Content Domain and Language Competence in Computer-mediated Conversation for Learning

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This study addresses the issue of interactional dominance in Teletandem conversations, in which two speakers communicate via video calls and chat and alternatively use their L2, the latter being the native language of the interlocutor. In particular, the research focuses on the impact of language competence (native/non-native) and content expertise (minus/plus familiarity with the topic at hand) on the role assumed by each interlocutor in structuring conversation. The data consists of 3 hours of computer-mediated recorded and transcribed conversations during 3 meetings: meeting 1 comprises free discussion for mutual introduction; meeting 2 is a discussion in English of a topic chosen by the Italian native speaker; meeting 3 is a discussion in Italian of a topic chosen by the English native speaker. The participants’ language proficiency in L2 ranged from upper-intermediate to advanced. The following indicators were considered: sequential dominance, determined by identifying and counting topic moves; interaction dominance, defined in terms of average turn length; interruptions. The research design considers behaviours that are potentially salient for language learning (e.g. clarification requests). Results show no tendency by the native speaker to control conversation flow: neither the English nor the Italian speaker is dominant during events in which her own native language is used. As regards content familiarity, this seems to have an effect when topic knowledge becomes expertise like during meeting 3, when the English native speaker produces more topic moves and longer turns in L2 than her partner.

Keywords: computer mediated communication, native non-native interaction, language learning, interactional dominance
1 Introduction

The study investigates the impact of content choice and language competence on conversation structure in order to gain a better understanding of the influence of context variables on those activities salient for language acquisition (e.g. making clarification requests, starting negotiation of meaning, etc., see also Kasper 2004). The focus is conversational dominance during multimodal computer communications, an emerging learning context that is increasingly being employed in various institutions (e.g. Brazilian and Italian universities) for effective L2 use and learning.

Data have been collected during Teletandem sessions, in which pairs of native speakers of two different languages converse alternately in their L1 and L2 as a component of their study of each other’s native language. The communication is multimodal, that is, conducted via Internet using voice, video and instant messaging software applications (e.g. Skype). Dominance will be intended as the communicative behaviour of an interlocutor who controls the conversation flow (Zhou et al. 2004) in both oral and written communicative modes.

Teletandem (www.teletandembrazil.org) communicative exchanges present similar characteristics to face-to-face tandem conversations (Brammerts 2003). They can be regarded as a variety of “conversation for learning” (Kasper 2004) since in both learning contexts, speakers talk having a “dual-focus” in mind (Apfelbaum 1993; Bange 1992). One is the language used for communication; for instance, the discourse includes pedagogical turns in which participants correct/repair interlocutors’ language misuse, negotiate meanings, explain a rule related to their first language, etc. The other focus is the topic under discussion: the interaction process is characterized, for instance, by the presence of appraisal/agreement sequences. This latter quality makes Teletandem conversation close to natural peer communication (Apfelbaum 1993; Anderson & Banelli 2005; Leone 2009a, 2009b).

In particular, among sequences of focus on form, negotiation of meaning and repairs play an especially important role, since both of them allow the development of L2 communication ability. Negotiation of meaning is prompted by non-comprehension and aims at resolving communication problems (Gass 1997; Leone 2009a, 2009b). As regards Teletandem communication, written chat is employed as a strategy to facilitate communication: by writing the new word, and sometimes its translation, interlocutors use a semiotic code that makes the message permanent and accessible over time (Leone 2009b). Repairs arise because appropriate target language vocabulary or expression is missing or because the non-native speaker is not sure whether certain forms are correct or understandable. Repairs are often self-initiated, that is, the learner either attempts to resolve communicative problems alone, testing out a hypothesis on the target word or explicitly asking the interlocutor for help (e.g. how do you say…?), or using the expression in another language, thus showing indirectly his/her need to be assisted (e.g. in our data: ENGL1: si ho lezioni e poi ahm ho molti compiti ancora di fare adesso devo fare i compiti per morfol[ogia] e poi la notte abbiamo entrenamento allen[amento] e:hm training; ITL1: [uhm u:hm] allenamento si; see also Apfelbaum 1993; Rost-Roth 1995, 1999; Kasper 2004; Anderson & Banelli 2005).
Code-switching is another common characteristic of Tandem and Teletandem. It is employed not only for facilitating communication, as mentioned above, but also for evoking a context in which, for example, an event takes place (e.g. in England + I don’t know - people of my AGE don’t really sort of read the newspaper or watch the news. And here it’s like if you have people around for dinner or something you can and they like – oh telegiornale³ uhh; Anderson & Banelli 2005: 94).

Like in face-to-face tandem, also in Teletandem conversations speakers integrate gestures and body movements into their communication process. During Teletandem, for instance, one of the partner's movement towards the webcam is interpreted by the primary speaker as a signal of non-understanding and a request for repetition. In Teletandem communication, interlocutors use written chat in different moments and for different functions: for instance, at the beginning of a Teletandem session to check if the interlocutor is listening (e.g. can you hear me?) or to facilitate communication by writing the new word and sometimes its translation (Leone 2009b).

Tandem and Teletandem conversation is a form of exolingual communication, during which participants do not share their mother tongue and talk alternatively in their second language and in the first language of the interlocutor. During (Tele)tandem conversations imbalance in expertise can be related either to language competence or to contents under discussion. The two dimensions are separate from each other. Language proficiency ranges from novice (e.g. the non-native speaker) to expert (the native speaker). Along the continuum there are different levels of non-native speaker competence, reaching the very advanced level of the L2 locutor for whom the only obviously non-native aspect of target language use is accent. Conversely, the level of expertise relative to the contents under discussion can vary from complete lack of familiarity to advanced knowledge of a specific discipline. Teletandem conversation can be shaped by different forms of expertise in the two dimensions mentioned. In particular, those discussed in the present study are: upper intermediate language competence and native competence in language use for communication and familiarity with a topic, which emerges when one of the interlocutors selects the subject for discussion. In order to compensate for the gap between native and non-native speaker in the target language competence, for the purposes of this study, the low-proficiency L2 user has been asked to choose a topic for discussion.

