Margot van Mulken* and Berna Hendriks

Effective communication modes in multilingual encounters: Comparing alternatives in Computer Mediated Communication (CMC)

DOI 10.1515/multi-2014-0064

Abstract: This paper reports on an experimental study investigating alternative communication modes to English as a Lingua Franca. The purpose was to examine the effectiveness of different modes of communication and to gain insight in communication strategies used by interlocutors to solve referential conflicts. Findings show that ELF may not necessarily be the most effective mode of communication for speakers who do not share a native language. In the context of multinational corporations, RM may be regarded as a viable alternative to English for negotiating mutual understanding, particularly for speakers with (linguistically) closely related mother tongues.

Keywords: receptive multilingualism, English as a lingua franca, L1-L2, communication strategies, computer mediated communication

1 Introduction

The increase in multilingualism as a result of growing mobility and technological advances has led both educational institutions and corporate organizations to reconsider their language policies. Research has shown that the adoption of a single lingua franca (typically English) no longer meets the demands of multilingual communities (Hultgren 2014; Lüdi et al. 2010; Mahili 2014). Although linguistic diversity is valued highly, as evidenced by, for example, the EU mother tongue plus two policy (COM, 2003: 449), it can also give rise to communication problems. Top-down single-language policies stipulated by organizations no longer seem to satisfy the linguistic needs of the multilingual

***Corresponding author: Margot van Mulken**, Radboud University Nijmegen – Communication and Information Studies Erasmusplein 1 6500 HT Nijmegen, Nijmegen, Gelderland 6500 HT Netherlands, E-mail: M.v.Mulken@let.ru.nl

Berna Hendriks, Radboud University – Communication & Information Studies Room 4.19 Radboud University P.O. Box 9103, Nijmegen HD 6500 Netherlands, E-mail: b.hendriks@let.ru.nl

workforces. This paper aims to gain insights into the effectiveness of alternative modes of communication that organizations might apply when rethinking their communication policies to cater to the requirements of today's multilingual society.

At the level of the individual, resolving communication problems resulting from linguistic diversity requires interactants to use their knowledge of the linguistic situation at hand to choose the most appropriate communication mode. What can be considered the most appropriate communication mode is highly dependent on contextual, situational and individual constraints. For example, an organization concerned with global coordination and control may wish to send messages meant for the entire workforce using English as a *Lingua Franca*, whereas individual face-to-face interactions between expats and local staff in a foreign subsidiary might be more effective when conducted in the local language. Yet another mode of communication may be used by colleagues whose receptive competences in each other's mother tongues enable them to successfully interact while communicating in their own mother tongues. In other words, in multilingual encounters, there are at least three feasible modes of communication: using a *lingua franca*, adopting the native language of the addressee (an L2 language), or relying on receptive competences with all speakers communicating in their own language.

This paper aims to address the effectiveness of three different communication modes: English as a *Lingua Franca* (ELF), L2-L1 interactions, where one participant adopts the mother tongue of the other partner(s), and receptive multilingualism (RM – when speakers use their mother tongue but have receptive competence(s) in the language of the partner(s)). The effectiveness of these communication modes will be compared with the effectiveness of mother tongue interactions, which serve as a baseline. Moreover, we will also focus on computer mediated communication (CMC), since one of the reasons for the changing multilingual reality is that the number of users involved in various types of CMC activities for (inter)national interactions on a daily basis (e.g. Twitter, Facebook, MSN) has grown exponentially (e.g. Gunnarsson 2014; Tworoger et al. 2013).

2 Effective communication

By far the most common mode of communication in linguistically diverse situations is English as a *lingua franca* (ELF). The continuing globalization of markets has led to a rapid increase in the use of ELF, particularly in international business

communication and in higher education. ELF research has shown that the use of ELF in multilingual contexts can facilitate communication, but that ELF may also cause linguistic, cultural and organizational problems for staff who are not native speakers of English. For multinational corporations (MNCs), a corporate lingua franca can be a valuable tool in streamlining intra-organizational communication with international and multi-locational workforces in particular. At the same time, a common corporate language may present barriers to effective communication if proficiency in the corporate language of those who are non-native speakers of the language is insufficient (Charles and Marschan-Piekkari 2002; Lønsmann 2014; Marschan-Piekkari et al. 1999).

For many multinationals, however, language is often a forgotten factor, because they disregard the intangible costs and consequences of the implementation of a lingua franca (Welch et al. 2005). Worldwide, the most commonly adopted lingua franca is English, but the EF English Proficiency Index for companies (EF EPIc 2012), which benchmarked English proficiency across 18 industries and 24 countries, has indicated that in two-thirds of the countries in their study, the national workforce had lower English proficiency than the adult population in general. In addition, the study found that in most countries or industries for which English skills were investigated, the workforce lacked the high level of English proficiency required for efficient and effective workplace communication.

The commonly cited reason for implementing English as a corporate lingua franca is that it creates a linguistic balance between speakers with different linguistic backgrounds (House 2007; Mauranen 2006; Seidlhofer 2002). Louhiala-Salminen et al. (2005), for example, report on a corporate merger between Swedish and Finnish companies, where Finnish managers and staff started to feel linguistically handicapped due to their limited ability to speak Swedish – the common language of in-house communication at the time. The adoption of ELF, which distributes ‘reduced’ proficiency equally over the partners in the interaction, seemed to resolve this issue.

Although the implementation of ELF can create a more linguistically balanced situation in this sense, varying levels of English in organizations have also been shown to create problems. Welch et al. (2005), for example, showed that non-native speakers with limited knowledge of the corporate lingua franca may feel left out of the communication process, and are, in fact, often ostracized by those who do possess the necessary language skills. In addition, Rogerson-Revell (2007, 2008) showed that the use of ELF can lead to non-native speakers feeling frustrated about not being able to express themselves freely in English due to insufficient language skills. As a consequence, non-native speakers were found to be less active than native speakers of English during meetings

in English. A disadvantage of ELF interactions is often that as none of the participants can draw on the skills available to them in their native language, speakers need to rely on their knowledge of an L2, in this case, English. This means that speakers have similar difficulties in articulating a nuanced and complex description of reality. It is not inconceivable that this lack of linguistic sophistication may influence the effectiveness of the interaction. Indeed, Hincks (2010) has shown that speakers who had to deliver the same speech in both their native language and in ELF needed considerably more time for their presentation in English (26.5% more time).

