



Libraries and Learning Services

University of Auckland Research Repository, ResearchSpace

Copyright Statement

The digital copy of this thesis is protected by the Copyright Act 1994 (New Zealand).

This thesis may be consulted by you, provided you comply with the provisions of the Act and the following conditions of use:

- Any use you make of these documents or images must be for research or private study purposes only, and you may not make them available to any other person.
- Authors control the copyright of their thesis. You will recognize the author's right to be identified as the author of this thesis, and due acknowledgement will be made to the author where appropriate.
- You will obtain the author's permission before publishing any material from their thesis.

General copyright and disclaimer

In addition to the above conditions, authors give their consent for the digital copy of their work to be used subject to the conditions specified on the [Library Thesis Consent Form](#) and [Deposit Licence](#).

*FOSTERING PEER INTERACTIONS IN
ONLINE LEARNING ENVIRONMENTS*

*The potential of videoconferencing for interactional
abilities of foreign language learners in New Zealand
secondary schools*

Martina Simone Kopf

Faculty of Education
The University of Auckland

A thesis submitted in partial fulfilment of the requirements for the degree of Doctor of
Education in the Faculty of Education, The University of Auckland, April 2016.

ABSTRACT

The ability to communicate effectively in a foreign language has been crucial to the aims of language programmes worldwide for many years. However, foreign language learners often lack experience in spontaneous oral interactions. One way to provide more opportunities for communication practice is through synchronous computer-mediated-communication. Research on second language acquisition postulates that these real-time online exchanges are conducive to negotiation of meaning and communication strategies, where learners manage their discourse and solve communication problems in a social environment. Moreover, previous studies claim that computer-mediated-communication may be an ideal modality to reduce foreign language anxiety.

The aim of the current research was to examine interactions between two classes of near-beginner students of German as a foreign language via videoconferencing. Data were collected during four one-to-one Skype sessions to identify interactional features such as negotiation of meaning and other communication strategies that the 21 participants employed. This examination draws on interactionist and sociocultural theory regarding effective second language acquisition together with the Varonis and Gass model (1985) and Dörnyei and Scott's taxonomy (1997) to explore students' focus on meaning. Moreover, the study sought to examine how participants oriented themselves towards each other socially by using the model proposed by Rourke, Anderson, Garrison, and Archer (2001) to categorise and code social presence.

Tying in with the ability to communicate effectively, this study investigated the influence of computer-mediated-communication on foreign language anxiety, focusing on anxiety related to verbal communication in a foreign language. Learners' anxiety levels were measured prior to and after the intervention using the Foreign Language Classroom Anxiety Scale. Following each task, participants completed a short reflection regarding feelings of confidence and anxiety, as well as strategies that might help alleviate feelings of anxiety. Twelve participants were interviewed to explore in greater depth the reasons behind their levels of anxiety and perceived ability to interact.

Findings indicate that learners used a variety of interactional strategies to facilitate comprehension of input and output and were able to resolve communication breakdowns in the foreign language without having to resort to English. Moreover, the chat transcripts show that these learners' interactions contain interactional elements beyond the immediate context, such as acknowledgements and dis/affiliative comments.

Even though foreign language anxiety scores did not decrease significantly during the course of the study, self-rating scales and interviews revealed a reduction in students'

anxiety levels and an increase in confidence. Findings indicate that the most important factor for students' confidence in speaking is being able to practise oral language use in engaging, authentic environments with other learners and thereby coming to realise that interactions can be achieved by moving beyond their comfort zone, by taking risks in speaking, by using positive self-talk and by accepting that mistakes are an inevitable part of real-life interactions in a foreign language.

To my family

ACKNOWLEDGEMENTS

I would not have been able to complete this thesis without the support, and feedback of many others. I would like to thank Associate Professor Martin East and Dr Constanza Tolosa for their wise guidance, excellent feedback, patience and good humour.

I am extremely grateful to my research participants, who cooperated with me and consented to having their interactions recorded for this research. In addition, I would like to thank the participating teacher, and the administrators who allowed me to conduct the research.

My special thanks go out to the International Languages Department at my school. The “Language Ladies” have assisted me in my data collection and coding, but even more importantly, they took an interest in my research and supported me in any way possible.

Lastly, I would like to thank my family and friends. Without them, I would not have made it to this point. Thank you!

CONTENTS

Abstract	ii
Acknowledgements.....	v
List of Tables	x
List of Figures	xi
List of Excerpts.....	xii
List of Abbreviations and Acronyms	xiii
1 Introduction.....	1
1.1 Overview.....	1
1.2 Theoretical background	4
1.3 The New Zealand context	6
1.4 Statement of the problem.....	8
1.5 Purpose and significance	10
1.6 Research questions.....	11
1.7 Definition of terms	12
1.8 Organisation of the thesis.....	14
2 Review of the literature	15
2.1 Second language acquisition theory: The interaction approach	16
2.1.1 <i>Input hypothesis</i>	16
2.1.2 <i>Output hypothesis and collaborative dialogue</i>	17
2.1.3 <i>Sociocultural theory</i>	19
2.1.4 <i>Interactional hypothesis</i>	21
2.2 Summary.....	22
2.3 Foreign language interactions and discourse management.....	23
2.3.1 <i>Negotiated interactions</i>	24
2.3.2 <i>Communication strategies</i>	27
2.3.3 <i>Social presence</i>	30
2.4 Summary.....	31

2.5 Foreign language interactions and discourse management in computer-mediated-communication	31
2.5.1 Current research on videoconferencing for foreign language interactions.....	32
2.5.2 Negotiated interactions in computer-mediated-communication.....	34
2.5.3 Negotiated interactions in videoconferencing.....	36
2.5.4 Communication strategies in computer-mediated-communication.....	39
2.5.5 Social presence in computer-mediated-communication	40
2.6 Summary.....	42
2.7 Foreign language anxiety and its impact on foreign language interactions.....	43
2.7.1 Definition and causes of foreign language anxiety.....	43
2.7.2 Foreign language anxiety and computer-mediated-communication	45
2.8 Summary.....	49
2.9 The research gap.....	49
3 Methodology.....	53
3.1 Socially constructed learning epistemology.....	53
3.2 Mixed methods.....	55
3.3 Research Design	57
3.3.1 Videoconferencing as curriculum intervention	59
3.3.2 Participants.....	61
3.3.3 Tasks.....	63
3.3.4 Environment and procedures	64
3.3.5 Pilot-study.....	66
3.4 Data collection methods and analysis.....	68
3.4.1 Data collection for Research Question 1.....	69
3.4.1.1 The taxonomy by Varonis and Gass (1985) to code negotiation routines	70
3.4.1.2 The taxonomy by Dörnyei and Scott (1997) to code communication strategies	73
3.4.1.3 The taxonomy by Rourke et al. (2001) to code social presence.....	76
3.4.2 Data analysis of Research Question 1	77
3.4.3 Data collection for Research Question 2.....	78
3.4.3.1 Questionnaires	79
3.4.3.2 The videoconferencing reflection.....	79
3.4.3.3 Semi-structured interviews	80
3.4.4 Data analysis of Research Question 2	81
3.5 Trustworthiness.....	83
3.5.1 Dependability and transferability	83
3.5.2 Credibility and confirmability	84
3.5.3 Inter-rater reliability.....	85
3.6 Ethical considerations.....	85

3.6.1	<i>Informed consent and confidentiality</i>	86
3.6.2	<i>Protection of participants and power issues</i>	87
3.7	Summary	88
4	Findings	89
4.1	Research Question 1: Interactional features of foreign language interactions	90
4.1.1	<i>Negotiation of meaning: Quantitative results</i>	90
4.1.1.1	<i>Negotiated turns</i>	90
4.1.1.2	<i>Triggers and indicators</i>	93
4.1.1.3	<i>Responses and reactions to responses</i>	94
4.1.2	<i>Negotiation of meaning: Qualitative findings</i>	95
4.1.3	<i>Communication strategies</i>	101
4.1.4	<i>Social presence</i>	106
4.2	Summary of findings for Research Question 1	110
4.3	Research Question 2: Participants' experiences of the interactions	112
4.3.1	<i>Foreign language classroom anxiety scale pre-test and post-test</i>	112
4.3.2	<i>Self-ratings after each task</i>	118
4.3.3	<i>Skype anxiety rating scale</i>	119
4.3.4	<i>Reasons for foreign language anxiety</i>	122
4.3.5	<i>Strategies to cope with foreign language anxiety</i>	125
4.3.6	<i>Results from Skype reflections 1 to 4: Open-ended questions</i>	127
4.3.7	<i>Findings from open-ended questions of the post-test questionnaire</i>	130
4.3.7.1	<i>Aspects of the intervention participants enjoyed</i>	131
4.3.7.2	<i>Aspects of the intervention participants disliked</i>	132
4.3.7.3	<i>Ways the intervention aided participants' foreign language skills</i>	132
4.3.7.4	<i>Participants' feelings about interacting over the course of the intervention</i>	133
4.3.8	<i>Findings from the interviews</i>	134
4.3.8.1	<i>Interactional features</i>	135
4.3.8.2	<i>Social presence</i>	136
4.3.8.3	<i>Foreign language anxiety (causes and strategies)</i>	137
4.3.8.4	<i>Videoconferencing environment</i>	138
4.3.9	<i>Holistic view of participant experiences</i>	140
4.4	Summary of findings for Research Question 2	145
5	Discussion	147
5.1	Summary of themes for Research Question 1	148
5.1.1	<i>Negotiation of meaning</i>	148
5.1.2	<i>Communication strategies</i>	152
5.1.3	<i>Social presence</i>	155

5.2 Integrated findings of Research Question 1.....	156
5.3 Summary of themes for Research Question 2.....	157
5.3.1 Foreign language classroom anxiety scale.....	158
5.3.2 Reasons and strategies for foreign language anxiety.....	160
5.3.3 Self-rating scales.....	161
5.3.4 Skype scale.....	162
5.3.5 Participants' views on interactional features.....	163
5.3.6 Participants' views on social presence.....	165
5.3.7 Participants' views on foreign language anxiety and confidence.....	167
5.3.8 Participants' views on the videoconferencing environment.....	170
5.4 Integrated findings of Research Question 2.....	171
5.5 Summary.....	173
6 Conclusion.....	175
6.1 Implications.....	176
6.1.1 Theoretical and methodological implications.....	176
6.1.2 Pedagogical implications.....	177
6.1.2.1 Negotiation of meaning.....	178
6.1.2.2 Communication strategies.....	178
6.1.2.3 Social presence.....	179
6.1.2.4 The videoconferencing environment.....	180
6.1.2.5 Foreign language anxiety.....	181
6.1.2.6 The interact assessment.....	182
6.2 Limitations.....	183
6.3 Suggestions for further research.....	184
6.4 Concluding remarks.....	185
References.....	187
Appendices.....	203

LIST OF TABLES

TABLE 1 OVERVIEW OF RESEARCH DESIGN	58
TABLE 2 OVERVIEW OF SAMPLING DECISIONS.....	62
TABLE 3 PRIMES OF NEGOTIATION ROUTINES; ADAPTED FROM VARONIS AND GASS (1985).....	71
TABLE 4 COMMUNICATION STRATEGY (CS) TAXONOMY; ADAPTED FROM DÖRNYEI AND SCOTT (1997)	74
TABLE 5 SOCIAL PRESENCE (SP) TAXONOMY; ADAPTED FROM ROURKE ET AL. (2001)	76
TABLE 6 NUMBER AND PERCENTAGE OF NEGOTIATED TURNS IN RELATION TO TOTAL TURNS PER TASK AND NUMBER OF NEGOTIATION ROUTINES PER TASK	90
TABLE 7 NEGOTIATED TURNS PER PARTICIPANT IN RELATION TO OVERALL TURNS.....	91
TABLE 8 NEGOTIATION OF MEANING (NOM) ROUTINES INITIATED PER PARTICIPANT	92
TABLE 9 BREAKDOWN OF TRIGGERS IN NOM	93
TABLE 10 BREAKDOWN OF INDICATORS IN NOM	93
TABLE 11 BREAKDOWN OF RESPONSES IN NOM	94
TABLE 12 BREAKDOWN OF REACTIONS TO RESPONSES IN NOM.....	95
TABLE 13 FOREIGN LANGUAGE CLASSROOM ANXIETY SCALE (FLCAS) SCORES PRE- AND POST-TEST	113
TABLE 14 FLCAS LEVELS CATEGORISED INTO LOW, MEDIUM, AND HIGH SCORES.....	114
TABLE 15 ALL FLCAS ITEMS PRE- AND POST-TEST WITH PERCENTAGES OF AGREEMENT.....	116
TABLE 16 PARTICIPANTS' ANXIETY AND CONFIDENCE SELF-RATING LEVELS CATEGORISED INTO LOW AND HIGH SCORES FOR TASKS 1 TO 4.....	119
TABLE 17 SKYPE SCORES PER PARTICIPANT	120
TABLE 18 ITEMS OF THE SKYPE SCALE ACCORDING TO PARTICIPANTS' SELECTION IN PERCENTAGES	121
TABLE 19 ALL CAUSES OF FOREIGN LANGUAGE ANXIETY (FLA) PRE-AND POST-TEST	123
TABLE 20 MOST IMPORTANT CAUSE OF FLA PRE-AND POST-TEST.....	124
TABLE 21 ALL STRATEGIES TO COMBAT FLA PRE-AND POST-TEST	126
TABLE 22 MOST IMPORTANT STRATEGY TO COMBAT FLA PRE-AND POST-TEST.....	127
TABLE 23 SELECTED PARTICIPANTS' ANXIETY AND CONFIDENCE LEVELS ACROSS ALL QUESTIONNAIRES	140

LIST OF FIGURES

FIGURE 1. NEGOTIATION OF MEANING (NOM) MODEL ADAPTED FROM VARONIS AND GASS (1985)..	26
FIGURE 2. CONCURRENT TRANSFORMATIVE RESEARCH DESIGN ADAPTED FROM (CRESWELL, PLANO CLARK, GUTMANN, & HANSON, 2003, P. 181).....	56
FIGURE 3. SCREENSHOT OF THE VIDEOCONFERENCING INTERFACE.	65
FIGURE 4. FOREIGN LANGUAGE CLASSROOM ANXIETY SCORE (FLCAS) GAIN SCORES PER PARTICIPANT.	114
FIGURE 5. PARTICIPANTS' ANXIETY AND CONFIDENCE SELF-RATINGS ACROSS ALL FOUR INTERACTIONS.	118

LIST OF EXCERPTS

EXCERPT 1: INDICATOR IN NEGOTIATION (CLARIFICATION REQUEST AND INCORRECT RESPONSE)	96
EXCERPT 2: RESPONSE IN NEGOTIATION (REPETITION AND L1).....	97
EXCERPT 3: RESPONSE IN NEGOTIATION (EXPANSION).....	98
EXCERPT 4: TRIGGER OF NEGOTIATION (SYNTACTIC)	98
EXCERPT 5: INDICATOR IN NEGOTIATION (INAPPROPRIATE RESPONSE)	99
EXCERPT 6: RESPONSE IN NEGOTIATION (REDUCTION)	100
EXCERPT 7: REACTION TO RESPONSE IN NEGOTIATION (INCOMPLETE RESPONSE).....	100
EXCERPT 8: REACTION TO RESPONSE IN NEGOTIATION (SHORT TASK-APPROPRIATE ANSWER)	101
EXCERPT 9: INDIRECT COMMUNICATION STRATEGY (CS): PROCESSING TIME PRESSURE-RELATED: FILLER AND REPETITION	102
EXCERPT 10: DIRECT CS: OWN-PERFORMANCE PROBLEM-RELATED: SELF-REPAIR.....	102
EXCERPT 11: DIRECT CS: OWN-PERFORMANCE PROBLEM-RELATED: SELF-REPHRASING	103
EXCERPT 12: DIRECT CS: RESOURCE DEFICIT-RELATED: RETRIEVAL.....	103
EXCERPT 13: DIRECT CS: OTHER-PERFORMANCE PROBLEM-RELATED: OTHER-REPAIR (RECAST)	103
EXCERPT 14: DIRECT CS: OTHER-PERFORMANCE PROBLEM-RELATED: OTHER-REPAIR (Co- CONSTRUCTION).....	104
EXCERPT 15: INDIRECT CS: OTHER-PERFORMANCE PROBLEM-RELATED: FEIGNING UNDERSTANDING	104
EXCERPT 16: DIRECT CS: RESOURCE DEFICIT-RELATED: MESSAGE ABANDONMENT.....	105
EXCERPT 17: DIRECT CS: RESOURCE DEFICIT-RELATED: RESTRUCTURING	105
EXCERPT 18: DIRECT CS: RESOURCE DEFICIT-RELATED: ALL-PURPOSE WORDS	106
EXCERPT 19: AFFECTIVE SOCIAL PRESENCE (SP) RESPONSE: HUMOUR AND EMOTIONS	107
EXCERPT 20: INTERACTIVE SP RESPONSE: AGREEMENT AND ASKING QUESTIONS	108
EXCERPT 21: AFFECTIVE SP RESPONSE: SELF-DISCLOSURE	108
EXCERPT 22: COHESIVE SP RESPONSE: PHATIC EXPRESSIONS.....	110
EXCERPT 23: DIRECT CS: OWN-PERFORMANCE PROBLEM-RELATED: SELF-REPAIR AND OTHER- PERFORMANCE PROBLEM-RELATED: OTHER-REPAIR (RECAST).....	143

LIST OF ABBREVIATIONS AND ACRONYMS

ANOVA:	Analyses of variance
CMC:	Computer-mediated communication
CSs:	Communication strategies
EFL:	English as foreign language
ESL	English as second language
F2F:	Face-to-face
FLA:	Foreign language anxiety
FLCAS:	Foreign language classroom anxiety scale
LRE:	Language-related episode
L1:	First language/mother tongue
L2:	Foreign language/second language
NCEA:	National certificate of educational achievement
NNS:	Non-native speaker
NoM:	Negotiation of meaning
NS:	Native speaker
SLA:	Second language acquisition
SP:	Social presence

LIST OF APPENDICES

APPENDIX A	ACHIEVEMENT STANDARD FOR THE <i>INTERACT</i> ASSESSMENT	204
APPENDIX B	INTERACTION TASK SHEETS TASK 1-4.....	207
APPENDIX C	PRACTICE WORKSHEETS FOR TASK 1.....	215
APPENDIX D	CONVERSATION FILLERS.....	219
APPENDIX E	EXERCISES TO PRACTISE FILLERS	221
APPENDIX F	CONVERSATION ANALYSIS CONVENTIONS ADOPTED FROM TEN HAAVE (2007)....	222
APPENDIX G	SAMPLE TRANSCRIPT OF STUDENT INTERACTION	224
APPENDIX H	PRE-INTERACTION FLCAS QUESTIONNAIRE.....	229
APPENDIX I	POST-INTERACTION FLCAS QUESTIONNAIRE.....	235
APPENDIX J	SKYPE REFLECTION TASK 1-4.....	242
APPENDIX K	INDICATIVE INTERVIEW QUESTIONS.....	243
APPENDIX L	PARTICIPANT INFORMATION SHEETS AND CONSENT FORMS	244

1 INTRODUCTION

The aim of this project is to explore how foreign language (L2) learners collaboratively carry out interactions in an online environment. Specifically, the research examines how participants solve problems in communication and maintain L2 discourse. Moreover, the study investigates how interactions via computer-mediated-communication (CMC) impact on students' levels of foreign language anxiety (FLA), a situation-specific type of apprehension, typically related to all aspects of the L2, and elicits students' perspectives on interactions in an L2, their perceived anxiety and confidence levels, and the strategies that can be used to alleviate FLA.

This chapter serves as an introduction to the motivations and intentions behind the present research and outlines the theoretical background on interaction in L2 learning grounded in the fields of research into second language acquisition (SLA) and CMC. The study is placed into context by giving an overview of research on L2 interactions, the CMC environment, and its relationship with student anxiety. After having given an outline of discourse management devices that learners employ during discourse, the New Zealand context, in which the study is situated, is outlined. The following sections describe the statement of the problem for the current research and present the research objectives and questions. In addition, a definition of terms is given, followed by an outline of the organisation and structure of the thesis.

1.1 Overview

The ability to communicate effectively in an L2 has been central to the aims and goals of L2 programmes worldwide for many years (Brown, 2007; Richards, 2001). As East (in press) makes clear, Brown talks of a recent "new wave of interest" that has drawn attention

to “language as interactive communication among individuals”, whereby L2 teachers are “treating the language classroom as a locus of meaningful, authentic exchanges among users of language”, and L2 learning is seen as “the creation of meaning through interpersonal negotiation among learners” (p. 218).

Philp, Adams, and Iwashita (2014) explain that increased appreciation of the value of peer-to-peer interactions is supported by both a cognitive perspective (e.g., Long’s (1983, 1996) interaction hypothesis) and a sociocultural perspective in which learning is “a jointly developed process and inherent in participating in interaction” (p. 8). According to Philp et al., peer interaction is “any communicative activity carried out *between* learners, where there is minimal or no participation from the teacher” (2014, p. 3)¹. It is “collaborative in the sense of participants working together toward a common goal” (p. 3). It enhances opportunities for L2 learners to practise communication, negotiate meaning, and take on new conversational roles. Van den Branden puts it like this:

[U]sing language is a means to an end: by understanding language input and by producing language output, i.e. by interacting with other people in real-life situations through the use of language, the goals that the learner has in mind can be (better) achieved. (2006, p. 4)

Seen from an interactionist view of language learning, conversations are not merely a medium to practise the L2, but are the fundamental basis of SLA (Long, 1996). Most literature grounded in an interactionist view proposes that, in order to gain interactional competencies, L2 learners need to engage in two-way exchanges, since these exchanges offer ample opportunities for input, output and feedback that can help learners notice the gap between the correct L2 and their own language production (Chapelle, 2005; Long, 1983, 1996).

With an increased focus on social peer communication, a change has been noted not only in the L2 classroom but also in terms of student assessment. Increasingly, it is being acknowledged that testing practices should support the goals of L2 classroom teaching. Therefore, peer-to-peer interactions are seen as a new way of student assessment in an effort to integrate learning and assessment tasks (Antón, 2015; East, 2015, in press; Philp et al., 2014).

Nevertheless, there are numerous reasons as to why L2 learners may shy away from spoken communication. These include anxiety, shyness, and a lack of confidence in their own ability to sustain social communication in the L2. Moreover, class sizes and time

¹ This focus on peer interactions does not mean that the teacher does not play an important role in student interactions but for the purpose of the current study this teacher influence of monitoring was not an area of focus.

constraints often affect speaking practice time and prevent students from developing interactional skills in authentic environments. While the need to develop interactional skills is crucial both for successful SLA and successful language use, many L2 learners experience a degree of speaking inhibitions and FLA, as acknowledged by recent research (Arnold, 2007; Baralt & Gurzynski-Weiss, 2011).

Hence, language teachers are increasingly turning to CMC to address these limitations. In recent years, the development of CMC technologies, such as Skype have made it easier for students to communicate with peers and native speakers (NSs) and these tools have the potential to bridge the gap between classroom practice and real-world use of the L2. Several studies have highlighted that CMC, and particularly video CMC, can provide increased opportunities to improve students' interactional skills due to its unique affordances (Bueno Alastuey, 2011; Yanguas, 2010).

Findings from different lines of inquiry assert that CMC has several benefits for the language classroom. Hampel and Hauck (2006) suggest that CMC, and specifically videoconferencing, provides a more equal opportunity for students to participate compared to those taking part in classroom discussions and can decrease learners' anxiety (de los Arcos, Coleman, & Hampel, 2009). The fear learners may experience in speaking situations is often attributed to shyness rather than comprehension skills and previous research proposes that participation can be increased in CMC modes, since students consider the environment more relaxed and less threatening compared to classroom speaking activities (Satar & Özdener, 2008). Likewise, Thorne and Black (2007) found that CMC can change the traditional model of teacher-centred communication into a more student-centred, active environment for SLA.

In addition, CMC has the ability to overcome distance, to connect learners and create a community of language learners (Wang & Chen, 2007). Similarly, learners perceive the CMC tools and their experiences during the online activities as positive and report the creation of personal connections in CMC and consequently an emergence of social presence (SP) (Lee, 2007).

Another benefit is that CMC is said to promote learners' interactional skills, such as negotiation of meaning (NoM) (Chapelle, 2009) and communication strategies (CSs) (Kost, 2008; Lee, 2001). Prior investigations suggest that synchronous CMC helps L2 learners notice their linguistic mistakes (Sarré, 2011) and focus both on form (i.e., grammar and accuracy) and on meaning (Y. Wang, 2006; Yanguas, 2010). CSs facilitated by CMC aid the comprehension of input (the language students receive) and output (the language students produce) and promote fluency (Lee, 2001, 2002).

However, few studies have addressed the use of CMC for speaking skills in secondary education. It remains to be examined how beginner learners manage social discourse, achieve shared meaning, and avoid communication breakdowns during CMC mediated spoken discourse. The current research addresses this gap by exploring L2 learners' interactional patterns in peer-to-peer communication via Skype over an academic term, focusing on high-level beginner-learners of German from two secondary schools within New Zealand. In this study, high-level beginners are classified as those operating at around levels A1 and A2 on the Common European Framework of Reference (Council of Europe, 2001).

1.2 Theoretical background

The current research is grounded in an interactionist framework that encompasses both cognitive and sociocultural elements and assumes that interactions in the L2 are beneficial for SLA from both these perspectives (see, e.g., Philp et al., 2014). Interactionist theory takes both a sociolinguistic and sociocultural perspective on SLA, and can only be successfully understood through learners' interactions in the L2. In what follows, I outline the cognitive beginnings of the interactionist theory and go on to talk about sociocultural developments.

