INTRODUCING "ACTIVE LISTENING" TO INSTANT MESSAGING AND E-MAIL: BENEFITS AND LIMITATIONS

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ABSTRACT

In today's information society it is critical to use computer-mediated communication effectively. This article explores whether the highly recognized face-to-face communication concept "active listening" can also be applied to online settings. Demanding verbal and nonverbal skills, this way of communication improves mutual understanding by using techniques like paraphrasing. For instance, it avoids misunderstandings and in conflicts it increases chances to find a joint solution. The presented study investigates whether "active listening" is effective in written online communication, which is a novel asset. Focusing on instant messaging and e-mail, we examined both settings' capacities and differences. Qualitative analysis based on a unique data set including log files and written user reactions on online "active listening" activities, reveals that "active listening" is possible in online communication, although a face-to -face setting is preferred due to a number of constraints imposed by online media. Results show that, while there are limitations to expressing empathy in online settings, the latter offer valuable opportunities that face-to-face conversations tend to lack. For instance, it appears that online media leave control with a communicator by allowing to completely verbalize thoughts before responding. Our results provide preliminary support that even newcomers to the concept can benefit from using active listening techniques in their online communication.

KEYWORDS

Computer-Mediated Communication; Instant messaging; E-mail; Written Communication; Active Listening

1. INTRODUCTION

Day-to-day we are confronted with communication challenges in any kind of interpersonal relationships. Listening to each other is not as easy as it seems. However, listening – real listening – is a key factor. Communication skills are, though, regarded as one of the top generic key skills in higher education (Dearing, 1997, Qualifications and Curriculum Authority (QCA), 2008). Oral communication skills were revealed as the third most important competency required for graduate employment in Europe (Brennan et al., 2001).

A highly recognized concept is active listening, and so it is no coincidence that communication experts and trainers in soft skills pay attention to it. It plays an important role in a wide variety of disciplines, among them counseling and psychotherapy (Hafen and Crane, 2003), education (Cheon and Grant, 2009, McNaughton et al., 2008), and business (Kubota et al., 2004, Mishima et al., 2000, Rautalinko and Lisper, 2004). The concept of active listening has been framed for oral communication. However, nowadays computer-based communication – mostly in written form – dominates business and learning settings. For people who frequently work in distributed teams, it is important to exploit the full potential of computer-based communication. Rather than developing oral or written communication skills independently, it seems crucial to strengthen communicative as well as media competence for being able to fully exploit (inter)personal capacities in each medium's scope and to make appropriate choices regarding the usage of media. As active listening has been originally proposed as a concept for oral communication, prior research has analyzed its effects only in face-to-face (f2f) settings. Up to now, no research has been undertaken in order to understand whether the concept of "active listening" can be transferred to written online communication.

In recent years, the effects of different computer-mediated communication (CMC) tools on online communication have been studied extensively. Research in computer-mediated interpersonal communication has discovered a variety of aspects that change when communication takes place via online media instead of f2f. Studies have found negative effects of online communication on relational communication such as lower social presence of the other (Short et al., 1976), impersonal nature (Walther, 1996), delayed trust formation (Bos et al., 2002) and lower accuracy of judging other's emotions (Kato et al., 2007), but also positive effects such as idealization of communication partners and higher social attraction (Walther, 2007) as well as higher sharing of emotions and self-disclosure (McKenna and Bargh, 1999).

There are several insights from prior research that may account for making "active listening" even easier and more effective online. First, on the sender/talker's side, the "true self" as defined by Rogers (1951) is more accessible in online interaction than in f2f interaction (e.g., Bargh et al., 2002), the process of writing enhances introspection (e.g., Johnsen, 2007), and the online medium leads to higher self-disclosure (e.g., McKenna and Bargh, 1999, Joinson, 2001). Second, on the listener/receiver's side, people use communication strategies such as asking direct questions more often in online settings in order to reduce uncertainty about the other (Tidwell and Walther, 2002). Third, by having higher control on editing messages, communication partners can positively influence intimacy of communication (Walther, 2007), and senders may feel more understood by idealizing their online communication partners due to the lack of non-verbal, disconfirming information (Walther, 1996).

Nevertheless, other effects of online communication like lower accuracy of judging other's emotions (Kato et al., 2007) and delayed trust formation (Bos et al., 2002) may reduce the suitability of online media for active listening.

Despite the fact that a growing body of research has focused on the effects of media on communication, it remains unclear whether or under what circumstances active listening will be possible in online media, as this specific concept has not yet been examined. A better understanding of how online media alter "active listening" is not only of scientific, but also of practical value – especially for professional communication in electronically communicating teams and for support in online psychotherapy and counseling.