An alternative to the use of a lingua franca may be for speakers to communicate in their mother tongue (L1) and for interlocutors to adjust to this mother tongue by switching to their second language (L2) (L1-L2 interactions). In this type of L1-L2 interaction, which requires one of the speakers to adopt the language of the partner, the native speaker has the obvious strategic advantage of mother tongue proficiency. Unlike in ELF interactions, however, L1-L2 interactions offer non-native speakers the opportunity to benefit from the native language skills of their partners. For example, if an L2 speaker lacks the required vocabulary to explain what he or she means, the native speaker may help the L2 speaker out by providing the right vocabulary, which creates a learning opportunity for the L2 speaker. If non-native speakers have sufficient competence in their L2, they can thus 'lean' on the skills of the native speaker. This type of cooperation (called 'scaffolding'), in which the less advanced language user is supported by the advanced language user, has been shown to enhance the effectiveness of the communication (Thoms et al. 2005).

A second conceivable alternative is the use of receptive multilingualism (RM), when both partners speak their native language and 'receive' (understand) the language of their partner. RM thus implies the passive use of another language. This could be a language that was learned in an educational setting, or a language that is sufficiently typologically similar to the native language to enable mutual intelligibility (Nabelkova 2007; Rehbein et al. 2012; Schüppert 2011). Ribbert and Ten Thijs (2007) describe a successful instance of RM in the German Goethe Institut in Amsterdam where a German member of staff communicated in German while his Dutch colleague communicated in Dutch. As both partners had a sufficient understanding of their partner's mother tongue, their communication was found to be successful. Whereas in L1-L2 interactions, only one of the interlocutors has the advantage of having access to sophisticated mother tongue proficiency, the added advantage of receptive multilingualism is that it offers both partners the advantage of being able to communicate in their mother tongue. Receptive multilingualism seems ideally suited for interactions between speakers of typologically related languages, such as German and

Dutch, Swedish and Norwegian, Spanish and Italian. RM is often applied successfully in border areas between countries in particular (Beerrens 2010).

To date, most research into the effectiveness of different communication modes has mainly been of a qualitative nature and has invariably focused on studying interactions in a single mode of communication, notably ELF. As Firth observes:

Most of this work has concentrated on the discursive and pragmatic characteristics of ELF, and noted [...] that explicit and overt miscommunications are rare despite variance in language form and proficiency [...]. But the database from which existing studies have been conducted is narrow, being mainly focused either on students' casual conversations or business encounters—in almost all cases within a Western European setting. The extant findings, then, are likely to reflect this relatively narrow empirical database. (Firth 2009: 149)

In view of the lack of empirical studies comparing ELF to other modes of communication, the purpose of the present study was to determine the effectiveness of the alternative modes of communication. In addition, we set out to investigate differences in the use of communication strategies across alternative modes of communication. As noted above, we investigated the effectiveness of different modes of communication in CMC interactions specifically. Various studies (e.g. Iwasaki and Oliver 2003; Smith 2003; Thoms et al. 2005) have pointed out that in CMC, participants negotiate for meaning in ways similar to those found in face-to-face interaction, and that the taxonomy of communication strategies used to analyse oral interactions can also be applied to the analysis of chat interactions.

In this study, effectiveness has been defined in different ways. When time is limited, as is often the case in professional communication, effectiveness can be determined by the amount of time needed to achieve a certain communicative goal, which is what Van Engen et al. (2010) investigated. Similarly, Arbuckle et al. (2000) defined collaborative success as time per trial and as successful solution of a task. Following Arbuckle et al., we consider the number of communicative goals achieved within a limited time span as a measure for effectiveness.

Additional measures of effectiveness might be the number of words and turns needed by interactants to achieve their communicative goal (cf. Arbuckle et al. 2000; Hupet et al. 1993). Previous research examining interactions involving non-native speakers have found that non-native interlocutors tend to be more verbose than native interlocutors (Edmondson and House 1991). Edmondson and House found that non-native speakers have a tendency to 'waffle' as a result of their feelings of insecurity caused by limited target language proficiency and because they may feel intimidated by the higher proficiency displayed by any native speakers present. Therefore, our second measure of effectiveness is the number of words

required to achieve communicative goals. We expect L2 and ELF speakers to be more verbose than L1 speakers in trying to achieve their goals. A related factor influencing the success of non-native interactions is turn management in discourse. Rogerson-Revell (2008) highlights possible differences between native speakers and non-native speakers of English in turn allocation and turn claims in meetings. In brief, turn management is expected to vary across modes of communication, and, therefore, our third measure for effectiveness is the number of turns used to achieve communicative goals.

3 Communication strategies

In communicative settings where interlocutors are obliged to communicate in a foreign language (a lingua franca or other language), speakers are known to resort to communication strategies to achieve successful communication. Communication strategies have been the focus of many SLA studies, which have typically looked at learner interactions. The aim of these studies has been to uncover the strategies that learners should apply to attain a higher level of proficiency. SLA research has resulted in a heavily debated taxonomy of strategies. Although the number of distinct categories and labels may vary per author, there is sufficient overlap between the taxonomies to speak of a defined set of communication strategies. In this study, we use a taxonomy based on the work of Bialystok (1990), Dörnyei and Scott (1997), Faerch and Kasper (1980; 1983), Le Pichon et al. (2010), Poullisse (1989), and Tarone (1980) (see Table 1). Whereas in SLA research the focus has been on the use of strategies by language learners, in the present study, our aim is to inventory the strategies used by language users (as opposed to learners) in different communication modes (as opposed to one language variety). Moreover, we will explore the use of strategies in CMC interactions, since research in this domain is fairly scarce. Smith (2003) has shown that communication strategies are indeed used in CMC interactions (chats), but that chat language is also characterized by the frequent use of paralinguistic strategies, such as the use of emoticons, exclamation marks and capitals.