1.1 Background to the study

In interactional studies, dominance and asymmetry describe different aspects of interaction. The distinction between these two concepts can be explained by referring to speakers' behaviour in ordinary and institutional conversation. In ordinary conversations, although contribution to conversation development may be unbalanced, equality in participation can be easily brought about. In fact, if one speaker controls the conversation flow more for any reason (i.e. a speaker's familiarity with the topic at hand, a temporary lapse of one interlocutor's attention), his/her interlocutor may modify “participant structure” (Philips 1972, 1983) and “establish the conversational order” (Orletti 2000: 13–14). Conversely, in institutional conversations (e.g. doctor-patient) the “global
management” of the interaction cannot be changed (e.g. Linell & Luckmann 1991; Orletti 2000). For example, during a doctor-patient conversation, to the doctor's question “how are you?” the latter does not reply “Fine, thank you and how are you?” since the imbalance in participant knowledge and status is manifested in the different rights of each interlocutor in managing interaction. The former type of “inequity” will be referred to as dominance, and the latter asymmetry (Linell 1990; Orletti 2000).

Dominance is a general term which is used in different fields of study (e.g. biology). Particularly, in psychology and sociology it refers to the position of power and authority of one group or individual over others in both human and animal behaviour and it is intended as the opposite of submission. On the other hand, in applied linguistics, specifically in interaction studies, dominance is defined as “temporary lack of reciprocity” in conversation (Hakulinen 2009: 61). An interactional dominant behaviour is verified when one of the speakers takes a number of initiatives during conversation (e.g. introducing topics) to which one or more interlocutors reply.

Research in applied linguistics has analysed the relationship between macro-social variables (e.g. gender differences, status differences) and the way dialogues are structured, aiming to highlight the relation between social power and speakers’ linguistic and communicative behaviour (Orletti 2000: 9) and to use observation of these dialogues and discourse as a basis for generalizations about asymmetries in other contexts.

Conversely, this study focuses on the effects of situational variables and individual factors (e.g. language competence, topic familiarity) on interaction structure. For a proper understanding of the significance of its results, it is important to point out that there is no logical and necessary relationship between social or psychological forms of authoritarianism and the way a dialogue unfolds. The features of discourse practices captured by the analysis will not be considered to be signs of social and psychological power of one interlocutor over the other. In other words, an individual communicative choice cannot be a predicting behaviour of either authoritarianism or submission. Silence, for instance, is not a dominant interactional action but can manifest either social or psychological dominance over the interlocutor. As underlined by Linell and Luckmann, “…the analyst must always keep the distinction in mind; it is one thing to identify dominant actions, another thing to determine what they mean or what they are signs of...a person who possesses power need not be, or at least not always be, dominant in interaction” (1991: 11).

1.2 Dominance and language learning in tandem

The concept of interactional dominance is linked to the principles of reciprocity, autonomy and collaboration, on which tandem and Teletandem are based (Brammerts 2003; Telles 2009). Indeed, joining one of these educational programs implies that:

- there must be mutual recognition by each partner of the same rights and privileges in relation to participation in the activity (reciprocity);
activity planning must be free from external control (autonomy). For instance, the instructor is a consultant and collaborates to find solutions when requested (Telles & Vassallo 2006);

- partners must work in conjunction in order to achieve results (collaboration).

In particular, investigating interactional dominance means analysing whether or not one partner more actively controls the conversation flow, thus actually affecting the degree of reciprocity and autonomy in using conversational patterns, and imposing a definite form of collaboration. That is to say, if one partner asks many more questions, thus taking a dominant role, s/he puts the interlocutor in the position of having to reply or of having to request to “restore order”, by recognizing his/her right to intervene actively (e.g. by saying please, let me ask you some questions). This situation is limiting for the submissive partner who sees his/her freedom to manage the flow of conversation jeopardized. This also has an effect on the forms of cooperation established between interlocutors, since each participant might feel engaged to a differing degree in the general communicative task (see Linell 2009: 178), thus creating the conditions for a form of collaboration, based on static roles and not on dynamics as it is when speakers share the equal right to introduce new material into the discourse (Linell 2009: 179).

Therefore, the definition of reciprocity, of autonomy and of collaboration we are aiming at is determined by the situation and by the way participants interpret their roles during Teletandem sessions. These roles emerge during the conversation flow and reflect external conditions, such as the kind of task to be accomplished, and internal conditions such as individual factors (e.g. personality). In fact, the focus of the present study is to determine whether modifying certain external conditions, that is, topic choice made by the non-native speaker, leads to possible alternation in conversation management, giving both interlocutors the opportunity to use particular language structures, for example, information requests, or long turns.

The production of particular language forms is the condition which can develop language competence. It is well known that during communication, in order to be understood by his/her partner, learners test out hypotheses about target language rules and pay attention to meanings and to the form by which meanings are conveyed. This occurs clearly when an utterance (or a word in the utterance) is not understood by the interlocutor who signals non-comprehension by, for instance, requesting clarification, after which the primary speaker is forced to modify his/her preceding output in order to make it comprehensible. This process applied to forms that characterize dominant behaviour in communication (e.g. asking for information, making long turns) might result in the learner's language development.

2 Methodology

In this section, research questions, data collection and analysis will be presented. The analytical framework will be discussed, relating the perspective adopted for this study to that of other research into dominance. The section will
conclude with a discussion of the problems arising from data analysis in relation to each single dominance indicator (i.e. subsections 2.2.1, 2.2.2, 2.2.3).

2.1 Research questions and data collection

The study addresses issues related to language expertise (research question-RQ1) and content familiarity (RQ2) in Teletandem conversations. The research questions are:

RQ1: What is the role of the native speaker in conversations during exolingual communication for learning?

RQ2: What is the role of the L2 speaker when he/she has chosen the topic for conversation?

