	Statistik			Föreläsning 1; Föreläsning 2	Föreläsning 3	Föreläsning 4; Föreläsning 5	Föreläsning 6	Föreläsning 7	Hemtentamen statistik; examination		

seminariet vecka 41

- söka relevanta publikationer
- presentera en hittad artikel
- kritisera resultat/metod/...

## seminariet vecka 41

### Steg 1

Utgångspunkten är att hitta en artikel inom området och som är relevant för den studie ni planerar. Artikeln ska baseras på kvantitativ metodik.

Använd både MAHs bibliotek och Google Scholar för att leta efter intressant artikel.

### Steg 2

Information om vald artikel skickas till [yuanji.cheng@mah.se](mailto:yuanji.cheng@mah.se) och [goran.hagert@mah.se](mailto:goran.hagert@mah.se) senast fredag vecka 40 (3/10).

## seminariet vecka 41

### Steg 3

Analysera den valda artikeln utifrån frågor som exempelvis:

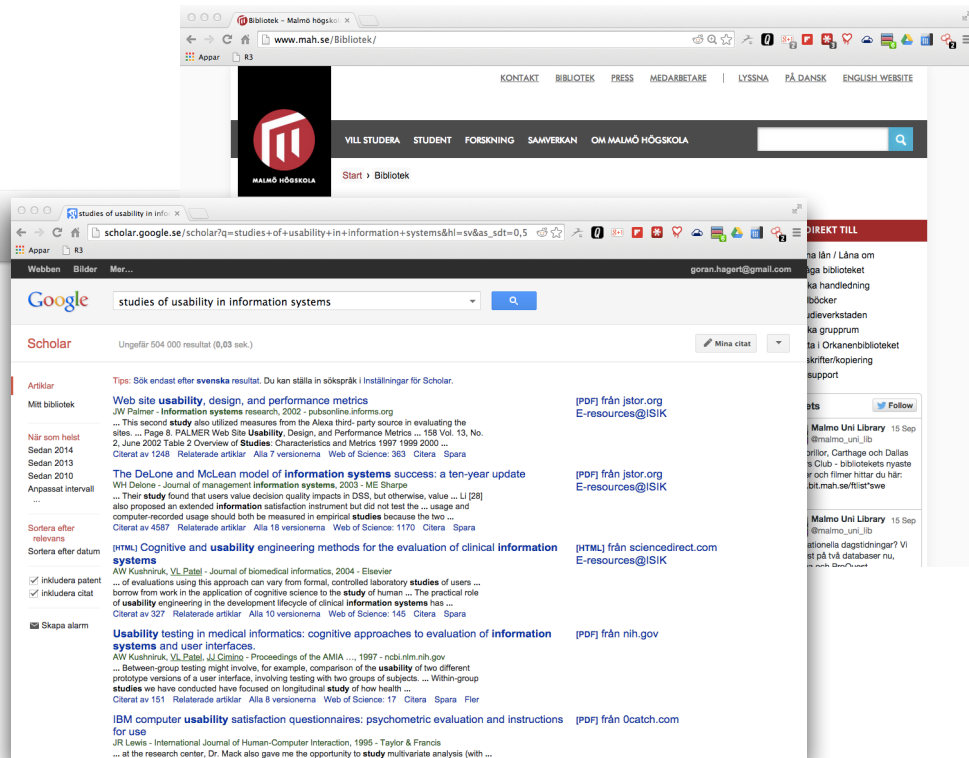
- Vad är forskningsfrågan som artikeln vill besvara/belysa?
- Vilken/vilka kvantitativ/a metod/er används?
- Hur samlar man in data
- Hur analyseras data
- Hur är presentationen av data
- Är resultaten tillförlitliga? Reliabiliteten?
- Vad kan sägas om validiteten?
- Vilken/vilka andra metod/er skulle studien kunna använt?

### Steg 4

Förbered en presentation av 1) artikel och 2) konstruktiv kritik. Den bör vara planerad för 10 minuter och klar senast onsdag i vecka 41. Gör en PDF av presentationen.