All strategies in Table 1 are communicative attempts at achieving mutual understanding between partners. Comprehension checks (*Do I understand this correctly*), self-corrections (*Do you have stwraberries strawberries?*), appealing for assistance (*What do you call it?*), signalling uncertainty (*Next to the ... uh ... floppy? I'm afraid my English is not very good*) are strategies that speakers use when they are aware of their possible communicative vulnerability. Offering help (*four strawberries, these red fruits*) is a strategy that is initiated by the

more proficient or confident speaker. Another group of strategies comprises those strategies that are used specifically to address lexical deficiencies. These are called compensatory strategies and can be divided into process-oriented strategies (when the speakers use descriptions or superordinates) and code-oriented strategies (when the speakers invent words or use literal translations of words in their native language, or simply switch codes) (Kellerman 1991). Process-oriented strategies are generally considered to be of a higher, conceptual order than code-oriented strategies (Kellerman 1991). Finally, metadiscursive strategies are used when speakers try to solve a communicative problem by discussing task fulfilment. The list of strategies was complemented with the category of paralinguistic strategies, which are typical of CMC interactions, as observed by Smith (2003). In CMC interactions, participants make use of expressive typography, such as capitals, emoticons, or exclamation marks to signal their emotions. They also use so-called ‘onomatopoeia’, such as *Ow!* or *Ahhh* to that effect.

Table 1 provides examples of each of these strategies.

Table 1: Taxonomy of communication strategies as used in the present study: strategies with descriptions and examples.

Strategy	Description and example
1. Comprehension check	Speaker checks whether he/she has correctly understood the message; <i>so we have 3 things different so far right?</i>
2. Self-correction	Speaker restates or retypes the same message: <i>do you have also strwaberries? *strawberries</i>
3. Appealing for assistance	Speaker explicitly asks for help: <i>what do you call it?</i>
4. Signalling uncertainty	Speakers signals uncertainty, insecurity or lexical deficiency <i>I don't know if that is what you mean? or do you mean paperclip?</i>
5. Offering help	Speaker offers help implicitly or explicitly: <i>yellow high Vit C, often used for decoration; four strawberries, these red fruits</i>
6. Compensatory Process oriented	Use of superordinates or descriptions: <i>under the big yellow fruit; a little plastic thing for medicine</i>
7. Compensatory Code-oriented	Word coinage, foreignizing, literal translations, code-switching: <i>a cumcumber; an photoapparat; teeth brush and pasta</i>
8. Meta-communication	<i>Shall I start with mentioning the objects on the left?</i>
9. Paralinguistic strategies	use of capitals, emoticons, onomatopoeia, punctuation <i>THE SECOND DIFFERENCE; :-); jeej; ???</i>

We formulated two research questions:

Research Question 1: To what extent does the effectiveness of the communication modes differ?

Research Question 2: To what extent does the use of communication strategies in the communication modes differ?

4 Method

In addition to the three different communication modes (ELF, RM, L1-L2) distinguished above, we are also interested in the comparison of these three modes to mother tongue interaction (L1-L1). In addition, in L1-L2 interactions, a crucial difference for the speaker is whether he or she can speak his or her native language, or whether he or she has to adapt to the language of the interlocutor. Consequently, in the analysis of all variables (with the exception of the number of differences between pictures found in the chats) we distinguish two variants of this mode: L1-L2, when the speaker uses the L1, and L2-L1, when the speaker adopts the language of the partner. In all, we distinguish five different communication modes: ELF, RM, L1-L2, L2-L1 and L1-L1.

4.1 Design

We carried out a within-subject experiment in five group sessions. The distribution of participants for the five sessions is displayed in Table 2. In the first session, 18 participants carried out three ten-minute spot-the-differences tasks in L1-L2, L2-L1 and ELF. All participants filled out a proficiency test for English and the respective L2s (Dutch and German; (Transparent Language® Grammar Part I). In addition, all participants filled out self-assessment questionnaires. They were asked to assess their speaking, listening, reading and writing skills, how comfortable they felt using the respective languages and indicated length of residence in the target language community on 7-point scales. The difference in English proficiency scores between Dutch and German respondents was not significant ($t(16) = 2.01, p = 0.061$). As the experiment was perceived to be rather long, we decided not to administer the proficiency test for the remaining group sessions. The first session enabled us to fine-tune our analytical tool for the use of communication strategies and it also showed that participants enjoyed solving our tasks. However, since participants only found around three differences on average in the task, we decide to extend the time limit from ten to fifteen minutes per task for the remaining group sessions.

Table 2: Distribution of participants and communication modes in experimental sessions.

	Communication mode	Participants	Chats
Session 1	ELF, L1-L2, L2-L1	9 Dutch, 9 German	27
Session 2	ELF, L1-L2, L2-L1	12 Dutch, 12 German	34
Session 3	ELF, L1-L2, L2-L1	9 Dutch, 9 German	27
Session 4	ELF, RM	8 Dutch, 8 German	16
Session 3	ELF, RM, L1-L1	8 Dutch, 8 German	24
Total		46 Dutch, 46 German	128

In order to allow us to aggregate results, we adjusted for the difference in allotted time between session one (10 minutes) and the remaining group sessions (15 minutes). As ELF was a shared condition between all group sessions, we tested if the ELF scores (for differences found) were statistically the same ($F(4, 40) = 1.09, p = 0.375$). As this was the case, we aggregated results across sessions.¹

4.2 Participants

The group sessions involved 46 Dutch students (38 women) and 46 German students (32 women). The mean age was 21.19 years ($SD = 2.41$, range 17–30). All participants were students at Radboud University, Nijmegen, the Netherlands, and were native speakers of Dutch or German. The Dutch students had some knowledge of German (German is a compulsory subject at secondary schools). The German students all had a Dutch language certificate that allowed them to study at a Dutch university and this may explain why they assessed their Dutch competence as higher than the Dutch participants assessed their competence in German ($t(40.80) = 5.26, p < 0.001$).