The data have been collected by video-recording via multimodal computer conversations practised by two female volunteer university students (informed consent has been obtained). One of them was an Italian native speaker (ITL1; age 29); the other was an English native speaker (ENGL1; age 22). The conversation was conducted via computer, using instant messaging and VoIP software (i.e. Skype). Their language proficiency in L2 ranged from upper-intermediate to advanced, as self-evaluated by the participants and confirmed in data. The data consists of three hours of recorded/transcribed computer-mediated conversations which constitute three different meetings, organized as follows:

- Meeting 1 (M1). During this meeting, during the first 30 minutes the language of conversation was Italian; in the second 30 minutes the language was English (M1ITENG). There was no previous topic choice, the conversation was free discussion for mutual introduction and for dealing with general subjects;
- Meeting 2 (M2). During this meeting, the language of conversation was English (M2ENG). The topic was chosen by the Italian native speaker and agreed by the English native speaker partner via email. The topic was travelling;
- Meeting 3 (M3). During this meeting, the language of conversation was Italian (M3IT). The topic was selected by ENGL1 and agreed via email by ITL1. The topic was rugby, the sport practised by the English native speaker.

2.2 The analytical framework

The multidimensional analytical model adopted for the present study is based on previous research and aims to highlight the nature of Teletandem conversations. Hence, parameters for investigations will take into account the bi-focality of the communication process (i.e. focus on content and language of communication), emphasizing the role of interaction for language learning, and consequently the use of language forms as an opportunity for language practice and learning.

In previous studies, dominance in everyday conversation has been investigated in different contexts of use and has been measured in terms of the
distribution of various communicative behaviours (e.g. fillers, turn length). Much of this research consists of empirical investigations of communicative actions on the basis of gender factors. To cite just a few, Zimmerman and West (1975) and West and Zimmerman (1983) analysed the relationship between gender and language variation by looking at interruptions and overlaps. Fishman (1983: 405) examined “concrete conversational activity of couples in their homes from the perspective of the socially structured power relationship between males and females”, by investigating the distribution of questions, statements, minimum responses, topic initiation. Gass and Varonis (1986), also aiming to highlight genre dominance in conversation in Japanese society, analysed the distribution of amount of talk, number of turns, questions and overlaps produced by male and female speakers when talking in ESL.

As regards native/non-native conversation, on which the present study focuses, Zuengler and Bent (1991) investigated the influence of content knowledge when participants had different expertise, by looking at the distribution of fillers, amount of talk, backchannels, interruptions, resisting interruptions and topic moves.

A fairly well-known attempt at defining the analytical framework of different social situations (e.g. ordinary conversations, radio call-in chat programmes, etc.) is the work by Linell and his associates (Linell and Gustavsson 1987; Linell et al. 1988; Linell 1990; Linell and Luckman 1991; Linell 2009) who propose a scheme of analysis based on the following dimensions of dominance: quantitative dominance, intended as the measure of words uttered in a turn by each speaker and by the average turn length; topic (or semantic) dominance which is manifested by control of topics in the discussion, measurable for instance by the introduction of new content words, and interactional dominance. This last dimension deals with “patterns of asymmetry in terms of initiative-response (IR) structure” (Linell 1990: 158). Linell and his associates’ model distinguishes 18 categories of turns, comprehending either an initiative (I) or a response (R) (Sinclair and Coulthard 1975), ordered on a six-point scale in relation to the strength each of them shows in structuring conversation. A strong move is an initiative such as a question which brings about new topics (Linell et al. 1988); in contrast, a weak move is a response which shows no tendency to develop the dialogue. The distinctive feature of the model proposed by Linell et al. (e.g. 1987, 1988) and Linell (1991, 2009) is the perspective of analysis which is not limited to local IR but attempts to capture interrelations between turns and macro-structure, i.e. topics and episodes, in order to highlight the co-construction dynamics of what he calls the “communicative project”. This dialogical dimension of discourse supersedes the traditional Searlian speech act theory (Searle 1969), considered ”monologist pragmatics”. Linell et al.’s and Linell's interaction analysis is also a valuable attempt to employ a quantitative analysis to capture differences among different social situations, ranging from symmetrical (e.g. peer to peer everyday conversations) to highly asymmetrical (e.g. court interviews) and to define differences between phases of the same social event.

Whereas the model proposed by Linell et al. and Linell aimed mostly at characterizing social situations, showing different interactional behaviours in symmetrical and asymmetrical contexts, for the purposes of the present study, it seems more appropriate to follow the analytical framework of Itakura (2001) which focuses on the description of a non-institutional context such as L1 and L2
conversations between Japanese male and female speakers, trying to capture differences in behaviour of each interlocutor. Like in Itakura (2001), the focus of the present study is just one social situation (which does not fall under the category of asymmetrical) and particularly the role assumed by each actor in relation to the conversation flow, including the role he/she plays in solving communication problems, which are particularly relevant in native/non-native conversations. Instead of an ordinal scale ranging from strong to weak moves, the present analysis will be carried out by measuring behaviours pertaining to opposite extremities such as controlling and non-controlling moves. The former have an actual impact on the other speaker’s contribution; In contrast, the latter do not determine modification in the discourse (e.g. a repair which is not followed by interlocutor's focus on form). Although this polar analytical measurement tends to bring about a less articulated description of the interaction structure, it nevertheless allows a comparison of different attitudes towards the conversation flow by two interlocutors who are sharing the same "communicative project" (see above).

The research design adopted is multidimensional and will measure conversational traits such as (see also Itakura 2001):

- sequential dominance, that is, the direction of interaction, resulting from the qualitative analysis and measurement of controlling topic moves (see also Fishman 1983; Linell 2009);
- participatory dominance, that is, the violation of the interlocutor’s right to take part in the conversation, i.e. interruptions and overlap;
- the interaction space, that is, a quantitative measure of words and turns produced by each interlocutor.

In particular, for the purposes of this study, the average turn length was considered, since it also takes into account the distribution of turns among speakers, allowing a comparison of conversation structures during the three meetings.

For sequential and participatory dominance, data analysis highlighted qualitative themes which have then been quantified. Conversely, interaction dominance has been quantitatively measured. For sequential dominance the qualitative analysis consisted of identifying controlling moves and relating them as percentage to the total number of turns.

