Theory-to-Practice

An Experiment in Internet Relay Chat (IRC)

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Abstract

The purpose of this study was to learn more about the methods and difficulties related to implementing Internet Relay Chat (IRC) in a graduate course in adult education. IRC transcriptions were analyzed, as well as post-course evaluations with participant consent. We present lessons learned and suggestions for further research and for course implementation and improvement.

Introduction And Need For The Study

Computer-mediated communications (CMC) is used commonly in distance education. The use of CMC has increased dramatically over the past decade. For example, 51% of adults 18 years of age and older and 76% of adults with a baccalaureate degree or higher had access to a computer at home in August, 2000, and 37% of adults used the Internet in the home in 2000 (Newberger, 2001).

Many types of CMC, such as e-mail, listservs, bulletin boards, and use-net newsgroups, have been introduced to both academics and students as potentially revolutionary methods of enhancing instruction. However, while there are many potential educational uses for these technologies, very little research has been conducted on the use of one particular form of CMC, Internet Relay Chat (IRC) in educational settings. Doell (2000) notes that "research on IRC is relatively rare and comes from a multitude of disciplines with a wide variety of methodological approaches" (p. 6).

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Review Of The Literature

It is often useful to contrast IRC to other forms of electronic communications that are "one way," such as television broadcasting, satellite transmission, electronic mail, bulletin boards, and newsgroups (Kerka, 1996). The most basic form of synchronous CMC is IRC. IRC can be characterized as "communication which is real time or instantaneous" (Wulf, 1996, p. 50). IRC is a "text-based conferencing system that allows users to chat via the network in real time" (Cheung, 1995, p. 1). To elaborate further, IRC provides a "means by which one user can type a message in real time to one or more Internet users, and almost instantaneously, the message appears on the monitors of all the others who are monitoring the transmission" (Simpson, 2000, p. 1).

IRC requires an internet connection, either dial up or direct, and a software package; in the case of our study, it was a built-in component of WebCT, the software used for university distance education. Oft cited benefits of IRC include:

- Participants can contribute to discussions on an equal basis.
- Student and teacher interaction is enhanced.
- Peer, mentor, and/or guest interaction is enhanced.
- Students who are shy in real life have the opportunity to participate more actively.

Disadvantages include:

- A dependency on sophisticated infrastructure, technical expertise, and hardware.
- A reliance on complicated or unreliable software.
- A lack of "genuine interactions with peers" as well as commentary related to absence of "reflective" communication.

(See, for example, Gay, Pena-Shaff, & Martin, 2001; Ingram, Hathorn, & Evans, 2000; Rohfield & Hiemstra, 1995.) Given its potential advantages, its purported disadvantages, and the relatively rare research on IRC, there is a need to learn more about its potential uses and the possible pitfalls of engaging in IRC. Further, the authors wanted to utilize the interesting feature of being able to save chat transcriptions for later analysis in order to make a contribution to the literature on IRC.

Background

In spring, 2000, the authors participated in a graduate seminar on distance education methods and technology. With the encouragement of the professor and the class, we set about implementing, within the graduate-level, distance education seminar, an experientially based mini-course using IRC to learn about IRC. We wanted to create a community whereby we could learn about chat as well as its possibilities and limitations. This approach is much different than just *reading* about chat. A further understanding of the mechanisms of on-line chat was desired.

The purpose of the study was to engage in IRC, conduct an in-depth analysis of participant on-line responses, as well as their written evaluations of the overall experience, and disseminate our findings. In this paper we have synthesized what we have learned from group experiences in IRC.

Methodology

An investigation team consisting of the two authors obtained permission from all adult graduate seminar participants (informants) to participate in this study. All volunteers expressed a desire to learn more about IRC and granted consent for study participation and the recording of their responses. These six informants ranged in age from 34 to over 50. Each came to the class with different expectations and technical background. For example, one of the participants worked in information science at the university library and, indeed, ended up facilitating the technical end of the course, while some were novices on the computer.

All on-line interactions were stored in a separate, downloadable file for later analysis by the authors. The use of transcriptions of IRC interactions over the course of the semester was deemed critical to the project, since these transcriptions provided the raw data for analysis in conjunction with course evaluations. The participants were also asked to discuss any issues they felt were important. There was no lack of critique, as participation and critique in no way contributed to a participant's course grade. In other words, there was an open-ended spirit of camaraderie that acknowledged critical evaluation of the experience.

After the collection of all data, analyses were conducted and themes emerged. A cross-case method was used (Patton, 1990) for cross-classification coding. Separate categories for each of the six individuals were not created; however, categories arising from the transcriptions of the total group emerged (hence, the term "cross-classification" is used). A constant comparative method was used during the analysis stage. The constant comparative method combines inductive category coding with a simultaneous comparison of all social incidents observed. "As events are constantly compared with previous events, new relationships may be discovered" (Goetz & LeCompte, 1981, p. 58).