To fill this research gap, we examine whether the concept of "active listening" can be applied to written online communication. The main goal of the study is to explore "active listening's" capacity in written online communication and to analyze the concept's benefits as well as its limitations by comparing the settings f2f vs. instant messaging vs. e-mail.

The paper proceeds as follows: first, we present an overview on the concept of active listening, then we discuss media characteristics of f2f communication in comparison to instant messaging and e-mail and provide an overview of prior research in CMC. The research method is described in the next session followed by the empirical results. Finally, findings are discussed both from a theoretical and a practical perspective, conclusions are drawn and points for further research identified.

2. BACKGROUND

2.1 "Active Listening"

The concept of "active listening" goes back to Thomas Gordon (Gordon, 1974), but has its roots in Carl Rogers' client-centered therapy and nondirective counseling (Rogers, 1951). Inspired by the concept of reflective listening, Thomas Gordon started to apply the communication skills used in therapeutic settings in rather everyday situations. Meanwhile it has become a widely-known ingredient in a variety of contexts that involve gathering information and solving problems (Rautalinko and Lisper, 2004).

Basically, "active listening" requires the listener to capture what the sender is communicating from the sender's point of view (Rogers and Farson, 1957). Trying to keep distortion at a minimum, the listener has to continuously validate the accuracy of understanding (Gordon, 1977), whereby "active listening" captures also the feelings that come with what is said. In its essence, to listen actively means listening for total meaning, responding to feelings, and paying attention to all cues (Rogers and Farson, 1957).

While "active listening" is rooted in each person's personality and thus, as a whole, is much more than a technique, it encompasses some elements or techniques that have been found to be facilitative in most cases. However, if not applied genuinely and rooted in deep interest in the other person, such pretended usage will soon become evident and the whole listening process will loose its promotive effect. Accordingly the listener will need to hold and communicate empathic understanding, acceptance and, congruence (the three Rogers variables) (Rogers, 1951) at least to a certain degree in order that active listening can show beneficial effects. Having emphasized this, let us turn to the component techniques commonly used in active listening: paraphrasing (restating), verbalizing emotions, asking, summarizing,

clarifying, encouraging, and balancing (Decker, 1989). Table provides a brief overview over these techniques' use and purpose, and illustrates these with examples.

Table 1. Active Listening Techniques (Decker, 1989, adapted)

technique	purpose	to achieve purpose	examples
paraphrasing (restating)	▪ convey interest ▪ encourage to keep talking	▪ restate the information just received with one's own words	"So you think this is the safer way but maybe not the best way."
verbalizing emotions	▪ show that one understands ▪ help the speaker to evaluate his/her own feelings	▪ reflect the speaker's basic feelings and emotions in words	"So you were happy to be there..."
asking	▪ get more information	▪ ask questions	"Are you speaking about yourself?"
summarizing	▪ review progress ▪ pull together important ideas and facts ▪ establish a basis for further discussion	▪ restate major ideas expressed including feelings	"So your major concern is not being trusted..."
clarifying	▪ clarify what is said ▪ help the speaker see other points of view	▪ ask questions for vague statements ▪ restate wrong interpretations to force the speaker to explain further	"You said that you have reacted immediately. Was this still on the same day?"
encouraging	▪ convey interest ▪ encourage to keep talking	▪ use varying voice intonations ▪ offer ideas and suggestions	"That interests me."
balancing	▪ get more information ▪ help the speaker to evaluate his/her own feelings	▪ ask questions	"Did you perceive the inconvenience worse than not being taken seriously?"

Active listening's benefits are manifold, the most important of which are summarized below (e.g., Gordon, 1974, Rogers and Farson, 1957):

▪ **Avoidance of misunderstandings**: As people confirm that they understand, active listening contributes to prevent misunderstandings.

▪ **Disturbing feelings fade**: Senders frequently use negative feelings as codes for messages in order to get attention. If the sender is addressed empathically (as active listening does), such strong negative feelings give way for much weaker feelings or even positive ones.

▪ **Increased trust**: The fact that someone listens and understands releases positive feelings, which furthers the relationship between sender and listener and a sense of trust emerges.

▪ **Demonstrating respect**: It is difficult to convince people that they are respected by telling them so. One is much more likely to get this message across by behaving that way. Active listening gives the sender the feeling of being worth listening and respected.