In order to compare data between meetings (in the first of which 30 min. were in Italian and 30 min. in English), both M2 and M3 have been divided into two events of 30 min. Thus, for the purposes of data analysis, six different events were considered (M1part1IT, M1part2ENG, M2part1ENG, M2part2ENG, M3part1IT, M3part2IT).

In the following subsections interactional traits considered for the purposes of this study will be described in more detail.

2.2.1 Sequential dominance

The investigation of sequential dominance is based on the analysis of the relationship between moves in an exchange, the latter being a basic structure in which a topic develops. The analysis started from topic moves. A turn could contain one or more moves. Topic moves could be embedded into a response or
follow a response. Therefore, a response plus a topic move (topic initiation or
continuing move) was also possible. A response plus a topic move corresponds
to two moves and two exchanges.

A topic move is considered controlling when it anticipates possible features
of the following turn (Linell 2009: 179) and when it selects an appropriate
response (Itakura 2001: 1865). Hence, the response which follows the initiation
move must be a complying action which fulfils its illocutionary force. If an
initiation move comes before a non-complying initiation action then it is
considered attempted control (Itakura 2001: 1864).

In the analysis the bi-focal nature of Teletandem conversation was taken
into account (see Section 1). Therefore together with initiations, having functions
such as eliciting relevant information in relation to a topic, or introducing new
material into the conversation (Tsui 1994) moves incorporated in metalingual
sequences (e.g. negotiation of meaning) are also taken to constitute valid
eamples of controlling moves. For instance in example 1, the repetition request
(eh) made by ENGL1, clearly linked to ITL1’s strong initiative (eh di piccola
cilindrata tipo), is considered a controlling move. Conversely, in Linell et al.'s
(e.g. 1987, 1988) and Linell’s (1991, 2009) model comprehension checks, requests
for repetition, etc. are considered weak initiatives in relation to the following
turn since they do not ”introduce new material into the discourse” (Linell 2009: 179)
and, furthermore, they do not provide the required response to the
preceding turn. The before mentioned analytical perspective, if it can be
appropriate for analysing and describing dominance in endolingual
communication, does not seem to apply to exolingual communication in which
the language competence gap between interlocutors makes metalingual
exchanges an essential component of the communication process and, as regards
Telatandem, of language development.

Ex.1- (M3_part1IT; 0:37:02.8- 0:37:35.1)

ENGL1: wow è una passione molto differente ma mi piace a:hm e hai avuto
il motorino vuol dire una motocicletta piccola sì
ITL1: e:hm di piccola cilindrata tipo
ENGL1: eh
ITL1: piccola cilindrata
ENGL1: mh
ITL1: il motore è piccolo non so cilindrata va bene come
ENGL1: eh si e:hm è una parola tecnica no ((somebody is hitting on the
key)) ma
ITL1: che il motore è piccolo non ci vuole la patente come la vespa che
l'hai vista in=
ENGL1: =eh si come una vespa no si ah si non è si non è come qui negli stati
uniti ci sono le harley davidsons sai ((laugh))

Hence, indicators in the form of repetition requests (e.g. example 1 ENGL1: eh),
are actually considered appropriate responses to an unclear utterance (see
above), anticipating and projecting the metalingual focus of the subsequent
contribution. For example, in example 1 ITL1 uses the expression di piccola
cilindrata tipo which is probably unknown to ENGL1, thus this latter interlocutor
replies by requesting a repetition and starts a new sequence whose focus is
language. Thus, an utterance produced by the primary speaker, which is followed by indications of non-understanding, is a topic initiation move, the repetition request is both a response and a topic move with a metalingual focus that has consequences for the following turn.⁶

On the other hand, moves that have a focus on form but do not lead to a change in the behaviour of the next speaker are considered non-controlling. For example, in example 2 ENGL1 says baking thus recasting the incorrect English expression cooking sweets. The correct form by ENGL1 since it is not incorporated in ITL1’s following turn – in fact the latter repeats sweets – is considered non-controlling, or specifically, attempted control.

Ex. 2 (M1_part2ENG; 0:54:03.0- 0:54:45.6)

ENGL1: I mean I've never really tried you know but I just don't have the patience I think I always like if I have to make food for myself I make like a salad or sandwich but I have never I never go fancy like I just don't I don't know but some day maybe [I'll take my time]

ITL1: [yes it is some] thing that since when I was really young I was always there you know watching my mother cooking and I was really curious then now that I live alone of course actually I'm not good in cooking sweets

ENGL1: ah ok baking [yeah]

ITL1: [sweets] I cannot do it really I don't know they don't work in my hands ((laugh))

Similarly, in example 3 ITL1 turn no no is coded as non-controlling since it has clear properties of response (i.e. pancakes is not the right word) but does not actually project any feature onto the following turn: I mean I said by ENGL1 which seems to be linked to the same speaker’s preceding turn ehm I don't know pancake, in both cases failing in the attempt to find, together with her partner, the right translation of pan di spagna. On the other hand, ITL1 shows her wish to avoid negotiation of meaning and continue the conversation by saying first no no and then ok it doesn't matter, then laughing at her partner’s attempt to translate the word (i.e. Spanish cake), finally, by saying anyway... at the beginning of her long turn in which she avoids the use of the problematic word.

Ex. 3- (M1_part2ENG; 0:55:10.5- 0:55:48.4)

ITL1: yeah you know I don't know in english how to say you know the cake in italian is pan di spagna the soft cake that you have to fill with cream and so on to make

ENGL1: ehm I don't know pancake

ITL1: no no

ENGL1: I mean I

ITL1: ok it doesn't matter

ENGL1: spanish cake

ITL1: no no ((laughs))=

ENGL1: =what about it=
ITL1: =anyway when I was trying to cook it it was a kind of stone because it was really crack ((gesture communicating something hard)) and they said wha-((laugh))

ENGL1: ((laughs ))I think that not (XXX) happen

Furthermore, for their strictly interactional value, and for their shortage of initiative properties, also moves followed by listener responses (Clancy et al. 1996) such as backchannels (e.g. continuer, display of interest: ya ya ya, see example 9) and jointly constructed turns as forms of collaborative behaviour (example 4) and echo repetition (example 5) are coded as non-controlling. In example 4, ITL1 aims to complete her partner's preceding turn by saying to miss me which is an utterance that has no impact on the interlocutor's behaviour. Similarly, al contrario produced by ENGL1 does not anticipate any feature of the following turn.