To control for differences in the level of English competence between German and Dutch participants, participants in all sessions were asked to self-assess their English proficiency on 7-point scales ('I find communicating in English easy – difficult'; 'Communicating in English makes me feel secure – insecure'). Self-assessment scores for Dutch and German participants did not differ significantly (all $ps > 0.11$).

¹ We thank an anonymous reviewer for suggesting testing differences across group sessions.

between the two versions of the picture. Participants were instructed to find 10 differences between the pictures using instant messaging within a 15-minute time limit.

Before each task, participants were instructed as to which communication mode to use in chatting about the task. The order of the tasks and the communication modes were systematically varied (Latin square) over the three chat sessions. Participants were given a different partner for each task.

4.4 Instrumentation

Effectiveness was measured in terms of the number of differences found in the spot-the-differences tasks. We also measured the number of words per turn and the number of turns per chat. All chats were analysed for occurrences of communication strategies.

4.5 Statistical processing and coding

After participants had completed their tasks, the logs of the chats were collected and analysed. Fifty per cent of the data was analysed by two coders ($\kappa = 0.67$ (adequate for interpretative data according to Spooren and Degand (2010))). Disagreement was resolved through discussion.

For the analysis of the communication strategies, Kolmogorov-Smirnow tests revealed that the distribution of the communication strategies violated normality assumptions (all p -values < 0.05). Consequently, the occurrence of communication strategies was analysed with non-parametric tests.

5 Results

The primary objective of these studies was to investigate the effectiveness of different communication modes. For the analysis, the results of the participants were aggregated in terms of differences between the pictures found by participants, word count and number of turns. The unit of analysis for the number of differences between the pictures found was the chat (Table 3). One-way analyses of variance showed that there was an effect of communication mode on differences between the pictures found ($F(3, 95) = 4.96, p = 0.003$). Post-hoc analyses (Least Significance Difference: LSD) showed that significantly more differences were found in the mother tongue (L1-L1) and RM than in the L2-L1 and ELF modes. For means and standard deviations see Table 3.

Table 3: Means and standard deviations for differences found in function of chat in communication mode.

Communication mode	<i>n</i>	Differences <i>M</i> (<i>SD</i>)
ELF	45	4.13 (2.10)
L2–L1	30	4.03 (2.22)
RM	16	5.38 (2.03)
L1–L1	8	6.75 (1.58)
Total	128	4.68 (2.22)

As the number of turns, words and communication strategies used varied per participant, the unit of analysis for the subsequent analyses was participant in a communication mode (Table 4). In the L1-L2 communication mode, proficiency levels varied across participants, with one partner communicating in the L1 and the other partner communicating in an L2. Consequently, the L1-L2 mode was recoded into L2-L1 if the speaker (rather than the listener) used the L2. In other words, L1-L2 and L2-L1 alternate per turn. Therefore, we will distinguish five different modes in subsequent analyses: ELF, RM, L2-L1, L1-L2 and L1-L1. One-way analyses of variance showed that there was an effect of communication mode on number of words ($F(4, 251) = 9.23, p < 0.001$) and on number of turns ($F(4, 251) = 9.78, p < 0.001$).

Table 4: Means and standard deviations for number of words and number of turns in function of participant in communication mode.

Communication mode	<i>n</i>	Words <i>M</i> (<i>SD</i>)	Turns <i>M</i> (<i>SD</i>)
ELF	90	261.06 (82.623)	55.02 (19.12)
L1 – L2	59	315.77 (149.26)	63.53 (32.03)
L2 – L1	59	221.86 (109.65)	53.80 (22.19)
RM	32	260.22 (80.36)	60.81 (20.19)
L1 – L1	16	369.31 (86.66)	93.19 (30.13)
Total	256	271.29 (114.41)	29.81 (25.80)

With regard to the number of words, significantly more words were used in L1-L1 and in L1-L2 interactions than in RM, ELF and L2-L1. In ELF, significantly more words were used than in L2-L1. For means and standard deviations see Table 4.

With regard to the number of turns, in the L1-L1 interactions significantly more turns were used than in the other modes. In L1-L2 more turns were used than in ELF and than in L2-L1.

Our second concern in the present study was the use of communication strategies by participants as they communicated in different modes. Non-parametric tests were used to investigate the distribution of communication strategies among the five different modes of communication. Table 5 lists means and standard deviations of the frequency of use of these strategies in the five communication modes.

A Kruskal-Wallis test revealed that the occurrence of the following five strategies was significantly affected by mode of communication: ‘comprehension check’ ($p = 0.028$), ‘process-oriented strategies’ ($p = 0.002$), ‘code-oriented strategies’ ($p < 0.001$), ‘paralinguistic strategies’ ($p = 0.018$), and ‘signalling uncertainty’ ($p = 0.038$). For the four communication strategies whose frequency of use seemed to be significantly different across the five modes of communication, 10 multiple Mann-Whitney tests were additionally run for each strategy to identify differences between communication modes. Running multiple Mann-Whitney tests will inflate the Type-I error rate. To adjust for this inflation, a Bonferroni correction was applied, in which the critical value for significance was corrected to 0.005 (we performed ten tests per strategy) (Field 2009: 565). Table 5 shows the means and standard deviations for the strategies.

