

ONLINE ACTIVE LISTENING AND MEDIA COMPETENCE

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ABSTRACT

The highly recognized concept of "active listening" is widely adopted in contexts that involve gathering information and solving problems. Demanding both verbal and nonverbal skills, this way of communication improves mutual understanding by using techniques like paraphrasing. The benefits are manifold and crucial in many areas of life for all kinds of communicative settings – face-to-face as well as online. For instance, it avoids misunderstandings, as people verify that they really understand. In conflicts, people tend to be more willing to explain in detail, which increases chances to find a joint solution. Our study investigates active listening in an online educational setting using written communication, which is a novel asset. We thereby focus on instant messaging and e-mail communication and examine both settings' capacities and differences. More than only exploring whether active listening is effective in online communication, we examine students' media competence for being able to adequately use the media under investigation for the given task. The study was conducted in a technology-enhanced course on "Soft Skills for Computer Scientists". Interestingly, analysis reveals that active listening techniques do have positive effects on communication in the analyzed online settings and students seem to be aware of the analyzed media's strength and weaknesses. Furthermore, our results tend to support the media synchronization theory.

KEYWORDS

Online Communication, Active Listening, Media Competence.

1. INTRODUCTION

Day-to-day we are confronted with communication problems in any kind of interpersonal relationships. 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, Johnston, Little, Shah, & Woodley, 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 psychotherapy (Rogers, 1980), education (Weissglass, 1990), and business (Comer & Drollinger, 1999; Kubota, Mishima, & Nagata, 2004; Mishima, Kubota, & Nagata, 2000; Rautalinko & Lisper, 2004). As the concept derives from oral communication, it is applied to spoken language. However, nowadays computer-based communication – mostly in written form – predominates both in business and in e-learning settings. Rather than developing oral or written communication skills independently, it seems crucial to strengthen media competence for being able to fully exploit each medium's capacity and choosing the appropriate one.

In the context of this study, we trained students in active listening, both face-to-face and online. We gave attention to both settings in order to promote students' media literacy, which is defined as "the ability to access the media, to understand and to critically evaluate different aspects of the media and media contents and to create communications in a variety of contexts" (Commission of the European Communities, 2007).

On the one hand, this paper presents how face-to-face and online active listening can be trained in a university course setting. On the other hand, we will describe main findings on advantages, but also

limitations, of online active listening, which could be derived from students' reflections on their active listening experiences.

2. THEORETICAL BACKGROUND

2.1 Characteristics of Communication

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. Communication channels describe whether the communication flow is one-way or two-way, and how many people can communicate with each other (e.g., 1:1, 1:n, n:m). 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 & Snyder, 2001; Lipnack & Stamps, 1997).

Every setting can be qualified by above-mentioned characteristics. For exemplification, the following tries to match characteristics with communication settings between two individuals:

- **Face-to-face** (f2f) communication: synchronous, physical presence, oral, no permanence, direct communication, two-way, 1:1.
- **E-mail** communication: asynchronous, distance, written, permanence, computer-mediated, two-way, 1:1.
- **Instant messaging or chatting** (e.g., using ICQ or Skype): asynchronous (depending on the setting short lag only or long-term asynchronism), distance, written, permanence, computer-mediated, two-way, 1:1.

2.2 Media Choice Theories

Research in media choice basically investigates the suitability of different media for specific communicative processes and tasks. Theories are thereby based on the concept of rational media choice: Users decide on a particular medium by weighting costs and benefits and select the medium, which seems to best suitable for a particular communicative activity (Nohr, 2002). The fundamental media choice theories are sketched below:

- **Social Presence Theory** (Short, Williams, & Christie, 1976): 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 more communication channels a medium has, the more the communicators will sense the other's presence. The medium with highest social presence is not necessarily the most appropriate one. While the resolution of a conflict may demand for a rather high social presence, the mere exchange of factual information will need less.
- **Media Richness Theory** (Daft & Lengel, 1986): This theory determines a medium's communicative richness regarding its capacity for immediate feedback, the number of cues and channels available (symbol variety), language variety, and the degree of personal focus (whether communicators are anonymous or identifiable). Choosing the richest medium is, however, not always appropriate. Too rich a medium may induce overcomplication since medial richness can be distracting and may increase insecurity rather than reducing it. 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 (Reichwald, Möslein, Sachenbacher, & Englberger, 1998).
- **Media Synchronicity Theory** (Dennis & Valacich, 1999; Dennis, Valacich, Speier, & Morris, 1998): Criticizing media richness theory for being one-sided gave rise to the media synchronicity theory. It 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 & Valacich, 1999). Apart from synchronicity, there are further five factors influencing media choice: feedback immediacy, symbol variety (e.g., non-verbal cues), parallelism (e.g., several people participating in communication, 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 or she needs to understand it (Schwabe, 2001).

Adhering to the presented media choice theories, Table 1 compares f2f meetings, e-mail communication, and instant messaging according to the categorization by (Weigle & Krcmar, 2000). Face-to-face conversation is a communication form with high media synchronicity due to offering immediate feedback and low parallelism. E-mail communication conveys slow feedback and high parallelism and, thus, provides little media synchronicity. Instant messaging provides medium feedback and parallelism and, thus, less media synchronicity than f2f conversation but more than e-mail communication.

Table 1. Characterization of Media

	F2F Meetings	E-Mail	Instant Messaging/ Chat
Time Aspect	synchronous	asynchronous	synchronous
Space Aspect	dependent	independent	independent
Ways of Expression	all	textual	textual
Social Presence	very high	low	low
Communicative Richness	high	low	low
Feedback Immediacy	high	low-medium	medium
Symbol Variety	high	low-high	low-medium
Parallelism	low	medium	medium
Rehearsability	low	high	medium
Reprocessability / Permanence	low	high	low-high

2.3 Active Listening

The concept of active listening goes back to Thomas Gordon (Gordon, 1974, 1977; Gordon & Burch, 1974), but has its roots in Carl Rogers' client-centered therapy and nondirective counseling (Rogers, 1951). Inspired by his professor's work on reflective listening, Thomas Gordon started to apply the communication skills used in therapeutic settings in rather everyday situations. Meanwhile it has become a widely-know ingredient in a variety of contexts that involve gathering information and solving problems (Rautalinko & Lisper, 2004).

Basically, active listening requires the listener to capture what the sender is communicating from the sender's point of view (Rogers & 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 to listening for total meaning, responding to feelings, and paying attention to all cues (Rogers & Farson, 1957).

The commonly used techniques are: paraphrasing (restating), verbalizing emotions, asking, summarizing, clarifying, encouraging, and balancing (Decker, 1989). Table 2 provides a brief overview over these techniques' use and purpose, and illustrates these with examples.

Table 2. Active Listening Techniques

Technique	Purpose	To Achieve Purpose	Examples
Paraphrasing (restating)	<ul style="list-style-type: none"> convey interest encourage to keep talking 	<ul style="list-style-type: none"> restate the information just received with one's own words 	"So you showed up at the meeting on time."
Verbalizing emotions	<ul style="list-style-type: none"> show that one understands help the speaker to evaluate his or her own feelings 	<ul style="list-style-type: none"> reflect the speaker's basic feelings and emotions in words 	"And this has made you really angry."
Asking	<ul style="list-style-type: none"> get more information 	<ul style="list-style-type: none"> ask questions 	"And after that, John did not react?"
Summarizing	<ul style="list-style-type: none"> review progress pull together important facts 	<ul style="list-style-type: none"> restate major ideas expressed including feelings 	"These seem to be the key ideas you've expressed..."
Clarifying	<ul style="list-style-type: none"> clarify what is said help the speaker see other points of view 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> convey interest encourage to keep talking 	<ul style="list-style-type: none"> use varying voice intonations offer ideas and suggestions 	"Then your manager approached you. How did he behave?"
Balancing	<ul style="list-style-type: none"> get more information help the speaker to evaluate his or her own feelings 	<ul style="list-style-type: none"> 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 (Gordon & Sands, 1976):