Ex. 4 - (M1part2ENG; 0:41:56.7- 0:42:20)

ITL1: =yeah ((laughs)) but sometimes you know e:hm I think e:hm because I remember with my friend when she had to leave we were talking and she said but I will be sad as well and I told her no you won't because actually the people who will be sad is who remain at home ((laughs )) not the one who leaves ((laughs))

ENGL1: right because you feel like the emptiness whereas she’s probably you know experiencingsomething new so she doesn't have as much time to like you know

ITL1: to miss me ((laughter))

ENGL1: ((laughter )) to (xx)

ITL1: yes but ok I I think that one day when my day will come and when I move I will see if it is the same or not ((laughs))

ENGL1: right

Ex. 5 (M3part2IT; 0:33:00-0:33:03)

ENGL1: si bisogna avere un- una chitarra speciale no
ITL1: si non tanto dover mettere le corde al contrario
ENGL1: al contrario7
ITL1: si quindi ho provato a imparare a suonare la chitarra...

The application of a polar coding system that forced data interpretation according to a yes/no condition (i.e. a move could be counted as controlling or non-controlling) was problematic; limits in coding different turns were approached in a way that led to an understimation of some characteristics of speech. There was some doubt, for instance, regarding the analysis of the proactive feature of closing turns of sequences such as a response in a greeting sequences, and forms of single or multiple acknowledgements of a preceding utterance (e.g. right, ok). Neither of these types of turns were shown to be particularly marked in defining the conditions for the next turn, hence they were classified as non-controlling action (see above), despite each of them actually leaving the interlocutor the opportunity to open a new discursive sequence.
In example 6, in the first greeting sequence the *hallo*, produced with a falling tone by ITL1, is a response to the primary locutor’s initiative but it shows no real proactive features, setting primarily pragmatic conditions of relevance and leaving the interlocutor the possibility to open any type of sequence (see Linell 2009: 180). In fact, ENGL1 greets her interlocutor again. Conversely, *hallo* pronounced with a falling-rising tone, manifesting the speaker’s surprise, would have had a stronger projection energy over the following action leading to an interpretation of this closing turn as a complying action (e.g. A: "Hallo"; B: "Hallo" -falling-rising tone--; A: "Long time no see").

Ex. 6 (0:00:33.8-0:00:41.1)

ENGL1: hallo
ITL1: hallo ((laugh))
ENGL1: hi
ITL1: hi Marta

Similarly, in sequences such as those in example 7, acknowledgements (single or multiple) are intended as an appropriate and relevant response to the preceding topic move but are not considered controlling in relation to the following turn since they only partially suggest what may follow.

Ex. 7 (M1_ENGL- 1.01.52.07-1.02.02.1)

ITL1: [uhm uhm] [[uhm]] =yes but languages are always useful also in the field you decide so it is perfect
ENGL1: that’s true
ITL1: ya
ENGL1: exactly
ITL1: it’s so cool really

Hence, although the analytical framework served the purposes of this study, it raised problems whose solutions have not proved entirely satisfactory.

2.2.2 Participatory dominance: overlaps and interruptions

"Interruption refers to simultaneous speech produced by a speaker who begins to speak in the middle of a current speaker’s turn constructional component” (Itakura 2001: 1868). In contrast, "Overlap occurs when two speakers speak simultaneously at a turn transition relevance point where both speakers have the right to complete their respective utterances” (Itakura 2001: 1869). In the present study overlaps have been regarded as controlling when they lead to the primary speaker’s withdrawal since, in this case, they violate his/her right to maintain and complete a turn. Therefore they function as interruptions. In example 8, there is an example of interruption leading to interlocutor withdrawal:

Ex. 8 (M1_part1IT- 0:13:18.6- 0:13:48.9)

ENGL1: : e:hm e che fai durante l'estate [dopo aver f-]
ITL1: [l'estate] finito tutto allora di solito torna a casa dalla mia famiglia che comunque taranto è proprio vicino al- è sul mare come città è carina di visitare sì sì e quindi di solito l'estate vado al mare non tanto perché come puoi vedere la pelle è troppo bianca mi scotto (laugh) il sole non lo sopporto più di tanto però vado al mare oppure quando ho potuto ho viaggiato

2.2.3 Interaction space: quantitative dominance

Both spoken and written words are measured as components of interaction space. This dominance dimension was quite easy to consider since the transcription of Teletandem conversations annotated spoken words as well as chat texts. The average turn length was considered instead of the distribution of the number of words (like in Itakura 2001) since the former preserved the information about the distribution of turns, allowing observations to be made about the discourse variation in different meetings (see Section 3.1). 9

3 Results

In section 3, some general characteristics of the Teletandem exchanges between ITL1 and ENGL1 will be presented, focusing on the type of relationship that the experience allowed them to build. We will proceed to some considerations about communication strategies used by the partners (e.g. chat), after which data regarding every single conversational trait will be shown and discussed. The relationship among different analytical measures will be discussed and finally research questions will be answered.

3.1 General characteristics

In general, in most parts of the conversations subjects were engaged in talking. They appear to enjoy talking (e.g. they very often laugh) and they discuss common interests. The relationship grows during the three meetings so that during the third meeting they decide they will keep in touch even after the end of what they have called "the project", that is, data collection for this research. In contrast to what emerged in a study carried out with subjects with low-intermediate competence in L2 (Leone 2012), chat was rarely employed for communication. In fact, the need for using written texts seems to be more relevant when the language for the dialogue is not well known by one of the participants. In this situation, the graphic form of a word allows the low-competence non-native speaker "to look at the new word or utterance", keeping the small language sequence away from the voice and from "difficult pronunciation", sometimes hard to grasp (Leone 2009b).

Although speakers respect the "rule of talking in one language" (e.g. English for the second meeting), code-switching is often employed for facilitating communication (Anderson & Banelli 2005: 90-106; Leone 2012).