- **Revealing the core of the problem**: When someone starts talking about a problem, the sender and the listener tend to notice the ostensible problem only. Active listening helps effectively to advance to the core problem.
- **Higher sense of responsibility**: Instead of providing ready solutions, active listening stimulates self-dependent thinking and to find solutions oneself. As a result, people get more self-dependent and more responsible.
- **Personality development**: Active listening tends to constructively alter the attitudes of the listener resulting in an experience of growth. On the sender's side, the process of solving a problem independently may contribute to personality development, strengthening self-confidence and self-esteem.

2.2 Characteristics of Communication Media

Communication settings, whether or not enhanced by information and communication technologies, hold a wide range of characteristic. A basic differentiation is, whether people interact simultaneously or at different points in time. We can distinguish, whether people are collocated or distributed. As soon as communicators are distributed, communication takes place by means of some additional medium. We further differentiate oral and written communication. People retain what they are communicated orally in their individual memories only. Written interaction offers the ability to capture communication, which leads to permanence, the degree to which a medium is capable of creating and keeping a record of messages (Duarte and Snyder, 2001).

Since conveyance of information and convergence of meaning are the two main goals of CMC, a medium's influence and support of developing intersubjective meaning determines its impact on communication quality (Miranda and Saunders, 2003). One of the most recent theories on the suitability of different media for specific communicative processes and tasks is the media synchronicity theory (Dennis et al., 2008). This theory distinguishes communication media for their interactivity by defining media synchronicity as "the extent to which individuals work together on the same activity at the same time" (Dennis et al., 2008). Apart from synchronicity, there are further five factors characterizing media: transmission velocity, symbol variety (e.g., non-verbal cues), parallelism (e.g., many communicative processes taking place simultaneously), rehearsability permitting the sender to revise a message before it reaches the recipient, and reprocessability (permanence) allowing a receiver to re-examine a message as many times as he/she needs to understand it.

Adhering to the presented characteristics of communication media, Table 2 compares f2f meetings, e-mail, and instant messaging. F2f conversation is a communication form with high media synchronicity due to offering immediate feedback and rather medium parallelism. E-mail communication conveys slow feedback and high parallelism and, thus, provides low media synchronicity. Instant messaging provides medium feedback and parallelism and, thus, lower media synchronicity than f2f conversation but higher than e-mail communication.

Although these discussed capabilities of media are objective physical characteristics, individual communicators may perceive them differently and their perceptions may also change over time. Furthermore, people may use media's capabilities appropriately or not (Dennis et al., 2008). The adaptive structuration theory (DeSanctis and Poole, 1994), for instance, points out that media can be used in other than the intended way influenced by social

structures and the channel expansion theory argues that experiences can alter a user's perception of media (Carlson and George, 2004).

Table 2. Characterization of Media (Dennis et al., 2008, adapted and extended)

	f2f meetings	E-mail	Instant Messaging
synchronism vs. asynchronism	synchronous	asynchronous	asynchronous (short or long lags)
physical presence vs. distance	physical presence	distance	distance
oral vs. written	oral	written	written
permanence	no permanence	permanence	permanence
transmission velocity	high	low-medium	medium-high
parallelism	medium	high	low-medium
symbol variety	few-many	few-medium	few-medium
rehearsability	low	high	medium
reprocessability	low	high	medium-high
information transmission	fast	slow	medium
information processing	low	high	low-medium
synchronicity	high	low	medium

2.3 Computer-Mediated Interpersonal Communication

In CMC research, social presence theory (Short et al., 1976) has long been used to account for interpersonal effects. Social presence is a subjective feeling that others are involved in a communicative process. Media, though, create a sense of social presence in varying degrees only. The higher a medium's symbol variety, the more the communicators will sense the other's presence. With its lack of nonverbal communication cues, any kind of CMC was said to be extremely low in social presence hampering the development of interpersonal relationships or – at least – decelerating the process. Especially person-oriented and social activities like the resolution of a conflict may demand for rather high social presence according to social presence theory (Short et al., 1976). Since media with high social presence tend to better promote reciprocity of communication, they are considered to have a positive effect on the depth of information sharing and the social construction of shared meaning (Miranda and Saunders, 2003). Similarly, the media richness theory (Daft and Lengel, 1986) states that the low degree of personal contact and lack of feedback of media conveying little richness may lead to oversimplification, which renders impossible to develop a common understanding.

Early research in the field of media theory has further claimed that online communication is more appropriate for task-oriented communication than for social or emotional sharing due to low social presence and impersonal nature (Walther, 1996). Particularly, a sense of trust was reported to emerge more easily when using rich media like, for instance, f2f conversations (Rocco, 1998). Field research, however, soon revealed that online communication settings can yield considerable positive relational behavior and even online communities or warm friendships emerge (e.g., Antheunis et al., 2007, Bargh et al., 2002, Ramirez and Zhang, 2007).