- **Avoidance of misunderstandings:** As people confirm that they understand, active listening contributes to prevent misunderstandings (Gordon, 1974, 1977; Gordon & Burch, 1974; Gordon & Sands, 1976).
- **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 (Gordon, 1977).
- **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 (Gordon, 1974; Gordon & Sands, 1976).
- **Demonstrating respect:** It is difficult to convince people that they are respected by telling them so. Rather 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 (Rogers & Farson, 1957).
- **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 (Gordon, 1977).
- **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 (Gordon, 1974, 1977; Gordon & Burch, 1974; Gordon & Sands, 1976).
- **Personality development:** Active listening tends to alter constructively the attitudes of the listener resulting in an experience of growth (Rogers & Farson, 1957). On the sender's side, the process of solving a problem independently may contribute to personality development (Gordon, 1974, 1977; Gordon & Burch, 1974; Gordon & Sands, 1976), strengthening self-confidence and self-esteem.

3. RESEARCH QUESTIONS

This case study explores active listening in an online educational setting using written online communication. Transferring the concept of active listening to written communication is a novel asset. Therefore, the presented case study aims at analyzing whether this concept deriving from oral communication is appropriate and effective in online written communication. Specific research questions are: Can active listening be applied to settings with written online communication? How does media choice affect active listening? What are the drawbacks of combining online written communication and active listening?

4. STUDY

4.1 Course Description

This case study was conducted in a course on "Project Management – Communication and Soft Skills" for computer science students at the University of Vienna in the winter term 2006. This course is part of the Master program indicating that the participants had already received a Bachelor degree in computer science. As this course was held as a technology-enhanced course, it included presence phases in class and online elements.

The course aims at improving students' competencies in project work situations, in particular in team communication, ad hoc presentations, and moderation techniques. It is based on active, experiential learning and accompanied by an e-learning platform for knowledge intensive inputs and materials. The facilitator moderates the initial three workshops, and then students take over. More precisely, student teams (about 3-4 persons each) are free to decide on a particular soft skills topic, based on their interests, which they prepare. Each team moderates its own workshop on the respectively chosen topic. Feedback is given during the workshops as well as in online reaction sheets (Motschnig-Pitrik, 2006).

4.2 Implementation of the Case

After a preliminary kick-off meeting, the concept of active listening was both elaborated theoretically and exercised practically in class in the first two-day presence phase. Students built groups of three, whereby one student talked about something he or she wanted to share with the others, one student listened "actively", and the third student took the role of the observer. After approximately 10 minutes, students changed roles, so that finally every student had the chance to experience each role.

After this first presence phase, students were assigned to build pairs using a web-based team-building tool in order to exercise online active listening in dyads. Students had to act once in the role of the listener and once in the role of talker. Half of the class was instructed to use instant messaging; the other half was to use e-mail instead. Students were free to choose any tool or client they liked. Since the course's facilitator did not suggest any topic, students could pick up any topic or feeling.

After the exercise, every student had to reflect in writing on the exercise addressing following two questions: (1) What happened during the exercise? (2) How did I perceive it as the talker and as the listener?

Figure 1 illustrates the process including all main activities by the instructor and the participants.