A shortage of metalingual talk shows "interlocutors' efforts" to avoid "troubles" (see example 4; Aston 1986). Although M2 and M3 develop around a topic, there are digressions from this main topic.
3.2 Sequential dominance, participatory dominance and interaction space

As shown in Figure 1, in 5 events out of 6 the English native speaker produces more topic moves than her partner. Particularly, in M1, in the first 30 minutes, during which Italian is the vehicle language, the English native speaker produces more controlling topic moves than the Italian native speaker, whereas in the second event, during which English was the language for conversation, ITL1 makes more initiation moves. The gap between figures representing ENGL1’s and her partner’s behaviour in relation to this variable grows in the first event of the second meeting and in the third meeting.

Figure 1. Percentage of controlling topic moves in relation to the total number of turns. Data are related to 3 Meetings lasting 1 hour each. Each meeting is divided into 2 events of 30 min. M1/2/3 indicate Meeting 1, 2 and 3. IT is the abbreviation for Italian, ENG for English.

Figure 2 and Tables 1-6 report data for interaction space. In particular, it represents the variation of the average turn length during the three meetings. As for measuring other dimensions, each meeting (1 hour) has been divided into 2 events of 30 min. The 6 tables show the number of words spoken and written in chat, the number of turns and the average turn length produced by each interlocutor during each meeting.
Figure 2. Average turn length (spoken and written words). Data are related to three meetings lasting 1 hour each. Each meeting is divided into 2 events of 30 min. M1/2/3 indicate Meeting 1, 2 and 3. IT is the abbreviation for Italian, ENG for English.

In M1 (Table 1 and 2) and in M2 (Table 3 and 4), there is not strong evidence of asymmetries between the average turn length produced by each interlocutor. Particularly, in M1 (Table 1 and 2, Figure 2), the ENGL1 talks longer. In M2 (Table 3 and 4, Figure 2), it is the ITL1 who "occupies a larger interaction space". On the other hand, asymmetries in turn length are very evident in M3 (Table 5 and 6, Figure 2), during which Italian is the vehicle language. The English native speaker talks longer in both events (M3part1IT and M3part2IT), and produces fewer turns than her interlocutor (114 in relation to 144 of her interlocutor); therefore the average turn length of her talk is higher than that of her partner.

Figures reported in Tables 1–6 show also that the second half of M2 (M2part2ENG; lasting 30 min., Table 4, Figure 2) has the greatest average turn length, having a number of words comparable to those of the other events but a number of turns inferior to others (less than 100). During this meeting English was employed for discussing travelling. After the first 30 min. of conversation the two interlocutors became very involved in this topic, which allowed them to describe and discuss their personal experiences of visiting different countries and getting acquainted with people from different cultures.

Table 1. Number of words spoken and written in chat during Meeting 1, first 30 min. Vehicle language is Italian, free discussion (M1part1IT).

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Tokens</th>
<th>Turns</th>
<th>Average turn length</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITL1</td>
<td>2,212</td>
<td>130</td>
<td>17,02</td>
</tr>
<tr>
<td>ENGL1</td>
<td>2,345</td>
<td>130</td>
<td>18,04</td>
</tr>
</tbody>
</table>
Table 2. Number of words spoken and written in chat during Meeting 1, last 30 min. Vehicle language is Italian, free discussion (M1part2ENG).

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Tokens</th>
<th>Turns</th>
<th>Average turn length</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITL1</td>
<td>2,448</td>
<td>102</td>
<td>24</td>
</tr>
<tr>
<td>ENGL1</td>
<td>2,575</td>
<td>103</td>
<td>25</td>
</tr>
</tbody>
</table>

Table 3. Number of words spoken and written in chat during Meeting 2, first 30 min. Vehicle language is English, topic choice is “travelling” (M2part1ENG).

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Tokens</th>
<th>Turns</th>
<th>Average turn length</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITL1</td>
<td>2,532</td>
<td>111</td>
<td>22.8</td>
</tr>
<tr>
<td>ENGL1</td>
<td>2,484</td>
<td>115</td>
<td>21.6</td>
</tr>
</tbody>
</table>

Table 4. Number of words spoken and written in chat during Meeting 2, last 30 min. Vehicle language is English, topic choice is “travelling” (M2part2ENG).

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Tokens</th>
<th>Turns</th>
<th>Average turn length</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITL1</td>
<td>2913</td>
<td>72</td>
<td>40.46</td>
</tr>
<tr>
<td>ENGL1</td>
<td>2686</td>
<td>73</td>
<td>36.79</td>
</tr>
</tbody>
</table>

Table 5. Number of words spoken and written in chat during the Teletandem Meeting 3, first 30 min. Vehicle language is Italian, topic choice is ”rugby” (M3part1IT).

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Tokens</th>
<th>Turns</th>
<th>Average turn length</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITL1</td>
<td>1,382</td>
<td>144</td>
<td>9.6</td>
</tr>
<tr>
<td>ENGL1</td>
<td>2,662</td>
<td>114</td>
<td>23.35</td>
</tr>
</tbody>
</table>

Table 6. Number of words spoken and written in chat during the Teletandem Meeting 3, last 30 min. Vehicle language is Italian, topic choice is ”rugby” (M3part2IT).

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Tokens</th>
<th>Turns</th>
<th>Average turn length</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITL1</td>
<td>1,534</td>
<td>116</td>
<td>13.22</td>
</tr>
<tr>
<td>ENGL1</td>
<td>2,511</td>
<td>115</td>
<td>21.83</td>
</tr>
</tbody>
</table>

Violation of the interlocutor's rights to finish a discourse, by interrupting her talk, is the other measure considered for this study (participatory dominance). Data are reported in Table 7.

Table 7. Interruptions.

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Meeting 1</th>
<th>Meeting 2</th>
<th>Meeting 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITL1</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>ENGL1</td>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

As we can see, there are few interruptions during the course of the 3 meetings. In M1 there are none at all. This is probably because at the beginning of the experiment, the subjects are not acquainted with one another, and therefore turn-taking rules seem to be respected as form of politeness by each of them. In
M2, ITL1 interrupts 3 times, and during M3 she is also responsible for 3 interruptions, her interlocutor 2.