Interactionist theory originates from approaches that are focused on cognitive, formal factors of SLA. One of the most notable early proponents of this theoretical perspective is Krashen, whose input hypothesis (1985) asserts that successful SLA is subject to the extent of comprehensible input an L2 learner receives. Not only does the input have to be comprehensible but it should also be slightly more advanced than learners' current level of ability in the L2. In turn, this early hypothesis has motivated further research to examine other parts of the process, in addition to input. Swain (1985, 1995), for instance, put an emphasis on output, claiming that the production of language is a significant factor in SLA. According to Swain's output hypothesis (1995), feedback leads L2 learners to notice gaps in their linguistic knowledge which, consequently, pushes them to modify their output. Hence, comprehensible output can help learners express meaning while allowing them to experiment with forms and structures of the L2 (Swain, 2005).

One of the most significant theories that developed from Krashen's research is the interaction approach (Long, 1985, 1996). While the input hypothesis only regards comprehensible input as crucial for successful SLA, researchers who work in the field of the interaction approach postulate that an L2 is best acquired through interactions. (Gass, 2012; Long, 1996; Swain, 2000; Varonis & Gass, 1985). This major strand in SLA theory regards

SLA as a combination of social and cognitive phenomena and its recent focus on L2 interactions in CMC environments is supported by a number of studies on SLA in CMC that, in recognising the essential role of two-way communication, have taken an interactionist stance towards online communication (Baralt & Gurzynski-Weiss, 2011; Bueno Alastuey, 2012; Yanguas, 2010).

The theoretical base for these claims is grounded in Long's interaction hypothesis (1996) according to which a fundamental element of SLA is social, two-way communication with other speakers of the L2. In Long's view, language production (output) and comprehensible input (any L2 heard by the learner) are essential elements in language learning. More importantly, Long's theory highlights how this language input is made comprehensible for learners. Long believed that learning occurs when attempting to actively communicate in the L2 and claimed that NoM or modified interactions between learners has the biggest impact on L2 acquisition because it helps them to utilise strategies that enable them to avoid misunderstanding or repair language problems.

NoM is the process L2 learners go through in resolving disruption in communication. In these negotiations learners attempt to clarify the comprehensibility of utterances through confirmation checks, clarification requests, and comprehension checks (Gass, 2003; Gass, Mackey, & Pica, 1998).

Besides, L2 learners employ CSs in attempts to maintain the flow of conversation by making use of different strategies and tactics. CSs describe the manner in which language is manipulated to achieve interactional goals and to compensate for a lack of communicative and linguistic competence. Hence, NoM and CSs are two principal categories of strategies used to deal with communicative problems and maintain discourse. These categories will be outlined in more detail in the following chapter.

In addition to discourse management skills as described above, an important research strand in SLA has concentrated, not on the cognitive factors of interactions, but on social factors of L2 conversations, based on the work of Vygotsky (1978) and his sociocultural theory. Research grounded in this theory claims that SLA does not exclusively take place in cognitive processes and instead highlights social and cultural factors that contribute to SLA. According to Vygotsky (1978), social discourse and culture have an impact on cognitive development and all learning is situated in communication or mediation between humans. He argued that development is a combination of interaction with people and the tools that the culture provides to help form their own view of the world. Thus, learning cannot be separated from the social context in which it takes place and cannot take place in isolation.

This connection between linguistic features and the context in which learners acquire an L2 is one of the main distinctions between a cognitively based interactionist perspective

and one based on sociocultural theory, in which social aspects are used to explain how those variables affect L2 learning. In other words, while cognitive approaches focus on the formal properties of the language, sociocultural approaches concentrate on the use of L2 in cooperative, authentic and social interaction. Even though a focus is placed on social factors, socioculturally influenced research does acknowledge the need to study cognitive processes (Lantolf & Poehner, 2014; Lantolf & Thorne, 2006) but, most importantly, these processes need to be studied in relation to the social and cultural context of L2 learning (Lantolf & Thorne, 2006). Overall, sociocultural theory sees L2 learners as active participants of meaningful, social interactions and activities through which they improve their linguistic competence.

In sum, the above theoretical debates suggest that there is a need to view L2 interactions from different angles, using various measures of analysis. The theoretical frameworks of interactionist theory and sociocultural theory can be used in combination to analyse peer-to-peer collaborations. In order to examine closely how L2 learners negotiate, repair and manage discourse, this study is built on the premise that these methods should complement each other, rather than be seen as isolated measures of interactions.

1.3 The New Zealand context

As discussed in the previous section, a primary goal of L2 teaching is to increase opportunities for meaningful and natural communication in different situations among students and one of the main aims of L2 learning is to be able to interact in natural and realistic situations. This is in accordance with the goals and emphases of the revised *New Zealand Curriculum*, which intend that “communication in the target language is central” (Ministry of Education, 2007, p. 24) and, by implication, that opportunities to interact and communicate in the L2 are crucial to SLA. In addition, the New Zealand curriculum states that students should be connected and independent learners by taking ownership of their learning and by employing student-centred, social approaches to learning, which ties in with a sociocultural view of L2 learning.

This focus on authentic, two-way interactions is a particular motivation of a recent revision to New Zealand’s high stakes assessment system, the National Certificate of Educational Achievement (NCEA). This revision was the introduction of a new *interact* assessment used to measure achievement of the curriculum for secondary school students (East, in press; Ministry of Education, 2011) (For a detailed outline of the assessment, see APPENDIX A). The internally assessed tasks linked to *interact* focus on interactions between students to foster real-life, meaningful communication in the L2, as described below:

Fostering peer interactions in online learning environments

The new assessment, known as interact, is intended to capture for assessment purposes a series of genuine and unrehearsed student-initiated peer-to-peer spoken interactions. It stands in contrast to an earlier assessment, converse, which relied on a summative one-time conversation between teacher and student. The primary purpose of interact is therefore to move teachers and students away from assessments of spoken proficiency that had effectively become one-sided engagements in somewhat staged “conversations”, and towards assessments that will demonstrate a level of ability to interact spontaneously, negotiate meaning and demonstrate a genuine ability to communicate. (East, 2015, p. 102)

Students are required to collect evidence of these interactions over time, in portfolios, out of which students choose their three best interactions that are handed in towards the end of the academic school year to their teacher for holistic summative marking. Tasks for purposes of *interact* can be defined as activities that:

invite the learner to act primarily as a language user, and not as a language learner. Tasks are supposed to elicit the kinds of communicative behaviour (such as the negotiation for meaning) that naturally arises from performing real-life language tasks, because these are believed to foster language acquisition. (Van den Branden, 2006, pp. 8–9)

For students to pass the assessment at NCEA Level 1 (generally corresponding to Year 11), they need to express personal information and opinions in a range of different authentic situations commensurate with the requirements of the Common European Framework of Reference for Languages Levels A1 and A2 (Council of Europe, 2001). Moreover, learners are required to negotiate meaning and use interactional strategies, such as fillers or apologising and initiate and maintain the discourse with a total student contribution of about three minutes. The interactions can be “face to face or technologically facilitated” (Ministry of Education, 2007, p. 24).

These assessments, introduced between 2011 and 2013 at all levels of NCEA, are therefore a relatively new way of assessing oral proficiency. With an assessment reform, there are often challenges, however. For instance, East (2011) shows how one teacher interpreted and introduced the new assessments. Problems cited by the teacher were issues with the recording and storing of the tasks: that is, both students and instructors need to be clear how to record the interactions and who is filing them in which place so that they can easily be selected towards the end of the year. Hence, the problem is that students need to exert self-management without necessarily having been taught this skill before and educators feel the need to keep oversight over the interactions in terms of keeping students on track, ensuring authenticity of the tasks and storing the assessment recordings. Not only did the interview uncover that the organisation of the recordings was time-consuming but the completion of the tasks also took a long time. In his later work, East (2015) confirms that the main problem with the assessment was practicality, with workload in particular.

1.4 Statement of the problem

The *New Zealand Curriculum* places communication at its centre and stresses the importance of authentic, social communication. The new *interact* assessment aims to reflect these emphases and to encourage them via its washback effect. Consequently, both teachers and students must be skilled in authentic interactions and need to know what is needed to conduct an authentic conversation in the L2. Practically, however, there are obstacles to achieving this type of discourse. Students often do not know how to interact appropriately in an L2 and are regularly forced to interact in contrived and stilted tasks.

Specifically, the assessment specifications for the *interact* assessment state that students need to negotiate meaning and use interactional language to succeed. However, classroom teaching often does not incorporate enough opportunities for student output and NoM in particular (East, 2012) and there seems to be a discrepancy between form focused instruction in L2 and meaning focused interactions. While L2 instructors tend to teach formulaic expressions, such as leave-takings (e.g., ways to end a conversation using appropriate language like 'I need to go now. See you soon. '), there seems to be a lack of instruction on how to use these expressions adequately to negotiate meaning in communication and develop interactional competence (East, 2012). Moreover, previous research has revealed a focus on teacher-centred rote-learning with pre-scripted dialogues, which in turn, makes L2 learning a predictable experience and does not lend itself to learner-centred, spontaneous communication (Erlam, Sakui, & Ellis, 2006; Philp & Tognini, 2009; Tognini, Philp, & Oliver, 2010). These studies therefore recommend peer interactions for students to be able to experiment with the L2 through sustained and creative practice.

Another issue with peer-interaction assessments is that of students' perceptions of the assessment. If they regard the interactions as performance-driven tasks rather than authentic conversations, there is the danger of them using pre-scripted and rehearsed language and therefore making the assessment of authentic, spontaneous language use challenging (East, in press; Philp et al., 2014).

It is therefore proposed that research on interactional features, such as NoM and interactional skills in peer-to-peer exchanges, is needed to shed light on how students interact and what discourse management tools they employ in order to achieve shared meaning. Subsequently, the findings of this investigation may lead to more informed classroom practices to support more spontaneous and effective L2 communication (and potentially enhanced performances in related assessments).

In addition, class sizes and time constraints often impact on speaking practice time and prevent students from developing interactional skills in authentic environments

(Ozvire & Herrington, 2011). This is a particular problem for the *interact* assessment, where students have to work independently and create portfolios of their work over time. Therefore, solutions need to be found that resolve issues related to practicalities, such as time management and student self-management.

When trying to find ways to make interactions more authentic and create more efficient assessment conditions with fewer implications on teaching time, I became interested in using videoconferencing for L2 speaking to meet the demands of the curriculum and to give students more opportunities for authentic communication. While the need to develop interactional skills is crucial for successful SLA, students are often unwilling to communicate in the L2 and many L2 learners experience a degree of FLA, which prevents them from participating in verbal interactions (Arnold, 2007; Baralt & Gurzynski-Weiss, 2011). Research indicates that CMC can help alleviate anxiety by offering learner-centred environments (Arnold, 2007; Hauck & Hurd, 2005; Satar & Özdener, 2008).

With regard to the discourse management skills students need for effective L2 interactions, a growing number of studies grounded in interactionist theory have investigated CMC, focusing on a range of discourse management skills, such as NoM (Rouhshad, Wigglesworth, & Storch, 2015; Smith, 2003a; Y. Wang, 2006; Y. Wang & Tian, 2013; Yanguas, 2010) and CSs (Lee, 2007; McNeil, 2014b; Smith, 2003b). While these studies have revealed that the teaching of discourse management skills has the potential to enhance L2 interactions and assist SLA, most of these have investigated CMC discourse as a cognitive process, neglecting the influence of social factors on SLA.

Moreover, while several researchers have investigated the negotiation routines evident in verbal discourse of L2 learners, no studies have been conducted to examine this for secondary students' videoconferencing exchanges, and peer-to-peer interactions between non-native speakers (NNSs) in same-proficiency dyads are a particularly under-researched phenomenon.

Most studies on oral L2 learning via CMC have researched online interactions and face-to-face (F2F) communication in order to compare and contrast the two learning environments. Studies exploring CMC, and particularly videoconferencing interactions as a setting for oral L2 learning in its own right, are rare, especially given rapid developments in terms of computer-assisted language learning (Lin, 2014).

Few researchers have evaluated anxiety levels of beginner L2 learners and even less research has been carried out to investigate the relationship between apprehension levels and student perception of speaking activities in CMC. Furthermore, while some studies allude to students' views on anxiety, more research needs to be conducted to help learners overcome speaking apprehensions.

In summary, the study of videoconferencing in high school education seems to be an underrepresented area of research. Most research on CMC for verbal language learning focuses on tertiary students or distance education, while the benefits and challenges of CMC for secondary students have received less attention. Besides, the majority of literature concentrates on telecollaboration where students interact with NSs in intercultural exchanges (O'Dowd, 2007). Wang and Vásquez (2012) confirm this in their review of studies on Web 2.0 between 2004 and 2009 and state a lack of studies employing mixed methods and a theoretical lens. Furthermore, they argue that more research needs to be undertaken in secondary settings in contexts other than EFL (English as a foreign language) courses and advocate for a focus on less researched areas of Web 2.0 tools, such as networking tools.

1.5 Purpose and significance

In order to address this manifest need for research in the area of L2 interactions in CMC, the purpose of this study is to investigate the influence of technology on verbal interaction skills for L2 learners by exploring peer-to-peer videoconferencing chats through both interactionist and sociocultural lenses. Specifically, the research examines L2 learners' interactional features and anxiety levels during four videoconferencing interactions to define the opportunities online exchanges provide for cooperative L2 learning. This study aims to address the deficiency of authentic speaking situations in L2 secondary classrooms and the increasing need for natural discourse in L2 learning. It is hoped that this research will be significant for policy-makers, practitioners, and students, particularly in the specific context of the recent policy initiatives in New Zealand to reform student assessments, but also more generally.

Policy-makers in various educational settings increasingly focus on L2 communication and students' abilities to interact in natural situations. Specifically, and as previously stated, the *Learning Languages* area in the *New Zealand Curriculum* (2007) prescribes that real communication is the focus and basis of assessment and emphasises the development of interactional skills. Consequently, students need to be given opportunities to interact independently in authentic situations. This requirement has implications on teaching time, the type of tasks students are asked to engage in, and for student engagement. From a professional viewpoint as a classroom practitioner, I am aware of a gap between the need for authentic, learner-centred communication and actual classroom practice that the current research aims to close by providing educators with a theoretical base for assessment practices and a model to assess student interactions effectively (Antón, 2015).

It is also hoped that L2 educators will become more aware of the areas of speaking that their students feel most anxious in and, consequently, are able to create a learning environment that is conducive to maximum student output and interaction. Furthermore, it is hoped that findings will contribute to increasing student engagement and benefitting students' learning through providing student-centred, authentic, and collaborative learning environments enhanced by technology through which they may become "confident, connected, actively involved lifelong learners" (Ministry of Education, 2007, p. 8).

In terms of their L2 development, it is anticipated that participants will benefit from this research, since they are given the opportunity to connect with other learners and engage in realistic conversations to facilitate SLA and to build interactional and social skills in order to cope in authentic speaking situations. In turn, it is expected that this will have a positive impact on students' future performance in speaking assessments.

Another problem, often overlooked, is the anxiety that speaking in an L2 can cause. This issue is twofold: It is clear that FLA exists, yet there are few studies that consider learners' views. Even more important, most studies simply measure students' anxiety levels and list reasons for FLA but offer no help or strategies to overcome this nervousness. Therefore, this research gives participants an opportunity to reflect on their own potential FLA issues and strategies to deal with them. Moreover, the current study aims to find out how the *interact* assessment may be carried out more effectively in terms of time management, authenticity in the speaking situation, students' anxiety and ability to interact.

1.6 Research questions

In light of the above outlined affordances of CMC and the issues relating to interactions in the L2 classroom, the current study explores L2 learners' interactions and strategies for dealing with discourse management via videoconferencing. This research posits that interactions carried out via videoconferencing can support the L2 classroom in providing increased opportunities for learner communication and offering opportunities for feedback and the modification of input, leading to L2 acquisition. Originating from these objectives, grounded in both my reflection on previous literature on L2 interactions and my own educational practice, the following research questions guide the research:

- 1) What interactional features are evident in verbal videoconferencing interactions of L2 learners?
- 2) How do learners perceive their experience of these interactions, especially with regard to their anxiety and ability to interact in the L2?
 - i) What aspects of the interactions do learners associate with anxiety?
 - ii) What strategies do language learners use to cope with anxiety?

1.7 Definition of terms

Since previous research has looked at L2 interactions, including NoM and CSs from multiple perspectives, using different terminologies for primes of discourse management, it is beneficial to include definitions of these primes for clarification. In addition, it was considered necessary to list and define important key terms that will be used throughout this thesis, while others will be explained in context in the next chapters.

- **Computer-assisted language learning** Levy (1997) defines computer-assisted language learning as “the search for and study of applications of the computer in language teaching and learning” (p. 1).
- **Clarification request (Global statement of non-understanding)** One speaker seeks help in understanding the other speaker’s previous utterance through questions or imperatives such as “I don’t understand” or “Please repeat.”
- **CMC** CMC is defined as “communications, mediated by interconnected computers, between individuals or groups separated in space and/or time” (Luppicini, 2007, p. 142). CMC can include both synchronous or asynchronous interactions. In synchronous interactions, students are all logged on at the same time and engage in real-time conversations. Conversely, in asynchronous CMC, there is a time lapse between the posting and response of a message.
- **Comprehension check** A speaker’s attempt to determine whether the other speaker has understood a preceding message.
- **Confirmation check (Echo)** A speaker’s attempt to confirm that he has understood an interlocutor’s preceding utterance through repetition, with rising intonation, of what was perceived to be all or part of the preceding utterance.
- **Corrective feedback** Responses to learners’ incorrect L2 production. Corrective feedback is information given to learners regarding a linguistic error (Sheen, 2008). Noticing and uptake refer to L2 learners’ attention to linguistic forms and their consequent attempts to correct their output accordingly after having received corrective feedback (Gass, 2012).
- **CSs** Communication strategies are verbal and nonverbal discourse management tools that learners employ to express meanings and avoid communicative breakdown and to “enhance the effectiveness of communication” (Canale, 1983, p. 9).
- **Distance education** A method of study in which lessons are conducted by correspondence, without the need to attend a school.

Fostering peer interactions in online learning environments

- **EFL** In an English as a foreign language setting students (whose L1 is not English) learn English while living in their own country.
- **ESL** In an English as a second language setting foreign students learn English while staying in an English-speaking country.
- **FLA** Foreign language anxiety is a situation-specific anxiety related to the L2 context. It constitutes a specific kind of anxiety, aroused by situational factors such as tests, speaking in front of class, and being called on by the teacher (MacIntyre, 2007).
- **FLCAS** The Foreign Language Classroom Anxiety Scale was developed by Horwitz, Horwitz, and Cope (1986) and is a questionnaire that uses 33 Likert scale items to measure issues related to FLA, such as test anxiety, and fear of negative evaluation.
- **LRE** A language-related episode is any area of the collaborative dialogue in which students discuss, question and correct the language they are producing. This includes recasts, requests for help, implicit and explicit feedback and negotiation for meaning.
- **L1** For the purpose of this study, L1 refers to a mother tongue or first language learnt. It also refers to English, the shared language of instruction for participants of the current study.
- **L2** Foreign, additional, target or second language. A language other than the L1. In the context of this study, the L2 is German.
- **NoM** In the words of Gass and Selinker (2008) negotiation of meaning is the “attempt made in conversation to clarify a lack of understanding” (p. 457). In the literature this is often called negotiation of meaning or negotiation for meaning.
- **Recast** A form-focused, partner-related, target-like reformulation of an incorrect utterance in corrected form (implicit error correction) (Long, 1996).
- **SP** Social presence describes “the degree of feeling, perception, and reaction of being connected on CMC to another intellectual entity” (Tu & McIsaac, 2002, p. 140).
- **SLA** Second language acquisition generally refers to the study of both L2 learners and the processes involved in learning the L2. The scope of SLA includes formal and informal L2 learning
- **Videoconferencing** CMC between people in different locations using an environment that combines video-image and synchronous audio with a graphic interface, such as text chat. These exchanges can take place in mobile, cloud-based, desktop- or dedicated videoconferencing systems. For the current study Skype was used as an internet-based desktop videoconferencing application.

1.8 Organisation of the thesis

The main body of this thesis consists of six chapters, which are outlined briefly below. The current chapter has provided the background and motivation for the investigation, and introduced the theoretical framework on which the research is based as well as its significance and the research questions. The remaining chapters are structured as follows.

Chapter Two reviews relevant prior literature and begins with a detailed description of the theoretical background on L2 interactions grounded in an interactionist view supported by sociocultural theory. Next, the review of the literature concentrates on definitions of NoM, CSs and SP and focuses on findings in the area, first in F2F contexts and then in CMC settings. The last section of the literature review focuses on the definition of FLA and looks at studies researching this context in online environments. This is followed by a brief look at strategies to deal with anxiety.

Chapter Three describes the methodology and research design of this study, namely a mixed methods design informed by interactionist and sociocultural theory. It outlines the processes involved in the Skype classroom intervention², the participants, materials, and procedures. Finally, the methods of analysis to answer the research questions are presented, including the coding categories for negotiation and communication approaches and social proximity, as well as data collection and analysis procedures for the questionnaires.

Chapter Four displays the quantitative and qualitative findings for each research question. Students' perceptions of the treatment are also presented.

Finally, in Chapter Five, these results are discussed and interpreted in detail within the theoretical framework of L2 interactions in terms of their contribution to the study of L2 interactions and to inform research on L2 learners' problem-solving skills.

Chapter Six concludes this thesis with a summary of the findings and pedagogical implications for L2 learners, instructors, and educational stakeholders. Furthermore, limitations of the study are addressed and opportunities for further research presented.

² The term intervention is used throughout this study to refer to the classroom activities conducted via Skype. In line with Boudah's recommendations (2010) the intervention is characterised as a pre-test – post-test group design of "Group → Pretest → Intervention → Posttest" (p. 101).

2 REVIEW OF THE LITERATURE

One of the main aims of language learning, as outlined in Chapter One, is for L2 learners to be able to interact in natural and realistic situations (see Ellis, 2005). Increasingly, the literature advocates for peer-to-peer interactions, in which L2 learners can work towards mutual goals via increased opportunities for social, interactional and collaborative conversations (Brown, 2007; Richards, 2001). Having argued in the previous chapter that there is a paucity of research on beginner L2 communication in CMC, particularly studies that integrate the cognitive and sociocultural factors of SLA and focus on both data from video chat transcripts and learner opinion, the present chapter will put the research project into context by reviewing existing literature that concentrates on interactions in an L2. A particular focus is on NoM and the CSs L2 learners employ in an effort to achieve mutual understanding.

First, a theoretical background of SLA from both interactionist and sociocultural viewpoints will be given, followed by definitions of the different tenets of interactional features in L2 discourse, including their background and how students incorporate these constructs into their dialogue. The third part of this chapter concentrates further on these concepts of discourse management, considering studies in CMC and videoconferencing in particular. In the fourth part, definitions and causes of FLA will be discussed, with an emphasis on research in CMC contexts. Finally, the research gaps will be summarised in order to better position the current investigation.

2.1 Second language acquisition theory: The interaction approach

According to interactionist models, two-way communication is paramount to language learning (Hatch, 1978; Long, 1983, 1996). Within this framework, there are two main trends: Social-interactionists regard language learning as a cultural activity acquired in communication with others, whereas nativist language acquisition theories see language learning as an innate capacity to form language. Recent research, however, claims that, rather than focusing on the differences of these two approaches, the focus of further research should lie on their compatibility (Gass, 2012). Gass claims that “the dichotomy between innatist and environmental approaches is ill-conceived in the sense that a presumed dichotomy leads only to a discussion of “which is correct” rather than of “how they complement one another” (p. 2).

In recent years, an increasing number of researchers has advocated for a combination of sociocultural and interactional approaches to study interactions in SLA. Reinhardt (2008), for instance, calls for a combination of these two approaches to better examine all aspects of collaborations: The NoM via an interactionist, linguistically motivated approach and the co-constructing of face, mutual support and community through a sociocultural approach. In a similar vein, Philp et al. (2014) argue that the increased focus on the value of discourse among L2 learners is supported by both a cognitive perspective and a sociocultural perspective in which learning is “a jointly developed process and inherent in participating in interaction” (p. 8). Consequently, the first part of the literature review connects different views on input, negotiation, and output.

2.1.1 Input hypothesis

Krashen (1985) believed that input is the comprehensible language a learner is exposed to and this is the central part of language development in his L2 learning theory. His work laid the foundation for further work on the role of input and output and links to student anxiety, an important element of the present study.

Krashen claimed that language acquisition takes place during interaction in the L2 while the learner is exposed to comprehensible input. According to his input hypothesis, this input would have to be just beyond the learner’s current level of linguistic development ($i + 1 = \text{input plus one}$). In fact, Krashen presented five hypotheses, which will be summarised briefly below.

The acquisition/learning hypothesis separates acquisition from learning. Krashen argued that language learning alone does not lead to the acquisition of a language. While

acquisition is perceived as a process without a conscious focus on linguistic forms, learning is seen as a conscious, unnatural process that focuses on grammar rules. According to the monitor hypothesis, speech output is monitored by the speaker and checked against these forms and rules. As noted above, the input hypothesis claims that language learners have to be exposed to language that is slightly above their current level of linguistic competence.

The natural order hypothesis states that grammatical structures are acquired in a predictable order that is unaffected by instruction. Lastly, the affective filter hypothesis gives reasons for variations in the success of language acquisition. Krashen's model highlights the necessity of optimal conditions for learners to succeed. The affective filter hypothesis presents three factors related to attitude and emotions that contribute to the presence of either a high or low filter. High filters are motivation and self-confidence while anxiety is a low filter. Krashen's hypothesis has received criticism despite it being the basis of a number of studies that developed and modified his theory. Criticism has mainly related to the difficulty of clearly defining and testing comprehensible input and the neglecting of input presented in learner-learner interaction. Furthermore, productional skills and error correction are neglected in Krashen's hypothesis.

2.1.2 Output hypothesis and collaborative dialogue

Swain (1985, 1995, 2005) also took the view that language learning is an innate process but argued, in contrast to Krashen, that learners not only need comprehensible input but also have to produce output for their communicative abilities to improve. She placed attention on learners' production of the L2, researching French immersion students in Canada, who were taught their academic subjects in L2 French (1985). Swain found that students acquired native-like skills in comprehension but made less progress in the productive skills. She argued that this discrepancy was because comprehensible input alone was not enough to reach high levels of accuracy in speaking and writing. Swain proposed the model of 'pushed output' in which learners are pushed to produce language in order to be understood.

