

New contexts of communication and inter-relationships between people are appearing since the arrival of the Internet. A problem with growing interest is whether the differences in computer-mediated communication (CMC) styles are equivalent to the ones to be found in face-to-face communication.

During studies of lexical-grammatical differences between the two genders (Poynton, 1989), it has been observed that females are more people-oriented, talk more about themselves, reveal a higher number of thoughts and feelings and interact with others to a greater extent. Maltz and Borker (1993) indicate that females use conversation primarily to negotiate and express relationships, while males use it to establish control. Females are more directed towards co-operation.

In CMC the differences found between the two genders are similar to the ones in face-to-face communication. Herring (1993, 1994, 1996) summarizes males and females' different styles in CMC by males' tendency to confront and females' tendency to give support. Males write longer messages and more frequently, in a critical way and sometimes using sarcasm, while females write shorter messages but expressing more doubts, suggestions and gratefulness. In the forums males bring up more topics for discussion than females, and their arguments are mainly based upon facts, whereas females have a way of arguing basing themselves on intuition and experience (Truong, 1993; Savicki, 1996; Savicki and Kelley, 2000; Ferris, 1996).

Our study

The messages sent to WebCT discussion forums for several on-line university courses were analysed. Possible differences related to gender were studied

Our sample

104 students (Psychology, University of Barcelona)
Ages between 18-58

Messages analyzed

A random sample of 500 (selected from more than 4000 that were sent to forums)

Principal results

Are there any differences in the total number of messages sent to the forums related to gender? There were no significant differences ($p=0.29$) between the observed proportions of messages sent by females and males and their expected proportions (based on the number of females and males subjects in the sample)

Total number of messages sent



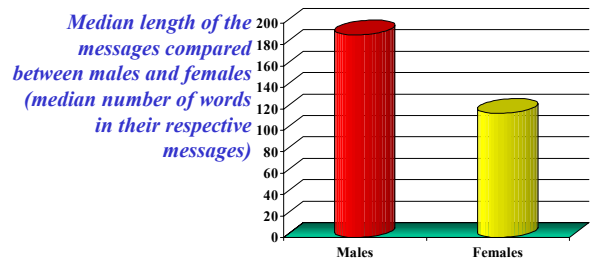
Constancy of participation



Are there any differences between the number of sent messages during the course (constancy of participation)? A Lambda value of 0.938 was obtained, indicating that males and females participate with the same constancy.

Are there any differences in the length of messages?

We used two measurements of length of message. The first one is the number of words, it can be considered as an indicator of verbal fluidity. The second one is the number of significant units, as an indicator of fluidity of ideas. If the median length of the messages is compared between males and females, through the Student's t-test, it can be observed that males write longer messages (more words), but that no differences are found in the number of significant units. The median length of a males' messages is 189 words and 116 of females'



Are there any differences in the type of significant units used in the messages?

In addition to quantifying the length, quantity, etc. of the sent messages by each group to the discussion forums, the content of a sample was analysed with the aim to use the category system created by Barrett and Lally (1999). The seven used categories were defined as follows:

INFORMATIVE: affirmations in which objective information is stated (concrete data, formal explanations, narrative of events, clarified examples, etc.) Ex.: 'During 1999 my city suffered two violent nature phenomena'. **-APPRECIATIONS:** expressions from own point of view, opinions or subjective appreciations. Values of judgement. Ex.: 'I think the constitutional base of one's personality is very important'. **-INTERACTIVES:** all courtesy phrases directed towards a specific person. Also, phrases or parts of phrases connecting to previous messages. Ex.: 'Reconsidering Ariadna's idea...'. **-SOCIALS:** phrases that are not related to a topic's formal content. This category includes social conventions, that is, greetings, good-byes, gratitude; generally courtesy phrases, as long as they are not directed to a specific person (if that is the case they would be interactive.) It also includes announcements in which personal aspects are explained, for example, name, age, work, studies, personal interests, expectations and personal experiences. Ex.: 'Greetings to everybody'. **-METACOGNITIVE:** reflections about own thoughts and consciousness about knowledge and lack of knowledge about a topic. Ex.: 'One thing is for sure and that is that I cannot see it clearly'. **-QUESTIONS:** statement of a doubt in direct form or indirect form with the aim to be informed. Ex.: 'Could anybody inform me about this topic?'. **-CONTEXTUAL:** statements lacking formal contexts, used to introduce the subject matter of what will be showed; connections or any type of expression that serves to situate the reader in the matter. Ex.: 'I agree with the example.'

When comparing the use of each significant unit's category of males and females, it can be found that males ask more questions than females ($p=0.073$). As well, there are differences in the use of contextual significant units ($p=0.01$) and interactive ($p=0.02$). Males use more contextual and interactive expressions. There were no differences in the use of the other type of significant units.