As underlined by Itakura (2001: 1870), interruptions and overlaps as measures of participatory dominance are "likely to be a less significant indicator of conversational dominance than sequential dominance" in face-to-face communication, since they have a low frequency in data. Interruptions and overlaps become even less significant in computer-mediated communication since the use of technological apparatus further reduces the possibility of violating turn-taking rules.

Before answering the research questions, a discussion of the relationship between the different measures adopted for the analysis is inevitable. This implies highlighting their consistency which is verified when one speaker appears to be dominant according to two or more indicators. As already said, considering the low frequency of interruptions in our data, this indicator will not be considered; sequential and quantitative dominance will constitute our sole focus.

3.3 Consistency between different considered measures

A comparison of data in Figures 1 and 2 show that in 3 events out of 6 there is consistency between percentage of topic moves and average turn length. This applies to the first event of M1 and during M3 when ENGL1 acts as dominant during a conversation in Italian. Conversely, during part 2 of M1, the Italian native speaker produces a noticeably higher number of topic moves (Figure 1) whereas the average turn length (Figure 2) is nearly equal to her interlocutor's. In M2, ENGL1 makes more topic moves but speaks less than her interlocutor.

Inconsistency between sequential and quantitative dominance has been observed in Gass and Varonis (1986), Linell et al. (1988) and partially in Itakura (2001). In this last study the author points out that "Inconsistency between sequential and quantitative dominance is observed when one speaker controls the development of the topic of conversation via short initiations that prospect longer responses" (Itakura 2001: 1872). This can happen in situations in which one of the speakers, recognizing the interlocutor as expert, makes many questions to which the other replies in long turns (Linell et al. 1988). This pattern is very typical of doctor-patient interaction and it is as well common in classrooms when the teacher tests student's knowledge by asking him/her questions. Example 9 from M2 is an example of this type of inconsistency: in this extract ITL1 produces a topic move (20 words) which is followed by a long response (149 words) after two turns: one displaying interest (ya ya ya, non-complying action, see Section 2.1.1), the other being unclear speech (ITL1: [(xxx)])

Ex. 9 (M2ENG: 12.40.8-14.08.5)

ITL1: yeah but actually I like this kind of let's say maybe exotic culture i don't know how to name there
ENGL1: yeah yeah yeah
ITL1: [(xxx)]
ENGL1: [well] that's interesting 'cause I'm- I say - I think I would like too but and so now I've started only to pretty much like very european like developed like third world countries even you know I went to brazil and that was already that was a big big change for me like I- my travels have been you know portugal italy france spain you know the uk germany like I have done europe but I've not really gone outside those you know the european context even like when I was in south america there is one of my friend in argentina which it's so european and I liked it there because it was familiar to me like it was - it wasn't different but I've always said I'd love maybe go to egypt and india but I don't know if it would be a big shock like it's [it's]

Conversely, in M3 the relationship between sequential and quantitative dominance is consistent: ENGL1 produces long topic moves to which ITL1 makes short responses, the latter leaving the floor to her partner. An example is given in an exchange via chat at the beginning of Meeting 3 (example 10).

Ex. 10 (M3part1-00.00.00-00.00.54)

ENGL1: (chat: ciaooo il mio computer ha un problema con il suono aspetta un minuto)
ITL1: (chat: certo)¹⁰

3.4 Discussion

In the following subsections research questions regarding the impact of language and content expertise on the role assumed by each speaker in conversation will be answered.

3.4.1 Language competence and dominance

This analysis suggests no tendency for the native to be more active in conversations (RQ1). In fact, ITL1 does not produce either more topic moves or longer turns than her partner during the first event of M1 or in M3, whose language of conversation is Italian. Similarly, ENGL1 does not prove to be more active in relation to these two conversational behaviours either during the second event of M1 or in M2 in which the target language is English. These results suggest conclusions not exactly in line with what is stated in Kasper (2004), which analyzes sequences of “conversation for learning” (Gesprächsrunde) between a novice and a native speaker of German. In this study, Kasper observes that the German L1 speaker assumes the role of interaction manager who initiates sequences, asks questions, ratifies the answers, introduces and elaborates topics, and keeps the interaction going. German language expertise is invoked by the non-native speaker when communication is difficult. For instance by code-switching in her first language (English), she presents her problems in producing the utterance in the language of conversation (German) and indirectly asks the interlocutor for help. Metalingual exchanges, which occur together with ordinary conversation sequences – during which participants act as acquaintances – put the German language expert in the
position of “interactional pivot” (Hauser 2003: 19; Kasper 2004), that is, s/he manages conversation. The difference in perspectives on data analysis between the present study and that of Kasper, along with the involvement here of more competent L2 speakers than those involved in Kasper’s study, calls for caution in comparing the results of the two investigations. The microanalysis of metalingual sequences carried out by Kasper finds evidence of the active role of the native speaker in those specific events. Probably, a closer look at metalingual exchanges would highlight the role of dominance of the native speaker also in the Teletandem conversations analysed for the present study. As regards the participants’ language competence, the relative ease with which ENGL1 and ITL1 interact might have reduced the impact of language expertise on the overall conversation structure.

### 3.4.2 Content familiarity and dominance

Findings reveal participation patterns which only in M3 can be explained by the influence of content choice (RQ2). In fact, in the last meeting, in which Italian is the vehicle language and the chosen conversation topic is rugby, the non-native speaker exhibits dominant behaviour according to the considered indicators. Probably, the selected theme – ENGL1 is a relative expert in rugby not only because she loves it but also because she practises it – gave the English native speaker the opportunity for making long turns and for introducing new material in controlling topic moves. This condition, that is, the degree of expert knowledge in a content domain, seems to be close to that of the study by Zuengler and Bent (1991) in which content expertise and not familiarity was tested. Figures related to event 1 of M1 (Figure 1 and 2), where consistency between sequential and interaction dominance is shown and once again ENGL1 has a more active role, lead us to assume that the English native speaker probably has a personal orientation to the event as a controller of the conversation flow. The condition of content choice thus enhances the personal attitude that has emerged during free conversation. Conversely, in M2, which was in English, the Italian native speaker who chose the topic “travelling”, produces (but not consistently) longer turns than her interlocutor but fewer topic moves (inconsistency between these two indicators is discussed above). Thus showing ENGL1’s orientation to get the L2 speaker to talk, giving her the opportunity to practice the target language.