According to Swain's output hypothesis (1995), learners' fluency is increased by awareness of gaps in learners' language knowledge, by allowing them to experiment with language forms and structures, and by receiving feedback from other learners. Consequently, learners notice a gap between what they are capable of communicating and what they desire to communicate. In turn, noticing this gap leads to modification of output in the productive language skills of writing and speaking. Output can be classified into five roles: Output (1) creates knowledge from semantic to syntactic processing; (2) serves as a means to practise or apply existing knowledge; (3) creates automaticity; (4) elicits further

input that tests hypotheses formed; and (5) enables feedback (Gass & Selinker, 2008; Swain, 1995).

In her later work, Swain (2000, 2005) emphasised the importance of collaborative dialogue and how it can help solve linguistic problems and build knowledge about language. This theoretical perspective parallels the work of Vygotsky's sociocultural theory that claims that individual behaviour develops from interaction with others. Swain maintained that collaborative dialogue is a key form of mediated learning. Her studies examined mediation in both a French immersion and an adult English classroom. Students were able to mediate their own learning without the guidance and intervention of their teacher, and, according to Swain, negotiated learning, rather than meaning. Swain's study presented a definition of collaborative dialogue:

It is knowledge-building dialogue. In the case of our interests in second language learning, it is dialogue that constructs linguistics knowledge. It is what allows performance to outstrip competence. It is where language use and language learning can co-occur. It is language use mediating language learning. It is cognitive activity and it is social activity. (2000, p. 97)

It is important to note that, according to Swain, language use and language learning occur and develop at the same time. Collaborative dialogue draws on shared problem-solving and decision-making, as opposed to a pure interactionist view, where negotiated interactions result from non-comprehension (Ohta, 2000).

A detailed occurrence of collaborative dialogue is what Swain (2005) called a language-related episode (LRE). An LRE is defined as any area of the collaborative dialogue in which students discuss, question and correct the language they are producing and incorporates recasts, requests for help, implicit and explicit feedback and negotiation for meaning (Leeser, 2004). In summary, LREs exemplify learning that is in progress and can be encouraged through collaborative tasks that lead to increased responsibility and ownership (Swain & Lapkin, 2002).

Several studies have brought evidence supporting the view that collaborative dialogue encourages language use and language learning to co-occur. A study by Williams (1999) investigated the collaborative dialogues of eight students at four different language levels. Her first study revealed that most of the LREs concentrated on vocabulary rather than grammar. In contrast, in the more advanced group, the focus was on definitions, pronunciation, word form and preposition choice in the lexically based LREs, while tense issues were the prevalent discussion in grammatically based LREs.

Fostering peer interactions in online learning environments

Studies by Storch (2001, 2002) showed similar findings but these were not restricted to one task type. In her 2002 study that focused on adult learners of English, she found that, among other forms of interaction, collaboration was the strongest factor.

Lapkin, Swain, and Smith (2002) conducted a study in a secondary school setting investigating the collaborative dialogues of eight learners from a senior-level French immersion class. According to students' proficiency, they formed two average dyads, and two strong dyads, which had to carry out either a jigsaw or a dictogloss task. After a taped lesson on discussing the differences between the original and the revised text, the students watched the videos, took part in recalls, and eventually revised their original texts individually. The breakdown of the number of interactions showed that the LREs created by the average pairs were shorter than the respective LREs created by the strong pairs. Hence, it appeared that proficiency has an effect on the quantity and quality of LREs.

A study by Leeser (2004) also focused on student proficiency and its impact on the number, type and outcome of LREs. The study was set in a university context and used three types of dyads based on the ability of Spanish L2 students. Leeser concluded that the highest dyads tended to focus on grammar, were able to solve all problems, and consequently gained more from using collaborative dialogue.

Loewen's (2005) findings were similar but stemmed from a teacher-student interaction rather than a peer-peer collaboration. Malmqvist (2005) used a dictogloss task to extract LREs amongst beginner learners of German and showed that learners tended to fall back to their shared first language (L1) to talk about language-related issues.

In summary, research on collaborative communication has found that grouping according to ability has an impact on the nature of LREs and that proficient learners tend to create more LREs (Leeser, 2004; Swain & Lapkin, 2002; J. Williams, 1999) that are also longer in nature, as discovered by Lapkin et al. (2002). The literature also shows that most linguistic problems can be solved regardless of ability, which means that learners are able to support and encourage each other in their language learning. Moreover, in a collaborative task students tend to retain the solution they found (Loewen, 2005; Swain & Lapkin, 2002; J. Williams, 2001). This collaborative, social view of L2 learning will be examined in more detail in the next section.

2.1.3 Sociocultural theory

The central question of the current research is how students interact online in an L2. Therefore, the theoretical base for social interactions needs to be established, as well as what constitutes social interactions for the current study.

Fostering peer interactions in online learning environments

According to Vygotsky (1978), social interaction has an impact on cognitive development and all learning is situated in communication or mediation between humans. Mediation is an important principle of Vygotsky's theory. He professed that development is a combination of communication with people and the tools that the culture provides to help form their own view of the world. Thus, learning cannot be separated from the social context in which it takes place and cannot take place in isolation. Vygotsky believed that language develops from social interactions and language ability becomes internalised as thought and inner speech. This line of argument implies that language allows individuals to improve their mental development through contact and mediation with others.

Lantolf (2004) proposed three areas of mediation: social mediation (by others in social interaction); self-mediation (by the individual via private speech); and artefact mediation (mediated by language, tasks, and technology). In a similar vein, Warschauer (2005) suggested that CMC tools transform the structure of language learning through mediation of learners' activity. Consequently, he argued that CMC tools are cultural artefacts through which humans interact with each other and with the world.

According to Vygotsky (1978), learning is mediated by social discourse between learners and a more knowledgeable other: a person who possesses a better understanding or higher level of ability than the learner does. This can be a teacher, an adult, or a peer with more knowledge or experience. Therefore, sociocultural theory recognises the central role of social relationships and sees learners as mediators who have to participate in order to gain knowledge. This concept is important for the current research, since participants mediate each other in a learner-centred, social environment.

The second important principle of Vygotsky's theory (1978) is the zone of proximal development, which is the difference between what a learner can achieve without assistance and what a learner can achieve with guidance and collaboration from a skilled partner. For example, in the case of L2 learning, when a learner is in the process of developing certain structures and skills, this higher level of development can only be achieved through collaboration with others. Therefore, the current research proposes a learner-centred environment, in which all learners participate and mediate each other. Thus, learning is not a process that an individual can undertake alone but rather is a collaborative process involving other individuals (Aljaafreh & Lantolf, 1994).

Lantolf and Thorne (2006) perceived the zone of proximal development as a framework that combines all the different areas of learning, including social and cultural background, the teacher, the learner, learning goals and motives as well as the resources available to learners. In recent years, a broader view of the zone of proximal development

has been adopted that is not restricted to interactions between the learner and a more knowledgeable other but also includes peer-to-peer interaction and interaction with technology (Lantolf, 2012; Lantolf & Poehner, 2014; Lantolf & Thorne, 2006; Warschauer, 2005). This collective scaffolding provides a space in which learners support one another's development by collaboratively taking their linguistic output to a higher level (Lantolf, 2012; Lantolf & Poehner, 2014; Kinginger, 2002).

In summary, the concepts of sociocultural theory can be transferred to synchronous interactions in an online environment, which is significant for this study. It is proposed that L2 learning is shaped by social learning theories that focus on the importance of interaction and collaboration for cognitive development and stress community building and SP. Language is seen as a cultural, experimental, and semiotic construct, where the language and context of its setting are inseparable. While this section has concentrated on social aspects of L2 interactions, the next section details one of the most important theoretical underpinnings for the current study, which is the interactional approach to SLA.

2.1.4 Interactional hypothesis

Interactionist theory has developed from sociocultural theory and builds on its social aspect. However, instead of focusing on social aspects of interactions, interactionist theory places an emphasis on the cognitive processes in two-way communication (Zuengler & Miller, 2006). Hatch (1978) laid the foundation of interactionist methods by suggesting that conversations should not only be used to practise specific grammatical systems. She argued that the social process of communications should be examined and that "language learning evolves out of learning how to carry on conversations" (p. 404). According to Hatch, the first step in language learning is to learn how to communicate, which then promotes the acquisition of grammatical structures. Based on Hatch's research, a number of other studies developed, including Long's (1983) work that investigated the role of input and interaction in SLA and provided the basis for later work on interactionist theory (Jacoby & Ochs, 1995; Long, 1996). Long's theory stresses the importance of NS modifications to avoid communication breakdowns, and claims that NSs frequently used interactional modifications, such as clarification requests and repetitions, in order to provide comprehensible input for the NNSs.

According to Long's (1996) interactional hypothesis, a fundamental element of SLA is social, two-way communication with other speakers of the L2. In Long's view, comprehensible input, (any L2 heard by the learner) is an essential element in language learning but more importantly, his theory emphasises how this language input is made comprehensible for learners. In Long's words:

negotiation for meaning, and especially negotiation work that triggers interactional adjustments by the NS or more competent interlocutor, facilitates acquisition because it connects input, internal learner capacities, particularly selective attention, and output in productive ways. (1996, pp. 451–452)

Long believed that learning occurs when attempting to communicate in the L2 and claimed that NoM or modified interactions between learners, or between NSs and NNSs, has the biggest impact on L2 acquisition. Thus, in contrast to the other theories presented, the interactionist framework considers all aspects of communication, such as input, the processing of input, output, and interaction, as fundamental for L2 learning. In contrast to sociocultural perspectives, Long viewed SLA as a cognitive, internal process, which is facilitated by L2 interactions (Zuengler & Miller, 2006).

In their later work, Long and Robinson (1998) also deemed negative feedback to be conducive to SLA through NoM. This negative feedback can be either implicit or explicit. Implicit feedback can take the form of a recast, where learners correct an utterance by repeating it in a corrected form, while explicit feedback is an overt correction or involves questions to elicit understanding. However, this modification of output is not a given in conversations and depends on the learner's ability and willingness to not only notice mistakes but also to react to the feedback, process it accordingly and show uptake, which is a learner utterance that shows a reaction to the preceding feedback or correction (Gass, 2015).

In the words of Gass and Selinker (2008) NoM is the "attempt made in conversation to clarify a lack of understanding" (p. 457). This attempt for clarification leads to learner feedback, such as corrections, questions, and repetitions. The feedback then draws learners' attention to differences between what they are capable of communicating and what they desire to communicate. Noticing this gap leads to modification of output, which is any L2 the learner produces, and consequently to successful language acquisition (Mackey & Goo, 2012). While this section has provided an overview of the interactionist approach, concrete findings from previous studies will be analysed in Chapter 2.3.1 in order to detail negotiated L2 interactions more closely.

2.2 Summary

In summary, the above review has laid out the theoretical background for the research presented in this thesis and has demonstrated the need to view L2 interactions from different angles. In order to closely examine how L2 learners negotiate, repair and manage discourse, these theories on SLA should complement each other, rather than be used in isolation.

In particular, the interaction approach was discussed, with a focus on one of the key points of this thesis, which postulates that interactions are crucial for successful SLA. Therefore, in addition to comprehensible input and output, which can help learners experiment with forms and structures of the L2, research drawing on interactionist theory emphasises that L2 learning occurs when attempting to communicate actively in the L2.

Within two-way exchanges, input is made comprehensible as a result of adjustments to the interactions at times when communication problems occur. These modified interactions have the biggest impact on L2 acquisition in helping learners utilise strategies to avoid misunderstandings or to repair problems.

In addition to the interactional adjustments learners make in conversations, it is important to also investigate the social factors inherent in L2 conversations, based on the work of Vygotsky (1978) and sociocultural theory. Here, L2 learners are regarded as active participants of meaningful social interactions and activities through which they improve linguistic competence. For the current study, L2 learning is seen as a shared activity, accentuating the importance of interaction and collaboration for cognitive development. Yet, social factors are not to be neglected, as SLA is seen as a cultural, experimental, and semiotic construct, where the language and context of its setting are inseparable.

The following section focuses on the different definitions of negotiated interactions and how the concept is used in practice. Furthermore, the constructs of strategies to enhance communication and social proximity in online collaborations will be outlined in more detail.

2.3 Foreign language interactions and discourse management

This part of the review of relevant literature concentrates on the discourse management devices L2 learners use to repair and maintain conversations. In light of recent trends in placing peer-to-peer interactions at the centre of L2 programmes (as noted in Chapter One), it is necessary to begin this chapter with a definition of student interaction that supplements the brief outline given in the introduction.

For the current study, peer interactions are regarded as communicative activities between learners that are student-centred and collaborative (Philp et al., 2014). Oliver and Philp (2014) stress the reciprocal nature of communication, “which is collaborative in that it is co-constructed by two or more participants and most often reciprocal in nature” (p. 6) and “consists of speaking and listening as well as non-verbal and paralinguistic features” (p. 6), which, particularly for young or inexperienced L2 learners, can simply be an agreement with their interlocutor. In L2 interactions, learners, and beginner and adolescent learners in particular, sometimes use the L1 at times of communication difficulties. However,

according to Philp et al. (2014), it appears that getting familiar with interacting in the L2 and increased practice time aid students in limiting their L1 use. Moreover, they found that L1 use may also be used as a scaffolding tool to discuss the L2 production, prevent eventual errors, and maintain the conversation.

Another aspect to consider when researching peer discourse is the age of the learners. In contrast to children, adolescent L2 learners possess greater cognitive, linguistic and social competences (Philp et al., 2014). However, social factors may cause students to refrain from participating in L2 communication, particularly with peers they do not identify with.

In sum, while social factors can greatly influence peer interactions and impede some learners' participation, improved cognitive abilities mean that adolescent learners are more likely to focus on lexical and grammatical difficulties, negotiate meaning, and reflect on these (Oliver & Philp, 2014).

As outlined previously, NoM can aid SLA by giving learners means to modify their discourse. These modifications can have different aims, however. The following section will first discuss negotiated interactions with the goal of repairing communication and show some issues related to this type of discourse management. Second, discourse management skills that entail the negotiation of content to sustain and maintain the coherence of conversation will be discussed. In contrast to NoM episodes, these CSs generally occur in problem-free discourse. Third, how learners can achieve closeness with each other and develop interpersonal skills in order to connect with their interlocutors and ensure smoothness in their discourse will be examined.

2.3.1 Negotiated interactions

Despite the definition given in Section 2.1.4 above, NoM is regarded in a variety of different ways in the SLA literature. While some researchers understand NoM solely as a tool to repair communication breakdowns, others view it as a strategy to avoid communication breakdowns. Furthermore, some research on NoM separates problems in communication from linguistic issues. Ellis (2001), for example, makes the distinction between, negotiation of form and NoM. That is to say, negotiation can entail strategies to repair issues relating to linguistic features as well as strategies to clarify meaning.

In contrast to the division between focus on form and focus on meaning, another definition of NoM has emerged, which includes both lexical and grammatical functions, as well as comprehensibility. Pica (1994), for instance, stresses the comprehensibility of a message, as opposed to accuracy and claims that NoM:

Fostering peer interactions in online learning environments

focuses on the comprehensibility of message meaning, and on the message's form only insofar as that can contribute to its comprehensibility. Learners and their interlocutors find ways to communicate messages through negotiation, but not necessarily with target-like forms. (pp. 517–518)

Additionally, definitions of NoM focus on the productive and receptive nature of NoM and mutual understanding regardless of the reasons and types of issues in communication. According to Long (1996), negotiation is:

the process in which, in an effort to communicate, learners and competent speakers provide and interpret signals of their own and their interlocutor's perceived comprehension, thus provoking adjustments to linguistic form, conversational structure, message content, or all three, until an acceptable level of understanding is achieved. (p. 418)

In the updated interaction hypothesis, Long (1996) views NoM as more than SLA through comprehensible input. Rather, negative feedback makes L2 learners notice and creates a focus on their output. Hence, the theory connects input, negotiation, noticing, and output.

More recently, conversations between NNSs have become the focus of several studies and previous research claims that peer-to-peer interactions between NNSs with different proficiency levels elicit more instances of NoM, whereas fewer opportunities for negotiation occur when L2 learners are of equal proficiency and share the same L1 (Gass & Varonis, 1984; Varonis & Gass, 1985).

In a more comprehensive study, Ma and Kawaguchi (2012) compared NoM routines and corrective feedback between six participants: two English NSs, two lower-level NNSs and two NNSs with higher proficiency. Fourteen dyads consisting of different proficiency settings were formed to complete three tasks. Findings confirm that more opportunities for corrective feedback and NoM were found in exchanges between lower-level NNSs and higher-level NNSs than in interactions of NNS–NS. This could be due to the experience of higher-level L2 learners who, through their own L2 learning, may be more accustomed to grammatical difficulties than NSs and are therefore able to correct problems through NoM.

In a similar vein, Varonis and Gass (1985) posited that interactions between NNSs provide a non-threatening environment, which is conducive to NoM. In order to better categorise and research NoM between NNSs they developed a model to identify and categorise negotiation routines in discourse among L2 learners. This model assumes that conversation moves in a linear fashion. An occasion of non-understanding can be resolved through a series of exchanges with the purpose of resolving that particular breakdown in the conversation. Figure 1 illustrates such a negotiation routine.

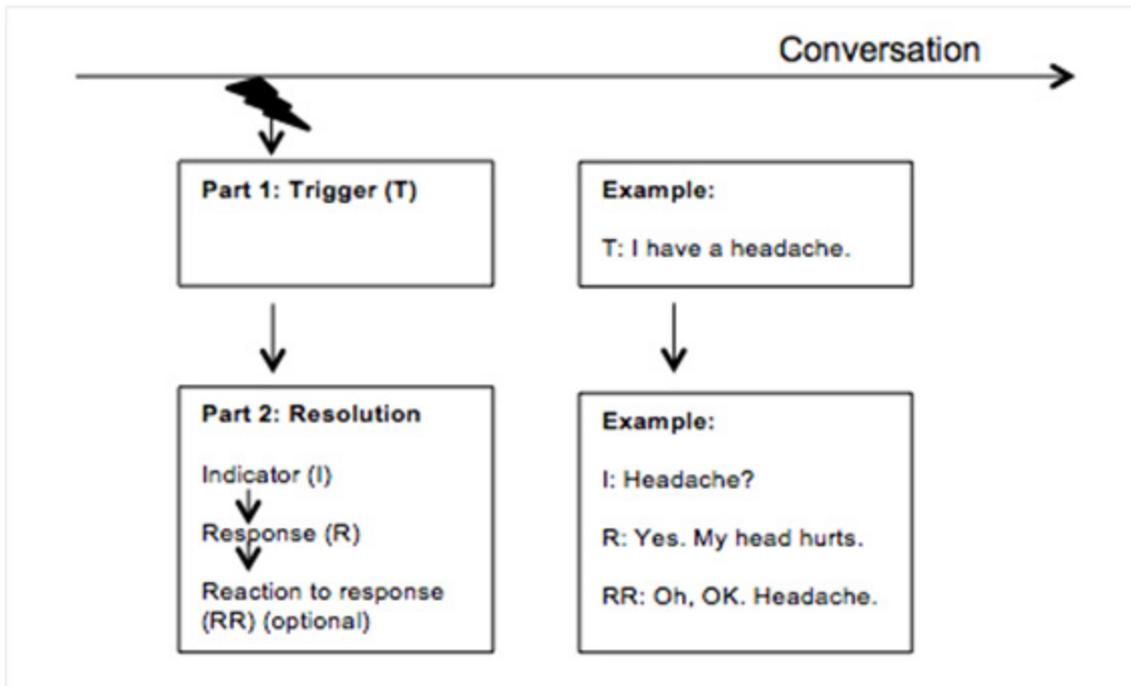


Figure 1. Negotiation of Meaning (NoM) Model Adapted from Varonis and Gass (1985).

A negotiation contains two parts: a trigger and a resolution. A trigger is a speaker's utterance that results in the receiver's non-understanding. Triggers can occur in various forms: a question, an answer to a question or neither a question nor an answer. The resolution to the trigger consists of three modes: an indicator, a response, and sometimes a reaction to the response. The indicator is an utterance by the hearer that stops the horizontal movement of the conversation and indicates that something has not been understood. A response is the acknowledgement of the request from the speaker and a reaction to the response indicates that a resolution has been reached.

In comparison to dyads comprising NSs and NNSs, Varonis and Gass (1985) reported that pairs of NNSs produced the most negotiation routines. In addition to these findings, Oliver (2002) discovered that the lower the proficiency of an L2 learner the more negotiation takes place.

The Varonis and Gass (1985) model concentrates on occurrences of non-understanding, which are described as "those exchanges in which there is some overt indication that understanding between participants has not been complete" (p. 73). Communication continuers via confirmation checks are also classified as part of the negotiation routine but are not elaborated on in the paper. Foster and Ohta (2005) returned to this issue and affirmed that not all interactional modifications are caused by communication breakdowns. They argued that confirmation checks in particular do not

signal an interruption in communication. Rather, they show an encouragement to continue the conversation.

In a similar vein, Pica, Lincoln-Porter, Paninos, and Linnell (1996) cautioned that not all negotiation routines lead to interactional modifications. A confirmation check, for example, which only allows the original speaker to confirm or deny their problematic utterance, lends itself less to modified output. A clarification request, on the other hand, requires the speaker to repeat and/or modify the original utterance.

Another issue pointed out by Foster and Ohta (2005) is that of 'loss of face' through NoM. They argue that L2 learners may experience frustration due to a lack of success in interacting, or experience a fear of losing face when admitting a communication breakdown. They therefore assert that positive encouragement is equally as beneficial to SLA as NoM. This point of view is supported by recent research on negotiated interactions. Van der Zwaard and Bannink (2014) stress that:

from a socio-interactive perspective, however, initiating negotiation of meaning is a dispreferred repair sequence: in most situations people, whether they are language learners or not, prefer to wait for their interlocutor to resolve the trouble source rather than to explicitly ask for clarification or explanation. (p. 139)

Philp et al. (2014) make a similar point when asserting that peer interactions between NNSs contain less corrective feedback and are instead characterised by a focus on modified output in order for students to avoid corrections. Reasons for this include perceived low L2 proficiency, the desire to be polite and save face and an emphasis on communication, rather than accuracy.

Therefore, cognitive and interactional factors should be taken into account when analysing L2 interactions (Reinhardt, 2008). In addition, the Varonis and Gass model has been developed for F2F discourse and does not take into account the unique features of online communication. Previous research that has adapted the model has either concentrated on text chat (Smith, 2003b) or not given a detailed taxonomy of negotiation routines (Y. Wang, 2006; Yanguas, 2010). Furthermore, comprehension skills in a video environment have not been taken into consideration. Consequently, the current research aims to close a gap in describing negotiation routines of beginner learners in videoconferencing.

2.3.2 Communication strategies

As outlined in the previous sections, in addition to negotiation of discourse and feedback after a breakdown in communication, L2 learners often employ CSs and use collaborative dialogue in order to avoid problems and to bridge a gap between their

linguistic deficiencies and communicative goals. Canale and Swain (1980) first coined the term 'strategic competence', a subcategory of their communicative competence framework, which they defined as "verbal and nonverbal CSs that may be called into action to compensate for breakdowns in communication due to performance variables or to insufficient competence" (p. 30). Later, Canale (1983) widened the definition and asserted that CSs could also be used to "enhance the effectiveness of communication" (p. 9). In other words, CSs describe the manner in which language is manipulated to achieve interactional goals and to compensate for a lack of communicative and linguistic competence. This definition is similar to that of Swain's collaborative dialogue (2000). However, Swain placed her focus on linguistic co-construction, while strategic competence also includes non-verbal strategies and problems caused by social behaviour.

Despite the abundance of literature, there seems to be no generally accepted definition or approach to CSs (Smith, 2003b). Two major trends have emerged from the literature: the cognitive or intra-individual approach and the discourse management or inter-individual approach. The intra-individual approach regards CSs as cognitive plans to deal with communication problems without the interlocutor's support (Færch & Kasper, 1983). These two researchers have developed two categories of CSs. Achievement strategies are used to get the intended message across via an alternative L2 output. Reduction strategies, on the other hand, are used to avoid a problem in communication by changing the message.

Conversely, according to the inter-individual approach, CSs are interactive in that they are shared by both interactants to negotiate meaning and form in order to achieve shared meaning despite a lack of shared linguistic and socio-linguistic structures (Tarone, 1981). Similarly, in his earlier work on L2 interactions, Long (1983) concentrated on the latter approach and defined CSs as discourse strategies that learners employ to maintain a conversation and to avoid a communication breakdown by simplifying content and language. Strategies to overcome linguistic difficulties include word coinage, self-correction, repetition, co-construction, translation, and topic change.

While supporters of the cognitive approach believe that CSs are not teachable, supporters of the discourse management approach call for the teaching of these discourse management skills to ensure improved L2 discourse (Dörnyei, 1995). Research promoting the direct teaching of CSs demonstrates that instruction in CSs proliferates the frequency of strategy use (Dörnyei, 1995) and contributes to speaking proficiency while enhancing the quality of discourse (Nakatani, 2005, 2010).

Regardless of the two approaches, in light of a sociocognitive view of learning, it seems favourable to make L2 learners aware of CSs and direct them towards using these, both in the L1 and L2. However, studies that offer practical solutions for the use of these strategies are rare, since the use of CSs depends on a number of variables, such as the nature of the tasks and the level of L2 proficiency. Even more important, the selection of CSs is often made subconsciously.

In spite of these difficulties in teaching CSs, previous research has indicated that instructing in CSs improves L2 discourse. Nakatani (2005) found that participants in an experimental group who had received special training on CSs were more aware of how to use CSs to improve L2 interactions and consequently were able to employ further achievement strategies, while neglecting reduction strategies as compared with the control group. In later studies (2006, 2010) Nakatani also stressed the importance of strategies for NoM. He concluded that low proficiency learners use fewer achievement strategies and therefore stated a need for increased training on CSs to make L2 learners aware of them. These suggestions align with Maleki's advice (2010), which affirmed that different CSs can, and should be, part of L2 teaching and learning.

