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Teaching by chat

Zusammenfassung

Diese Arbeit diskutiert einige didaktische Aspekte der Nutzung von Chats für Lehrzwecke. Die Bereiche, die dabei angesprochen werden, reichen von der Auswahl geeigneter Kurstypen und Studierendengruppen über Vorbereitung und Moderation von Chats bis zu der Frage, wie mit Unruhe stiftenden Studierenden und technischen Problemen umgegangen werden kann.

Abstract

This paper discusses some didactical aspects of chat usage for instructional purposes. Areas covered range from the choice of course type and student group for using chats, to the preparation and moderation of chats, and discussing how to manage both troublemaking students and systems.

In February 1998 I was the chair of a committee at my previous university that was authoring a recommendation list about the Internet to the president of the school. One of our recommendations was to eliminate the IRC server (Internet Relay Chat), since it was only causing traffic and was just being used for games. We stated that we could not envision a use for chatting either for research or for instructional purposes.

Five years later here I am: teaching 4 of my 5 courses by way of chat.

There has been an enormous growth in the use of chat-based instruction, but also quite a lot of problems encountered. Much of the available literature addresses technical problems, or discusses chats from an educational psychology perspective. This paper will address ten of the didactical issues in chat-based instruction, summarizing the experiences that I have made in many years of chat experience.

1. When to Chat

The most basic didactical question is deciding when a chat will be beneficial to the instructional setting. Just chatting for the sake of chatting is not going to be useful, there needs to be some sort of added value that is derived from using chat-based instruction.

The clearest situation for using chat-based instruction is when the participants in instruction are not all in the same physical location, but are able to schedule synchronous time. My first use of chatting was during my sabbatical, when I was in Sweden and my students in Berlin. It was a bit silly for them, as they were all sitting in the same room together, it was only me that was at a distant location. This caused some additional problems such as a participant commenting aloud on something that I had been discussing with the student in private. Since the others became aware that we were conducting a parallel thread (a difficult task as it was), they demanded that everything be repeated for all of them.

The program in which I am currently teaching requires the students to spend their internships in a foreign country. There is an obligatory course that accompanies internships in which the students reflect on their work situation. This is an ideal course for chatting, as the participants are distributed throughout the globe. It does have time zone problems, however. In order to accommodate the students in the Americas, for example, I must offer a chat at 9 pm German time. The students who are in India must be made to understand that Indian time is 5 ½ hours different, so they must join the chat on the half hour and not on the full hour.

Chatting for more than an hour is extremely tiring and tends not to be very useful. After a maximum of 90 minutes, just as in face-to-face instruction, a break is mandatory. But if only an hour is available, one must insist that the students come on time to the chat and commit to stay for the entire hour. Otherwise the net time available for instruction is considerably reduced by continually having to greet latecomers and say goodbye to early leavers. I try and enter the chat room 5-10 minutes early and to offer some small talk with those who have also arrived early, in order to make it worth their while.

I have tried to use just one chat session in a course normally taught face-to-face for a situation in which I am out of town. This does not work very well, as the students have to learn how to conduct themselves in a chat-based learning situation. Much time is spent on technical considerations, so that the chat is not very worthwhile. However, if a group has experienced chat-based instruction before – such as after our internship course – then it is easy to replace one meeting with a chat. Thus, chats should be used as early as possible in a program so that the students are able to use them in various courses.

Chatting is sometimes suggested for a tutoring situation, in which a distance student can chat informally with other participants or ask a tutor a question. It is difficult, however, to get distance students to work on a particular class synchronously. They might be willing to commit to an hour's chat per week, but not to doing their homework on Monday evenings. An asynchronous news group is much better suited for such purposes.