### 4 Conclusion

This study analyses dominance in multimodal computer-mediated communication, in which two speakers of different L1 are involved and alternatively use their L2, the latter being the native language of the interlocutor. The research design aimed to shed light on those behaviours that might be salient for language learning. So patterns such as eliciting information, requests, forms of negotiation of meaning together with the possibility of elaborating a long discourse and the opportunity to finish a discourse, by not being interrupted, were considered relevant for this purpose.
Hence, the following conversational indicators were considered: sequential dominance, which consisted in identifying and counting topic moves; interaction dominance, that is, the average turn length and interruptions. For analysing topic moves a polar system, which distinguished controlling non-controlling acts, was applied. For measuring interaction dominance words said and written in chat were considered. The third indicator, interruptions, did not prove to be significant in the context under discussion due to their low frequency. It is probable that the use of the computer for communication reduces the possibility of violating turn-taking rules and creates the external condition for a "polite turn alternation".

The two different forms of expertise, language competence and content knowledge, considered for the present study, proved to have different impacts on the conversation structure. As regards language competence, data showed no tendency by the native speaker to control the conversation flow. In fact, neither ENGL1 nor ITL1 is dominant during events in which the language of conversation is English and Italian, respectively. As regards content domain familiarity, it seems to have an effect when the topic knowledge becomes expertise as it is in M3, when ENGL1 produces more topic moves and longer turns than her partner, confirming and enhancing an attitude she showed during the first event of M1 which was in her L2 (i.e. Italian). For other events interlocutors’ participation seems to be balanced.

As far as the analytical framework is concerned, we can say that consistency between sequential dominance and average turn length demonstrates the participants’ dominant and submissive behaviours (i.e. M3). Whereas, inconsistency becomes relevant for describing conversational structures when the gap between the two indicators in the same interlocutor is wide thus showing conversation patterns similar to those of an institutional asymmetrical contexts (e.g. teacher-student interaction in classroom).

The simplified framework adopted for describing sequential dominance, that is, a polar coding system, did not allow a consideration of different degrees of strength of topic moves, leading to an underestimation of the proactive feature of turns that concluded sequences such as unmarked last turn of greetings.

The small group of subjects and consequently the absence of statistical data suggest that caution is required in considering these findings, and generalizations should be avoided. Therefore the tendency shown in this study needs further investigation, particularly:

- all indicators must be further investigated with a larger group of subjects;
- a statistical analysis must be carried out (e.g. variance to define probability distribution, t-distribution for assessing the statistical significance of the difference between two means such as those of average turn length);
- metalingual exchanges require further investigation.

Qualitative and quantitative analysis of controlling moves (e.g. clarification request, confirmation check) which are part of negotiation of meaning processes will be considered separately from other indicators of sequential dominance to establish whether there is any consistency between the leader role of one speaker in topic development and in attempting to resolve communication
trouble (or the speaker who leads the conversation flow in terms of topic development is the same who tries to resolve communication troubles).

**Endnotes**

1) Transcription conventions:
- interrupted speech
  (xxx) unclear or in doubt expression
  = break and subsequent continuation of a single utterance
  [text1], [[text2]] start and end points of overlapping speech
  (chat:) text in chat
  ((xxx)) non verbal activity

2) ENGL1: yes I have lessons and the a:hm I still have to do homework by now and I have to do homework for morph[ology] and the night we have *entrenamento training (in the original data training is in English)
   ITL1: [u:hm u:hm] training (in the original data the word is in Italian)

3) Television news.

4) For qualitative data analysis Transana 2.42 was used, it is an open source software developed at the University of Wisconsin-Madison Centre for Education Research. Transana allows "to identify analytically interesting clips, assign keywords to clip, arrange and rearrange clips, create complex collections of interrelated clips" and access portions of relevant data by keyword search (http://www.transana.org/).

5) ENGL1: it's a very different hobby but I like a:hm and did you have a scooter meaning a little motorcycle
   ITL1: e:hm the kind with a small engine
   ENGL1: what
   ITL1: small engine
   ENGL1: mh
   ITL1: the engine is small I don't know small engine is it ok like
   ENGL1: eh yes it is a technical word isn't it but
   ITL1: that the engine is small you don't need driving licence like for vespa which you have seen in=
   ENGL1: = oh yes it's like a vespa no yes ah yes not it's yes it's not like here in the united states where there are harley davidson you know ((laugh))

6) In the model for describing negotiation of meaning sequences by Varonis & Gass (1985) the unclear word, expression or utterance is termed trigger. The repetition request is called indicator.

7) ENGL1: yes you must have a special guitar mustn’t you
   ITL1: yes not exactly you must put chord back to front
   ENGL1: back to front

8) ENGL1: e:hm what will you do during the summer [after having d-]
   ITL1: [summer] finished all then usually I go back home to my family which anyway taranto is just close to- is by the sea it is a nice town to visit yes yes and so usually during summer I go to the beach not so often because as you can see my skin is too white and I get burnt ((laugh)) I cannot stand the sun but I go to the beach the same or when I have had the opportunity I have travelled.
Quantitative data related to average turn length (interaction space) have been measured employing WorthSmith Tools v. 5.0 (Scott 2008), lexical analysis software that, among other activities such as “finding concordances in a text, finding salient words in a text or in a set of texts” (http://www.lexically.net/wordsmith/index.html), allows the user to measure the quantity of words in a text after having filtered units to be excluded from the final count (e.g. parenthesis and other symbols used for transcription).

ENGL1: (chat: hallooooo my computer has a sound problem wait a minute)
ITL1: (chat: ok)

References