Taking into account the interactionist perspective of the current research, an inter-individual definition of CSs seems favourable. However, additional communication resources that do not necessarily require a shared meaning process should also be considered when investigating student interactions. With this in mind, Dörnyei and Scott (1997) proposed a wider model of CSs. They included many of the categories used by other researchers and incorporated three categories of CSs. Direct strategies refer to manipulation or modification of language to compensate for L2 deficiencies. Indirect strategies are classified as endeavours to create a condition, which facilitates mutual understanding, such as the use of fillers or simulating understanding. Interactional strategies are the closest to NoM sequences, in that they are trouble-shooting episodes. Each strategy is divided into up to four sub-categories to further analyse the strategies learners employ. These are (1) resource deficit-related strategies, which infer a lexical L2 deficiency; (2) own-performance problem-related strategies; (3) other-performance problem-related strategies; and (4) processing time pressure-related strategies. These communication management tools are meant to occur in either problem-free or problematic conversations and therefore lend themselves to the examination of beginner L2 talk. A more detailed description of the model, including the coding categories, can be found in the Methodology chapter of this research.

2.3.3 Social presence

Similar to the negotiation of discourse and strategic competence, social proximity amongst L2 learners has become the focus of recent SLA research (Yamada & Akahori, 2007; H. Zhao, Sullivan, & Mellenius, 2013). While communication skills are regarded as discourse management devices to prevent or repair a breakdown in communication, SP is concerned with speakers' interpersonal skills. Specifically, SP was first defined as the "degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationship" (Short, Williams, & Christie, 1976, p. 65). That is to say, SP describes how speakers interact, create a personal connection, and convey emotions (Rourke, Anderson, Garrison, & Archer, 2001).

With the advent of CMC technologies, research has focused increasingly on the concept of SP to describe interlocutors' community building but there seems to be no clear definition of the concept in the literature. For the current study, a definition will be adopted that takes the CMC environment, participants' social skills and their feelings into consideration. In Tu and McIsaac's (2002) view, social presence is "the degree of feeling, perception, and reaction of being connected on CMC to another intellectual entity" (p. 140). Hence, SP measures the sense of community learners experience in an online environment. The literature furthermore claims that SP can help create environments where learners are willing to get out of their comfort zone, express emotions, take risks and allow themselves to make mistakes (Kehrwald, 2008; Ko, 2012).

Since SP is a highly contextual construct, its measurement needs to consider the communication context. For instance, videoconferencing holds a potentially higher amount of SP than text chat due to additional social cues, such as gestures and eye gaze, as noted by Rourke et al. (2001). Equally, SP depends on the interlocutors, their attitudes towards the online environment and communication, as well as the communicative tasks used (Tu & McIsaac, 2002). Dunlap and Lowenthal (2014) argue that previous models to measure SP need to be revised more accurately to do the complex concept of SP justice. Specifically, they claim that coding schemes do not take into account different levels of SP. For instance, an episode of self-disclosure should hold a higher degree of SP than for example a single episode of humour. Moreover, Dunlap and Lowenthal feel that individual differences between students need to receive more attention and that one approach does not fit all students. Hence, just as there is no conclusive definition of SP, an encompassing way to measure SP has also not been found. Previous research measures either attitudes via questionnaires (Gunawardena & Zittle, 2009; Yamada, 2009) or participant behaviour in interactions (Ko, 2012; Rourke et al., 2001).

This lack of conclusive definition is particularly evident in CMC environments. Studies on text chat and asynchronous CMC have brought forward models to measure SP (Rourke et al., 2001; Szeto & Cheng, 2014) but these cannot fully be transferred to video chats with their own unique traits. For the current investigation, the taxonomy of Rourke et al. (2001) will guide data analysis and will be defined in more detail in the Methodology chapter.

2.4 Summary

The above reviewed literature demonstrates that the use of discourse management skills, which requires L2 learners to notice and solve problems in discourse, both in active expressions and comprehension of messages, can aid the development of SLA.

Similarly, students' use of strategies to aid communication and interpersonal skills can assist the development of interactional skills. While CSs serve the purpose of coping with inadequate L2 knowledge, NoMs are episodes of trouble-shooting, used to prevent breakdowns in communication or repair the discourse in cases of misunderstanding. Hence, the functions of CSs and NoM can be broadly divided into strategies concerned with production and strategies relating to comprehension. Meanwhile, SP is also concerned with discourse management, but from a social perspective rather than a cognitive one.

In this section, categories to classify and analyse CSs have been outlined along with the definitions of direct and indirect strategies that are central to this study. Direct strategies refer to manipulation or modification of language to compensate for L2 deficiencies, while indirect strategies try to create conditions for mutual understanding.

It has been shown, not only that the theoretical frameworks of sociocultural theory and interactionist theory can be used in combination, but also that the different taxonomies to analyse peer-to-peer interactions overlap at some point and should not be regarded as isolated discourse management tools. In what follows, these theories and methods will be analysed in light of their application in CMC environments.

2.5 Foreign language interactions and discourse management in computer-mediated-communication

Previous research has established that L2 learners benefit from a vast amount of input in CMC with other L2 learners, a language instructor, or an NS. This input enables learners to have more contact with the L2 than in a classroom-based setting. Equally, CMC allows for increased output and interaction. In the following section, studies that connect L2 exchanges with CMC will be reviewed with a particular emphasis on interactions carried out in video environments.

2.5.1 Current research on videoconferencing for foreign language interactions

Videoconferencing tools belong in the category of Web 2.0 tools, which can be classified as platforms that offer a social, and engaging, collaborative approach to interaction (Andersen, 2007). This constructivist definition of Web 2.0 with a focus on collaboration, interaction, and networking shows parallels to Vygotsky's framework (1978) of socially constructed learning. Equally, Wang and Vásquez (2012) stress that learning networks should play an important role in education, since students' social and educational lives are increasingly centred on online collaborations and networking.

Videoconferencing has been the centre of interest in a number of studies due to its authenticity and accessibility to L2 culture, both visually and aurally. A distinction has to be made between audioconferencing and videoconferencing. While synchronous audio chat comes close to F2F communication, the lack of body language influences the nature of the interaction. In addition, the video environment requires new ways of social interaction and community-building as well as linguistic skills, listening and pronunciation (Hampel & Hauck, 2006). Video chat includes body language and provides learners with additional features, such as being able to see both their interlocutor and themselves on screen. These factors aid the building of learning communities and increased learner confidence (Hampel & Hauck, 2006; Hampel & Stickler, 2012).

In recent years, studies have increasingly illuminated the benefits of videoconferencing, since its similarity to F2F can aid the development of authentic conversations in an L2 (Bueno Alastuey, 2011; Guichon, 2010). Other benefits include the importance of making personal connections (de Freitas & Neumann, 2009; Lee, 2007) and an increase in learners' autonomy by taking ownership of their own learning (Blaurock, 2011). In addition, studies report a substantial growth in students' speaking proficiency and the advantage of instant phonetic feedback (Bueno Alastuey, 2011). Despite the aforementioned similarity to F2F conversations, researchers have also noted some differences and unique affordances of videoconferencing. Hampel and Stickler (2012) assert that videoconferencing contains further elements, such as audio, text, images and graphics. In addition to its multimodal nature, Wang (2004) discovered that videoconferencing differed to F2F interactions in terms of time lags, micro-cuts of sound and issues relating to turn-taking due to slow transmission of sound and picture. Moreover, even though a video element exists, only a frame of both interactants is available (Levy & Stockwell, 2006).

Aside from the affordances of videoconferencing, the literature has also concentrated on the implications of the technology for L2 courses. For instance, Dooly (2015) cautions

that, while technology is now widely available in secondary L2 classrooms, its full integration into the L2 classroom has not yet been achieved. She calls for an approach focused on the learner rather than the technology, and advocates the integration of technology that fosters communicative competencies into existing teaching paradigms. Moreover, Dooly recommends that specific technological tools should be selected which encourage the interactive competences students might require in their future careers. This view is supported by de Freitas and Neumann's claim (2009) to focus on effective pedagogical strategies rather than to over-emphasise the environment of interaction.

With the improved stability of existing videoconferencing platforms and emerging forms of video collaborations, an increased interest in teacher education on videoconferencing has been noted, while student training has received less attention (Develotte, Guichon, & Vincent, 2010; Guichon, 2010). Heiser, Stickler, and Furnborough (2013), however, claim that students are often falsely assumed to possess great competencies surrounding technology and that, even if they have the digital literacies to use electronic communication, they might not be able to use the tools effectively for L2 learning. They therefore argue that both instructors and students need special training on how to use software effectively and on how to establish SP in order to establish connections in a potentially problematic environment, in which they need to adapt to different cues to those of F2F communication. They posit, for instance, that learners need to be able to adapt to unique traits of the media, such as the delayed transmission of images in video chat.

Videoconferencing has been researched for verbal exchanges between NNSs (Y. Wang, 2006; Y. Zhao & Angelova, 2010) or for communication between NSs and/or teachers and L2 learners (Angelova & Zhao, 2014; Jauregi, de Graaff, van den Bergh, & Kriz, 2012; Tian & Wang, 2010; Y. Wang & Chen, 2012).

Telecollaboration in particular has received a lot of attention in previous studies (O'Dowd, 2007, 2010). However, these studies generally focus on collaborations between NSs and NNSs and mainly aim at cultural exchanges and intercultural competence, rather than interactional discourse management. Although the current study concentrates on peer-to-peer interactions of NNSs via videoconferencing, some studies researching NNS-NS discourse and/or a different CMC mode will be reviewed, due to the scarcity of research on sole NNS L2 video interactions, because they give insights into either discourse repair or management, social orientation, or anxiety levels of L2 learners.

Most previous studies have empirically described pedagogical interventions via videoconferencing, but there seems to be a paucity of research on "contextual factors that lead to effective learning outcomes and innovative uses of videoconferencing" (Lawson, Comber, Gage, & Cullum-Hanshaw, 2010, p. 296). Lawson et al. call for robust pedagogical

interventions that explore video CMC, not for the sake of it, but because it enhances teaching and learning and accommodates the needs of today's students.

One of the few studies investigating the use of video chat in secondary language learning is Blaurock (2011). This qualitative study was designed to describe the experience of six high school students learning Spanish in a video chat synchronous CMC environment using Skype. Over the course of 12 weeks, these students communicated once a week with NSs to complete various communicative tasks, such as information-gap activities. Data from interviews, student and teacher journals, and videos were gathered and analysed. Her study is of importance, since it explores not only how students interact but also their feelings about the online communication. Blaurock presented three main findings:

- Students' feelings about their interactions evolved over the course of the study
- The feelings were tied to their relationships with their speaking partners and their own knowledge of the L2
- They acquired the L2 by taking ownership of their own learning and by using specific learning strategies and they developed relationships with their speaking partners that contributed both to their feelings about the project and how they felt about the L2.

Development of spoken L2 skills among young learners was investigated by Phillips (2010) in what seems to be one of the few studies on videoconferencing interventions between primary students. She focused on pupils' and teachers' views of the value of videoconferencing for learning to speak French. The findings suggested that pupils of both lower and higher abilities tended to see videoconferencing as helpful for learning to speak French. More able students were highly motivated by their videoconferencing participation and the lower-ability students reported increased confidence in speaking as a result. Similarly, other studies have confirmed student satisfaction (Whyte, 2011), and a greater confidence, more L2 output and improved listening skills (Gruson & Barnes, 2012).

2.5.2 Negotiated interactions in computer-mediated-communication

Studies that investigate how L2 learners interact and achieve shared meaning in a CMC environment are largely characterised by an interactionist paradigm and a focus on the Varonis and Gass model or an adaptation of it (Blake, 2005; Jepson, 2005; Y. Wang & Tian, 2013; Y. Wang, 2006). Furthermore, most research has centred on text-based CMC or a comparison with audio and video-modes (Blake, 2000; Lee, 2008; Smith, 2003a; Yanguas, 2010). It has been established that CMC, much like F2F exchanges, has the potential to

induce negotiation routines in task-based activities (Smith, 2003a) as well as in open discussion interactions among NNSs (Jepson, 2005; Toyoda & Harrison, 2002).

One of the few studies that not only made use of the Varonis and Gass model but also expanded the framework, is Smith (2003a). He proposed that the model, originally designed for F2F discourse, was not suitable for text-based CMC, which includes a more pronounced and dynamic reaction to response phase. As a consequence, he developed a model that contains confirmation and reconfirmation, which occur after the reaction to response phase. Videoconferencing conversations, however, follow a F2F pattern of interaction and generally do not include delayed negotiation routines. Therefore, Smith's model was not included in the current study.

Jepson's study (2005) compared NoM in oral chat sessions and text-based chat sessions between ESL (English as a second language) learners in an online school. The study involved 10 groups of NNSs divided into text chat and voice-chat groups, which were observed for five minutes during five different sessions on five different days in chat rooms of students' choosing. In conclusion, repair moves such as confirmation checks, self-repetitions, and recasts were more common in voice-chat sessions and mostly stemmed from phonetic mistakes. Overall, more instances of NoM were recorded in the voice chat than in the text chat. While clarification requests were used the most in both text and voice chats, comprehension checks and self-corrections were not recorded. However, the activities used were non-task-based chat room conversations with a focus on fluent interactions, which may have caused students to neglect a focus on form.

Likewise, Sykes (2005) compared text- and verbal chat amongst three groups of third-semester Spanish students at university level. One group communicated via text-based chat, the second group used voice chat, and the third group was assigned a F2F approach. Discourse analysis showed that students in the written chat group produced more language, attempted more complex structures, and negotiated meaning more often. Sykes suggested that this was the case due to the non-visual environment in text chats. While the oral and F2F groups were able to use body language and tones, participants of the text-based chat had to produce more language and pose more questions to maintain the conversation. Sykes noted an increased focus on pronunciation and grammar, which he attributed to the decreased pace in voice chats, which gives students more time to reflect on the conversation. Sykes determined that text-exchanges occur within a minute but verbal chat could incur a delay of up to four minutes. This is contradictory to the findings of Kitade (2000) who claimed that text chat allows for more thinking time. Furthermore, results show that NNSs generally tended to translate unknown lexical items, while NSs modified the problematic item.

Kenning's study (2010) focused on collaborative scaffolding in audioconferencing between female, advanced university learners of French. Four tasks had to be completed, two 2-way jigsaw tasks and two decision making tasks. Kenning's findings indicate that advanced language learners produced few LREs when interacting, albeit solving all tasks and working collaboratively. The study provides evidence of collaboration and scaffolding as well as interactions between NNSs. These findings must be treated with caution, however. Kenning examined only six students in three NNS dyads participating in one voice-chat session each. Additionally, the author allowed participants to select their own partners, which may hinder NoM between interlocutors due to increased familiarity between interlocutors and, as a consequence, less need for clarifications. Research involving a larger sample and less advanced participants in a different setting might yield different results.

According to Kenning, individuals with similar abilities are less inclined to negotiate for meaning. Likewise, Foster and Ohta (2005) reported that peers tend not to negotiate for meaning.

A recent study by Rouhshad et al. (2015) aimed at comparing NoM in F2F and text CMC environments between same proficiency dyads of adult EFL learners. Findings indicate that significantly more NoM routines were found in the F2F mode than in CMC despite the fact that participants tended to spend more time on task in the CMC environment. Moreover, negotiations in CMC triggered successful uptake and modified output less frequently and fewer NoM routines were recorded overall. Therefore, the authors conclude that same proficiency dyads are unlikely to produce high rates of NoM and assert that:

The scarcity of negotiations suggests that learner–learner interactions, prevalent in communicative-oriented classes, are unlikely to provide many opportunities for language learning, as claimed by the Interaction Approach. (Rouhshad et al., 2015, p. 16)

However, these findings relate to text-based CMC with unique traits of communication, such as the fact that the text is permanent and can be revisited, and therefore fewer instances of both NoM and learner uptake might be evident. Because of these differences in modes of communication, the following section will focus specifically on negotiations in video chat modes in order to closely compare studies similar to the current investigation.

2.5.3 Negotiated interactions in videoconferencing

Recent studies have shown that videoconferencing lends itself more than text chat to NoM due to its similarities with F2F talk (Sarré, 2011; Yanguas, 2010). One of the few studies that explored negotiated interactions solely in a videoconferencing mode is Wang's

research (2006). She paired distance learners of Chinese with NS teachers for 19 language sessions lasting up to 90 minutes with the aim to complete different tasks, such as free conversation or talking about a recent day out. Wang analysed the data using the Varonis and Gass model (1985) and concluded that videoconferencing lends itself to NoM and allows participants to modify their interaction during a breakdown in communication. Further to the typical breakdowns caused by lack of vocabulary and interactional phrases, the videoconferencing intervention also revealed that participants employed visual cues as signals of non-understanding. Hence, videoconferencing-supported negotiations have their own distinct features. Building on this, the current research develops the Varonis and Gass model (1985) further to incorporate visual indicators as well as content-based indicators.

Lee (2007) investigated NNS and NS dyads in task-based videoconferencing adopting a qualitative view. Eighteen university students worked collaboratively with expert speakers of Spanish to complete two tasks, which provided each party of the dyad with different information that promoted collaborative interaction through NoM. Interviews and reflections shed light on participants' experiences. Lee concluded that the intervention was suitable for outgoing students but increased anxiety levels for less confident students. Furthermore, she proposed that students should be trained in using videoconferencing efficiently. For instance, she reported that students did not use pitch to convey meaning and, most of all, failed to use visual cues when communication problems arose. Hence, videoconferencing seems to require different interactional strategies to achieve successful negotiation routines, which the current research addresses.

Among the few studies examining the use of Skype in language teaching is Yanguas' investigation (2010) on oral interactions between 30 university students. Central questions of this qualitative study were how L2 learners negotiated for meaning in CMC groups (video or audio) during task-based communication and how this compared to NoM researched in the text-based CMC literature. The 15 dyads were randomly divided into three groups, audio, video and F2F, and were instructed to complete a jigsaw task that contained 16 unknown lexical items. All participants completed the task at the same time in the same computer lab and were given 20 minutes for completion. Yanguas found that all three groups negotiated for meaning, but there was a difference in how the audio and video groups carried this out, which could be attributed to the absence of visual cues in the audio group. Meanwhile, between the video and F2F group, no differences were recorded and verbal patterns of turn-taking were similar to those in F2F, but opposite to those found in written synchronous CMC.

This interpretation is similar to Sarré's findings (2011), which brought to light that video chat between NNSs from a Masters class of a French university contained more

negotiation routines and negative feedback than tasks conducted in text chat and discussion boards. His findings also show that L2 learners of English with low interactional skills tend to use statements of non-understanding rather than questions when communication problems arise. According to Sarré, this can be attributed to the fact that statements are easier to construct for NNSs than are questions.

Zheng, Young, Wagner, and Brewer (2009) studied L2 negotiations in virtual learning environments and took a socio-constructivist approach to their examination of content-related problems in discourse between NSs and NNSs of English. They recommended negotiation for action rather than negotiation for meaning and showed that learners actively put an emphasis on shared-content and information to solve their task.

Negotiations of L2 learners of English from Japanese and Chinese universities were compared in Zhao and Angelova's study (2010). Five students from each university chatted with each other for approximately an hour per week on topics about their own culture. It was found that all NNSs participated in discourse management but more NoM routines were recorded in video chat compared to text chat. Pronunciation errors and accents, factors that cannot cause problems in text chat, were identified as possible reasons. In fact, even though the authors conclude that L2 learners benefit from the video exchanges in terms of communicative L2 learning, they report a problem with the environment and claim that videoconferencing causes more issues for learners with a different L1 due to phonetic difficulties and mishearing in addition to having to react on the spot. They caution:

that even though videoconferencing allows for more visual and aural cues, it may as well impose more difficulties on the interlocutors, as they struggle with their pronunciation during communication, and therefore make communication in English a frustrating experience. (Y. Zhao & Angelova, 2010, p. 23)

Overall, it was found that NoM routines differed between the two CMC environments. While participants predominantly employed local indicators in text chat, indicators to signal comprehension problems in videoconferencing consisted mainly of global indicators, or non-verbal signals. In addition, Zhao and Angelova (2010) observed that the fast flow of conversation prompted participants to respond quickly in instances of non-understanding, despite sometimes not being able to locate the exact cause for the communication breakdown. Another observation was that, according to the researchers, maintaining a sociable conversation was of higher importance to participants than to receive fully comprehensible input.

A study by Grümpel, Stoll, and Cifuentes (2014) comparing different dyads of Spanish L2 learners of German with Austrian NSs or NNSs with a high language proficiency, outlined that only NNS interactions between high proficiency learners produced NoM. Yet, corrective

feedback was not acknowledged by the interlocutors and self-corrections were rare. However, the absence of discourse management may be explained by the fact that students were allowed to re-do and re-record their communication until satisfied.

2.5.4 Communication strategies in computer-mediated-communication

Communication skills in synchronous CMC have been the focus of much research in the last decade (Peterson, 2009; Smith, 2003b). Studies have shown that the strategies learners employ in CMC discussions are similar to those of F2F interactions (Lee, 2002; Smith, 2003b) and foster fluency as well as improved input and output (Lee, 2002).

Lee (2001) investigated NNS text chat discussions among 40 intermediate-learners of Spanish and found that students used CSs similar to those in F2F exchanges but employed clarification requests, checks and self-corrections more than other strategies. In addition, students tended to ignore linguistic issues and focused on content and the sharing of ideas instead. Later, Lee (2002) produced similar results in a study with 34 third-year university learners of Spanish. Again, the aforementioned CSs were mostly used in weekly chat sessions but in addition, the study revealed that, even when attempting open tasks, participants focused on co-construction of meaning and stayed on topic.

Smith (2003b) created a framework for analysing discourse strategies in text chat. His aim was to investigate CSs in different task types among low-intermediate EFL learners for weekly chats over five weeks. He categorised CSs into 28 categories, by combining taxonomies from previous research, and found that the CMC environment changes the use of CSs. Learners used a particularly high amount of resources to compensate for the absence of para-linguistic resources, such as eye-gaze, intonation, and pitch. As a substitute participants turned to framing, in order to mark the beginning and end of a topic and fillers to gain more time in cases of communication difficulty. Moreover, after seeding some tasks with unknown lexical items, Smith noted no effect of task-type on CSs.

As mentioned, CSs in text-based environments differ from those in F2F or video environments. However, studies on video or audio CSs are rare. Van Deusen-Scholl (2008) studied CSs of beginner and advanced level learners of German in synchronous and asynchronous text- and voice-based CMC. Results showed a wide range of CSs. Notably, less advanced learners used less complex strategies, while advanced learners employed a range of shared strategies tailored to the different communication means. These findings corroborate those of Kost (2008), who employed Dörnyei and Scott's model (1997), and also found that German learners used strategies appropriate to their language level. However, in contrast to previous studies, participants in Kost's study mainly resorted to code-switching back to English, the shared language of all participants, rather than

attempting to use more advanced strategies, such as requests for help or approximations. Kost reasoned that this was due to the lower proficiency level of students. Her participants were beginner learners of German, while all other studies on CSs researched intermediate or advanced L2 learners. In addition, participants in Kost's study had only 10 to 20 minutes to complete a role-play task once a week for 12 weeks, compared to previous studies where participants interacted for between 50 minutes and an hour over the course of a semester.

In contrast to Kost's findings, Peterson (2009) reported teacher-like corrections and feedback in his study with 14 intermediate undergraduates of English. Furthermore, there was an evident emphasis on task completion by using discourse strategies, such as requests for assistance and co-construction which, in turn, helped in building a collaborative and supportive learning environment. The use of these strategies facilitated the creation and maintenance of a collaborative environment.

H. Kim (2014) examined how CSs differ between synchronous CMC and F2F settings. Ten dyads of tertiary EFL completed three tasks in both environments. Through examination of the transcripts and interviews, it emerged that more strategies were employed in the F2F setting, in particular appeals for assistance, circumlocution, and approximation. Moreover, the majority of participants tended to avoid linguistically challenging items in the CMC mode. Findings therefore suggest the need to instruct CSs, and Kim advocates that "teachers need to encourage learners not to avoid linguistic problems during CMC and teach them strategies for negotiation that can be used in CMC" (p. 15).

In summary, while all studies report the use of CSs, and often specifically adapted to the medium of communication, these investigations are challenging in terms of their approach of classifying discourse strategies. Whereas Lee (2001, 2002) and Peterson (2009) utilised a set of categories that resemble negotiation routines, Smith (2003b) focused more on strategies before a breakdown in communication occurs.

2.5.5 Social presence in computer-mediated-communication

Along with an increasing proliferation of social media use, research on SP in social networks and CMC has increased rapidly in recent years. Video chat seems to be a particularly favoured medium of analysis, since it leads to a higher SP than more impersonal media, such as text chat and audio chat (Lowenthal, 2010).

Peer interactions in particular have been shown to be an important and motivating factor in learning via CMC (Tu, 2000). Darhower (2002) for instance, analysed social discourse functions, such as greetings and phatic expressions in CMC and observed that these speech acts enabled the sharing of feelings which, in turn, helped create a community

of learners, where students actively create identities and a shared sense of social learning communities. Furthermore, Darhower claimed that students were more inclined to stay on task when social discourse was maintained.

Likewise, Tu and McIsaac (2002) found that social interactions necessitate SP. Their mixed methods study involving 43 students of an online course also revealed that an increased involvement in online exchanges does not mean an increase in SP. Rather, positive attitudes towards the technology used and the quality of interactions, such as the building of trust and familiarity through informal discussions, seem to define the amount of SP. These findings were supported by Swan and Shih (2005) who further reported that SP is best achieved by sharing personal information within their community of learners and by acknowledging their peers' output.

Kehrwald (2008, 2010) took a different approach and is one of the few researchers to take the learner's perspective into account in interviewing participants on their views about SP. He claims that SP is an active state that changes with the quantity and quality of communication and deems factors such as trust, respect, self-disclosure, and empathy as important.