Accordingly these studies substantiate that it is also possible to develop deep relationships with online media since communication can transcend media. In comparison to f2f communication the process is, though, slower in online settings. According to the social

information processing theory (Walther, 1992), relationship formation takes longer because exchange of social information occurs at a slower rate. For assessing the communication partner and reducing uncertainty about him/her, other uncertainty reduction strategies have to be used in CMC than in a f2f setting – interactive strategies such as asking direct questions are, for instance, used more often (Tidwell and Walther, 2002). Especially text-only communication delays trust formation and richer media help determining the trustworthiness of the communication partner (Bos et al., 2002). However, Walther (1992) recognizes that extended interactions provide sufficient information exchange to enable communicators to develop stable interpersonal relations.

Further related research studies in the context of the "hyperpersonal model" (e.g., Nowak et al., 2005) showed that communication mediated by lean media (e.g. chat compared to video-conference or f2f meetings) can even be more engaging; people tend to believe that their communication partners are more like themselves, more credible, and involved in the interaction. By the efforts put in editing messages, communication partners can positively influence intimacy of communication (Walther, 2007). In CMC, impressions of others may be exaggerated and communication partners idealized (Walther, 2007). Furthermore, they feel less uncertainty, but rather more social attraction for the other in the communication process. This effect is explained by a lack of physical, nonverbal information and, thus, missing disconfirming information. Additionally, communication partners have higher control on presenting desirable and positive characteristics of themselves and minimizing negative information (Walther, 1996).

Although social presence and visibility as well as bodily experiences (e.g. touching) are reduced or absent in CMC, a recent review came to the conclusion that it is not more difficult to express emotions online (Derks et al., 2008). Positive emotions can be similarly expressed as in f2f situations; negative emotions may even be communicated more overtly. In CMC, communicators are likely to be less concerned about the impression they make because CMC reduces the expectancy of negative social appraisal for expressing emotions like anger or sadness. Research results show that some people experience CMC as a safe place for sharing emotions and for self-disclosure, which can lead to greater intimacy (McKenna and Bargh, 1999). Especially the effect of CMC to promote intimate self-disclosure was demonstrated consistently by prior research (e.g., Joinson, 2001). Additionally, the online setting seems to make the "true self" more accessible than in a f2f interaction (Bargh et al., 2002). The process of writing and inherent limitations (e.g., constraints in the number of characters), may enhance a writers' ability to introspect and to access the "true self" (Johnsen, 2007) and therefore allow for more openness and higher self-disclosure in an online "active listening" setting.

However, the accuracy of judging other's emotions may be lower in CMC settings with e-mail as reported by Kato et al. (2007). Moreover, there are indications that people feel more understood when receiving interpersonal feedback or appraisal f2f than online, and show higher feedback acceptance (Hebert and Vorauer, 2003).

3. RESEARCH QUESTIONS

The presented study aims at analyzing whether the concept of "active listening" deriving from oral communication is appropriate and effective in written online communication.

Based on the literature review there are several effects in CMC interpersonal communication that could lead to differences of CMC "active listening" in comparison to f2f settings. In the "listening" role, there may be basis for positive effects when applying "active listening" in a text-based online setting, because listeners have more time to edit empathic messages and can react more deliberately with more controlled expressions of their emotions (Derks et al., 2008). Research also suggests that in the writing setting, "talkers" may be more aware of their inner self due to introspection and the medium may additionally reinforce openness and self-disclose (Johnsen, 2007). Furthermore, the impression of "being listened to" could be enhanced, because the communication partner may be idealized as proposed by the hyperpersonal model (e.g., Nowak et al., 2005). However, it could also be a drawback for "active listening" that the accuracy of judging other's emotions may be lower in CMC settings (Kato et al., 2007) and that people feel more understood when communicating f2f (Hebert and Vorauer, 2003). To investigate whether and how these effects will actually influence online "active listening", we address the following research questions:

RQ 1.   Is "active listening" possible in written online communication?

RQ 2.   How do specific online media (e-mail vs. instant messaging) influence "active listening"?

Basically, we expect insights on the potential and the limitations of applying the concept of "active listening" in written online communication.

4.   METHODS

Our research follows a case study research strategy (Yin, 1984) with a multiple case holistic approach. The first case study (Bauer and Figl, 2008) aimed at exploring "active listening's" capacity with written online communication and compared "active listening" in the scenarios *f2f vs. instant messaging*. The second case study (Figl and Bauer, 2008) compared the scenarios *f2f vs. instant messaging vs. e-mail* for "active listening" activities.