Findings

What we learned about the interactive chat experience proper is summarized under the subtopics of technical limitations; addressivity; and abbreviation, actions, gestures, and non-verbal cues (the latter two subtopics following Werry's [1996] linguistic analytical approach). We then move on to recommendations and conclusions.

Technical Limitations and Overall Impressions

During IRC messages were short and limited to six lines because of the screen size, typing speed, minimal response time, number of on-line participants, and the pace of the conversation. The number of people on line increased the competition for attention. These limitations hampered communication and contributed to the need to shorten speech-like, online dialogue. Most home-based and school computers were still limited both technically and physically in terms of screen space, shape, and size.

The authors, who were also participants, found that, in order to keep up with the flow of conversation, it was necessary to respond quickly. Those who were able to type quickly had fewer difficulties than those who needed more time. One participant commented:

> I found this variety of speedy repartee to be challenging and fun, but not everyone will agree with me. At the same time, however, I am quite comfortable with a slower, longer comment fit for the Bulletin Board. Somehow the latter does more justice to a thought emanating from my middle-aged brain than does a sentence or two machine-gunned out in a series of short, monosyllabic words.

We found from our experience that typing is slower than speaking. Long messages tended to disrupt the conversational pace; such long messages proved frustrating for participants. The ability to have lengthy conversations consisting of longer paragraphs decreased as the number of people on line increased. In fact, as more members of the class participated, the more difficult it was to hold together a cohesive conversation even though the participants knew one another. Most of those on line wanted immediate attention and a response. Some tended to start individual conversations with others if too much time was spent producing a response. For example, one participant commented:

> We kept waiting for number two to respond, and everyone started to respond because it seemed as if the person did not get the idea at first. I, for one, went out of turn just to see if everyone understood the exercise. Elena kept telling me to wait.

Addressivity

Patience was called for so that each person would go in turn when logging in. When persons did respond randomly, confusion could set in. If someone wanted to reply in a lengthy manner, the group decided that person should type a *t* (short for, "I'm busy formulating and typing a response"). The *t* was a clue to us to maintain patience and wait for the response. Just as one must listen in a classroom, it takes a long time online for four or more people to reply to one another. For example, one participant noted:

> However, it was difficult for us to wait for a response. We all wanted to respond out of turn and did respond out of turn just like it was an informal conversation. We all wanted to interject our thoughts, not realizing that we really needed at least a minute for everyone to respond. At times, it was painfully slow.

We found that, when addressing a person during chat, it was helpful to use a number or name to avoid "ambiguity and discontinuity in the structure of the exchange or in turn-taking" (Werry, 1996, p. 52). Paralinguistic cues, intonation, pauses, gazes or gestures, notes Werry (1996), help to determine, in face-to-face encounters, who speaks and when. Rules were established, and everyone had to remember not to cut in and be patient while other people were typing. As the authors noted in their transcript of this experience:

> We need to somehow supplement our chat with some rules and symbols and abbreviations as well as to address one another's name or number in parentheses, but more on that tomorrow when we post the rules. Thanks for continuing on this bold adventure in chat! (You are all invited on this adventure). Bring your patience and good will with you! Godspeed. On Monday at 10:30 p.m. let's chat again in a more organized manner.—Susan

Rules established for chat included responding in chronological order. Further, several abbreviations were adopted.

Abbreviation, Actions, Gestures, and Non-Verbal Cues

The need for online abbreviation became apparent during the process of working in IRC. This need was borne out of necessity. Additionally, the second author noticed her son using abbreviation regularly in his e-mail messages. Hence, the group was asked to make up its own abbreviations especially for this class. These were culled and presented as options for use. The goal was to achieve a speed with which messages could be exchanged so that the pace of the exchange would be more like that of a face-to-face conversation. Examples of abbreviations used by course participants included the following: *T* was established for "typing" and *P* or —> for "pass." A *?* was used for the purpose of asking for clarification. Also, *BRB* was utilized for "be right back" if the person had to step away from the computer for a moment, and *GTG* was the abbreviation for "got to go." Formal names tended to become nicknames, such as changing Susan to Sue or Su.

Symbols often were used as a substitute for gestures, actions, and non-verbal cues. While we stumbled upon the need to express communicative qualities of face-to-face gestures by using imagery and symbols, such as *lol* for "laughing out loud" or *rotfl* for "rolling on the floor laughing," we found from later readings and exploring other online chats that this was a commonly used practice in IRC. For example, *XOXO* is used for "hugs and kisses," sending an image of a rose meant "love," and a smiling face, :) (something we used), was used as an indicator of satisfaction.