A Kruskal-Wallis test revealed that the occurrence of the strategies ‘comprehension check’ ($H(4) = 10.89$, $p = 0.028$) and ‘signalling uncertainty’ ($H(4) = 10.15$, $p = 0.038$) was significantly affected by mode of communication. However subsequent Mann-Whitney tests did not reveal any significant differences for either strategy between any of the communication modes at the 0.005 level.

The occurrence of process-oriented strategies turned out to vary across communication modes ($H(4) = 17.25$, $p = 0.002$). These strategies were used relatively more frequently in ELF than in L2-L1 ($U = 1102.0$, $z = -2.82$, $p = 0.004$) and than in RM ($U = 573.5$, $z = -3.51$, $p < 0.001$). It appears that in ELF in particular, speakers tend to resort to descriptions and paraphrases to overcome lexical deficiencies in naming objects in the pictures. An example of such a process-oriented compensatory strategy is the fascinating but perfectly clear description that is used by two partners trying to work out how many tampons and panty liners they see in their pictures, see (1).

Table 5: Means and standard deviations of the nine communication strategies in function of mode of communication.

Strategy	L1-L2 <i>M (SD)</i>	L2-L1 <i>M (SD)</i>	ELF <i>M (SD)</i>	RM <i>M (SD)</i>	L1-L1 <i>M (SD)</i>	Total <i>M (SD)</i>
Self correction	2.02 (1.68)	1.71 (1.08)	1.61 (0.96)	1.21 (0.43)	1.50 (0.58)	1.67 (1.13)
Comprehension check	1.71 (0.77)	1.75 (0.86)	1.42 (0.75)	1.80 (0.45)	1.00 (0.00)	1.57 (0.75)
Appealing for assistance	1.29 (0.33)	1.66 (0.91)	1.56 (0.96)	1.20 (0.45)	–	1.53 (0.84)
Offering assistance	1.68 (1.13)	1.40 (0.42)	1.30 (0.52)	2.29 (1.25)	1.00 (0.00)	1.58 (0.95)
Signalling uncertainty	2.32 (1.41)	2.66 (1.73)	2.33 (1.36)	1.56 (1.03)	1.50 (1.00)	2.32 (1.47)
Process-oriented strategies*	4.12 (3.66)	3.20 (2.25)	5.75 (4.59)	2.36 (1.58)	3.43 (2.71)	4.36 (3.84)
Code-oriented strategies*	1.25 (0.34)	5.00 (4.19)	3.16 (2.81)	1.45 (0.52)	2.25 (1.50)	3.43 (3.33)
Paralinguistic strategies*	4.27 (3.44)	4.72 (4.48)	5.07 (4.47)	6.68 (4.79)	7.94 (5.38)	5.26 (4.47)
Metacommunication	1.82 (1.37)	1.50 (0.79)	1.90 (1.31)	2.54 (1.84)	1.82 (1.25)	1.94 (1.47)

*Indicates significant differences across communication modes.

- (1) Dutch participant: *and on the right side i have some things women use when they have their period*
 German participant: *3 things*
 Dutch participant: *I've got 2*
 German participant: *2 voor inside and 1 voor outside*
'2 for inside and 1 for outside'
 Dutch participant: *I've got 1 for inside 1 for outside*

Moreover, this strategy was not only used in ELF but also in the other modes, as is shown in example (2) where the German participants used the L2-L1 mode and the Dutch participant L1-L2 mode (the German chatted in Dutch). The Dutch participant confuses a thermometer with a needle, and the German participant corrects him by giving a perfectly clear description of what a thermometer does, see (2).

- (2) Dutch participant: *en daaronder een injectienaald ofzo*
'and beneath that a needle or something [..]'
 German participant: *ik heb gen² injectienadel*
'I don't have a needle'
 Dutch participant: *boven het condoom niet?*
'not above the condom?'
 German participant: *ik heb een ding, dat je [m]oet als je pijn hebt een hoge*
Temperatur
'I have a thing that you use when you are in pain, a
high Temperature'
 Dutch participant: *owjah dat is dat ja!*
'ah yes that's it yes!'

Code-oriented strategies varied significantly across communication modes as well ($H(4) = 25.03, p < 0.001$). These strategies were used relatively more frequently in L2-L1 than in L1-L2 ($U = 73.5, z = -3.85, p < 0.001$) and than in RM ($U = 81.5, z = -3.42, p < 0.001$).

An example of a code-oriented compensatory strategy use in the L2-L1 mode is the exchange above, see (2), in which the German participant uses *injection nadel* 'needle' despite the fact that the Dutch participant had already used the

² The original typos and misspellings in Dutch and German have been retained, but have been corrected in translation.

word *naald* ‘needle’ – the German participant simply literally translates the German word into Dutch. Another example of a literal translation is an interaction in which a German participant (in the L2 mode) mistakenly translates the German word *Bürste* ‘teeth of a comb’ into *borsten* ‘breasts’, see (3). The Dutch participant does not seem to bat an eyelid.

- (3) German participant: *de kam mist bij mij een paar borsten?*
 ‘my comb is missing a couple of breasts?’
 Bij jij ook
 ‘yours as well?’
 Dutch participant: *bij mij niet. ... de kam is bij mij helemaal intact*
 ‘mine not ... my comb is intact’

Another example showing participants’ creativity is a Dutch participant conjuring up the word *elastics* for *rubber band* in ELF, probably based on the Dutch word *elastiekje* ‘rubber band’, see (4). The German participant does not seem to have any problems understanding this, as German also has the word *Elastik*. As Dutch is more closely related to German than to English, participants can successfully make use of cognates to get their message across.

- (4) Dutch participant: *and two elastics?*
 German participant: *yes*

Finally, we illustrate a third form of code-based compensatory strategy: code-switching, see (5). In this ELF example, the Dutch participant apparently cannot remember the word *strawberries*, and therefore resorts to French.