4.1 Description of the Setting

Both case studies were conducted in a course on "Project Management – Communication and Soft Skills" for students of computer science at the University of Vienna, which primarily aims at improving students' soft skills as required in project work situations. The course style is based on active, experiential learning and strongly integrates the person-centered approach to education (Rogers, 1983). Students participating in this course did not have any prior training in active listening and where, thus, inexperienced in this domain.

After a preliminary kick-off meeting, the facilitator introduced the concept of "active listening" theoretically and then students exercised it practically in class (f2f) in the first course block. For the practical exercise students formed triads consisting of a speaker, a listener, and an observer. One student talked about something he/she wanted to share with the others, one student listened actively, and the third student observed the setting for being able to learn from this passive experience and also to give feedback to his/her colleagues. After approximately ten minutes, students changed roles, so that finally every student had the chance to experience each role. Then, students shared their experiences resulting from the active listening exercise with the whole course community. Referring to the active listening

exercise one student for example shared following experience: "It was very helpful for me. My active listener's listening helped me to take a different view of my own problem, I think about it and I am on the good track to solve that problem."

After this first course block, students assigned themselves to build pairs in order to try online "active listening" in dyads. As suggested by Weissglass (1990), students had to act once in the role of the listener and once in the role of the sender (talker). In the first case study, all participants carried out the online "active listening" exercise with an instant messaging tool. In the second case study half of the class chose to use instant messaging; the other half used e-mail instead. Students were free to choose any tool or client they liked, as long as they could provide the log files (cf. Section 4.2). Furthermore, the course's facilitator did not impose any topic but recommended to share some personal experience or concern rather than discussing external issues like politics or sports events.

After the exercise, students were asked to reflect on the "active listening" experience addressing following two questions: What happened during the exercise? How did I perceive it as the talker and as the listener?

Figure 1 illustrates the processes of both case studies, including all main activities by the facilitator and the participants. In order to keep track of the f2f and the online exercise, the diagram shows vertically f2f in the middle and online activities in the right swim lane.
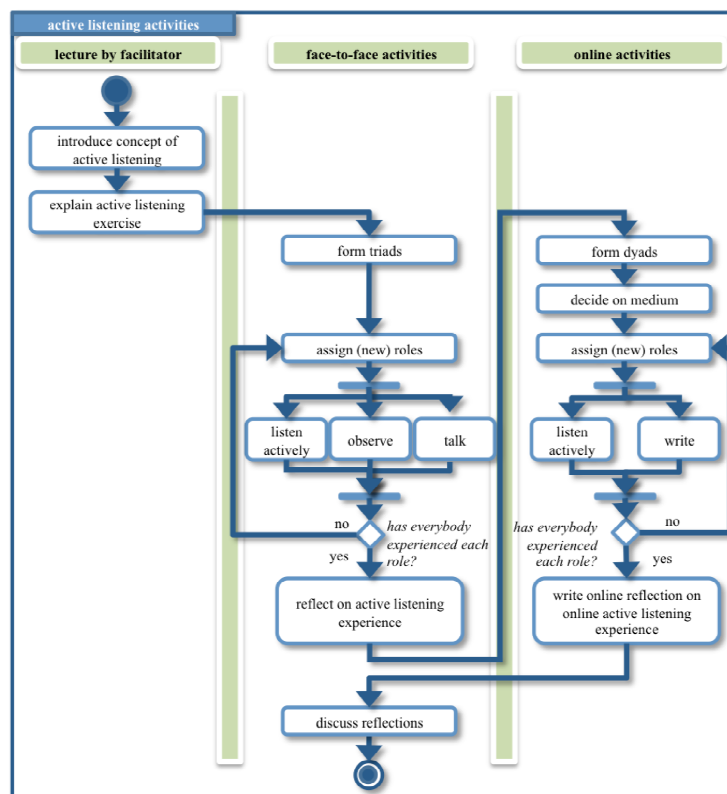

Figure 1. UML activity diagram of the "active listening" exercises.

4.2 Data Collection and Analysis Methods

Students were asked to provide their written reflections on the course's e-learning platform as well as the log files (protocols) of the active listening sequences, on which these reflections were based.

We applied text and qualitative content analysis (Mayring, 1983) to evaluate students' reflections. The classification scheme was both data and theory-driven. For illustration, we give some examples from the data, describing the coding schema. Suitability of medium for active listening: "In my view, active listening worked out well even with the online medium (in this case ICQ)". Overlaps of conversation inputs: "One of the most disturbing disadvantages of chatting is the collision of sent messages". Distraction: "I was distracted by the happenings around me and so I had to concentrate even more".