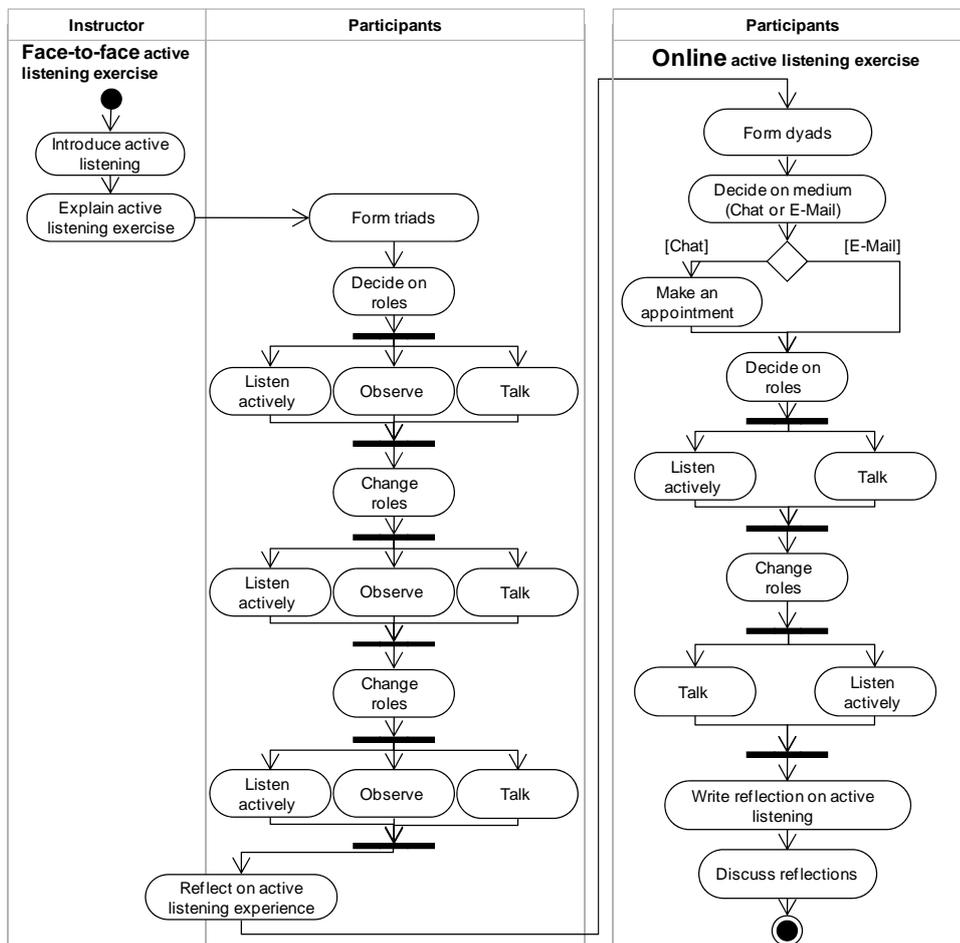


Figure 1. Activity Diagram of the Case Study

4.3 Data Collection, Sample, and Methods

All of the 21 participants of the course took part in the face-to-face and online active listening exercises. Due to the impair number of participants 18 students could carry out the exercise in pairs; the remaining three

students worked in a threesome. Each team carried out the face-to-face as well as the online exercise in the same line-up. Prior to the exercise, five teams were instructed to use an instant messaging tool (chatting software) for the online activity; the comparison group was to use e-mail instead. Consequently, 21 reflections with a total character count of 45339 could be analyzed.

Students' written reflections were to be provided on the course's e-learning platform. Text and qualitative content analysis (Mayring, 2003) were applied to evaluate these reflections. The classification scheme was developed inductively from raw data. In order to provide inter-subjectivity, categorization was undertaken by two researchers.

5. RESULTS

Table 3 gives a brief overview of reflections' analysis. Students talked about a variety of topics (e.g., master's thesis, holidays, attitudes to life, fears, unemployment, ethics, etc.). Generally they reported that they made use of several active listening techniques in the online settings (5 nominations; e.g., "[My communication partner] 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"). Students indicated that the active listening exercise was easier with communication partners who have already been familiar (6 nominations; e.g., "Getting to know each other is essential. The chat was pleasant due to the fact that – in the run-up – we had already met personally many times [...] and, thus, we already knew each other").

Most comments were dedicated to shortcomings of online media – both e-mail and chat. Long waiting time for messages was nominated especially often (12). In addition, students remarked that messages get mixed up (in chats) and that non-verbal cues and voice were missing (7 nominations each). Surprisingly, students perceive a lack in non-verbal cues in chat settings more intensely than in e-mail conversations.

For the chat setting, students also reported technical problems and difficulties with distractions and missing attention of communication partners. Specific drawbacks of e-mailing are the long pauses between sending and receiving, which leads to insecurities, why the other does not reply. Furthermore these pauses preclude a fluent conversation. The circumstances when sending may be totally different to those when reading a message, which makes it more difficult to put oneself in the position that the text expressed and may cause misunderstandings. Due to the long waiting time, there is no possibility for quick interpose questions. Moreover, writing e-mails is more demanding than instant conversation and needs a lot of concentration since finding the right words is rather central in a setting, which has permanence. Furthermore, students reported that it was difficult for them to assess their communication partners' honesty 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.").