## seminariet vecka 41: verktyg

Tips



## seminariet vecka 41 - exempel: Scientific Journals

International Journal of Human-Computer Studies

Human Computer Interaction

Computers in Human Behavior

Interacting with Computers

Computers & Education

Interactive Learning Environments

Behaviour & Information Technology



Computers in Human Behavior 37 (2014) 270–282

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**The impact of age on website usability**

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**ABSTRACT**

As the general and working populations age in most developed nations, the study of website usability for older adults is becoming increasingly relevant. Website usability is concerned with both utilitarian (i.e. functional) and hedonic (i.e. pleasure-related) aspects. A new website usability model is proposed that considers the effects of age on website usability through cognitive antecedents that are most relevant to age-related effects. Specifically, spatial ability is the declining cognitive skill of particular interest in this research. A laboratory experiment was conducted where younger and older participants interacted with an experimental website. The results suggest that age has a pronounced impact on performance as a mediated effect through declining levels spatial ability and mental model accuracy as well as through a direct effect suggesting the presence of other objective and subjective changes associated with aging that could impact performance. Perceived disorientation was also examined within the proposed website usability model, revealing both expected and surprising findings.

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**1. Introduction**

The population of most of the world's developed nations are experiencing an increase in average age (OECD, 2006). A similar trend has been observed among users of computers and the Internet with older adults now making up the fastest growing consumer segment of Internet users (Chevalier & Rossetti, 2010; Stevens, 2010). As older adults remain in the workforce longer (Mitzner et al., 2010), many are using computers and the Internet on a daily basis to do their jobs (Nord, McCubbins, & Nord, 2006). Thus, as the Internet is becoming an increasingly integral part of the lives of older adults, the study of Internet usability by older adults is becoming an increasingly relevant field of study.

Usability has been recognized as an important aspect in the study of online behaviors in Information Systems (IS) and Human Computer Interaction (HCI) literature (Venkatesh & Agarwal, 2006). For individuals, usability has been associated with important

for organizations such as improved job performance, higher productivity and reduced costs (DeLone & McLean, 2003).

To date, a considerable amount of effort has been dedicated to exploring website usability issues for older adults and a number of guidelines have been developed (Morrell et al., 2003; Zaphiris, Kurniawan, & Ghiawadawala, 2007). While some of these guidelines are very specific (i.e. font size, typeface, colors, etc.), the recommendations for other aspects, such as navigation systems, site topologies, and accommodation of changes in cognitive abilities, are much vaguer. Further, many of these guidelines are based on extrapolations from the study of older users using offline applications, as well as general research on aging, as opposed to empirical studies using websites. In addition, most of the guidelines are focused on functional or utilitarian (functional) aspects of website usability and fail to consider a holistic approach that incorporates hedonic (pleasure-related) aspects. This lack of empirical testing creates many opportunities for future research in the area of web-

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## The speed of mouse-click as a measure of anxiety during human-computer interaction

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**Abstract.** The monitoring of the human-computer interaction process is one of the essential aspects in the evaluation and enhancement of both task and affective outcome of human-computer interaction. However, although objective measures exist for task outcome, most affective measures are subjective. This study represented an investigation into the speed of mouse-click as a possible measure in human-computer interaction, and was based principally on the suggestions that a relationship exists between stress and motor activities involved in the operation of the fingers. Two groups of 30 subjects were exposed to different sets of human-computer interaction conditions, and the speed of mouse-click and state anxiety were examined. No correlation was found between the speed of mouse-click and state anxiety. However, a significant difference was found in the speed of mouse-click between the groups and the different human-computer interaction situations. The implication of these findings and the possible advantages of using the computer mouse to collect data relating to the computer user's covert state during human-computer interaction are discussed.

**1. Introduction**

Although the need for objective means of monitoring the user's affective condition during human-computer interaction should be a central area of research in the field of human-computer interaction, it is in that of Affective Computing that it is presently seen as an important goal. Affective Computing is the area of computing related to the realization of an adaptive computer, and the general driving belief is that a

a role in the monitoring of emotional state in Affective Computing and human-computer interaction in general.

One way Affective Computing has been described is that it is computing that is associated with emotions (Picard 1997). At the heart of it, therefore, are the monitoring and the recognition of signals related to the user's emotional state. Such signals include facial expression (Ekman 1993), vocal intonation (van Bezooeyen 1984), and physiological responses (Picard 1997). It is expected that these signals can be combined to assist in the recognition of emotional states. For example, it has been suggested that physiological measures such as galvanic skin resistance (GSR), heart rate, skin temperature, and general somatic activity are sufficient to determine reliably a person's emotional state (Ark et al. 1999).

Presently, a number of different methods exist for monitoring these signals during human-computer interaction. For example, the Emotional Mouse (Ark et al. 1999) can measure a number of physiological signals to assess the user's emotional state, and the Sentic Mouse (Kirsch 1997) the finger pressure. However, most of these methods either require the attachment of extra visible devices to the computer user or to the mouse, making the process cumbersome and intrusive, and possibly discouraging to practical application. The present study represented an investigation into a non-invasive method of measuring anxiety during human-computer interaction, based on