

Editorial

What Does Research Say About the Learners Using Computer-Mediated Communication in Distance Learning?

One of my students recently undertook a review to see what was said in the research literature about learners using computer-mediated communication (CMC) in distance learning settings. I don't have space to report all her findings, but the following is a synthesis of the main ideas. In her study, these are supported by references to empirical studies, though I am not listing the references, only the findings.

Satisfaction and Dissatisfaction

Satisfaction is strongly linked to the learners' sense that the distant instructor has a social presence. Satisfaction is also linked to the provision of feedback from instructors. For some students, satisfaction comes from the invisibility to others of those personal characteristics that they sometimes feel bring discrimination in face-to-face settings. For some, satisfaction is linked to the feeling that CMC allows them, if they want, to express their emotions. The very nature of the curriculum and the course design directly relates to learner satisfaction. For example, learners have reported satisfaction with the kind of courses in which they improve their computer communication skills as well as courses that are performance based, that require group work, and that apply collaborative learning. A reported phenomenon in which learners move from feeling like outsiders to feeling like insiders in the collaborative group contributes directly to feelings of satisfaction.

Dispositional and situational characteristics, for example, lack of confidence, fear of failure, lack of access and/or time, and lack of experience with learning in groups when learning activities are group based, all have been found to translate into learner dissatisfaction.

Just as the social aspect contributes to satisfaction, it can also feed dissatisfaction. Lack of prompt feedback, feelings of loneliness, perceived difficulty communicating with those one does not know well, fear of expressing opposing views in discussion forums, and resentment at perceived cliques are all reported reasons for learner dissatisfaction.

Among instructional activities leading to learner dissatisfaction, students complain about activities that have no real-world application as well

as ambiguous instructions, too many discussion postings, and heavy time requirements.

A Focus on Ideas Rather Than Social Factors

Just as social presence can influence affective outcomes—that is, learner satisfaction—so cognitive presence, defined as the critical practice of inquiry, can influence the quality of cognitive learning outcomes. When there is good cognitive presence, the focus of discussion becomes ideas in contrast to social factors. Research suggests that interactions delivered by CMC become increasingly more cognitive and less social, with interpersonal communications decreasing over time and with peer referencing decreasing and text referencing increasing as the course progresses. One key to good cognitive presence is to have “on-task” learning activities designed by instructors. However, “Off-task” activities remain important as they establish the social interaction that is needed for building the communicative community.

Thinking Styles

A number of research studies contribute to knowledge about which thinking and learning styles are most consistent with learning by CMC. Among these, research into such topics as continual sustainable communication and the amount of time needed for reflective thinking contribute to understanding that the computer-mediated learning environment is especially supportive of those learners who need and do well when they have ample control of their time and have opportunity to reflect, think deeply, and prepare their contributions thoroughly. CMC appears to support the development of high-level reasoning skills and high-level (deep) thinking. Developing high-level (deep) thinking probably depends on reflection time, increased interactivity through continual discussions, an active engagement with the learning process, and an effective group collaborative environment.

Learner Empowerment

Some research findings suggest that the equal opportunity to participate that is provided in CMC discussions gives a sense of empowerment to some students. These include the relatively introverted and shy students and also those who feel discriminated against, particularly as members of

certain ethnic groups. Findings suggest learners are also empowered in indirect ways: by assuming the responsibility of new roles in which they become both the teacher and the learner, by having the choice of interacting more with other learners than with instructors, and by having the freedom to communicate with and relate to individuals as individuals and not just the group.

Participation and Nonparticipation in Discussions

Evidence suggests that not only do interpersonal dialogic relationships develop online, but the extent of the dialog is surprising to educators moving from conventional classroom settings. Sometimes dialog sustains itself at a constant level, and sometimes it is heavier at some times of the week or some parts of the course. Sometimes it is greater with one discussion leader than another. Participation in dialog is likely to be, to a considerable extent, related to course design. If course expectations with respect to discussion participation are specific, and participation is graded, then students are likely to participate at a high level.

Sometimes, even though conversations are initiated by the instructor(s), overall discussion participation is low or declines over time. Such nonparticipation has been related to dispositional and situational barriers that, according to some reports, are higher for females than males. Course design, too, can directly affect nonparticipation. If explicit, detailed directions are not provided on what is expected and how to participate, participation is more likely to be low.

Collaborative Learning and Social Construction of Knowledge

Although ideas, rather than social interaction, are the focus of a mature online learning group, many researchers suggest that social interaction, especially in the form of learner-learner interaction, leading to social integration and social interdependence is an essential prerequisite for the development of such ideas. Even before the Web impacted CMC (making it easier for learners to interact with one another), students were reporting their interest in developing friendships and a network of colleagues. Conceptualizing learning as socially situated, some researchers argue that group-based collaborative learning enables development of learning communities in the short term and potential communities of practice in the longer term. One seminal study (Gunawardena, Lowe, and Anderson 1998) developed an in-

teraction analysis model to examine the social construction of knowledge in CMC. It was concluded that the dynamics of the virtual group pulled all the participants toward various forms of compromise and negotiation on the way to socially constructing a commonly acceptable form of knowledge. Research suggests that the affection, inclusion, and sense of solidarity of the group, the ease of expression and synthesis of multiple viewpoints with no one student dominating, are important characteristics in this successful social construction of knowledge online. A previous study, as early as 1991 (Cheng, Lehman, and Armstrong 1991), reported a higher completion rate for those computer-mediated learners who worked collaboratively (90%) than for those who worked independently (22%).

This is only a simple summary of a sprinkling of the research now available on the learner and the learning process. I hope it might encourage some readers to think about how they might contribute to this important part of our distance education research agenda.

Michael Grahame Moore
Editor

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References

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