- (5) Dutch participant: *are there any fraises on the right, at your picture?*
 German participant: *what are fraises?*
 Dutch participant: *I’m not sure if I had the right word but they are red [...]*
 German participant: *do u mean strawberries?*
 Dutch participant: *right, thank you*
 so stupid XD

The use of paralinguistic strategies also varied across the communication modes ($H(4) = 11.93$, $p = 0.018$). Paralinguistic strategies were used relatively more frequently in L1-L1 than in L1-L2 ($U = 180.0$, $z = -2.97$, $p = 0.002$) and than in L2-L1 ($U = 172.0$, $z = -2.79$, $p = 0.005$). For an illustration of the use of paralinguistic cues in an L1-L1 interaction, see (6):

- (6) German participant a: *foto?*
 ‘picture?’
 German participant b: *jo*
 ‘yes’
 German participant a: *mit nem mann?*
 ‘with a man?’
 German participant b: *en heisser kerl*
 ‘a hot bloke’
 German participant a: *rawr :)*
 ‘rawr :)’
 das stimmt
 ‘right’
 German participant b: *die koennen das alles hier lesen*
 ‘they can read everything’
 viele gruesse an die auswerter =)
 ‘many greetings to the transcribers =)’

6 Conclusion and discussion

Against the backdrop of an ever-increasing influence of English as a Lingua Franca, the purpose of this study was to explore the effectiveness of different communication modes. ELF, L1-L2, L2-L1 and RM were compared and mother tongue interactions served as a baseline. It appears, then, *ceteris paribus*, that apart from mother tongue interactions, the RM mode appeared to be the most effective mode. In this mode, most differences between the pictures were found compared to the other communication modes. It is noteworthy that communication in ELF scored relatively low on effectiveness (number of differences found). The two conditions in which both partners speak their mother tongue (RM and L1-L1) were most effective.

Our findings show that participants were most verbose in their mother tongue. Contrary to our expectations on the basis of Edmondson and House (1991), who claim that in the absence of a native speaker, participants feel less reserved in expressing their thoughts, we did not find that participants using ELF ‘waffled’ more than speakers in L1-L2 interactions or in L1-L1 interactions. On the contrary, in the L1-L1 communication mode and in the L1-L2 mode, more words were used than in any of the other modes. This might be due to the fact that waffling may be more likely to occur in situations of total freedom and ease, whereas in our studies participants were instructed to carry out a concrete task with a time constraint.

With regard to the distribution of communication strategies, it seems that each communication mode can be characterised by a preference for particular strategies. ELF interactions were characterized by a predominance of process-oriented strategies, whereas in both ELF and L2-L1 interactions participants frequently resorted to code-oriented strategies. To be able to use process-oriented strategies, a speaker must be relatively proficient (Kellerman 1991). Hence, we might infer that the level of English of our participants was on average higher than their knowledge of their L2 (German or Dutch). We observe that compensatory strategies were predominantly used in interactions where at least one of the partners needs to communicate in a foreign language, which means that speakers used words and time to overcome lexical deficiencies. In RM, however, where both speakers only use the foreign language receptively, less effort is required to compensate for lexical deficiencies, which means that speakers can concentrate on the task at hand.

In both L1-L1 and RM interactions, participants frequently used paralinguistic strategies. In their native language, speakers were apparently less focused on resolving lexical deficiencies and consequently felt free to decorate their interaction with evaluative cues. These paralinguistic strategies seem to do more than just resolve communicative problems. The paralinguistic strategies were included in our coding table on the basis of Smith (2003), but our data seem to indicate that L2-users and ELF users use paralinguistic strategies for different purposes than L1-users. Therefore, in future research it might be wise to distinguish between the various types of paralinguistic cues.

One of the limitations in our study was that the participants were instructed to communicate in one particular mode for each task. Typical of multilingual communication is for partners to switch between communication modes (Lüdi et al. 2010), especially when faced with lexical deficiencies (for an overview, see Auer and Wei 2007). In a follow-up study, we will investigate whether participants are more successful when they are at liberty to choose their own mode(s) of communication.

The Eurobarometer (2012) shows that many Europeans now speak more than two foreign languages and that English is still the most widespread foreign language throughout Europe. More specifically, up to 38% of EU citizens claim that they are proficient enough in English to have a conversation, while slightly over 10% indicate that they speak French (12%) or German (11%) in addition to their mother tongue. More importantly perhaps, passive language skills were found to be on the increase. Our findings indicate that ELF may not necessarily be the most effective mode of communication in situations where speakers do not share a native language. On the other hand, RM, for which speakers only need a receptive competence in the partner's language, may turn out to be an

attractive alternative. In border areas, this mode is relatively common, but for many other language users it is still relatively unknown. Many language users may still need to get accustomed to this mode. Admittedly, receptive multilingualism may be an especially suitable mode for speakers of typologically related languages, where receptive competence of the interlocutor's language is more likely to be sufficient than for speakers of typologically more unrelated languages. The relation between language distance and receptive multilingualism is still under investigation (see Gooskens 2013).

Arguably, Dutch students are generally more proficient in German than German students are in Dutch. This asymmetry is caused by the educational system: German is a compulsory subject for a number of years at secondary school in the Netherlands, but Dutch is not a common school subject in Germany. In the Nijmegen area, however, the German students at Radboud University are usually from the neighbouring Bundesland Nordrhein-Westphalen – which may cause their fluency in Dutch to be above average. Therefore, we recommend a replication of our study with participants who have no prior experience with the neighbouring language (see e.g., Gooskens et al. 2010).

In a European context it may be advisable to promote receptive multilingualism – especially for languages that are closely related, such as Romance, Germanic and Slavic languages. What is more, this mode is already used in particular regions, such as in the border area of the Netherlands and Germany (Beerkens 2010) and in Scandinavian organizations (Zeevaert 2007; see also Gunnarsson 2014).

7 Practical implications

Future communication practitioners in multilingual exchanges might need to take into account the various modes of communication available, and may need to consider making an inventory of feasible language options. Such meta-communicative considerations will make participants aware of cross-linguistic differences and of the linguistic opportunities available to them. ELF has the distinct advantage of being an egalitarian communication mode: all participants need to take the hurdle of communicating in a non-native language, which forces them to collaborate on negotiating mutual understanding.