Abrams (2013) studied socio-pragmatic skills among a class of 17 second-semester students of German at university level to find out how participants develop these skills in six text chats. She found a transfer from L1 pragmatic skills to the L2 and observed more diverse skills, such as assertions and humour, developing in later interactions. Abrams concluded that general language development and socio-pragmatic skills go hand in hand. In a similar study with a larger sample size, Abrams (2008) showed that beginner learners of German use opening sequences extensively, initiate topics independently, stay on topic and focus on the task and an exchange of ideas. These studies were all set in a text based CMC environment within an eLearning online course context. Despite the fact that visual cues in CMC are not entirely comparable to F2F interactions, the following studies have been selected to put forward definitions of SP in video chat.

A mixed methods approach was employed by Yamada and Akahori (2007). They investigated different modes of CMC (video and audio conferencing and text CMC with and without interlocutors' image), and the effects these different chat environments had on participants' perceptions of their sense of community, SLA and interactional skills. Forty university students of English were divided into four groups, each representing one of the types of chat. Findings revealed that SP helps L2 communication, particularly in videoconferencing, since students were more aware of their use of language and produced more linguistic outcomes. A correlation was found between chats conducted in voice environments and the presence of the speaking partner's image. The visual impact

motivated students to speak more. Further studies confirm the positive impact of visual cues. Hampel (2006) and Yamada (2009) pointed out that a lack of visual signals such as nodding can increase anxiety, while Wang and Chen (2012) stressed the importance of visual cues for the building of a learner community.

In her later study, Yamada (2009) focused more on the concept of SP in CMC and the relationship between the different types of CMC, and suggested that image and voice promote awareness of natural communication, while text-based CMC aids the increase of grammatical accuracy. Results showed that voice chats affect both learners' emotions and their output. The existence of an interlocutor's image enhances the concept of natural communication, which leads to a number of self-corrections. In line with previous research (Blake, 2000; Lee, 2008; Smith, 2003a), Yamada's study revealed that negotiations about lexical items are more common than grammatical negotiations. Thus, negotiations focus more on overall meaning than on structure (Jepson, 2005; O'Rourke, 2005).

Wang and Chen (2007) explored the use of videoconferencing by pairing five students studying intermediate Chinese at university with NSs, who took part in two hours of live speaking distance tutorials each week for 10 weeks. Participants had to complete learning tasks in the form of role-play, game playing, or dialogue within the synchronous cyber classroom. Students stressed the importance of making personal connections. Moreover, participants stated that they liked being able to see their partner and felt that it helped them improve their pronunciation, since they could observe how they formed words. These findings can be contrasted to Bueno Alastuey's outcomes (2011), which stated that the lack of visual cues did not make any difference to students' oral proficiency levels.

In a similar vein, van der Zwaard and Bannink (2014) argue that video chat may not be conducive to task-completion. They claim that, in video chats between NNSs and NSs, about half the negotiations resulted in incomplete tasks due to the NNSs focus on fear of losing face and the NSs aim to stay polite and show solidarity with the L2 learner.

2.6 Summary

The above section has provided evidence for the claim that CMC can help promote learners' interactional skills. In particular it was argued that L2 learners negotiate more in video environments and use statements of non-understandings to resolve issues in discourse, rather than complex discourse management tools (Sarré, 2011).

Previous research on NoM in video environments has discovered that indicators to signal comprehension problems in videoconferencing consisted mainly of global indicators due to the fast flow of conversation (Y. Wang, 2006; Y. Zhao & Angelova, 2010). Visual cues

to signal problems in communication are rare (Lee, 2007) and a recent study (Grümpel et al., 2014) reported that NoM routines occurred only in NNS interactions between high proficiency learners.

With regard to CSs, it was found that beginner learners tend to draw on strategies appropriate to their language level, such as code-switching (Kost, 2008). In turn, the use of CSs can help facilitate the creation and maintenance of a collaborative chat environment (Peterson, 2009). Moreover, previous research on SP in CMC revealed that L2 learners tend to increase their SP by sharing personal information and by acknowledging their peers' output (Swan & Shih, 2005), as well as by developing trust, respect, and empathy (Kehrwald, 2008, 2010).

2.7 Foreign language anxiety and its impact on foreign language interactions

The following section outlines the second main part of the current investigation. Equally important to knowing how to interact appropriately in the L2 and how to use interactional resources are strategies to cope with stress and anxiety while speaking in the L2 in order to ensure naturally flowing conversations.

There is a consensus in the literature that speaking activities in an L2, and particularly in CMC environments, can cause nervousness for some learners (Baralt & Gurzynski-Weiss, 2011; Sheen, 2008). Therefore, this section outlines a definition of FLA and how the literature views the relationship between CMC in L2 learning and participants' anxiety levels.

2.7.1 Definition and causes of foreign language anxiety

FLA is a situation-specific anxiety related to the language-learning context. It constitutes a particular kind of stress, aroused by situational factors such as tests, speaking in front of class, and being called on by the teacher (MacIntyre, 2007). S. Kim's (2009) analysis of anxiety and motivation in the L2 classroom revealed that the source of FLA in conversation classes was related to speaking spontaneously, without any preparation, and mainly speaking in front of peers, as well as a fear of negative evaluation.

Besides this, MacIntyre and Kim noted that learners frequently have unrealistic expectations of their required ability to use the L2 efficiently. According to them, L2 learners often feel they need to perform at a high proficiency level in order to communicate effectively. Moreover, students often find the learning process too slow and underestimate the time it takes to acquire a L2 to a high level.

Parallel to these findings are those by Horwitz et al. (1986) and Young (1990, 1991) who claimed that students experience anxiety when their self-identity or self-concept is threatened by their limited ability to express themselves and understand others.

According to Horwitz et al. (1986), FLA is triggered by the following factors: Fear about communicating with others in the L2, fear of failure in tests and fear of negative evaluation. In a similar vein, Beushausen (2009) put forward three main reasons for speech anxiety. First, the fear of judgement in the speaking situation, second, the attention and isolation in the speaking situation, and, third, the possibility of failure and making errors. Gregersen and Horwitz (2002) found that a common reaction to this fear is the learner's avoidance of those situations. This reaction can be counterproductive to oral communicative competence, since it prevents the learner from contributing to verbal interactions.

These difficulties in speaking can result in communication apprehension, a particular type of FLA, which is defined as a "shyness characterized by a fear of or anxiety about communicating with people" (Horwitz et al., 1986, p. 128). This fear of speaking seems to be a common occurrence in the L2 classroom and can prevent students from participating in their L2 lessons. Consequently, the current research not only determines anxiety scores of students but also suggests strategies for students to overcome their speaking apprehension.

Deriving from these definitions and causes of nervousness, it appears that FLA, and particularly communication apprehension, is a significant debilitating factor for SLA, particularly in the area of social two-way communication, one of the main tenets of both sociocultural and interactionist theory. McNeil (2014a) emphasises this:

From a SCT perspective, the lack of communication due to anxiety confines engagement in the co-construction of linguistic and content knowledge. In short, if students do not communicate, there exist limited opportunities to receive the assistance from others that supports language development. (p. 143)

Consequently, it is imperative to create learning conditions in which L2 learners feel confident and safe to communicate and experiment with language. Previous research has put forward the claim that CMC may be an ideal environment for independent interactional practice and the next section examines this assertion and the interrelation between CMC and learner anxiety, with a particular focus on communication apprehension.

2.7.2 Foreign language anxiety and computer-mediated-communication

Warschauer (1996) compared F2F and CMC discussions in an English class at university and reported that students found the experience motivating and felt less stress during the CMC. This is in contrast to Lee's study (2004), which concentrated on anxiety levels between NSs and NNSs of Spanish in a CMC environment. Findings indicate that, even though students viewed the experience mainly positively, students still felt anxious and were afraid of making mistakes when conversing with NSs.

These outcomes are in accordance with a more recent study, conducted by de los Arcos, Coleman, and Hampel (2009), which concluded that the isolation of the learner in audioconferencing in addition to the lack of visual cues can be detrimental to motivation and cause anxiety. Additionally, it was pointed out that the lack of visible body language could influence FLA and hinder the creation of community and trust.

De los Arcos (2010) confirmed that FLA levels can increase, particularly for beginners, when they are not able to use body language in communication. In addition, the impact of SP can be lessened (Satar, 2011). Despite this, students tended to improve cognitive skills and take more risks (Hampel, Felix, Hauck, & Coleman, 2005; Hampel, 2006). The setting for all these studies was distance learning, however, and these factors may not apply in a classroom-based setting.

Arnold (2007) examined the long-term effects of CMC on language learners' communication apprehension. She assigned 56 students enrolled in German courses at university to either a F2F, synchronous CMC or asynchronous CMC group and, over the course of an academic semester, students took part in six group discussions in which they discussed open-ended personal subjects in groups of three to four. Arnold administered pre-test and post-test questionnaires based on Horwitz et al.'s Foreign Language Classroom Anxiety Scale (FLCAS) (1986). Participants in both the synchronous CMC and F2F groups generally felt that the group discussions had increased their confidence. In contrast, participants in the asynchronous CMC groups did not report a strong increase in confidence levels. Students' self-reports as well as pre-test and post-test communication apprehension scores suggest that regular student-centred discussions can trigger a permanent reduction in communication apprehension, particularly for participants with high levels of this fear. The study shows that CMC can have a long-lasting effect on apprehensions towards speaking. These findings support those of Arnold (2002), in a study which explored the relationship between CMC and FLA among 56 third-semester German students. Six discussions were held in synchronous CMC, asynchronous CMC or F2F. A pre-test and post-test FLCAS and self-ratings after each interaction were administered to elicit whether the

medium affected learner anxiety and confidence. Arnold discovered that, while self-ratings did not change considerably between the three treatment groups, participants enjoyed the group discussions on the whole.

Post-test, participants in all three groups displayed significantly lower levels of FLA and those students who displayed high anxiety levels before the study had a significantly greater reduction of apprehension levels than participants with initially low or medium levels of FLA. Arnold (2002) also concluded that participants became less focussed on accuracy and instead started to become more aware of the communicative nature of the interactions.

Similarly, Satar and Özdener (2008), as described previously, studied classes that were using CMC and found that students soon overcame their initial anxieties and reported mainly low levels of stress that contributed to a better class atmosphere, particularly when working in pairs in a voice chat group. After a thorough search of the relevant literature this seems to be the only study on FLA in a secondary classroom-based environment.

De los Arcos et al. (2009) explored the nature of language anxiety in Lyceum, an audiographic chat application. Their investigation was guided by the question of whether the online environment influenced learners' FLA. The study was conducted as part of a distance learning Spanish language course at university level and involved interviews with seven students who practised oral skills using the chat functions of Lyceum. Findings showed strong connections between emotions and learner beliefs. Students' beliefs and apprehensions about language learning changed in the context of CMC. The general FLA was made redundant since students could not be seen and their experiences of the outside world did not apply in the online exchanges.

A more recent study regarding the issue of anxiety in a text-based CMC context compared the effects of CMC and F2F communication on learners anxiety levels (Baralt & Gurzynski-Weiss, 2011). In contrast to most other studies in this field, the researchers could not report a decrease in nervousness for the CMC method. Twenty-five intermediate learners of Spanish at university were given two information-gap tasks and their FLA levels were measured half-way through and after each task via questionnaires. On the one hand, participants stated that the chat version gave them more time to think and to scroll back up to see what had been said earlier. On the other hand, students noted that having to think and type at the same time was hard.

According to Baralt and Gurzynski-Weiss (2011), there are several reasons as to why anxiety levels in the CMC mode were not lower. Even though all participants were familiar with chatting online, this would normally occur in their L1 and therefore the novelty of

having to use L2 in chat could have led to increased FLA levels. Moreover, the CMC sessions took up more time on average, which, in combination with the opportunity to check on and focus on form, may have triggered attention on accuracy and offered more scope for anxiety.

Likewise, Poza (2011) could not detect significant differences in students' anxiety levels measured by an adapted FLCAS scale. The study compared FLA in F2F and voice board discussions over six weeks. Forty-eight intermediate learners of Spanish at a US university course participated in the discussions in both environments and four participants were interviewed after the intervention. In contrast to the data from the FLCAS, data from the interviews revealed that students felt more at ease in the CMC environment, since the voice board offered them more time to think about their responses, edit their responses, and take risks. Nonetheless, students reported some negative aspects of the voice board, which were mainly related to technical difficulties. The importance of Poza's research lies in its qualitative component. However, only four students were interviewed regarding their perceptions of FLA and the chat environment, which makes it difficult to draw conclusions regarding students' opinions of the relationship between anxieties and speaking environment.

In an attempt to compare students' FLA levels in F2F and videoconferencing environment, Craig and Kim (2012) conducted oral tests with 40 EFL learners in a Korean university. The test was conducted with NS interviewers and each participant took part in one F2F interview, followed by a video CMC interview a month later. A survey was developed to measure feelings of apprehension before, during, and after the intervention. It was outlined that interviewees in the video chat generally had lower levels of FLA than those in the F2F chats. In particular, prior to the interviews, anxiety levels were higher for F2F than for CMC. However, since the CMC interviews were held after the F2F chats, students may have become accustomed to the interviews. In terms of performance, participants showed no difference between the two groups and test scores were similar across both F2F and CMC. The authors conclude that increased practice time should be given to students in order for them to control their FLA levels.

These results can be contrasted to those stemming from Jebali's research (2014). His study involved 20 high-intermediate L2 learners of French at a Canadian university. Participants completed an information gap task via Skype and a debate on a current event as the F2F task. FLA prior to the tasks was measured with the FLCAS. Additionally, after the Skype task, a questionnaire was used to elicit insights on students' perception of anxiety and the two chat environments. It was found that all participants performed better in the F2F activities. Jebali asserts that, in general, high-intermediate learners are comfortable speaking in the L2 and do not display high levels of anxiety, in contrast to beginner-learners.

Fostering peer interactions in online learning environments

These results are problematic in a number of ways, however. First, the tasks used in the two settings differ significantly. Second, the questionnaire to elicit participants' observations was administered between the two tasks, which may have influenced students. Third, the FLCAS was only administered prior to the intervention. Therefore, these results should be treated only as preliminary findings in the under-researched area of videoconferencing, CMC and student interaction.

One of the most recent studies in the field of FLA and CMC is McNeil's study (2014a), which examined reasons of nervousness among 15 Korean EFL students in an asynchronous voice CMC environment. The university students completed CMC tasks over eight weeks, while a version of the FLCAS measured anxiety levels. In addition, an open-ended questionnaire was used to capture both participants' perceptions of FLA and how they perceived the asynchronous chat environment.

Findings indicate that students deemed pronunciation and the lack of non-verbal cues to be the most anxiety-inducing aspects. In addition, participants stated that comparing themselves to each other caused nervousness. Regarding the environment, it was suggested that the introduction of CMC does not necessarily lower FLA. Rather, McNeil (2014a) suggests that an interplay of students' ability, the activities used, and the chat environment helps to alleviate anxiety.

The importance of McNeil's (2014a) study lies in its attempt to investigate FLA without introducing a control group. As described in this chapter, the majority of research in the field of CMC and speaking apprehension has been conducted to compare CMC to F2F environments but little research has been done to understand speaking apprehension in CMC environments uniquely.

A thorough search of the relevant literature revealed that the only study to date dealing with strategies that may help distance learners of L2 cope with anxiety is Hauck and Hurd's (2005) investigation. They provided participants with a list of 11 strategies to deal with FLA and administered two questionnaires to find out what strategies students experiencing nervousness still used after the four-month-long study. Findings revealed that students felt particularly anxious when having to speak in front of others and that self-management skills, such as using positive self-talk, can help mitigate anxiety levels. Moreover, students outlined that collaborating with other L2 learners and building a learning community helped ease the feeling of apprehension and isolation a speaking situation can cause.

2.8 Summary

The above section has delineated the concept of FLA, and communication apprehension in particular. Research has shown that many L2 learners feel a degree of anxiety when having to communicate in an L2 (Horwitz et al., 1986) which, in turn, impedes their verbal participation and leads to an avoidance of these speaking situations. This reaction is counterproductive to the construct of interactive competence, since it prevents the learner from contributing to verbal interactions. It therefore seems vital to not only understand the exact reasons for speaking apprehensions but also to equip students with strategies to minimise anxiety in order to improve their interactions.

Some researchers believe that CMC can create an environment in which FLA is reduced. For instance, Warschauer (1996) reported that students felt relaxed during CMC interactions. Other studies, however, have contradicted this claim by asserting that CMC can in fact increase anxiety levels for some students (Lee, 2004), particularly in audiographic environments, due to a lack of visual cues (de los Arcos et al., 2009). However, none of these studies was set in a video environment and it therefore seems problematic to transfer those findings to a video context.

2.9 The research gap

The review of literature has highlighted an emphasis on CMC interactions between NSs and NNSs in an EFL context. Previous literature has highlighted the benefits of CMC on speaking skills in terms of negotiation practices but has been inconclusive as to whether CMC provides more opportunities for discourse management (Sarré, 2011; Yanguas, 2010) than do F2F environments (Rouhshad et al., 2015).

Main trends grounded in sociocultural approaches are centred on affordances of CMC for SP and interactional skills. In particular, video CMC is said to be conducive to SP, since interlocutors feel assured by their partners' image (Yamada & Akahori, 2007) which, as a result, fosters an awareness of SP and enhances more active and effective communication in an L2-environment (Ko, 2012; Yamada & Akahori, 2009; Yamada, 2009)

Despite these trends in research, previous studies on communication practices and anxiety levels of beginner learners of an L2 in CMC have been limited. To date, FLA in online language learning has not been investigated from the perspectives of novice language learners. More importantly, the review of literature has shown that there seems to be a lack of research that explores strategies for students to overcome anxieties in speaking situations.

Most studies that have investigated the role of verbal online exchanges, and particularly video chat, concentrate on distance learning and/or university students.

Therefore, the current research examines whether the interactional moves in videoconferencing sessions of university learners can be transferred to those of younger, less experienced learners.

Additionally, the focus of most previous studies in the area of videoconferencing was interactions of L2 learners with NSs. There is little research on how CMC can be used effectively to encourage secondary school learners to produce meaningful communication in the L2. This is supported by Lin's synthesis of research (2014) with the aim of researching links between CMC and SLA in studies between the years 2000 and 2012.

Studies addressing interaction strategies in videoconferencing are sporadic. However, the few previous studies (Lee, 2007; Y. Wang, 2006) have shown that NoM in videoconferencing and F2F interactions differ and learners use different CSs in videoconferencing. In line with Wang and Chen's (2012) findings, more research is needed to find out how visual cues help mediate collaborative language learning in videoconferencing, especially since the quality of video is now relatively stable.

In summary, seven major themes have emerged from the above review:

- i. While several researchers have investigated the negotiation routines evident in the verbal discourse of L2 learners, no studies have been done to examine this for secondary students' videoconferencing interactions.
- ii. There is a paucity of research on online interactions conducted in languages other than in English.
- iii. The majority of studies examines NNS and NS, expert or teacher exchanges in distance education, which differ from interactions among NNSs in terms of discourse management (Bowles & Adams, 2015). Moreover, peer-to-peer interactions between NNSs in same-proficiency dyads are a particularly under-researched phenomenon.
- iv. Previous research has concentrated on gains in speaking proficiency, grammatical advances and SP in CMC but has not produced much work on interactional features and what kind of interactions take place in a video environment. Furthermore, little research has been conducted on the types and usage of CSs in synchronous CMC.
- v. Most studies on oral L2 learning via CMC have compared online discourse to F2F communication in order to compare and contrast the two learning environments. Studies researching CMC, and particularly videoconferencing exchanges, as a setting for oral L2 learning in its own right are surprisingly rare, especially given the rapid developments in terms of computer-assisted language learning. Additionally, technical problems concerning the CMC environments are seldom explored.

Fostering peer interactions in online learning environments

- vi. Few researchers have evaluated anxiety levels of beginner L2 learners and even less research has been done to investigate the relationship between FLA levels and student perception of speaking activities in CMC. Hence, while many researchers have outlined general potential benefits of CMC for verbal language learning and FLA levels, these effects have not been evaluated empirically.
- vii. While some studies allude to students' views on anxiety, more research needs to be done to help learners overcome speaking apprehensions.

On the basis of the above identified gaps, the current research explores secondary students' CMC interactions, their feelings about these, and strategies for lowering speaking apprehension. The following chapter provides more details on the investigation in terms of methodological choices, participants and the Skype intervention, as well as methods of data collection and analysis.

3 METHODOLOGY

Crotty (1998) defined research methodology as the “strategy, plan of action, process or design lying behind the choice and use of particular methods and linking the choice and use of methods to the desired outcome” (p. 3). The purpose of the current research is to find out how students interact in videoconferencing exchanges and how they perceive these interactions. Specifically, the following research questions will be answered:

- 1) What interactional features are evident in verbal videoconferencing interactions of L2 learners?
- 2) How do learners perceive their experience of these interactions, especially with regard to their anxiety and ability to interact in the L2?
 - i) What aspects of the interactions do learners associate with anxiety?
 - ii) What strategies do language learners use to cope with anxiety?

The following section discusses how the proposed choice of methodology was determined with regard to the research questions posed in this research. First, interactionist theory as a theoretical perspective on learning will be acknowledged. Subsequently, the chapter will provide an overview of the mixed methods design of the study. Finally, ethical considerations will be discussed, especially given my role as teacher of over half of the study's participants.

3.1 Socially constructed learning epistemology

As articulated in the literature review, L2 interactions take place through social discourse. Hence, for the current study knowledge and learning are seen as socially

constructed. This approach is grounded in an ontology in which multiple realities are permitted. These realities are subjective and fashioned and interpreted by humans according to their beliefs.

However, additional factors influencing this research are based on the assumption that modern technologies cannot be adequately studied with existing methods and need a more open approach to focus on the 'what' and 'how' of the research questions. This study aims to explore socially constructed interactions via modern technologies. Additional to asking how participants interact, the study also seeks to research participants' FLA levels. It was considered that a mixed methods design was the most appropriate to answer these questions.

Interactionist theory takes a sociolinguistic and sociocultural perspective on SLA, which can only be successfully understood through learners' interactions in the L2 (Lantolf, 2004). As described in the literature review, this perspective assumes that interaction is a fundamental process in L2 learning, which takes place in social activities rather than in internal processes (Lantolf & Poehner, 2014; Lantolf & Thorne, 2006).

Equally, it was considered appropriate to not focus solely on either sociocultural or interactionist theory but rather to combine the elements. This stance is supported by a new focus on research that promotes the combination of sociocultural and interactional approaches to study all aspects of peer-to-peer L2 interactions in SLA. In combining the theories it is possible to examine NoM via an interactionist, linguistically motivated approach and the co-construction of discourse, mutual support and community through a sociocultural approach (Reinhardt, 2008; Zuengler & Miller, 2006).

This approach seems particularly favourable for a small-scale, in-depth investigation of student exchanges, since multiple elements of these conversations may be important to understand how L2 learners select interactional and linguistic features and orient themselves towards each other socially. Reasons for the implementation of an interactionist and sociocultural theory approach for the exploration of CMC in education are that interactions via CMC can be studied in their natural setting. According to sociocultural theory, learning cannot be understood without reference to the social context (Vygotsky, 1978), which, in this study, is the use of CMC in authentic learning environments. Moreover, an approach informed by interactionist theory enables the researcher to explore and understand the nature and complexity of the processes and contexts in which online interaction develops.

In what follows, the mixed methods methodology that will be used in this study will be delineated. Prior to discussing methods of data collection and analysis, the following section presents the research participants, tasks and the learning environment.

3.2 Mixed methods

The aim of this investigation is to find out how students interact in the L2, whether their displayed anxiety levels change over time, and why. The methodological choices for this study are intended to reflect complex social interactions and multiple realities in an online environment. Therefore, as outlined in the previous section, it needs to be possible to answer both 'if' and 'how' questions (Terrell, 2012). Mixed methods research allows this by moving between and combining qualitative and quantitative interpretations of data to reflect social realities and provides a nuanced understanding of the research problem (Creswell & Plano Clark, 2007).

Increasingly the literature advocates the use of several sources of evidence and methods to support conclusions, as they then become more substantial and permit better explanation of a phenomenon (Hesse-Biber, 2010; Johnson & Onwuegbuzie, 2004; Tashakkori & Teddlie, 2010). A mixed methods approach is suitable for the current study, since it provides different dimensions and explanations for the "complex interaction of social, cultural, and individual factors that are involved in the language learning process in a computer-assisted environment" (Liu, Moore, Graham, & Lee, 2002, p. 264). Additionally, mixed methods lend themselves well to the analysis of talk in L2 learning.

According to Mercer (2005, 2010), both qualitative and quantitative methods should be considered when analysing classroom discourse. He mentions two reasons for combining methods when conducting socioculturally oriented research. First, it enables the building of a fuller, richer description. Mixing both qualitative and quantitative methods has been argued to be an important feature of research on student learning in order to gain a deeper understanding of their interactions. Second, according to Mercer, it enables cross-validation of findings through triangulation.

Drawing on a socioculturally constructed definition of interaction as a complex phenomenon, both quantitative and qualitative measures are employed. Specifically, the mixed method strategy for this study is a concurrent transformative design (Creswell & Plano Clark, 2007; McMillan & Wergin, 2006) with an emphasis on qualitative data from the video recordings, questionnaires and interviews. According to Creswell and Clark (2007), a concurrent design entails the collection of data in one phase by means of different methods, while a transformative design relies on a theoretical perspective as a framework to guide data collection and analysis. Figure 2 illustrates the research design.