As a positive characteristic of online media, students most frequently nominated the additional time to think compared to a face-to-face communication (7 nominations).

Students thought that online media are suitable for exchanging information and arranging appointments (4 nominations each), as well as for staying in contact. Nevertheless, online media are considered as not being ready to compensate face-to-face meetings (4 nominations). Students especially prefer face-to-face meetings for important, complicated, or longer conversations (3 nominations) and for sharing deep emotions (2 nominations (e.g., "[...] for conversations about private concerns and problems, personal face-to-face communication is better suited").

Concerning the question whether online media are suitable for active listening, 14 comments describing difficulties of online active listening and arguments against the suitability of online media could be found. (e.g., "'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 face-to-face conversation?", "I have to admit that I preferred the face-to-face conversation because in the online version I missed the affirmative nodding or direct questions, and the conversation dynamics since response times are too long.") Fewer (8) – but worthwhile – nominations of advantages of active online listening could be found (e.g., "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 face-to-face conversation, is communicated 'between the lines', for example via phrasing", "I was positively surprised by this kind of communication and glad about that experience").

Generally, the reflections indicate that students are aware of the analyzed media's strength and limitations. Due to their familiarity with these media, they seem capable to overcome difficulties, although they experience it as very demanding. Interestingly, our results seem to support media synchronization theory.

Table 3. Summary of Reflections' Analysis

	chat	e-mail	sum
Reaction about and statements on the "active listening exercise"			
Active listening techniques used by students	1	4	5
<i>Single nominations: positive start with whiteboard, humor is important, changed my view of the chatting partner</i>			
Familiarity of communication partner			
Active listening easier with familiar communication partner	3	3	6
Difficulties of online medium			
Waiting for next message	4	8	12
Messages get mixed up, parallelism	5	2	7
Missing non-verbal cues and voice	2	5	7
Difficult to judge honesty and interest		5	5
Technical problems	3		3
Distractions and missing attention	2		2
Identifying relevant themes	1	1	2
<i>Single nominations: exhausting to formulate everything in written form, misunderstandings, even more difficult with more chatting partners, no immediate response of communication partner</i>			
Appropriate issues for online media			
Appropriate for			
Exchange of information	3	1	4
Arranging appointments/ organizational tasks	1	3	4
Staying in contact	1		1
Not appropriate for			
No compensation for f2f meetings	2	2	4
Important, complicated or longer conversations	1	2	3
Sharing deep emotions		2	2
Further Characteristics of online medium			
Time to think	2	5	7
Emoticons	1	1	2
Faster flow of communication in chat compared to e-mail	2		2
Exchanging files and documents quickly	2		2
<i>Single nominations: independence of momentarily availability of others, important to see that others are writing, reprocessability</i>			
Suitability for active listening			
Difficulties for online active listening/ not suitable	5	9	14
Advantages for active listening/ suitable	7	1	8

CONCLUSION

Exploring active listening in an educational setting with computer science students, we presented how active listening can be trained in a university setting. We, thereby, did not only perform training in a traditional face-to-face setting but introduced active listening to written online communication, which is a novel asset.

We analyzed whether this concept is effective in written online communication focusing on the media e-mail and instant messaging (chat). Results reveal that the commonly used techniques in active listening (e.g., paraphrasing or summarizing) are applicable when communicating with a written online medium.

The prevailing drawback of active listening with e-mail was waiting for messages. For instant messaging, the main difficulty is that messages get mixed up. In both settings (especially when using e-mail) students appreciated that these media allow them extended time to think before responding.

The e-mail and the chat setting revealed differences concerning most of the analyzed categories. This finding's significance and reasoning shall be further investigated in a direct comparison of these media. The research design should allow subjects to experience both media in order to get insightful results.

Finally, reflections indicate that students are aware of the analyzed media's strength and weaknesses. Due to being used to these media, they are able to overcome these difficulties, although they experience it as more demanding than in face-to-face conversations.

We can summarize that training computer scientists in active listening proved to be a positive learning experience and is a meaningful contribution to improving students' communication skills. More than that, it constructively contributes to students' media competence. With regard to their future jobs, students will especially profit from a thoughtful combination of active listening in face-to-face and online settings.

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