For reliability reasons, the log files of the communication sequences were used for reflexive interpretation. Names in data quotes have been changed. Categorization was undertaken by two researchers in order to increase inter-subjectivity. As more than 90 percent of allocations to categories and judgments were consistent, the inter-rater reliability was high.

4.3 Sample

Out of the 42 participants, 40 took part in the f2f and online "active listening" exercises. The sample included 13 female (32%) and 27 male (68%) participants, which resembles the average female ratio of computer science students at the University of Vienna. All participants had already received a Bachelor's degree in computer science and were enrolled in the Masters' program.

34 students carried out the online exercise in pairs. The remaining six students worked in threesomes, including the role of an observer as had been practiced in the preliminary f2f exercise. While in the first case study, all participants used an instant messaging tool, in the second case study, half of the class (five teams) chose to use an instant messaging tool for the online activity; the remaining five teams chose to use e-mail instead.

On total, 40 reflections with a word count of 68,707 and 20 communication log files (a threesome delivered two log files) could be analyzed.

5. RESULTS

Addressing the question whether online media are suitable for "active listening", 14 comments describe difficulties of online "active listening" and raise arguments against the suitability of online media (19 nominations). One student describes, "'Active reading' demands a lot of time and concentration […]. For me the question of efficiency arises. Wouldn't I have come to know the whole lot also in a 20 minutes f2f conversation?" Another student explains, "I have to admit that I preferred the f2f conversation because in the online version I missed the affirmative nodding or direct questions, and the conversation dynamics since response times are too long".

It does not surprise that students perceive a lack in non-verbal cues (10 nominations) in e-mail conversations more intensely than in instant messaging settings, as the latter allows for immediate response, which conveys a feeling of social presence.

Additionally, students give an account of further difficulties for online "active listening" (47 nominations), which can be best expressed in their own words. Examples are: "With questions, difficulties can easily occur, so that the emerging atmosphere of an empathic conversation is destroyed due to problems of associating messages in their sequence. 'Active listening' is then retarded by the limited possibilities for interaction and coordination". "In course of [the exercise] I noticed that it is more difficult for me to communicate in written form that I do not understand something. [...] In f2f conversations I usually do not have problems to ask until I understand. But under these circumstances it is more difficult". "This way there is somehow missing something. One does not really feel understood when one is deeply emotionally moved".

Beside scattered nominations of diverse difficulties of communication with an online medium, some are emphasized. Particularly when using instant messaging, it can happen that conversation inputs overlap as new messages may arrive while someone is still formulating a reply to an earlier message (13 nominations). Sometimes these overlaps can cause misunderstandings (7 nominations, e.g., "I noticed [...] that misunderstandings occur every now and then. This mostly happens because messages 'get mixed up'".)

Also having to wait for the next message is mentioned particularly often (16 nominations) in all investigated online settings. Interestingly, students do not only criticize the long waiting time for e-mail (8 nominations), which is an asynchronous medium, but also for instant messaging (4 nominations), which should have short-term lag only in a continuous conversation. The long pauses between sending and receiving are, though, specific in an e-mail setting. An excessive waiting time leads to insecurities, letting people think and worry why the other does not reply. Furthermore these pauses and interruptions preclude a fluent conversation. The circumstances when sending may be totally different to those when reading a message. Consequently, it is even more difficult to put oneself in the position that the text expresses and may cause misunderstandings. Due to the long waiting time, there is no opportunity for quick questions and queries. The complaint about long waiting times, however, derives predominately from the perspective of the active listener. Simultaneously, it can also be regarded as advantage of instant messaging and e-mailing since these media allow extended time to think before responding (7 nominations).

The difficulties with distraction (11 nominations) and the rather frequent occurrence of misunderstandings (7 nominations) have been widely discussed in the earlier case study while in the later one rather not. In contrast, mostly students participating in the e-mail exercise (5 nominations) had addressed the absence of non-verbal cues and voice as disturbing factor.

Furthermore, students report that it was difficult for them to assess their communication partners' sincerity and interest (5 nominations; e.g., "In an online conversation you never know whether the e-mail partner is really interested in what you tell him/her; I simply miss the contact to the communication partner.").

In general, students think that online communication is no compensation for f2f meetings (8 nominations), which they particularly prefer for important, deeper, complicated or rather long conversations (9 nominations) and for sharing deep emotions (2 nominations, e.g., "for conversations about private concerns and problems, personal f2f communication is better suited"). As an advantage of the online setting compared to "active listening" in the f2f setting, students mention its permanence (3 nominations) as one can recheck statements during a conversation. Permanence may be a barrier for the talker to express and share deep emotions. On the other hand, it may prevent the listener from missing details (as he/she can re-read all messages) and, thus, furthers to be more responsive.