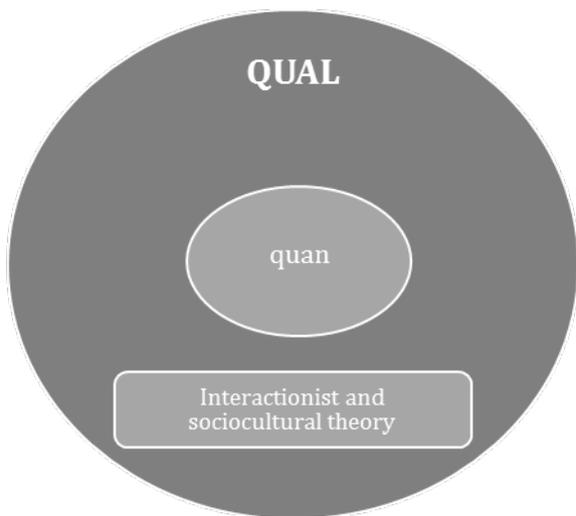


Figure 2. Concurrent Transformative Research Design Adapted from (Creswell, Plano Clark, Gutmann, & Hanson, 2003, p. 181).

Several features of this design are relevant for the current study. First, different information needs to be collected to answer each research question fully. Second, while the study gives priority to qualitative data, the inclusion of quantitative data was necessary to answer Research Question Two. Third, this approach is useful when a theoretical perspective guides the research and enables the researcher to use methods that best assist the chosen theoretical lens (Creswell, 2007). As previously described, the theoretical underpinnings for this research lie in an interactionist approach supported by sociocultural theory in order to best record and describe patterns of peer-to-peer interactions. This approach is supported by Bowles and Adams (2015):

As research moves forward, it would be well-served to take mixed methods approaches, examining both quantitative and qualitative data sources and drawing not just on the cognitivist underpinnings of the interactionist approach but also drawing on social theories of SLA as well. (p. 210)

For the current study, the context consists of two German classes from two different secondary schools in New Zealand. The study was bounded by one term of nine weeks, in which four online interactions were completed via videoconferencing. The phenomenon of interest in this study was learners' experiences with the nature of interacting in the online environment. Units of analysis were the four interactions and the intervention was categorised as a pre-test – post-test group design by administering a FLCAS before and after the online activities (Boudah, 2010).

Due to the mixed methods orientation, this study integrates multi-dimensional approaches in order to research the interactional features and how they are related to L2

learning and particularly negotiated interactions. Therefore, for the current project, the Varonis and Gass model (1985) functions as the main framework, drawing on different sets of data (video, questionnaires and interviews), aided by quantitative analyses and the taxonomies to code communicative discourse strategies and social proximity. These methods will be outlined after a general overview of the planned study in order to place them within the research context.

3.3 Research Design

This research investigated exchanges via CMC and their impact on students' anxiety levels and ability to interact. The following section provides a pedagogical rationale for the inclusion of videoconferencing in the L2 classroom and outlines the study in terms of its participants, settings, and tasks. Then, it discusses the purpose and outcomes of a pilot-study conducted to pre-emptively test the design and methods of the current study. This is followed by a description of implications for data collection methods and data analysis informed by the findings of the pilot-study. Prior to detailing all aspects of the research design Table 1 summarises the current study's design.

Table 1

Overview of Research Design

Research Questions	<ol style="list-style-type: none"> 1) What interactional features are evident in verbal videoconferencing exchanges of L2 learners? 2) How do learners perceive their experience of these interactions, especially with regard to their anxiety and ability to interact in the L2? <ol style="list-style-type: none"> i) What aspects of the interactions do learners associate with anxiety? ii) What strategies do language learners use to cope with anxiety? 				
	<ul style="list-style-type: none"> • Pre-interaction/post-interaction design • Repeated measures design 				
Participants	<p>21 language learners of German in Year 11 from 2 secondary schools in New Zealand</p>				
Instruments and Procedures	<ul style="list-style-type: none"> • FLCAS pre-interaction questionnaire • 4 videoconferencing sessions • Transcript of online chats • Videoconferencing reflections • FLCAS post-interaction questionnaire • Semi-structured interviews with 12 students after last session 				
Data R.Q. 1	<table border="1"> <tr> <td>Quantitative</td> <td> <ul style="list-style-type: none"> • Statistical analysis of interactions (descriptive for NoM) </td> </tr> <tr> <td>Qualitative</td> <td> <ul style="list-style-type: none"> • Analysis of transcripts using taxonomies for NoM, CSs and SP </td> </tr> </table>	Quantitative	<ul style="list-style-type: none"> • Statistical analysis of interactions (descriptive for NoM) 	Qualitative	<ul style="list-style-type: none"> • Analysis of transcripts using taxonomies for NoM, CSs and SP
Quantitative	<ul style="list-style-type: none"> • Statistical analysis of interactions (descriptive for NoM) 				
Qualitative	<ul style="list-style-type: none"> • Analysis of transcripts using taxonomies for NoM, CSs and SP 				
Data R.Q. 2	<table border="1"> <tr> <td>Quantitative</td> <td> <ul style="list-style-type: none"> • Descriptive statistical analysis of pre- and post- interaction questionnaire • Inferential analysis of FLCAS via ANOVA • Inferential analysis of Videoconferencing reflection and levels of anxiety and confidence via ANOVA </td> </tr> <tr> <td>Qualitative</td> <td> <ul style="list-style-type: none"> • Open-ended questions on all questionnaires • Semi-structured interviews </td> </tr> </table>	Quantitative	<ul style="list-style-type: none"> • Descriptive statistical analysis of pre- and post- interaction questionnaire • Inferential analysis of FLCAS via ANOVA • Inferential analysis of Videoconferencing reflection and levels of anxiety and confidence via ANOVA 	Qualitative	<ul style="list-style-type: none"> • Open-ended questions on all questionnaires • Semi-structured interviews
Quantitative	<ul style="list-style-type: none"> • Descriptive statistical analysis of pre- and post- interaction questionnaire • Inferential analysis of FLCAS via ANOVA • Inferential analysis of Videoconferencing reflection and levels of anxiety and confidence via ANOVA 				
Qualitative	<ul style="list-style-type: none"> • Open-ended questions on all questionnaires • Semi-structured interviews 				
Data R.Q. 2 i) and ii)	<table border="1"> <tr> <td>Quantitative</td> <td> <ul style="list-style-type: none"> • Additional items on all questionnaires </td> </tr> <tr> <td>Qualitative</td> <td> <ul style="list-style-type: none"> • Open-ended questions on all questionnaires • Semi-structured interviews </td> </tr> </table>	Quantitative	<ul style="list-style-type: none"> • Additional items on all questionnaires 	Qualitative	<ul style="list-style-type: none"> • Open-ended questions on all questionnaires • Semi-structured interviews
Quantitative	<ul style="list-style-type: none"> • Additional items on all questionnaires 				
Qualitative	<ul style="list-style-type: none"> • Open-ended questions on all questionnaires • Semi-structured interviews 				

3.3.1 Videoconferencing as curriculum intervention

Reasons for choosing videoconferencing as the medium for the peer-to-peer interactions in this research emanated from issues related to practicality and authenticity as well as curriculum demands. As outlined in Chapter One, the New Zealand Curriculum proposes that “communication in the target language is central” (Ministry of Education, 2007, p. 24). Furthermore, it is stated that:

Learning a new language extends students' linguistic and cultural understanding and their ability to interact appropriately with other speakers. Interaction in a new language, whether face to face or technologically facilitated, introduces them to new ways of thinking about, questioning, and interpreting the world and their place in it. (Ministry of Education, 2007, p. 24, my emphasis)

Hence, it is proposed that L2 learners need to be given opportunities to practise in dyadic interactions with their peers while using natural language. Equally, the introduction of the new NCEA *interact* assessment means that there is a focus on peer-to-peer interactions as a new way of assessing students' interactive proficiency that integrates learning and assessment (Antón, 2015; East, 2015, in press; Philp et al., 2014). However, while the curriculum prescribes a clear focus on authentic student-centred communication, its implementation in the L2 classroom poses several issues for educators and students.

The L2 classroom often does not provide enough opportunities for student output and NoM in particular (East, 2012). Therefore, some students do not know how to interact appropriately in spontaneous oral interactions, encounter difficulties with negotiating meaning and solving issues in communication, lack confidence in their own ability to sustain interactions in the L2, and may experience a degree of FLA (Arnold, 2007; Baralt & Gurzynski-Weiss, 2011). Moreover, class sizes and time constraints often affect speaking practice time and prevent students from developing interactional skills in authentic environments. Besides, there are few opportunities to use the L2 outside of the classroom.

In order to fulfil the requirements of the New Zealand curriculum, and since students increasingly have to communicate for assessment purposes, I became interested in incorporating videoconferencing into my classroom. Specific aims were to increase students' speaking practice time and to foster authentic interactions while creating more efficient assessment conditions for the *interact* assessment. In accordance with Dooly (2015), the inclusion of videoconferencing can substitute the traditional classroom learning environment and facilitate the L2 learning process by integrating technology that fosters communicative competencies into existing teaching paradigms.

As delineated in Chapter Two, videoconferencing has the ability to overcome distance, connect learners, may aid in creating personal connections, and, consequently, an emergence of SP (Lee, 2007) and a community of language learners (Wang & Chen, 2007).

Videoconferencing offers unique affordances, such as the inclusion of audio, text chat, images and a frame of both interactants, which allows for the inclusion of non-verbal features (Hampel & Stickler, 2012). According to Jauregi, de Graaff, van den Bergh and Kriz (2012), videoconferencing provides more learner involvement and a more equal opportunity for students to produce language in authentic situations and engage in social discourse compared to those taking part in classroom discussions. As uncovered by previous research, interactions in a video-environment tend to be authentic and contain a high amount of CSs and NoM (Y. Wang & Tian, 2013; Y. Wang, 2006; Yamada & Akahori, 2009; Y. Zhao & Angelova, 2010). Specifically, Sarré (2011) found similarities between F2F and videoconferencing negotiations and claimed that video chats encourage more negotiation routines than text and audio chat.

These extra affordances can help bridge the distance between L2 learners. For instance, L2 classes in New Zealand generally have smaller numbers of students compared to the majority of learning areas. In addition, classes in the NCEA pathway are often multi-level combined classes, sometimes with a single L2 learner per year-level. These students should be given every opportunity to interact with a variety of people. Moreover, L2 classes of the same level within the same locality can have disparate timetables, which makes it impractical to pool classes from different schools for assessment purposes. Nonetheless, since students need to complete multiple interactions over the academic year in various contexts and for different purposes, it would be beneficial to interact with several different interlocutors, in order to achieve authenticity and avoid rehearsed conversations.

Videoconferencing can therefore aid in connecting with other L2 learners by offering a relatively easy way of accessing additional L2 learners, regardless of students' location. A video environment seems to support negotiated, social interactions, which is a vital element in SLA, and the *interact* assessment in particular. Furthermore, it lends itself to autonomous work, since students can complete their assessments, record the interactions and select samples for their portfolio of assessment independently. This focus on autonomous work lends itself well to L2 learning, particularly for languages with limited numbers of students. Likewise, Thorne and Black (2007) found that CMC can change the traditional model of teacher-centred communication into a more student-centred, active environment for SLA. In a similar vein, Dooly (2015) recommends that technological tools should be selected to encourage the interactive competences students might require in their future careers. Hence, the inclusion of videoconferencing may not only support student-centred activities but may also contribute to the preparation of students for the future.

3.3.2 Participants

Participants for this study were sought from two New Zealand secondary schools and comprised learners of German in Year 11. The rationale for choosing participants from two different schools was to promote more spontaneous, real-life interactions, to connect L2 learners who tend to feel isolated and/or do not have access to a variety of interlocutors, and to expose students to a range of accents, pronunciation and ways of speaking.

Overall, there were 21 participants, including twelve students from an all-boys high school (my own school) and nine students from an all-girls high school, who volunteered to participate in the study and consented to recordings of their video interactions. Students were at the beginning of their third year of German at high school level, approximately 15 years old, and with an estimated level of German of A1 to A2 on the Common European Framework of Reference for Languages (Council of Europe, 2001). Over 85% of participants had already studied an L2 other than German and 19% spoke a language other than English at home. A survey of students' computer use revealed that over 90% used the computer daily for various purposes. Almost 43% of participants claimed to have had experience with video chat applications.

Participants were randomly paired up across the two schools for four videoconferencing sessions in German, each of which lasted around five minutes. Due to uneven numbers, some of the female participants were invited to complete additional interactions, in order for male participants to be able to complete all four interactions. Pairings were decided by the two participating teachers prior to each session and depended on the availability of students and computers since the length of each interaction differed from student to student. In addition, due to disparate timetables and school events, some students arrived late and had to be slotted in according to the availability of computers. This meant that, while pairs were not stable, some participants were paired up with the same speaking partner twice.

Sampling decisions were made dependent on available resources (Teddlie & Yu, 2007), in this case schools and students of German in the NCEA study pathway in Year 11 classes. Therefore a purposive homogenous sampling of participants was chosen, where potential participants shared similar characteristics that were important to answer the research questions (Lodico, Spaulding, & Voegtle, 2010).

In addition to the four interactions, all participants completed a FLCAS questionnaire before and after the interactions, as well as short reflections immediately after each Skype chat. After the intervention, 12 participants were chosen to be interviewed.

Selection of interview candidates followed a purposive quota sampling (Onwuegbuzie & Collins, 2007). Pre- and post-chat FLCAS were divided into high, medium, and low scores,

and out of each category four students were chosen to be interviewed in order to capture variations in participants' attitudes towards the interactions via Skype.

After having analysed the data, three interviewees with a range of FLA were selected to have all elements of their interactions analysed holistically in order to give an in-depth description of students' experiences. Purposive quota sampling was used once more to select the three participants by randomly sampling one interviewee out of each FLCAS category (high, medium, and low scores). Table 2 provides an overview of sampling decisions for this research.

Table 2

Overview of sampling decisions

Steps of the research	Sampling decisions	Participants
Interactions and questionnaires	Purposive homogenous sampling based on available German classes in Year 11 in the NCEA pathway	21 students from 2 classes: All participating students: WBHS01-12 WGHS01-09
Interviews	Purposive quota sampling, based on characteristics participants displayed in the questionnaires, such as low, medium, and high levels of FLA	12 students from 2 classes: Low scores: WBHS02, WBHS05, WGHS01, WGHS02 Medium scores: WBHS04, WBHS08, WBHS11, WGHS04 High scores: WBHS01, WBHS07, WBHS09, WBHS10
Global view of 3 students	Purposive quota sampling of 3 participants by randomly sampling one interviewee out of each FLCAS category (high, medium, and low scores)	3 students from 2 classes who participated both in the interactions and the interviews: Low score: WGHS02 Medium score: WBHS11 High score: WBHS01

Note. For the interviews and selection of three students; the classification into low, medium, and high scores was dependent on a) consent to participate in the interviews, and b) participants overall scores in the pre-and post-test FLCAS and the Skype scale.

3.3.3 Tasks

The interactive tasks used were developed according to the requirements of the national assessment regime for all secondary students of languages in New Zealand and, in particular, the *interact* assessment (see Chapter One). These tasks assess students' ability to communicate with a peer and focus on interactions that communicate personal information, ideas, and opinions in various situations. In the New Zealand context, teachers widely accept a definition of interaction tasks that, according to Ellis (2009), adheres to these principles:

1. *The primary focus should be on 'meaning' (by which is meant that learners should be mainly concerned with processing the semantic and pragmatic meaning of utterances).*
2. *There should be some kind of 'gap' (i.e. a need to convey information, to express an opinion or to infer meaning).*
3. *Learners should largely have to rely on their own resources (linguistic and non-linguistic) in order to complete the activity.*
4. *There is a clearly defined outcome other than the use of language (i.e. the language serves as the means for achieving the outcome, not as an end in its own right).* (p. 223)

Specifically, the practice tasks for the *interact* assessment used were opinion-exchange tasks, which require learners to state their own opinion based on shared information (Ellis, 2003). They had the topics of (1) getting to know each other; (2) talking about films; (3) arranging a date and pocket money; and (4) holidays. The tasks used in this study can be found in APPENDIX B.

Each activity was intended to be about five minutes long, and focused on vocabulary and grammatical structures included in the textbook "Anstoss GCSE" (Giles, Heidemann, & Shepherd, 2001) that both classes use. The four tasks were developed by me, critiqued at a local cluster meeting of German teachers, including the participating teacher of German, and discussed within the languages department at my school. While each *interact* task should normally last about two minutes, participants were allowed to talk for five minutes or longer via Skype to encourage natural conversation and to practise a variety of possible questions. The activities served as practice tasks and were not used for assessment purposes.

Both classes had worked on all topics prior to the study and similar tasks had already been addressed in class. Prior to the study, two lessons were set aside to revise the four topics using the same worksheets for both German classes (practice worksheets for Task 1 to be found in APPENDIX C). In addition, these lessons were used to go over useful interactional language and conversational fillers (APPENDIX D and APPENDIX E).

3.3.4 Environment and procedures

The four tasks were spread over the course of an academic term (lasting a total of 9 weeks) and students completed one task a fortnight during their regular language lessons. The interactions were carried out via Skype for several reasons. It can be installed on any computer, is free, and allows conversations to be recorded. It includes one-to-one or one-to-many videoconferencing, audioconferencing, and text chat.

Therefore, Skype offers a rich environment through a combination of different tools for social communication, learning and collaboration (Hampel & Hauck, 2006). It seems beneficial for oral language learning, since it is compatible with various computer systems and has adequate audio and video quality (Y. Wang, 2004).

Nonetheless, there are some potential issues with the program. First, the software for Skype needs to be downloaded and installed. In many cases, programs may not be downloaded onto public school computers and/or the program is blocked in educational institutions. Second, a fast internet connection is needed, particularly when making more than one Skype call at once and when using the video function. In the event of slow connections, the video can be delayed, causing latency in the transmission of image and or sound (Lawson et al., 2010).

Prior to the study, permission was sought from both schools' IT departments to install Skype and the recording programs Ecamm Call recorder for Skype³ and Vodburner⁴ on the school computers. Five Skype accounts per school were created by the teachers and test-calls were made prior to the intervention. Skype was set up so participants could view their interlocutors from the other school and themselves at the same time. However, in some cases participants changed the settings and could only see themselves in one corner of the screen.

All interactions were conducted during class time. Female participants completed the interactions in the school's computer laboratory using desktop computers, while male participants used their German language classroom to complete the tasks on laptops. All computers had an inbuilt camera and external headsets were used to minimise background noises and improve the audio quality.

³ Ecamm Call recorder for Skype is a licenced recording program for Mac computers, which works directly in Skype and is able to video- record both sides of any conversation directly to the computer's hard drive as an MP4 file. Another benefit is the ability to record side-by-side and split-screen modes, as well as the ability to split tracks after the recording, which makes it easier to distinguish overlapping talk. Moreover, the program enables automatic call recording.

⁴ Vodburner for Windows is a free Skype recording program for calls up to 10 minutes.

Fostering peer interactions in online learning environments

Students were given a session before the intervention to practise how to make video calls on Skype and record these. In addition, both schools provided technicians to help with any problems. Figure 3 shows a screenshot during a videoconferencing session.



Figure 3. Screenshot of the Videoconferencing Interface.

Since I was present at the boys' school during the interactions and had the support of two technicians, I supervised the video recording via Ecamm on the boys' school's computers but instructed the girls' school to make back-up recording with Vodburner. The licensed video recording program Ecamm allows split-screen recordings of both speakers, which enables the analysis of non-linguistic features, such as body language and facial expressions.

Each school utilised five computers at a time, with back-up computers in cases of connection problems or computer issues. Since lesson times between the two schools do not align completely, all tasks had to be completed within 30 minutes. Every participant was given a task sheet (see APPENDIX B), a help sheet with interactional language and conversational fillers (see APPENDIX D), and the Skype login details for the accounts created for this research.

Before and after the videoconferencing intervention participants completed an online questionnaire which contained items and questions to determine their FLA levels when speaking in German. Additionally, after each of the four interactions participants answered a short online questionnaire on how they perceived the interactions. These reflections took approximately five minutes to complete, while the pre- and post-interaction anxiety questionnaires were expected to take about 25 minutes.

The results of these questionnaires were used to sample 12 students for semi-structured interviews. The majority of these steps and some of the data collection techniques were piloted prior to this study in an effort to provide valuable insights to improve the methodology of this research, and the outcomes of this pilot-study are presented below.

3.3.5 Pilot-study

A pilot-study was conducted on selected aspects of the research proposal in 2012. It examined two videoconferencing interactions between a Year 10 and 11 class during lesson time. Participants came from two New Zealand secondary schools and comprised 16 male and 11 female students. The female students were in their third year of German at high school level (Year 11), while male participants had just started their second year (Year 10). Since the male participants have German lessons everyday, as opposed to the female participants, who have German three days a week and only had a German course for one third of the year in Year 9, it was judged that their level of ability was comparable. The majority of participants in the pilot-study did not participate in the current study but eight male students participated in both interventions.

For the pilot, participants were paired up at random between the two schools for two Skype chats. The tasks used were identical to Task 1 and 2 of the current study. In order to investigate interactional features in CMC environments, the chat logs were transcribed according to conversation analysis conventions and scanned for negotiation routines. Data analysis followed a simplified version of the Varonis and Gass model (1985) to explore how participants organised their interactions, established meaning and identified and repaired problems.

In addition, the pilot-study included a pre- and post-questionnaire, including the FLCAS developed by Horwitz et al. (1986) and additional items regarding the Skype exchanges. The original FLCAS contains 33 statements using a 5-point Likert-scale survey. It focuses on speaking in an L2 classroom and measures three criteria: communication apprehension, test-anxiety, and fear of negative evaluation. The benefits of this scale are that it is a well-tested, widely used instrument and supported by the literature (Arnold, 2002, 2007; Baralt & Gurzynski-Weiss, 2011). Furthermore, it is designed to measure the communication apprehension levels of L2 learners at different times rather than to focus on temporary states of anxiety.

The pilot-study had the purpose of checking the methods to be used in the main study, as well as the set-up and practicalities of the current study. Additionally, the preliminary findings served as a basis for the final research design.

Specifically, the model to analyse NoM was tested in a videoconferencing environment, which includes unique features, such as micro-cuts and visual cues different from F2F interactions. The data revealed additional categories, related to the chat environment and participants' inexperience in chatting in an L2. These were visual cues due to the ability to indicate non-understanding with gestures, comprehension triggers due to

technical problems, such as sound lag or overlapping talk, the use of L1 to clarify misunderstandings, inappropriate responses in answer to a question that signalled non-understanding and partial responses to push the conversation back up. These new primes will be discussed in more detail in the next section.

Equally, the questionnaires had been tested and evaluated by participants and the participating teacher to enhance validity. First, the participating teacher of the girls' school assessed the questionnaires. Then, after completing the questionnaires in the pilot-study, a discussion, held in each of the two participating classes, provided a forum for student feedback. This served the purpose of checking whether students had understood the items of the FLCAS and were able to answer them. In addition, the discussion provided students with the opportunity to give feedback on ambiguous wordings of questions or any other concerns they may have had. The session revealed that students tended not to respond well to parts of the general FLCAS, as they perceived the wording to be too strong and old-fashioned. Therefore, it was decided to adjust the language to common usage, add items pertaining to technological uses, and offer response options that better capture the intensity of students' feelings towards items on the scale (i.e. "Always like me" instead of "Strongly agree"). This shift away from agreement ratings towards ratings of frequency is also supported by Horwitz (1986).

Since the current study involves many logistical issues, such as setting up Skype in both schools, the availability of computers and a reliable internet connection, as well as finding suitable times for the interactions, it was helpful to be able to test the instruments at the pilot stage, and find solutions to unexpected problems. For instance, during the first interaction the internet connection slowed down significantly due to too many students using Skype at once. As a solution, more separate internet connections had to be found for the second interaction. This was helpful for the current research, which involved four separate interactions, a larger sample size and therefore might have posed problems concerning the set-up.

Furthermore, glitches with the recording program Vodburner resulted in some exchanges not being recorded. Either the program crashed or students forgot to start the recording button. Therefore, different recording programs were subsequently trialled and Ecamm was deemed the most stable program with the easiest user interface; it had added features, such as split recordings, and most importantly, the ability to record seamlessly and automatically.

A further complication that arose from the pilot-study seems to be a general problem related to technology in secondary schools in New Zealand. Originally, it was intended to involve German classes from four different schools to collaborate and interact online. Issues

centred on the installation of Skype, bandwidth and even general problems regarding the equipment, such as acquiring enough headsets, made the involvement of many classes impossible. For example, one school that showed an interest in participating in the research was unable to unblock Skype on the school's premises due to the school's cyber safety agreement.

Other schools were not given permission by their IT department, since an overload of the bandwidth was feared. These problems had implications for the execution of the project and it was therefore decided to work with my own class and the German class of the neighbouring girls' school only, in order to have more control over the set-up.

Furthermore, after having reviewed the videoconferencing transcripts, the participating teacher and I found that female participants in Year 11 were of higher L2 ability than their male counterparts from Year 10. For that reason, it was decided to include Year 11 students only in the current research in order to create speaking dyads with a similar proficiency level as is common practice for the *interact* assessment.

It was found that the pilot-study enabled participants to express their own opinions about the interactions and it also determined their FLCAS scores. For the main study, several features of the design were modified as a consequence of the pilot-study.

- The wording of the FLCAS items was changed to appeal to a younger audience, and items pertaining to technology were added
- Students felt that they needed more help and guidance to overcome issues relating to speaking apprehensions. It was therefore decided to include additional questions about causes for anxiety and strategies to improve spoken L2 communication
- Technical issues resulted in an effort to improve the environment of the study by using more stable recording programs and internet connections
- The pilot-study enabled the trialling of conversation analysis and the analysis of negotiation routines via the Varonis and Gass model (1985). Additional primes of NoM routines were found and classified, namely visual cues, comprehension triggers, the use of L1, inappropriate responses and partial responses.

3.4 Data collection methods and analysis

For this research project, data were collected via a number of sources. An emphasis was placed on the analysis of NoM routines but, since L2 interactions in a CMC environment are complex, an additional analysis of CSs and SP was conducted to support and enrich findings of the online chats, to provide a comprehensive portrait of the phenomenon and to strengthen the trustworthiness of the study. To answer Research Question 1, the

instruments for data collection were the video transcripts, which were analysed through a combination of conversation analysis, the Varonis and Gass model (1985), the Dörnyei and Scott model to measure CSs (1997), and Rourke et al.'s coding scheme for SP (2001). Instruments for Research Question 2 were the FLCAS questionnaires, student reflections, and semi-structured interviews. Data collection methods as well as data analysis will be defined for each research question in the following section.