From an intercultural perspective, ELF may have the possible disadvantage of masking cross-cultural differences between participants: as participants communicate in a common language, this may create the illusion that they also share a common culture. RM, on the other hand, obliges participants to respect

the linguistic identity of their partners as a consequence of all participants using their mother tongue. This may thus prompt a heightened awareness of the ‘otherness’ of their partner. In this sense, RM may minimize the intercultural discrepancies that individuals are often unaware of when communicating in a shared language.

All in all, our study may have contributed to the multilingual ideal that before engaging in an intercultural interaction, interlocutors should consider assessing all the communication modes available in order to maximize the outcome of their deliberations. Insights from this study may assist organizations in readjusting their communication policies to optimize the effectiveness of multilingual interactions.

References

- Arbuckle, Tannis Y., Michiko Nohara-LeClair & Dolores Pushkar. 2000. Effect of off-target verbosity on communication efficiency in a referential communication task. *Psychology and Aging* 15(1). 65. doi: 10.1037/0882-7974.15.1.65.
- Auer, Peter & Li Wei. 2007. Introduction: Multilingualism as a problem? Monolingualism as a problem. *Handbook of multilingualism and multilingual communication*, 1–14. Berlin: Mouton de Gruyter.
- Beerkens, Roos. 2010. *Receptive multilingualism as a language mode in the Dutch-German border area*. Münster: Waxmann Verlag.
- Bialystok, Ellen. 1990. *Communication strategies: a psychological analysis of second-language use*. Oxford: Blackwell.
- Charles, Mirjalisa & Rebecca Marschan-Piekkari. 2002. Language training for enhanced horizontal communication: A challenge for MNCs. *Business Communication Quarterly* 65(9). doi: 10.1177/108056990206500202.
- COM. 2003. 449 Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions of 24 July 2003 – Promoting language learning and linguistic diversity: an action plan 2004–2006. Retrieved from http://europa.eu/legislation_summaries/education_training_youth/lifelong_learning/c11068_en.htm (accessed May 20 2013).
- Dörnyei, Zoltán & Mary Lee Scott. 1997. Communication strategies in a second language: Definitions and Taxonomies. *Language Learning* 47(1). 173–210. doi: 10.1111/0023-8333.51997005.
- Edmondson, Willis & Juliane House. 1991. Do learners talk too much? The waffle phenomenon in interlanguage pragmatics. In Robert Phillipson, Eric Kellerman, Larry Selinker, Michael Sharwood Smith & Merrill Swain (eds.), *Foreign/second language pedagogy research*, 273–287. Clevedon, Avon: Multilingual Matters.
- EF EPIC. 2012. EF English Proficiency Index for Companies 2012. EF Education First Ltd. <http://www.ef.co.uk/epi> (accessed 22 November 2012).
- Van Engen, Kristin J., Melissa Baese-Berk, Rachel E. Baker, Arim Choi, Midam Kim & Ann R. Bradlow. 2010. The Wildcat Corpus of native-and foreign-accented English:

- Communicative efficiency across conversational dyads with varying language alignment profiles. *Language and Speech* 53(4). 510–540. doi: 10.1177/0023830910372495.
- Eurobarometer. 2012. Special Eurobarometer 386: Europeans and their Languages, *Wave EB77.1 Special Eurobarometer*: European Commission.
- Færch, Claus & Gabriele Kasper. 1980. Processes and strategies in foreign language learning and communication. *Interlanguage Studies Bulletin*. 5(1). 47–118.
- Færch, Claus & Gabriele Kasper. 1983. *Strategies in interlanguage communication*. London: Longman.
- Firth, Allan. 2009. The lingua franca factor. *Intercultural Pragmatics* 6(2). 147–170. doi: 10.1515/IPRG.2009.009.
- Gooskens, Charlotte. 2013. Methods for measuring intelligibility of closely related language varieties. In: Robert Bayley, Richard Cameron & Ceil Lucas (eds.), *Handbook of sociolinguistics*, 195–213. Oxford University Press.
- Gooskens, Charlotte, Vincent J. van Heuven, R. Renée van Bezooijen & Jos J. Pacilly. 2010. Is spoken Danish less intelligible than Swedish? *Speech Communication*, 52(11). 1022–1037. doi:10.1016/j.specom.2010.06.005.
- Gunnarsson, Britt-Louise. 2014. Multilingualism in European workplaces. *Multilingua-Journal of Cross-Cultural and Interlanguage Communication* 33(1–2). 11–33. doi: 10.1515/multi-2014-0002.
- House, Juliane. 2007. Unity in diversity: English as a lingua franca for Europe? In Constant Leung & Jennifer Jenkins (eds.), *Reconfiguring Europe – the Contribution of Applied Linguistics*, 87–104. London: Equinox.
- Hincks, Rebecca. 2010. Speaking rate and information content in English lingua franca oral presentations. *English for Specific Purposes* 29(1). 4–18. doi: 10.1016/j.esp.2009.05.004.
- Hultgren, Anna Kristina. 2014. Whose parallellingualism? Overt and covert ideologies in Danish university language policies. *Multilingua-Journal of Cross-Cultural and Interlanguage Communication* 33 (1–2). 61–87. doi: 10.1515-multi-2014-0004.
- Hupet, Michel, Yves Chantraine & François Nef. 1993. References in conversation between young and old normal adults. *Psychology and Aging* 8(3). 339–346.
- Iwasaki, Junko & Rondha Oliver. 2003. Chat-line interaction and negative feedback. *Australian Review of Applied Linguistics* 17, 60–73.
- Jenkins, Jennifer. 2007. *English as a lingua franca: Attitude and identity*. Oxford: Oxford University Press.
- Kellerman, Eric. 1991. Compensatory strategies in second language research: a critique, a revision, and some (non-)implications for the classroom. In Robert Phillipson, Eric Kellerman, Larry Selinker, Michael Sharwood Smith & Merrill Swain (eds.), *Foreign/second language pedagogy research: a commemorative volume for Claus Færch*, 142–161. Clevedon, Eng.: Multilingual Matters.
- Le Pichon, Emmanuelle, Henriette de Swart, Jacob Vorstman & Huub van den Bergh. 2010. Influence of the context of learning a language on the strategic competence of children. *International Journal of Bilingualism*. 14(4). 447–465. doi: 10.1177/1367006910370921.
- Louhiala-Salminen, Leena, Mirjalisa Charles & Anne Kankaanranta. 2005. English as a lingua franca in Nordic corporate mergers: Two case companies. *English for Specific Purposes* 24(4). 401–421. doi: 10.1016/j.esp.2005.02.003.