Fewer (8) – but worthwhile – nominations of suitability of active online listening could be found in the reflections. One student, for instance, reports, "It was also possible to convey via the medium e-mail that somebody is listening (well) and that I am not alone with that problem. Apparently, enough nonverbal information, which is transported by voice and mimics in a f2f conversation, is communicated 'between the lines', for example via phrasing".

Additionally, students reported a variety of "active listening" techniques they used and how they applied those in the respective online settings (13 nominations; e.g., "Michael really put effort into each e-mail to summarize the content of the previous e-mail, and by asking, he also tried to make sure that he had understood my thoughts correctly"). Beyond illustrating that the common techniques of the "active listening" concept can indeed be applied in settings with written online communication, this finding indicates that students had taken the exercise seriously, engaged with the concept, and learned from the exercises (at least to the extent that they know what techniques may be used). Examples are: "With clichés like 'I understand' and 'okay, I am with you' he accomplished to create an atmosphere, in which I found myself being understood and taken seriously." and "In the beginning of the conversation, though, I repeatedly wanted to comment on Peter's statements. I have not done that in order to let Peter finish his thought and to be able to listen better". Using clichés is, though, not an absolutely certain indication for real understanding as such clichés could also be used for simulating it. Nevertheless, we can derive from the communication logs that something changed in the conversations although students are yet beginners in "active listening". Simultaneously, students' reactions referring to finding themselves understood and taken seriously shows that the statements expressing understanding – whether they have been real or just simulated (for similar effects cf. Weizenbaum (1966)) – conveyed the inherent feelings and communicative intentions of "active listening".

Table 3 gives a brief review of reflections' analysis.

Table 3. Issues raised on online "active listening". In absolute numbers of nominations.

	instant messaging		e-mail	sum
	case 1	case 2	case 2	
arguments against suitability of online media for active listening				
difficulties for online active listening / not suitable	5	5	9	19
not appropriate for important, deeper, complicated or longer conversations and sharing deep emotions	6	1	4	11
better appropriate for exchange of information, arranging appointments / organizational tasks and staying in contact	2	5	4	11
no compensation for f2f meetings	4	2	2	8
specific difficulties of online media for active listening				
waiting for next message	4	4	8	16
messages get mixed up, parallelism	6	5	2	13
distractions and missing attention	9	2		11
missing non-verbal cues and voice	3	2	5	10
misunderstandings	5	2		7
arguments in favor of suitability of online media for active listening				
active listening techniques used by students	8	1	4	13
advantages for active listening / suitable		7	1	8
more time to think		2	5	7
use of emoticons	2	1	1	4

6. DISCUSSION

Interestingly, students generally express skepticism concerning "active listening" with CMC, while, at the same time, they explain that it worked out well in the exercise, which is also supported by the log files. Where this skepticism originates from deserves further study.

Generally we can derive from our study that distraction and missing attention are considered as the prevailing drawbacks of online "active listening" (e.g., "… of course, one can also deal with other things [while chatting] and thus be distracted. This means for 'active listening' that the narrator is not paid full attention."). In f2f conversations, people (third persons who are not involved in the conversation) can see that one is occupied and, thus, hesitate to interfere. In online settings, in contrast, communicators have to signalize actively that they do not want to be disturbed. Interestingly only one dyad reported that they had arranged for not being disturbed by using the invisible mode in their instant messaging tool.

At first glance it may seem that the opportunities for not paying full attention are seductive when being distributed. It, though, is people's attitude, which evokes distraction; those students, who report that they had been distracted, actively engaged with other tasks (e.g., chatting with other people, burning discs, etc.) while accomplishing the "active listening" exercise. One student, for instance, explains, "After the exercise I had a look on our log and noticed that I had departed from the task every now and then. The reason for this is simply that I do many things at the same time when I am at the computer and that I am distractible (burning [of disc] completed, download completed, new e-mail…)". As this exemplary answer illustrates, students blame the online setting for furthering distraction. We, however, attribute it to attitude and the lack of awareness that paying full attention can be controlled. Further research and specific training seem necessary in this field. Moreover, writing e-mails is experienced as more demanding than instant messaging conversations and requires a great deal of concentration since finding the right words is rather central in a setting, which has permanence and does not allow for immediate interaction. This finding supports a row of previous studies (e.g., Walther, 1995).