3.4.1 Data collection for Research Question 1

The data for Research Question 1 pertaining to interactional features in CMC exchanges were provided from transcripts of four interactions per participant. These were carried out via Skype and video-recorded with Ecamm, as outlined above.

The first research question addresses interactional elements of online chats. Accordingly, research methods need to take social settings and linguistic features into account. Conversation analysis, as a method that investigates real-life conversations, was deemed a suitable choice for the transcription of the video data, since it focuses directly on the interactions of participants and specifically on linguistic features and social actions that take place within the conversations (Mazur, 2004). Conversation analysis is one of the principal methods of sociocultural research in education and aims to describe the organisation of everyday language in terms of turn-taking and negotiation moves and approaches language as social action (González-Lloret, 2011).

Conversation analysis assumes that talk and interaction are sequentially organised and ordered. The relationships between turns and other moves in interaction, such as negotiation routines and repair moves, are the main means through which the sense of conversation can be measured (Liddicoat, 2011). Consequently, conversation analysis takes an emic perspective that focuses on the interlocutors' speech production. The researcher does not express subjective opinions about meaning when analysing data. Rather, the analysis of conversation itself illustrates how participants interact through sequential patterns. Therefore the analysis of data has to be bottom-up, inductive and free from preconceived theories (ten Have, 2007). Hence, analysis should focus on real-life interactions and an infinite number of interactional features may become significant (Liddicoat, 2011). In summary, transcription according to conversation analysis conventions fits the purpose of this study, since it examines a specific unit of interaction in depth and detail, in context and holistically, and seems to be particularly suitable for the analysis of CMC (González-Lloret, 2011). However, conversation is not regarded as a methodology for this study and merely serves as a basis for analysing interactional features in L2 discourse.

Another important factor regarding the data collection of the video chat transcripts is that of technical issues. Difficulties in transcription stemmed from echoes and delays in transmission of sound and image. Additionally, since five conversations were recorded in one room simultaneously, it was inevitable that background noises obstructed the sound quality of the calls at times. Therefore, all video files were first edited in Windows Movie Maker and iMovie to reduce background noise. The content of these files was not altered and no data were compromised.

Since beginner L2 learner speech is often diffident and disjointed with long pauses and hesitations between and within turns, the transcription of these silent parts was challenging in terms of turn-taking. Pauses can have several meanings, such as hesitation and time-gaining strategies. They can express emotions, such as sarcasm, and silence can act as a place maker to yield the floor to the interlocutor. Therefore, the surrounding context of the transcripts was taken into account to determine the meaning of the pause and whether the silence was an inter- or intra-turn, which are pauses between or within a turn respectively.

3.4.1.1 The taxonomy by Varonis and Gass (1985) to code negotiation routines

Varonis and Gass (1985) argue that conversation moves in a linear fashion. An occasion of non-understanding can be solved through a series of exchanges with the purpose of resolving a particular breakdown in the conversation. Since the Varonis and Gass model was developed for F2F interactions, it does not take into account unique features of online discourse. Previous research that has adapted the model has concentrated on text chat (Smith, 2003b), and has neither accounted in detail for negotiation routines (Y. Wang, 2006; Yanguas, 2010) nor considered comprehension skills in a video environment. Consequently, the current research aimed to address these gaps by describing negotiation routines of beginner learners in videoconferencing. The adapted model includes comprehension triggers, the use of L1, inappropriate responses, and visual cues as indicators, an L1 translation as response, as well as partial responses under the reaction to response prime. Table 3 shows a detailed taxonomy of primes for negotiated episodes, including a definition of the new primes.

Table 3

Primes of Negotiation Routines; Adapted from Varonis and Gass (1985)

Trigger	Indicator	Response	Reaction to response
Content	Echo (i.e., conformation checks, repetitions)	Minimal	Partial or incorrect response: <i>Incomplete/incorrect response that covers only part of the question</i>
Comprehension: <i>Problem caused by lack of listening skills, pronunciation, sound problem or overlapping talk</i>	Global statement of non-understanding (i.e., clarification requests)	Expansion/ Elaboration	Metalinguistic talk
Lexical	Inappropriate response: <i>Reply that explicitly shows misunderstanding</i>	Reduction	Minimal
Syntactic	L1: <i>Global or local statement of non-understanding in the L1</i>	Repetition	Task appropriate response
	Non-verbal response (silence)	Rephrasal	Testing deductions
	Visual indicator: <i>Visual signs of non-understanding (raised eyebrow etc.)</i>	Translation: <i>A L1 equivalent of problematic utterance</i>	

It must be noted that the primes are not distributed evenly. This is due to the fact that, while triggers were caused by four separate issues, resolutions may be achieved through a variety and combination of different primes. In particular, at the indicator and response stage, any number of primes can be employed to solve problems in discourse. Therefore, any combination of the above primes is possible.

The pilot-study revealed that the added comprehension trigger was necessary to account for a lack of listening skills, pronunciation issues, or sound problems caused by the videoconferencing program. With regard to indicators, participants used incorrect responses frequently in an effort to keep the conversation going. Due to participants' lack

of language skills and their shared L1, it seemed appropriate to include an indicator and a response in the L1. A partial or incorrect response was added to the reaction to response prime, since participants employed this strategy to answer parts of the problematic question only. Moreover, non-verbal and visual indicators were distinguished: the former includes silence while the latter includes gestures that often involve the chat equipment and are used in combination with other indicators.

Foster and Ohta (2005) raise a valuable point for researchers. They claim that the identification of negotiation routines could be difficult to achieve due to ambiguous speech acts. A repetition of a previous utterance may indicate non-understanding but it can also signal an encouragement to continue the conversation. Their recommendation is to analyse the data closely, taking into account the full data set, looking at what takes place before and after the perceived communication breakdown. They stress that:

[I]t is not a straightforward business to identify NfM moves and a qualitative approach to the definitions needs to be adopted by looking at the interaction in a wider context than just the immediately adjacent turns, and looking especially at the interlocutor's interpretation of an utterance with the surface shape of a negotiation move. Did the interlocutor think it was a signal of a language problem, a signal to stop and confirm or clarify? Or was it taken as an invitation to continue, to expand, to explain? (p. 425)

Likewise, Varonis and Gass (1985) have claimed that ignored triggers make it hard for researchers to determine whether a breakdown in communication has occurred. They therefore decided to examine only instances with a clear indication of non-understanding by the hearer of the trigger. In contrast, Yanguas (2010) also introduced omitted indicators, for instance when one speaker continues to re-define a lexical item without a prompt or signal from his interlocutor. In this case, the utterance by one speaker can contain a trigger, an omitted indicator, and a response. However, following the original model, this is not a negotiation routine. Rather, it could be reasoned that the hearer simply gives the speaker time to formulate his sentence, which is a normal occurrence, particularly for L2 learners. Hence, in the current study, the above scenario described by Yanguas would be classified under self-corrections. Moreover, in line with Foster and Ohta's recommendations (2005) and the conventions for conversation analysis, the whole transcript was taken into account, when identifying negotiation routines in order to better identify them.

The videoconferencing environment poses another potential issue for negotiation routines. Technical factors, such as issues with the transmission of sound or a lagging connection, can cause NoM routines void of a linguistic cause. However, since it was already established in the previous chapter that NoM routines are not merely seen as linguistic devices, but can contain adjustments to linguistic form, conversational structure, or content,

it can be argued that the unique problems the video-environment presents are part of the NoM routines. Nonetheless, even when taking the surrounding message into context, it is often difficult or impossible to establish whether a communication breakdown occurred due to technical problems or to a lack of comprehension (Foster & Ohta, 2005). Therefore, the comprehension trigger detailed in the previous section entails both these causes of communication breakdown. Lastly, despite the reasons for a breakdown in communication, L2 learners still need to navigate the problem and it therefore seems adequate to include these instances in the analysis, regardless of whether they led to increased learning or uptake.

3.4.1.2 The taxonomy by Dörnyei and Scott (1997) to code communication strategies

While an adapted version of the Varonis and Gass model (1985) was used to examine instances of negotiations in cases of discourse containing communication breakdowns, a shortened version of Dörnyei and Scott's taxonomy of CSs (1997) was employed to analyse problem-free discourse or instances where participants were focused on problem-solving.

The model classifies CSs into three categories, namely direct, indirect, and interactional strategies. Direct strategies, such as mime or word coinage "provide an alternative, manageable, and self-contained means of getting the (sometimes modified) meaning across" (Dörnyei & Scott, 1997, p. 198). Indirect strategies, such as fillers or repetitions are defined as "the conditions for achieving mutual understanding: preventing breakdowns and keeping the communication channel open" (p. 198). Interactional strategies comprise appeals for help and asking for repetition, and are classified as instances in which "the participants carry out trouble-shooting exchanges cooperatively" (p, 199).

Interactional strategies from the model were not included in the analysis, since those are defined as instances of communication breakdowns and therefore already incorporated into the negotiation model outlined above. Table 4 illustrates primes of CSs, adapted from Dörnyei and Scott's taxonomy (1997).

Table 4

Communication Strategy (CS) Taxonomy; Adapted from Dörnyei and Scott (1997)

Direct strategies	Indirect strategies
<i>Resource deficit-related</i>	<i>Processing time pressure-related</i>
<ul style="list-style-type: none"> ▪ Message abandonment ▪ Message reduction ▪ Message replacement ▪ Use of all-purpose words ▪ Word-coinage ▪ Restructuring ▪ Literal translation ▪ Foreignising ▪ Code switching ▪ Use of similar sounding words ▪ Mumbling ▪ Omission ▪ Retrieval ▪ Mime 	<ul style="list-style-type: none"> ▪ Use of fillers ▪ Repetitions
<i>Own-performance problem-related</i>	<i>Own-performance problem-related</i>
<ul style="list-style-type: none"> ▪ Self-rephrasing ▪ Self-repair 	<ul style="list-style-type: none"> ▪ Verbal strategy markers
<i>Other-performance problem-related</i>	<i>Other-performance problem-related</i>
<ul style="list-style-type: none"> ▪ Other-repair 	<ul style="list-style-type: none"> ▪ Feigning understanding

In the following, each strategy analysed in this study will be presented in more detail.

Direct strategies

- Message abandonment: Leaving a message or topic unfinished because of language difficulties (e.g., “I don’t understand. Let’s talk about something else.”).
- Message reduction: Reducing the message by avoiding certain parts that are problematic in terms of linguistic resources
- Message replacement: Exchanging the original utterance with a new message when feeling unable to complete the original message

Fostering peer interactions in online learning environments

- Use of all-purpose words: Giving a general, empty lexical item to contexts where specific words are lacking (e.g., the overuse of “thing” or “stuff”)
- Word coinage: Creating a nonexisting L2 word based on a supposed rule (e.g., “vegetarianist” for “vegetarian”)
- Restructuring: Abandoning a planned message, leaving it unfinished due to language difficulties and finishing the planned message using an alternative phrase
- Literal translation: Direct translation of a lexical item, from L1 to L2
- Foreignising: Using a L1 word by adjusting it to L2 phonologically and/or morphologically
- Code switching: Using L1 words or expressions without translating them to resemble the morphology of L2
- Use of similar sounding words: Using an alternative lexical item which sounds like the target item due to not being sure about the correct form
- Mumbling: Swallowing or muttering a word in cases of uncertainty about the correct form
- Omission: Omitting an unknown lexical item in leaving a gap in the message. The message is conveyed with a word missing
- Retrieval: Retrieving a lexical item by uttering a series of incomplete or wrong forms until the correct form is achieved
- Mime: Facial expression or gestures to express meaning
- Self-rephrasing: Paraphrasing an utterance, which may contain the same information or added elements
- Self-repair: Making self-initiated corrections
- Other-repair: Correcting something in the interlocutor’s message.

Indirect strategies

- Fillers: Using filler words or gambits, such as “uhhm” or “well” to fill pauses and to gain time to think
- Repetitions: Repeating a message to gain time to think
- Verbal strategy markers: Using phrases such as “kind of” to signal either the use of CS or an inaccurate form of L2
- Feigning understanding: Pretending to understand a message in an attempt to carry on the conversation.

3.4.1.3 The taxonomy by Rourke et al. (2001) to code social presence

As described in the review of the literature, previous models to categorise SP have concentrated mainly on text chat. Therefore, Rourke et al.'s (2001) definition of categories and indicators of SP is used here in an adapted form for a video context. The interactive indicators 'Continuing a thread', 'Quoting from other messages' and 'Referring explicitly to other messages' are text chat related and not used in the present investigation. Table 5 illustrates how SP indicators are divided into three categories, using eight codes in order to record occurrences of SP.

Table 5

Social Presence (SP) Taxonomy; Adapted from Rourke et al. (2001)

Categories	Indicators	Explanations
Affective:	<ul style="list-style-type: none"> ▪ Expression of emotions ▪ Use of humour ▪ Self-Disclosure 	<ul style="list-style-type: none"> ➤ Use of words that indicate feelings, such as “love” and “hate” ➤ Teasing, irony, sarcasm ➤ Sharing personal, sometimes vulnerable, information
Interactive:	<ul style="list-style-type: none"> ▪ Asking questions ▪ Complimenting, expressing appreciation, expressing agreement 	<ul style="list-style-type: none"> ➤ Asking questions or inviting partner to respond ➤ Expressing approval, praise or encouragement
Cohesive:	<ul style="list-style-type: none"> ▪ Vocatives ▪ Addresses or refers to the group using inclusive pronouns ▪ Phatic expressions, salutations 	<ul style="list-style-type: none"> ➤ Addressing participants by name ➤ Referring to the class as “we” or “us” ➤ Greetings, closure of conversation

The review of prior literature has illustrated that a combination of these different taxonomies to analyse peer-to-peer communication seems favourable. While the classifications share some similarities (for example code switch, a CS, can also be interpreted as indicator of SP, since it is often used to show familiarity with a speaking partner), not one single taxonomy can be used to describe and analyse L2 interactions comprehensively. The methods described above complement each other and aid the close examination of how L2 learners negotiate, repair, and manage discourse.

3.4.2 Data analysis of Research Question 1

The previous section has delineated the three different coding categories employed in this research. These were the categories outlined in the taxonomies by Varonis and Gass (1985), Dörnyei and Scott (1997) and Rourke et al. (2001). Hence, the coding scheme for this research is a mix between different frameworks, which also enhances certain elements of the coding scheme related to negotiation routines in L2 interactions, in order to better tie in with the theoretical lens, the research purpose and the data gathered (Révész, 2012).

Transcription and analysis of data were aided by NVivo qualitative data analysis software (QSR International Pty Ltd. Version 10, 2012. NVivo). Data were transcribed according to conversation analysis conventions first (see APPENDIX F for a description of the transcription details and APPENDIX G for a sample transcript of student interactions). These include pauses, pitch, and overlap between speakers, as well as laughter in order to represent the talk as closely as possible.

Recordings were first analysed quantitatively to allow comparisons across tasks regarding the nature of negotiations and the number of turns taken. Qualitatively, the transcripts were examined for negotiation moves, with a particular focus on the different types of triggers and resolutions and how and in which language the repair was performed.

Analysis adhered to the following procedures:

1. Unmotivated looking, which is to look at the data to get a general feel for it without preconceived goals or theories
2. Repeated listening to video data to become familiar with the details of the recorded data
3. Examining how participants select specific interactional and linguistic features
4. Finding out features such as relationships or identities of participants that develop from the interaction
5. Examining the interactional organisation and how participants orient themselves to this with a focus on negotiated interactions (Liddicoat, 2011; Seedhouse, 2004).

Then, all transcripts and videos were scanned for common patterns and negotiation routines following the Varonis and Gass model (1985). Triggers and resolution were identified and further analysed regarding:

1. The types of triggers (for example, lexical items, comprehension problems)
2. The indicator for negotiation (for example, questions, repetition, body language)
3. The types of response (for example, repetition, rephrasing, translating)
4. The types of reaction to the response (for example, repetition, nodding)
5. The language spoken during the negotiation (German or English)

On a quantitative level, themes from the transcript data were counted. This helps to prevent the neglect or overemphasis of emerging themes from the qualitative analysis (Onwuegbuzie & Leech, 2004). Moreover, the number of times participants spent on negotiating discourse, and what type of communication breakdowns and repairs occurred, were calculated. To this end, a turn was counted every time a student held the floor. This could be isolated phrases without a verb or whole sentences. A negotiated turn was every turn that contained one or any combination of trigger, indicator, response, or reaction to response. A NoM routine was counted as a series of negotiated turns that lasted until the conversation was pushed back up to understanding or was abandoned.

After scanning the transcripts for triggers and resolutions, CSs and instances of SP were coded according to the coding categories outlined in the taxonomies of Dörnyei and Scott (1997) and Rourke et al. (2001) respectively. Transcripts were scanned for these indicators. Due to the low proficiency level of participants and the shortness of the interactions, not all CS strategies and indicators of SP were found in the data and some were observed only once. Therefore, a qualitative analysis was chosen.

Concerning visual indicators such as the CS mime, or the NoM visual trigger, transcripts were scanned in NVivo together with the video data in order to find links between verbal and non-verbal interactional behaviour. In instances of isolated visual indicators, the surrounding transcripts were taken into account to establish whether the visual display was indeed a case of interactional modification or demonstration of social proximity.

3.4.3 Data collection for Research Question 2

The aim of Research Question 2 was to find out how participants experience the online-interactions in terms of their anxiety levels and their ability to interact. The instruments used to answer this question were semi-structured interviews and questionnaires.

3.4.3.1 Questionnaires

The pre-interaction questionnaires included demographic background questions and an adapted form of the FLCAS, as described in the outline of the pilot-study above. A copy of this instrument can be found in APPENDIX H. The original FLCAS developed by Horwitz et al. (1986) was adapted for the purpose of this study, which concentrates on speaking only. Therefore, some items relating to other aspects of FLA, such as writing, were not included in the current questionnaires.

Some items were simplified to account for the age of participants in this study, since participants of the pilot-study perceived the wording to be too complicated at times. The FLCAS for this study contains 20 items with a maximum score of five each and a range of possible scores between 20 and 100.

After the last of the four conversations, participants completed a second FLCAS with identical items in order to record possible changes in communication apprehension levels. In addition, the post-test FLCAS contained further items regarding the online-interactions in order to investigate potential changes in nervousness and confidence after the study (see APPENDIX I). These items were adapted from Arnold's study (2002) and also based on a 5-point Likert scale.

In order to answer the sub-questions pertaining to causes of, and strategies for dealing with speaking apprehension, the pre- and post-interaction questionnaires contained additional items. These determined the most prominent causes of nervousness and elicited the most popular strategies that participants employed to overcome FLA in speaking situations. This part of the questionnaire was adapted from Hauck and Hurd (2005). Finally, to allow participants to give further feedback, an open-ended question concluded both FLCAS questionnaires.

3.4.3.2 The videoconferencing reflection

Each interaction was immediately followed by a measurement of participants' attitudes and feelings towards the online chats via a short videoconferencing reflection (see APPENDIX J). These videoconferencing reflections were designed to measure participants' immediate reactions to the online-interactions and followed MacIntyre and Gardner's anxiety scale (1991), where students rate their levels of nervousness and confidence about speaking on a scale from 1 to 10. Additionally, open-ended questions gave students the opportunity to explain why they felt that way during the chats and what strategies they used to improve their talk.

3.4.3.3 Semi-structured interviews

In addition to the questionnaires, 12 students were chosen to be interviewed after the intervention. The purpose of this instrument was to explore students' experiences and feelings of nervousness in depth and to examine the reasons behind participants' levels of anxiety and ability to interact. Furthermore, semi-structured interviews helped triangulate findings derived from the other data sources and provided additional clarification of participants' responses to the questionnaires (McMillan & Wergin, 2006).

Selection of interview candidates followed a purposive quota sampling, based on characteristics participants displayed in the questionnaires, such as low, medium and high levels of FLA (Onwuegbuzie & Collins, 2007). Specifically, pre- and post-chat FLCAS were divided into high, medium, and low scores, and out of each category, four participants were chosen to be interviewed in order to sample over half of the participants and to capture variations in participants' attitudes towards the intervention. Interviews were scheduled at a time convenient for students and took place in my office at school, both for male and female participants. Prior to the interviews, I ensured that participants felt comfortable by engaging in some social conversation about their school life in general. The interviews were conducted in a semi-structured way to achieve sufficient flexibility. Even though a set of themes can be the basis for the talk, semi-structured interviews are flexible to a certain degree (Wellington, 2001). APPENDIX K presents indicative interview questions, although actual questions varied according to the responses of the interviewees.

Moreover, semi-structured interviews seem to fit research with young participants, since the interviews resemble a friendly, natural conversation (Neuman, 2006). Therefore, it was anticipated that participants could freely discuss elements of the interactions they considered positive or negative. Furthermore, the semi-structured interviews contained questions that probe for causes of, and solutions for, anxiety. Participants were also asked about whether they had developed different strategies to deal with anxieties over time.

After having analysed the data, three interviewees were selected to have all elements of their interactions analysed holistically. Purposive quota sampling was used once more to select the three participants by randomly sampling one interviewee out of each FLCAS category (high, medium, and low scores). All data sets of the three students with a range of FLA were used to connect findings between the different research questions and to give an in-depth description of students' experiences. Explicitly, the FLCAS, pre- and post questionnaire answers, the videoconferencing reflections, interview responses, as well as the video transcriptions were analysed to provide a holistic view of all aspects of the investigation.

Since over half of the interviewees were my own students it was essential to avoid power issues and to minimise risks for participants. Steps to mitigate ethical concerns included the cross-marking of any assessed work, an emphasis on the voluntary nature of participation, and informed consent. All ethical steps taken will be addressed in more detail in a subsequent section (3.6).

3.4.4 Data analysis of Research Question 2

The second main research question is concerned with participants' views of and their communication apprehension levels during the interactions. In order to answer this question, the Likert-scale items from the pre- and post-interaction questionnaires were added up to calculate overall speaking anxiety scores at different stages of the treatment. The general FLCAS contains 20 items with a maximum score of 5 each. Consequently, the possible range of scores is 20 to 100, with lower numbers representing a lower level of anxiety. The FLCAS includes both positive items (e.g., "I feel confident when I speak German in my language class") and negative items (e.g., "I get nervous during oral exams") in an attempt to avoid bias. Hence, a negatively worded statement that was marked with "Always like me" was scored a 5, while a positive item marked with "Always like me" was scored a 1.

The scale designed for the online interactions comprised 15 items with possible anxiety scores ranging from 15 to 75. In order to define levels of FLA before and after the study, participants' mean scores were calculated. An emphasis was placed on learners' gain scores by deducting their post-interaction scores from their pre-task scores, as well as their videoconferencing reflections to allow for comparison of participants. Frequency distributions of the Likert-style items were calculated to gain a meaningful representation of the distribution of responses and to illustrate which parts of speaking participants associate with nervousness (Rajamanickam, 2001).

To better classify students according to their anxiety levels before and after the intervention, the range of scores were organised into three categories of low, medium, and high communication apprehension scores. Even though Horwitz et al. (1986) did not outline clear scoring guidelines, they suggested that participants who supported at least 19 out of 33 items of the FLCAS (i.e. participants with scores of 76 and more) were classified as having moderate levels of FLA.

Following this, further researchers, including Arnold (2002), one of Horwitz's doctoral students, have used these guidelines to propose the following scoring procedures: Scores of 75 and less represent low levels of FLA, the range between 76 and 119 represents moderate FLA and scores of above 120 represent high levels of FLA.

Fostering peer interactions in online learning environments

For the current study, cut-off points had to be adjusted, since the scale consisted of 20 items only. The percentage weighting was kept consistent with the original scoring guidelines. Consequently, students with a total score of 74 and above showed a high level of FLA; scores ranging from 47 to 73 demonstrated a medium level of anxiety and scores of less than 46 were counted as a low level of nervousness.

Answers of the self-rating scales were calculated to give levels of confidence and anxiety directly after each interaction. The ratings were then also classified into low (1-5) and high scores (6-10).

In order to establish if any observed changes in FLA and confidence levels were significant, analyses of variance (ANOVA) were conducted. Specifically, one-way repeated measures analyses were used to compare FLA scores pre- and post-test, as well as levels of confidence and anxiety after each task.

With regard to reasons for FLA and strategies to cope with speaking apprehension, students were invited to list all causes and strategies that applied to them. They were also asked to give the most important cause for communication apprehension and their top-rated strategy to avoid anxiety. First, it was established which parts of L2 learning participants associated most with FLA and what strategies they deemed most helpful. Then, answers from the pre-test and post-test questionnaires were compared in order to find out if students' perceptions of anxiety had changed over the course of the study and whether they had discovered additional ways to deal with potential nervousness.

Information gathered from the open-ended question and interviews were coded according to common themes and sorted into categories (Radnor, 2001). Interviews were audio-recorded and transcribed by me following the conversation analysis conventions outlined for Research Question 1. Then, themes and categories were developed from the transcripts in NVivo, first by unmotivated looking and second via a preliminary list of categories that stemmed from the research questions, such as 'anxiety', 'confidence' and 'interaction'. New themes that emerged from the data were added to the list of categories.

The same procedure was followed for data from the qualitative section of the questionnaires. Afterwards, results were compared with the quantitative findings to enhance the interpretation of the FLCAS scores (Onwuegbuzie & Leech, 2004).

Finally, all data were checked against each other by looking for connections or inconsistencies between the categories and themes. The interview data was then related to those from the open-ended questions and the interaction transcripts in order to compare and contrast participants' experiences.

3.5 Trustworthiness

The research aims to present a true picture of the phenomenon studied in order to show that findings stem from the data rather than from my predispositions as a language teacher, practitioner, and researcher. Consequently, this section explores measures taken to enhance the trustworthiness of the current research.