Distance tutoring can be very difficult for the tutor – one sits and stares at an inactive chat room, and wonders if the inactivity is due to technical problems or if no one has any problems to discuss. In order to rule out the former, the distance tutor should be available in parallel by telephone. When, however, a student comes in with a question, the tutor tends to be reading a Web page in another window or out getting coffee and the learner fears that no one is there. If the chat room has the possibility to set a parameter so that an acoustic signal is given when someone enters the room or is re-active, this would be very helpful in getting the attention of the tutor. But always sounding the signal can be very annoying in other chat situations, so it must be possible to turn this on or off.

2. Appropriate Topics for Chatting

Chats are obviously useful for seminaristic situations in which the participants discuss an issue that they have (hopefully) prepared in advance. They can also be used for lecture-discussions, but these tend to get very boring for the students, as it is difficult to follow a lecture that is delivered in fits and starts. It does, however, give more of a chance to ask questions than a traditional face-to-face lecture does, as the lecturer "pauses" every time they use the send button.

This can be quite disconcerting for the lecturer, as she will have gone on to the next point, only to have a question about the previous point being interjected as soon as the student is finished typing. One ends up jumping back and forth in the train of thought. It is much too trying, however, to wait for questions at the end of every point. What one can normally read from the faces of the students (understanding, puzzlement, utter boredom) is not visible through the chat. The students need to be encouraged to make their conditions explicit! However, this can be overdone if you have 20 people writing "No" after you ask a question such as "Are there any questions on this matter?".

It is even possible to use a chat effectively for a course such as an introduction to programming exercise section. In order for this to work, the students must publish their exercises on the Internet before class. As you go through the exercises, you explicitly ask a particular student for the URL for their solution, and you instruct all of the students to point their browsers to this URL and discuss the solution found there. You can then ask if someone else has a different solution, and the group can thus compare the answers. This is very effective when there are more than one correct answer to a question, it provides an excellent situation for discussing the pros and cons of a certain way of solving a problem.

In evaluating such a scenario I had a number of interesting comments. One student pointed out that this way of looking at her exercises scared her – she was used to the exercises being a dialogue just between us, and was afraid of making a public mistake. This needs encouragement from the teacher. One must be extremely positive and supportive, and not make fun of people who make

mistakes, as the "hard" nature of the communication medium chat will make negative comments seem much sharper than they are meant to be.

On the positive side a student noted that it was fascinating to see all of the different ways of solving the problem, this was something that was not possible in the traditional form of exercise sessions. It is important to do bookkeeping in such a scenario in order to ensure that all students participate and that no one is picked on more than the others.

3. Target groups

The appropriate target group for using chat-based instruction is first and foremost students that have access to the Internet. This might seem a trivial question, but as more and more companies and universities install firewalls and other barriers against hackers, many of the typical chat systems may be unavailable to all of the students. Some chat systems are even Java-based but still do not work in all browsers or on all platforms, so students with only access to Mac systems or without Internet Explorer may be left out. It is very frustrating for a student to not be able to attend a chat even though they have made an effort to attend. An introductory "first chat" can be useful for solving such problems.

It would be best if all participants were able to type using the 10-finger system. It can be extremely frustrating to want to contribute to a discussion, but by the time one has laboriously typed out one's opinion, the discussion is already two topics on down the stream. Students of all programs should be encouraged to attend a typing class, if they have not already done so.

If a visually impaired student is attending the class, the students should be encouraged to refrain from excessive use of smileys and abbreviations such as lol[1]. There is software available that can read aloud text-based instructional material to the student, but they have difficulty interpreting this oft-changing jargon.

4. Preparation

Preparing for chat-based instruction is not a trivial task. It does, however, get easier if a class is repeated and one can re-use the materials previously prepared. I prepare a file with questions that I want to ask during the session, even if I usually don't manage to use them all. It is very helpful to be able to copy and paste these questions into the chat window without having to type them – although with longer questions it will certainly spark a comment or two on how fast you have learned to type.