Finally, the reflections indicate that students are aware of the analyzed media's strength and limitations. They also seem capable of overcoming difficulties due to their familiarity with these media. For instance, nonverbal cues like intonation, gestures or facial expressions have to be verbalized in written communication (e.g., with emoticons) in order to transmit this information to the listener. Students are aware of this necessity and are experienced enough to adapt to the requirements of a medium such that they transform important nonverbal cues into words and emoticons. Nevertheless, they experience this process as cognitively demanding.

All in all, the results indicate that – with limitations – "active listening" is possible in an online setting. And with conscious intention, experience, and competence as well as additional cognitive effort, limitations may be significantly reduced.

7. LIMITATIONS OF THE STUDY

As with all field studies, the research results presented here are subject to a number of limitations. Specifically, these include the facts that students were free to select a condition (instant messaging vs. e-mail) themselves and that all students first had to take part in the f2f assignment before engaging with online "active listening". However, we believe that the

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selected case study approach including two separate data sets was consistent with the goals of the study and provided an initial test of the applicability of the active listening concept in online communication. Based on preliminary findings, future research could use an experimental design including random assignment of students to the conditions and varying the order of f2f and CMC assignments to examine media differences in active listening in detail.

8. CONCLUSION

Exploring "active listening" in an educational setting with students of computer science, our case studies presented how the concept of "active listening" can be transferred from traditional f2f communication to written online communication, which is a novel asset.

Focusing on the media instant messaging (chat) and e-mail, we analyzed whether "active listening" is effective in written online communication. Findings highlight the advantages and limitations of online "active listening" as experienced and reflected by students.

Interestingly, results revealed that all of the commonly used techniques in "active listening" (e.g., paraphrasing, summarizing, or encouraging) are applicable when communicating with the two written online media under investigation. Rather than a concentration of only a few techniques, all of them could be found in almost every of the analyzed online conversations.

Focus of our research was to identify and evaluate the main characteristics of media with respect to their appropriateness and potential for "active listening".

Generally, we could observe that students' attitude towards online "active listening" is marked by a touch of skepticism. At the same time students report that it worked out well in the exercise, which is also supported by the exercises' log files. This contradiction calls for further analysis.

Although students agreed that online "active listening" was no compensation for f2f meetings, they also voiced considerable advantages of the online setting such as leaving control with the person who expresses his/her thought, which allows this person to completely verbalize his/her thought before responding. Reflections indicate that students are aware of the analyzed media's strength and weaknesses. Consequently, due to being familiar with instant messaging and e-mail, students tend to be able to handle the mentioned difficulties.

One of major drawbacks of online "active listening" in both online settings was the additional cognitive effort due to diminished social presence. This was even more strongly perceived with using e-mail. Additional disadvantages in the instant messaging setting were distraction and missing attention.

While our studies revealed differences between the e-mail and the instant messaging setting concerning most of the analyzed categories, these findings' significance and reasoning have to be further investigated in a direct comparison of these media. In order to get insightful results, the research design should allow subjects to experience both media allowing for a direct comparison. Beyond this, our findings pave the way for upcoming investigations directing the focus of research to the influence of media characteristics on the "active listening" process. Particularly interesting is the identification of media features that support the promotiveness of "active listening".

In our study, the participants have already been acquainted. A possible advantage of CMC for "active listening" may also be anonymity. When people feel anonymous, they often disclose more personal information, which can be important in counseling and psychotherapy. Consequently, another possible direction for future inquiry would be to investigate online active listening in anonymous settings.

Although the participants were beginners in "active listening", we could observe traces of the quality of listening in the conversations. The consciousness about these positive effects of "active listening" was also apparent from students' reflections on the activity. This is particularly precious as Rogers says that it is already promotive if the second person perceives empathic understanding, acceptance and, congruence in the communication at least to some extent. While the study with students at a beginner level of "active listening" brought valuable insights, further investigations with experienced "active listeners" (e.g., person-centered psychotherapists and counselors) are necessary in order to allow drawing general conclusions.

Future research should, thus, address communication partners who are more experienced in active listening in f2f situations and truly have assimilated or internalized this way of relating to another person. We assume that the prior f2f practice of active listening (as we have also implemented in our case studies) influences "active listening" in an online atmosphere. Furthermore we hypothesize that the online experience will also impact active listening in subsequent f2f settings. Future research should address these issues, proving (or rejecting) our hypotheses, and (if approbated) investigate the particular impacts.

Concluding, the introduction of "active listening" to settings with written means of communication proved to be fruitful regarding several aspects. First of all, our case studies delivered the finding that the concept of "active listening" is not restricted to oral communication. We can tap this concept's potential and benefits even in online settings. While our findings were related to professional communication in a university context, they have also implications for online psychotherapy and counseling, in which the concept of active listening is central to provide online support.

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