Recommendations

In summary, in spite of the technological limitations of on-line chat, people have tried to make it as much like face-to-face communication as

possible. Indeed, most communication is non-verbal. Therefore, the attempt has been to make online chat as natural as possible by using various strategies, developed by the group itself, to make it work. Some strategies have been successful and others have not. Indeed, this research supports Werry's (1996) contention that participants can adopt and adapt a number of linguistic strategies that compensate for the limitations of this technology. Further, we agree with his contention that there is a "drive to reproduce or simulate the discursive style of face-to-face communication" (p. 61). However, whether or not IRC in the format used in this experiential research project is useful for adult educators working with graduate students is a question we address below.

We found that establishing rules with group input was helpful. We also found that having a clear task, small group size, and a moderator was helpful. Our findings coincide with those of Dietz-Uhler and Bishop-Clark (2001) on these points. Rohfeld and Hiemstra (1995) also call for such structure when working with students in a distance education environment.

Ingram, Hathorn, and Evans (2000) state, "It [IRC] does not always lend itself to deep reflective conversations" (p. 33). This is exactly one of the key points made by one of our participants, reflecting the conditions that we experienced in this class. Further, Ingram, Hathorn, and Evans (2000) conclude that "chat technology is good for some kinds of discussions. For others, asynchronous communications might be more effective" (p. 34). We would tend to agree that, without the kind of structure recommended by Rohfeld and Hiemstra (1995), our research could very well support this claim.

We think that it is safe to say, as alluded to by one of our participants, that using a complementary blend of asynchronous approaches, such as bulletin boards, e-mail, and chat, given proper support and guidance from an experienced facilitator, might yield more scholarly discussions. In addition, Gay, Pena-Shaff, and Martin (2001) admit that, while chat does not appear to encourage deep kinds of thinking, it does prove useful for brainstorming sessions. They also suggest using bulletin boards for "promoting critical thinking skills and reflective thought" (p. 41).

Turning to the technical issues, one could conceptualize this technology in terms of its usefulness in a graduate seminar as not quite ready for prime time without careful attention being paid to providing structure to participants. The technology is limited in its usefulness, and those engaged in it were hampered by their inability to communicate as the number of participants increased. Basic computer skills were needed, as well as typing skill and speed. Conversational flow was hampered as more

students participated. While the group desired to explore more fully the use of abbreviations, it, unfortunately, ran out of time. Further, many of the participants had trouble with the technical aspects of the experience, even those considered to have a very high level of skill when dealing with computers.

> David: That's my quick evaluation on tonight's chat room experiment. Helter-skelter, shoot from the hip, fire at will, damn the torpedoes, full speed ahead. Does it work? The jury, I suspect, is still out.
>
> Lili (technical advisor): They haven't figured it out yet. Frankly, the technology has yet to be invented to support this kind of interaction
>
> Donald: That's pretty frank!

We wouldn't discount our experience out of hand, however. Under optimal conditions, with small groups of people operating over distances, IRC may be very useful for communication and collaboration. While there were difficulties encountered with the chat experience, our mini-course experience affirmed the value of implementing adult learning principles in adult education classes and courses and affirmed the positive value of tying theory to experience in experiential learning. We found that, when we combined what we were learning about distance learning with actual experience in one of its modalities, many of the issues came into focus much more clearly. However, we would agree with the recommendations of Rohfeld and Hiemstra (1995) and Ingram, Hathorn, and Evans (2000) that, indeed, careful attention to group size, ground rules, and clear tasks is warranted.

The value of the overall seminar experience could be attributed to the seminar leader. Many seminar participants felt it was the "best seminar they had ever had in graduate school." This could be attributed to the wisdom and ingenuity of the seminar leader who allowed us to come to our own conclusions about IRC and its usefulness in various contexts. We suspect that he knew all along what our ultimate conclusions would be, but he felt that learning from this experience also taught us something about learning from experience.

Experience is a powerful tool for adults' learning and growth. We would recommend that teachers of adults experience themselves the

technology they might consider asking their students to use. Doing so will help them anticipate more readily the problems that might be encountered; consequently, they will become more empathetic towards their students and more proactive in anticipating possible problems with the technology. We conclude by acknowledging all of the volunteers in the project, as well as the course facilitator and his belief in experience as one of life's great teachers.

Conclusions

Hiemstra (1984) predicted over 20 years ago that personal computers would have an important role "in the facilitation of improved professional practice of adult educators" (p. 1). While this prediction has proven quite true, we believe that more research into the use of computers and telecommunications for facilitating adults learning together is warranted. Our research into IRC has shown that, so far, computers and telecommunications equipment are merely tools to help facilitate basic human interaction.

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