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[1]   lol = laughing out loud

Just as in face-to-face instruction, it is helpful to have a weekly schedule posted to the web containing the topics to be discussed and links to materials to be read. Students need to be encouraged to actually read the materials. Assigning little exercises that must be turned in by midnight the day before the chat for a part of the grade can be very useful for this purpose. The grading of all of these exercises can be avoided if for example 15% of the final grade is 15 exercises that have binary grades: handed in on time / not on time.

In order to keep track of who has participated in the chat, I print out a chat participation list in advance using a spreadsheet program with a large line size and a column for every session as well as columns for special tasks that need to be finished sometime during the semester. It is very useful to have this next to the computer during the chat so that I can keep track of who has done what.

Chat course AEP

		Organigramm	Desk photo	01.04.2003	08.04.2003	15.04.2003
Charlie	Brown	+		+ +	+ + + +	+ + +
Fred	Flintstone		+	+ +	-	-
Wilma	Flintstone	+	+	+	+ + + +	+ +
Lucy	Schneider	+ +		+ +	+ + +	+ +

Figure 1: Chat Participation List

5. Moderation

Moderating a chat is a very difficult task. There can be numerous "threads", sequences of interactions on a particular topic, that appear in the chat interlaced. This task is similar to weaving a multi-colored rug – each colored thread must continue on until its part in the pattern has finished. When a number of questions or comments on different threads come up one right after the other – and this is very typical for chat groups that have more than 5 or 6 participants – the moderator needs to look back through the discussions from time to time in order to make sure that nothing has been ignored.

On the other hand, students often introduce extraneous threads into the discussion. A favorite is the misuse of the chat room to coordinate free time activities. I am quite dictatoric about this question, and will insist that such discussions be done after class. If the chat system has whispering capability,

they could theoretically use that to correspond. But this takes their attention away from the discussion point at hand.

Participants need to be addressed directly during the chat. In the next section I discuss the naming problem, but assuming that names are clear, it is important to signal to a participant that they are being spoken to directly. We use the "@" sign in front of the name in order to make the recipient of the message clear:

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weberwu: @Wilma, could you please explain what is meant by ….
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Sometimes the students use an address signal of @all in order to underline the fact that they are addressing the group.

It is important to have a clear and obvious beginning to the chat session and to have a formal ending. A chat session can begin by "going around the room" and having every participant say something about their current situation. If everyone is on time and I keep track of who has already said something, and I explicitly ask those who have not yet said anything to make a statement, it is possible to do this in about 5 minutes with 15 participants. Then the formal beginning can be stated by something like

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weberwu: Our topic for today is formal work processes.
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It is just as important to have a formal closing for the chat. I try and summarize what we have done in the session today, and remind the participants of the topic for the next week. This can be difficult to do if people leave the chat room early. I remind them that we need a commitment to come on time and to stay until the end, but this is not always successful.

In my international chats we have the additional problems of power outages and general network flakiness that drops people from the chat involuntarily. This makes it important for there to be a protocol of the chat session, so that people with such problems or those who could not make the session can read what was said. When the formal closing has been given, I turn off the automatic protocol so that we can have some small talk before leaving the chat room.

These automatic chat protocols tend not to be very useful, however. Even though they provide an exact record of what was said, it is much more effective from a didactical standpoint to assign a scribe for each session. The scribe has the task of summarizing the points that were discussed in the session and posting the summary on a bulletin board, on the open web, or somewhere in the learning management system for the course. It is much faster for people to read through short protocols instead of wading through an hour's worth of chat. The protocols also provide good material for exam preparation. This method has the added advantage of giving the students experience in summarizing discussions.

6. The German Du/Sie Problem

There is a particular problem that occurs when chatting in German: the problem of which second person singular form to use, Du or Sie. Du is the informal form used amongst friends, Sie is the formal form of address normally used in higher-education instruction. Chats have a very informal feeling to them, making it difficult to address the teacher as "Frau Prof. Dr. Weber-Wulff" or the student as "Herr Crzylowskionitzki". If I do use last names, I keep a list of the names of the students opened in an editor on my computer, so that I can copy and paste the difficult spellings of some of the last names.