- Lüdi, Georges, Katharina Höchle & Patchareerat Yanaprasart. 2010. Plurilingual practices at multilingual workplaces. In Birgit Apfelbaum & Bernd Meyer (eds.), *Multilingualism at work*, 211–234. Amsterdam: John Benjamins.
- Lønsmann, Dorte. 2014. Linguistic diversity in the international workplace: Language ideologies and processes of exclusion. *Multilingua-Journal of Cross-Cultural and Interlanguage Communication* 33 (1–2). 89–116. doi: 10.1515/multi-2014-0005.
- Marschan-Piekkari, Rebecca, Denise Welch & Lawrence Welch. 1999. In the shadow: the impact of language on structure, power and communication in the multinational. *International Business Review* 8. 421–440. doi: 10.1016/S0969-5931(99)00015-3.
- Mahili, Ifigenia. 2014. ‘It’s pretty simple and in Greek ...’: Global and local languages in the Greek corporate setting. *Multilingua-Journal of Cross-Cultural and Interlanguage Communication*. 33 (1–2). 117–146. doi: 10.1515/multi-2014-0006.
- Mauranen, Anna. 2006. Signaling and preventing misunderstanding in English as lingua franca communication. *International Journal of the Sociology of Language* 177. 123–150. doi: 10.1515/IJSL.2006.008.
- Nábělková, Mira. 2007. Closely-related languages in contact: Czech, Slovak, “Czechoslovak”. *International Journal of the Sociology of Language* 183. 53–73.
- Poulisse, Nanda. 1989. *The use of compensatory strategies by Dutch learners of English*. Dordrecht: Foris.
- Poulisse, Nanda. 1989. *The Use of Compensatory Strategies by Dutch learners of English / Nanda Poulisse; in collaboration with Theo Bongaerts and Eric Kellerman, Studies on Language Acquisition*, 8. Dordrecht: Foris.
- Rehbein, Jochen, ten Thijs, Jan, D. & Anne Verschik. 2012. Lingua receptiva (LaRa)—remarks on the quintessence of receptive multilingualism. *International Journal of Bilingualism*. 16(3). 248–264. doi: 10.1177/1367006911426466.
- Ribbert, Anne & Jan D. Ten Thijs 2007. Receptive multilingualism in Dutch-German intercultural team cooperation. In Jan ten Thijs & Ludger Zeveaert (eds.), *Receptive multilingualism: linguistic analyses, language policies, and didactic concepts*, 73–101. Amsterdam, Netherlands: Benjamins.
- Rogerson-Revell, Pamela. 2007. Research note. Using English for International Business: a European case study. *English for Specific Purposes*. 26. 103–120. doi:10.1016/j.esp.2005.12.004.
- Rogerson-Revell, Pamela. 2008. Participation and performance in international business meetings. *English for Specific Purposes*. 27(3). 338–360. doi: 10.1016/j.esp.2008.02.003.
- Schüppert, Anja. 2011. *Origin of Asymmetry. Mutual intelligibility of spoken Danish and Swedish*. Groningen: Grodil.
- Seidlhofer, Barbara. 2002. The shape of things to come? Some basic questions about English as a lingua franca. In Karlfried Knapp & Christiane Meierkord (eds.), *Lingua Franca Communication*, 269–302. Frankfurt etc: Peter Lang.
- Smith, Bryan. 2003. The use of communication strategies in computer-mediated communication. *System* 31(1). 29–53. doi: 10.1016/S0346-251X(02)00072-6.
- Spooren, Wilbert & Degand, Liesbeth. 2010. Coding coherence relations: Reliability and validity. *Corpus Linguistics and Linguistic Theory*, 6(2). 241–266. doi: 10.1515/cllt.2010.009.
- Tarone, Elaine. 1980. Communication strategies, foreigner talk, and repair in interlanguage. *Language Learning*. 30. 417–431. doi: 10.1111/j.1467-1770.1980.tb00326.x.
- Thoms, Joshua, Liao, Jianling & Anja Szustak. 2005. The use of L1 in an L2 on-line chat activity. *The Canadian Modern Language Review*. 62(1). 161–182. doi 10.1353/cml.2005.004.

- Transparent Language® n.d. Retrieved from <http://www.transparent.com>.
- Tworoger, Leslie C, Cynthia P Ruppel, Baiyun Gong, & Randolph A Pohlman. 2013. Leadership constraints: Leading global virtual teams through environmental complexity. *International Journal of e-Collaboration (IJeC)*. 9(2). 34–60. doi: 10.4018/jec.2013040102.
- Welch, Denise, Welch, Lawrence & Rebecca Piekkari. 2005. Speaking in tongues: The importance of language in international management processes. *International Studies of Management and Organization* 35(1). 10–27.
- Zeevaert, Ludger. 2007. Receptive multilingualism and inter-Scandinavian semicommunication. In Jan D. ten Thije & Ludger Zeevaert (eds.), *Receptive multilingualism: linguistic analyses, language policies, and didactic concept*, 103–135. Amsterdam, Netherlands: Benjamins.