I tend to suggest that we use the Du form in chatting, or that we use (non-standard) mixed forms. For example, I will use the first names of the students, but address them as Sie in the singular. Somehow – probably because I am American – I still end up using the Ihr form for the second person plural.

I offer the students a number of possibilities for addressing me – they can use my first name if they wish (but only a few groups have ever used this), or they can use a short form such as WeWu, which is easier to type. Since I use first names and Sie, they tend to settle in with WeWu and Sie as well. Of course, the easiest solution to this problem is to switch to English as the chat language!

7. Troublemakers

Just as in face-to-face instruction, chat-based instruction can be disturbed by participants who for some reason or other choose to cause trouble. Some problems are just attention-getting devices, but there is behavior that can threaten to destroy the learning situation. Some students feel that since they are now on
"equal terms" with the teacher, they can dominate the conversation. Others are angry about something and start verbal attacks on other participants. Those who chat as a hobby may also have trouble understanding that even though the medium is the same, their behavior needs to be adjusted to school behavior.

It is important to start the conversation and to stay in control, as noted in section 5. It is just as useless to get into a fight with a student on-line as it is in the classroom. Deferring the solution of the problem until after class can be helpful, as well as requesting that the student email his or her problem to you, so that you can discuss it in more detail one on one.

Defusing angry people is tricky. If face-to-face techniques don't work, one can only hope that the chat system being used offers some sort of sanctioning system. One method quiets the troublemaker, letting them receive messages from the other participants but preventing their comments from being sent to the others. This might be in the form of a time-out (a certain number of minutes) or for the rest of the session. A more severe punishment is kicking the person off of the chat system, that is, not letting them read or write to the group.

An interesting method is described in (Powazek 2002) for a democratic style of banning. When a participant starts to bother, anyone can give a ban command, which is broadcast to all of the participants, letting them know that one person is fed up. If others agree, they too can give a ban command. As soon as more than half of the participants have voted to ban the troublemaker, they either are put in time-out or kicked from the system, depending on how the parameters are set.

8. Chatiquette

Karin Neumann from the University of Tübingen has presented a list of Chatiquette (Chat etiquette) rules (Neumann 2002), among them:
- Be polite and patient
- Accept the moderator as leader of the discussion
- Contribute to the discussion yourself
- Keep to the subject
- Address a specific person by indicating his/her name
- Indicate reference to other contributions
- Use continuation signals (...) for longer contributions
- If you are addressed directly, send an answer
- Use smileys to indicate how something is meant

The last point is problematic, as noted above, for persons with visual disabilities who are attempting to participate in the chat. It can also be problematic if too many less well-known smileys such as @-->-->---- (a rose for you) are used.

I would add the following points:
- Write as you would speak in a normal dialogue
- Respect the opinions of the others
- Don't pretend to be somebody other than you are
- Don't take you bad mood out on the others by shouting (using all capital letters) or swearing
- Remember: if the chat can be recorded, the whole world is watching, so choose your words with care

9. Technical headaches

Internet-based instructional didactics are not complete without addressing some of the technical issues that come up, as they can cause quite some disturbance in the learning environment.

Sometimes participants that have been able to chat previously are suddenly not able to join the chat. Usually some update or adjustment somewhere along the line will have unexpected side effects. I let my students know the telephone number where I can be reached during the chat so that they can call with problems. Of course, non-chatters sometimes end up calling during the chat

instruction. I always write to the chatters that the telephone is ringing, and then I cut off the caller quickly by indicating that I am in the process of teaching.

One work-around for students being temporarily unable to join the chat needs a second chat system in which the affected student and at least one other participant are able to join. It is possible to use copy and paste in order to copy both the discussion to the cut-off student, as well as their comments. But this is quite a hassle for the participant having to do the copying and should not be used for more than emergency situations.

I have a back-up chat system, Chat-N-Time (Pfaff-Harris 2003), that has rather limited functionality, but due to its HTML-based nature is usually able to get through even the most difficult firewall and is easy to install. If we do switch chats, I post the new location for latecomers and check back every few minutes to see if anyone new has shown up.

A major problem with a number of Java-based chat systems is that it is not possible to copy the chat text from the screen. This is especially irritating when posting a long and involved URL that the rest of the class is to visit and discuss. If there is an area in the learning management system where everyone can post links, this is at least a work-around, but it is a very involved process to direct all the students to proceed to another area only in order to click on a URL.

10. Advanced chatting: Audio and Video

There are two more technical methods of synchronously meeting with students who are not in the same physical space, audio chat and video conference.

Audio chats are like telephone conferences – anyone can say anything at anytime, if they have a microphone and headphones. This is of course much easier to do than typing, but it brings its own problems with it. If you do not know the people in the chat, it can be difficult to identify who is currently speaking. If one has the technology that makes the participants register to speak and then have them be granted speaking privileges, then it is possible for a picture of them to be shown to the others, as the speaker can be identified.

Simpler audio chats can be very noisy, because all of the auxiliary noises from all of the participants microphones are added together, and it can be difficult to concentrate on the person speaking. One can use signals such as those that are used on two-way radio connections: over, over-and-out, roger, etc. for denoting when one participant is finished. Not everyone is able to use audio chats everywhere, however. A text-based chat can be conducted from any Internet-Café, or from any location where one can use a laptop and a mobile phone to obtain an Internet connection. An audio chat might be very inconvenient in such a situation, or when people are participating in instruction from their places of work.

Video conferencing needs even more special equipment – a camera that connects to a PC by way of USB or a video-capture card in addition to a microphone and headphones. And the software can be very difficult to have working right, as there are many different protocols for video transmission available, and many are not compatible with each other.

Simple VC systems transmit only one video stream pair, or even only one stream – the teacher to the students. There are some systems such as DaViCo (DaViCo n.d.) that permit a number of streams to be transmitted simultaneously, if enough bandwidth is available.

The technical problems in a VC teaching situation are daunting: ISDN or IP, feedback, participants unable to join, camera problems, transfer of the instructional materials, etc. make it difficult to use VC at the present time. But I assume that in 5 years time, this will have changed, just as chatting has changed, and VC will be as prevalent then as chatting is today in Internet-based instruction.

11. The perfect chat system?

Does the perfect chat system exist? If so, I haven't found it yet. Each system has some strong points and some weak points, and most are missing necessary functionality such as bookkeeping for the teacher.

In a recently finished Diplom thesis (Renning 2003), an attempt was made to both describe and realize the necessary functionality and use XML for storing the chat protocols in order to facilitate their transformation. The results are encouraging, it was possible both to duplicate the democratic banning described in (Powazek 2002) as well as to offer bookkeeping functions and to offer queries for the teacher to find out who has been participating how often in the discussion. Further work will be required, however, to move this from a prototype into a system that is robust enough to withstand a semester's worth of instruction with a large group of students.

Bibliography

DaViCo (n.d.). http://www.daviko.com/en_produkte.html. Read on 10.02.03

Neumann, K. (2002). Synchronous Communication in a Virtual Classroom, Presentation at the 1st International ILIAS Conference – Hamburg, 05.09.2002

Pfaff-Harris K. (n.d.). Chat-N-Time v. 2.9. Scripts for Educators. http://www.tesol.net/scripts/Chat-N-Time/. Read on 10.02.03

Powazek, D. M. (2002) Design for Community. The Art Of Connecting Real People in Virtual Places. Indianapolis : New Riders Publishing

Renning, D. (2003) Teaching by chat – Entwicklung eines Lehrsystems. Diplom thesis, FHTW Berlin