There seems to be no consensus in the literature regarding the issue of validity or trustworthiness in qualitative research, and even less so in making claims about the robustness of mixed methods research (Onwuegbuzie & Johnson, 2006). Since the current investigation focuses on the experiences of students and emphasises qualitative data over quantitative data, the evaluation criteria used to establish the trustworthiness of the study derive from research conducted within a qualitative framework. Specifically, Lincoln and Guba's (1985) guidelines are followed. They propose the terms transferability, credibility, dependability, and confirmability in lieu of the quantitative terms of generalizability, internal validity, reliability, and objectivity. Transferability refers to a study's ability to apply to other contexts. Credibility refers to accurate and detailed descriptions of the research phenomena. Dependability describes the processes that ensure consistent findings, and confirmability signifies that findings derive from the data, rather than from researcher bias.

First, strategies to ensure consistent findings will be explored, followed by those that help in accurately interpreting the data. As part of the latter strategies, the cross validating of data will be examined in particular.

3.5.1 Dependability and transferability

The purpose of this study was to understand how L2 learners interact in spontaneous CMC chats and how they perceive these interactions. Therefore, the current research did not seek external validity and generalisability of findings. However, various strategies helped ensure that the context and findings of this research may be compared to other situations and to allow for better application of the research findings by future researchers.

The research is situated within the clear framework of interactionist theory, supported by sociocultural theory. These detailed references to the theoretical background and the review of relevant literature helped demonstrate underlying assumptions and the research aim of the current study and therefore aid the transferability to other situations and contexts.

Another important aspect in building dependability is the clear documentation of all steps of the research process. Therefore, this chapter contained a detailed description of the research design, including the setting of the research in both participating schools, its

participants, interaction tasks, CMC environment and procedures. Moreover, methods of data collection and analysis were made transparent and all data from questionnaires, videoed interactions, and audio interviews were maintained in raw and transcribed form.

3.5.2 Credibility and confirmability

Creswell et al. (2003) recommend the following strategies to ensure that “findings are accurate from the standpoint of the researcher, the participant, or the readers” (pp. 195-196). They include triangulation, member checks, the provision of rich, detailed descriptions to put the study into context, sustained time spent observing the research site and gathering data, peer debriefing, the involvement of participants in the research process, and a critical reflection by the researcher regarding biases and assumptions that may influence the research. Every effort was made to incorporate these strategies into the research process.

Triangulation of the data, or the cross checking of data sources and methods, helped to gain a deeper understanding of student interactions. The inclusion of video data, transcripts of the interactions, questionnaires, and semi-structured interviews aided in presenting a detailed description of secondary students’ experience of synchronous CMC. The employment of multiple methods also helped to minimise the risks of bias, since the various methods, such as participant interviews, enabled me to regard the interactions from different angles, rather than my unique perspective as a teacher researcher.

Since the participants of the current study are all secondary students, it was considered that the participants may not be sufficiently mature to carry out a member check or re-read transcripts of their own interactions and interviews. It was therefore decided instead to have a brief discussion with each participant about the findings and let them decide whether to re-read their transcripts.

Detailed descriptions and elaborations of the research settings and procedures in this chapter are presented to provide the reader with criteria for the judgment of data collection and analysis techniques and therefore enhancing the study’s credibility. Validity was also ensured through the time spent in gathering the data. The study took place over one semester and a pilot-study preceded the current research. These repeated observations over an extended period of time increase the soundness of research data and findings.

Furthermore, strategies, such as peer debriefing and cross-coding of the data were employed to maintain a fair and balanced presentation of the findings and to avoid researcher bias. Every effort was made to remain reflective throughout the study, to monitor the motivations that influence the researcher’s decisions and ensure dignity and

respect for participants (Radnor, 2001). Additionally, after each phase of the data analysis, I reflected critically on the findings, taking into account potential biases and pre-made assumptions, and I shared these findings with the collaborating teacher. The next section outlines how cross-coding of the data was used to enhance dependability.

3.5.3 Inter-rater reliability

In line with the recommendations by Mackey and Gass (2005) to establish coding reliability through peer review, a second person was involved in the coding process of the interactional features (NoM and CSs). Repeated discussions and coding of the transcribed data research were used to further increase reliability and to ensure a consistent approach to data analysis.

The independent secondary rater is a language teacher colleague with an interest in linguistics and was introduced to the research with a rater training session, in which the coding categories outlined in Section 3.4.1 were explained. Sample files and procedures of data analysis were shared to assist the second rater. In addition, one transcribed file was coded together in the training session to ensure familiarity with the coding procedures and categories.

Following this, the second rater was given samples of randomly selected videoconferencing transcripts, which amounted to about 20% of the total transcripts. The second coder then examined the transcripts and coded the interactional features according to the coding categories. Subsequently, the second rater's check of the data and a peer debriefing enabled a discussion and cross-checking of the selected codes in order to achieve inter-rater reliability. This discussion regarding the interpretation of the data was particularly important for ambiguous coding categories, such as "Feigning understanding" under the CSs. The discussions facilitated more accurate scrutiny of the surrounding video transcript to gain clarity concerning the intention behind utterances. After the peer review and peer debriefing a 95% inter-rater agreement was achieved. Given the level of agreement, the data and coding outcomes were deemed reliable.

3.6 Ethical considerations

The following section outlines potential issues for the research procedures followed by strategies to mitigate those concerns. All steps taken followed the procedures and requirements outlined by the University of Auckland's ethic procedures and ethics approval for this study was granted by The University of Auckland Human Participants Ethics Committee.

Since this research was conducted in a classroom-based setting involving young participants, a particular emphasis must be on their protection (i.e., voluntary and informed consent). Moreover, my involvement as researcher and teacher of over half of the participants must be taken into account.

As described in the introduction to this investigation, the research questions emanated in part from my own practices and observations as an L2 teacher in New Zealand. Hence, in reflecting on how I could improve teaching and learning experiences, I became a teacher researcher. According to Cochran-Smith and Lytle (2009), this type of inquiry is intertwined with a teacher's own practices and experiences. Thus, the researcher is an insider. In my case, this signifies research in my own professional context and setting. This stance between theory and practice poses some problems, however. As the classroom teacher of some participants I cannot separate myself from this position in order to become a neutral, detached researcher (Cochran-Smith & Lytle, 2009).

Hence, my role as teacher of the male participants of this study has some implications for this research. First, there is the risk of the teacher-researcher influencing students and convincing them to take part in the study. Second, the teacher-researcher may be biased towards his/her students and their achievements in class. Third, the teacher-researcher may become too involved in the study and interfere with the set-up or aid students in the tasks. The following section outlines the measures taken to avoid bias and a power imbalance between the teacher-researcher and participants.

3.6.1 Informed consent and confidentiality

One issue when conducting educational research is to gain consent from all parties involved, especially the informed consent from young participants. Since most participants of this investigation were under the age of 16, informed consent was first obtained from their parents/guardians. A particular ethical concern for research involving young students is their ability to understand the demands of the research and consequently whether they can make an informed decision to participate.

Thus, consent was obtained from the participants themselves. In order for students to be able to make an informed judgement about the research, every effort was made to ensure that any written correspondence was accessible and comprehensible for them. Additionally, a person other than the researcher, in this case the language assistant of my own school and the German teacher of the partner school, introduced the research to potential student participants verbally to ensure their understanding and to enable students to ask any questions.

It was made clear to students that they may withdraw from the study at any time without risking any impediment to their classroom performance and their relationship with the teacher and school. Furthermore, it was explained to students that their decision whether or not to participate would not negatively affect their NCEA grades and their responses would remain confidential to me.

In addition to obtaining consent from parents and students, it was necessary to ask for the principals' permission in the participating schools, since the research was conducted during school time on the schools' premises. Lastly, due to the direct involvement required, it was deemed helpful to seek the consent of the participating German teacher, in order to be clear about the exact procedures necessary for the research. All participant information sheets and consent forms can be found in APPENDIX L.

3.6.2 Protection of participants and power issues

Due to a power imbalance between teachers, researchers and students, participants need to trust that the main priority of the research is to help them achieve their learning goals and succeed in internal and external examinations. As a consequence, the participating teacher and I were expected to talk to students regularly on an informal basis about the project to keep them informed and engaged.

According to Alderson and Morrow (2011), the relationship between the researcher or teacher and student participants should be collaborative and based on a mutual commitment to the research procedures. Participants were therefore assured verbally and through information sheets that the mutual aim of the project was to improve learning conditions and outcomes.

Moreover, my involvement as teacher in the actual tasks was minimal, since the interactions were all student-centred. It was anticipated that some students might feel uneasy about being videoed due to the non-anonymous nature of videos. However, participants were assured that only the researcher would have access to the recordings and that they would be stored safely.

I led the interviews with my own students and those from the other school but these were voluntary for students who were able to opt into them on their consent forms. Since the tasks for this study served as practice tasks for the interaction assessments only, no grades were given.

In order to avoid a conflict of interest and to protect all students by giving them equal learning experiences, participating and non-participating students completed the same interaction activities. Non-participating students completed the tasks amongst each other, rather than via videoconferencing with the partner class. Furthermore, as the tasks were

practice activities for national assessments, the intervention formed part of the normal curriculum and did not require students to perform additional activities for the sake of research.

3.7 Summary

Using a concurrent transformative, mixed methods research design, the nature of online interactions in Skype were analysed through four task-based videoconferencing sessions of L2 learners from two secondary schools. A mixed methods approach was employed in an effort to capture the widest range of effects of CMC on oral skills.

As previously outlined in this chapter, L2 learning is considered to be socially constructed, but cognitive processes in acquisition guide the research on interactional features of peer interactions, in particular for negotiated exchanges. Since the current investigation explores both interactional features of discourse and how interlocutors feel while interacting using CMC chats, a combination of interactionist and sociocultural theory forms the basis and theoretical lens of this research.

Multiple data collection sources were used in this research: Transcriptions of the online interactions, a pre-test and post-test FLCAS with open-ended questions and items pertaining to strategies to combat FLA and the Skype chats in particular, self-rating scales after each task and interviews with 12 students. These methods were selected in order to provide an insight into the relationship between discourse management and interactional skills. The forthcoming chapter presents the findings of the current investigation, focusing on the types of negotiation routines, communication tactics and strategies to create social connections, the frequency of negotiation strategies and the proportions of successful understanding. Furthermore, this research seeks to elicit participant opinions on the intervention and their perceived levels of anxiety and confidence to elicit what parts of peer-to-peer interactions students associated with FLA, how they regarded the curriculum intervention, and what strategies they deemed helpful to improve L2 interactions.

4 FINDINGS

Based on relevant research and frameworks relating to CMC and L2 development, the research questions and design of this investigation were defined in the previous chapter. The study was explained in detail in terms of its subjects, settings, data collection methods, and procedures for data analysis.

Consequently, this chapter presents the findings for each posed research question in order to provide a detailed description of student interactions in an L2 in terms of the strategies learners employed to manage discourse and create social connections, their feelings of anxiety and confidence, as well as strategies to improve these interactions. Specifically, data were analysed to address the study's research questions:

- 1) What interactional features are evident in verbal videoconferencing interactions of L2 learners?
- 2) How do learners perceive their experience of these interactions, especially with regard to their anxiety and ability to interact in the L2?
 - i) What aspects of the interactions do learners associate with anxiety?
 - ii) What strategies do language learners use to cope with anxiety?

Since multiple data sources were chosen to investigate the interactions, the findings are not presented in the chronological order in which they were collected but rather focus on each research question separately. First, interactional NoM features of the interactions will be described, followed by an analysis of CSs and SP. Second, findings from the FLCAS, reflections, and Skype anxiety scale will be presented. Third, data from the interviews and open-ended questionnaire questions will be outlined in order to shed light on students' perceptions of the exchanges.

4.1 Research Question 1: Interactional features of foreign language interactions

The first research question was posed to investigate the types of linguistic and interactional features participants demonstrated in the four Skype conversations. Specifically, a focus lies on NoM, that is, how students dealt with and repaired breakdowns in communication. In order to better compare results to those of previous studies, quantitative analyses were included to examine the interactions in-depth. Following, the video chat transcripts were examined with a particular focus on the different types of triggers, resolutions and how and in which language the repair was performed. Excerpts of student interactions provide further evidence of how participants managed and manipulated their discourse to keep communication channels open.

Moreover, a qualitative analysis of CSs focuses on strategies that participants used in order to avoid breakdowns and ensure smooth interactions. To conclude this analysis, elements of SP and how students engage in community building interactions will be presented.

4.1.1 Negotiation of meaning: Quantitative results

4.1.1.1 Negotiated turns

This first part of the analysis presents the amount of time participants spent negotiating meaning in relation to overall turns to allow comparisons across tasks. Table 6 displays the total number of turns and negotiations found per task and illustrates that total turns ranged from 598 to 1009 turns. The online chats yielded a total of 212 episodes of meaning negotiation.

Table 6

Number and Percentage of Negotiated Turns in Relation to Total Turns per Task and Number of Negotiation Routines per Task

Interactions	Negotiated turns	Total turns	Mean percentage	Negotiation routines
Task 1	311	1009	31%	78
Task 2	247	749	33%	56
Task 3	196	603	33%	41
Task 4	149	598	25%	37
Total	903	2959	31%	212

Fostering peer interactions in online learning environments

The proportion of negotiations to turns ranges from 25% to 33% and the results indicate that learners' total turns as well as their negotiation routines decreased from Task 1 to Task 4. This may be due to participants feeling more comfortable with their speaking partners, the tasks, and the video environment. Fewer turns were observed in the later interactions, which could indicate that learners were focused on task completion or got more accustomed to the new speaking situation. In order to better understand how overall turns and NoM routines were distributed between participants, it is necessary to analyse students' individual contribution to the verbal exchanges. To this end, Table 7 shows the ratio of negotiated turns to overall turns per student.

Table 7

Negotiated Turns per Participant in Relation to Overall Turns

Participant	Task 1	Task 2	Task 3	Task 4	Total
WBHS01	20/37	17/24	21/33	3/11	61/105
WBHS02	16/26	8/25	0/22	4/24	28/97
WBHS03	0/26	0/36	16/21	0/27	16/110
WBHS04	26/46	17/32	14/27	4/22	61/127
WBHS05	16/81	47/61	13/30	14/21	113/193
WBHS06	11/43	14/24	0/15	6/16	31/98
WBHS07	24/55	4/24	24/53	8/33	60/165
WBHS08	24/42	4/35	7/24	8/45	60/146
WBHS09	22/41	6/21	0/16	8/19	36/97
WBHS10	20/25	6/14	4/15	8/24	38/78
WBHS11	12/40	4/29	6/23	8/18	30/110
WBHS12	17/43	12/50	4/21	6/39	39/153
WGHS01	22/37	5/24	0/16	4/15	31/92
WGHS02	6/55	11/24	0/16	7/24	24/119
WGHS03	5/26	0/14	0/22	2/11	7/73
WGHS04	19/47	24/49	13/53	11/28	67/177
WGHS05	15/81	0/35	4/23	4/32	23/171
WGHS06	12/44	10/35	0/21	8/44	30/144
WGHS07	2/26	11/24	0/29	0/21	13/100
WGHS08	10/40	6/25	0/20	4/25	20/110
WGHS09	7/42	7/29	22/26	0/19	36/116

Note. WBHS01 – WBHS12 are codes for the 12 male participants, while WGHS01 – WGHS09 stand for the 9 female participants.

Fostering peer interactions in online learning environments

It must be stressed that overall numbers of negotiated turns are not the same as for Table 4 above, since most female participants had more interactions compared to male participants, due to uneven participant numbers. In order to calculate their individual contribution to NoM, only the first attempt at each task was counted for female participants.

It is evident that, while NoM routines were not equally distributed between participants, all students engaged in problem-solving discourse, such as using clarification requests or confirmation checks, at some point during the intervention. Negotiated turns ranged from 7 to 113, while overall turns per student ranged from 73 to 193.

Table 8 below illustrates the number of NoM routines participants initiated per task. These ranged from 1 initiated NoM routine to 27 routines per participant. Interestingly, participants who initiated few NoM routines were also less engaged in discourse management with their interlocutors. Hence, there seems to be a relationship between the amounts of negotiation of students and their interactant's willingness to engage in further discourse management.

Table 8

Negotiation of Meaning (NoM) Routines Initiated per Participant

Participant	Task 1	Task 2	Task 3	Task 4	Total
WBHS01	5	4	5	1	15
WBHS02	3	2	0	1	6
WBHS03	0	0	2	0	2
WBHS04	6	4	3	1	14
WBHS05	4	12	8	3	27
WBHS06	3	3	0	1	7
WBHS07	5	1	5	2	13
WBHS08	5	3	4	4	16
WBHS09	5	1	0	2	8
WBHS10	4	3	1	2	10
WBHS11	3	1	1	2	7
WBHS12	4	3	1	2	10
WGHS01	6	1	0	1	8
WGHS02	1	3	0	2	6
WGHS03	0	0	0	1	1
WGHS04	6	5	3	2	16
WGHS05	4	0	1	1	6
WGHS06	4	2	0	2	8
WGHS07	1	2	0	0	3
WGHS08	3	1	0	1	5
WGHS09	2	2	4	0	8

Table 8 above illustrates that some students dominated the interactions, while others remained mostly inactive in terms of discourse management. Reasons for this will be explored further in combination with a detailed analysis of the videoconferencing transcripts and students' perceptions.

4.1.1.2 Triggers and indicators

In order to better understand the nature of communication breakdowns, triggers and indicators were identified and further analysed regarding the types of triggers and how participants signalled their non-understanding. Table 9 shows the breakdown of trigger types. The data indicate that most negotiation routines were triggered by comprehension-related issues and lexical problems.

Table 9

Breakdown of Triggers in NoM

Trigger	Task 1	Task 2	Task 3	Task 4	Total
Comprehension	37	23	17	14	91
Lexical	19	15	14	10	58
Content	14	14	7	10	45
Syntactic	7	4	3	4	18
Total	77	56	41	38	212

Table 10, below, displays the different types of indicators participants used to signal non-understanding. The most salient indicators were global and in most cases of misunderstanding, clarification checks were used.

Table 10

Breakdown of Indicators in NoM

Indicator	Task 1	Task 2	Task 3	Task 4	Total
Global	54	37	41	24	156
Echo	15	14	14	10	53
Visual	6	18	8	7	39
L1	9	9	7	7	32
Inappropriate response	15	3	0	2	20
Non-verbal	1	2	1	3	7
Total	100	83	71	53	307

The high amount of indicators carried out in German also shows that students generally did not simply repeat the trigger but rather used conversational language, such as “Nochmal bitte” (Again please) or “Ich habe die Frage nicht verstanden” (I did not understand the question). Furthermore, it indicates that participants were able to use strategies to cope with elements of the unknown and to discuss communication problems.

Notably, visual indicators were employed sparingly. Occasionally, participants indicated non-understanding with a puzzled look or, more commonly, a gesture towards the headset. L1 indicators were rare, which demonstrates that these beginner L2 learners were able to stay in the L2 and could sustain the interactions by using language features such as questions and clarification requests.

4.1.1.3 Responses and reactions to responses

The following section outlines the resolutions to NoM. Particularly, the types of responses and the types of reactions to the response participants used to repair breakdowns in discourse are presented. Table 11 outlines the types of responses for each task. The most common form of response, accounting for over a third of all responses, was to repeat the question or statement. This is due to the explicit requests for repetition. Usually, after the repetition, communication was restored, which points to the assumption that L2 learners were sometimes unable to hear.

Table 11

Breakdown of Responses in NoM

Response	Task 1	Task 2	Task 3	Task 4	Total
Repetition	33	26	21	9	89
Expansion	12	9	14	10	45
Reduction	10	9	7	8	34
Acknowledgement	16	5	4	7	32
Rephrase	9	6	8	5	28
Translation	2	9	4	3	18
Total	82	64	58	42	246

Notably, expansion featured highly. In these instances, L2 learners expand on a previously misunderstood utterance and provide further information in order to repair a communication breakdown. This shows that these learners could contribute to, and manipulate, language construction. Reduction was generally used when it was clear which particular lexical item had caused the issue. Translations were only used when specifically

requested and mostly after other responses had failed to restore the flow of conversation. Reactions to responses were a vital element of negotiation routines and participants tended to give task appropriate responses, rather than simple acknowledgements only (Table 12).

Table 12

Breakdown of Reactions to Responses in NoM

Reaction to response	Task 1	Task 2	Task 3	Task 4	Total
Task-appropriate response	57	37	33	30	157
Minimal	15	3	4	2	24
Partial response	3	2	3	2	10
Testing deductions	2	2	1	1	6
Metalinguistic talk	0	0	0	0	0
Total	77	44	41	35	197

Out of the 48 interactions analysed, there was only one request for information that was abandoned immediately by the interlocutor. Nine routines did not reach the reaction-to-response stage and a further six were abandoned at the reaction-to-response stage. Consequently, most beginner-learners of German finished the negotiation phase they were in before moving on to the next one. Most unresolved requests occurred in the first interaction, which suggests that students found it easier to deal with communicative problems in their later conversations.

To sum up, global statements of non-understanding were the most frequent utterances used to indicate a problem in communication, which stemmed mostly from comprehension problems. Repetition was the most salient reaction to a breakdown and task-appropriate responses were most commonly used to restore communication.

The following section will analyse the same elements of discourse management, using transcripts of the peer-to-peer chat to examine how participants selected specific features of NoM. Additionally, this section will explore how students oriented themselves to each other during the interactions to achieve shared meaning.

4.1.2 Negotiation of meaning: Qualitative findings

Transcripts of the exchanges revealed a variety of negotiation routines, caused by factors such as lexical problems and listening problems. Participants discovered different ways of gaining mutual understanding and the following examples outline the most prominent strategies used by students. Transcription conventions follow Ten Haave (2007), as outlined in APPENDIX F.

Excerpt 1 demonstrates how clarification requests were used to negotiate meaning. In all cases the German, and all translations, are presented as used, without correction.

Excerpt 1: Indicator in negotiation (clarification request and incorrect response)

Participant	Task 3	English translation	Code
Student A:	Beginnt jetzt die zweite Stunde für dich?	Does the second lesson start for you now?	Trigger (lexical)
Student B:	Wie bitte?	Pardon?	Indicator (global clarification request)
Student A:	Wann beginnt die zweite Stunde für dich?	When does the second lesson start for you?	Response (rephrase)
Student B:	Uh, uhm, nächstes Woche.	Uh, uhm, next week.	Indicator (incorrect response)
Student A:	\$ Uhm, nein, \$ Wann beginnt die nächste Stunde für dich?	\$ Uhm, no, \$ when does the next lesson start for you?	Response (rephrase)
Student B:	Wait, the next what? Was ist das auf Englisch?	Wait, the next what? What is that in English?	Indicator (L1 clarification request, global statement of non-understanding)
Student A:	Next period \$	Next period \$	Response (L1)
Student B:	Ahh, ja, uhm, \$ nächstes Woche, natürlich. Uhm, im fünfzehn Minuten.	Ahh, yes, uhm, \$ next week, of course. Uhm, in 15 minutes.	Reaction to response (task appropriate)

This example shows an incorrect response. A clarification request and resulting rephrasing did not clear up the misunderstanding. Hence, Participant B chose to give an incorrect answer in order to keep the conversation going. It seems that the fast flow of conversation in Video CMC forced participants to respond quickly in cases of non-understanding.

Despite the apparent lack of understanding, Participant A rephrased the trigger once again, which shows a tendency to use and manipulate the L2 as much as possible. Analyses of the transcripts revealed that students were able to deviate from the planned, and add to and elaborate on their interactions. Students developed CSs such as rephrasing, and asking for clarification in the L2, which assisted communication and showed that students could engage with the language they used in the conversations.

The videoconferencing aided participants in making personal connections outside the classroom. Excerpt 1 draws attention to students' social orientation during the online chats. The student who had trouble understanding the question used humour after being made aware of his mistake. Consequently, participants were task-focused while creating and maintaining a positive learning environment. Humour and laughter were used frequently to detract from misunderstandings and mistakes. This concept will be revisited when analysing SP in Section 4.1.4.

In order to establish meaning, students often used a variety of CSs, rather than just one. Excerpt 2 contains both a repetition and translation of the trigger.

Excerpt 2: Response in negotiation (repetition and L1)

Participant	Task 1	English translation	Code
Student A:	Ah, was sind deine Fächer?	Uhm, what are your subjects?	Trigger (lexical)
Student B:	(2) Wie bitte?	Pardon?	Indicator (global – clarification request)
Student A:	Uhm, was sind deine Fächer?	Uhm, what are your subjects?	Response (repetition)
Student B:	Was ist Fächer auf Englisch?	What is ‘Fächer’ in English?	Indicator (local – echo)
Student A:	Uhm, what are your subjects?	Uhm, what are your subjects?	Response (L1)
Student B:	Oh, uhm, (3) Maths, Chemie, uhm Deutsch, accounting und (5) uh und du?	Oh, uhm, (3) maths, chemistry, uhm, German, accounting and (5) uh and you?	Reaction to response (task appropriate)

In the above example, the word “Fächer” (school subjects) was not understood and could not be cleared up with a repetition. Hence, Student B asked to have the word translated after which a full answer was given.

While participants sometimes explicitly signalled the problematic phrase or word, this trigger was used less often than global statements of non-understanding. A reason for this might be the fast pace of synchronous CMC and the fact that the trigger causing the problem usually occurred right before the indicator, unlike in asynchronous CMC.

The use of L2 equivalents was used sparingly, due to students’ attempts to stay in the L2. This use mainly occurred after other attempts to reach mutual understanding had failed or after an explicit request for a translation.

Expansion occurred when participants elaborated on a problematic utterance by providing more information to facilitate understanding and making input more accessible. This showed that learners could reformulate their initial utterances upon receiving feedback, which might have helped them recognize the gap in their inter-language. Excerpt 3 serves as an example for such expansions.

Excerpt 3: Response in negotiation (expansion)

Participant	Task 3	English translation	Code
Student A:	Ah, OK, viel Glück, und was, was kaufst du?	Ah, Ok, good luck, and what, what do you buy?	Trigger (content)
Student B:	Wie bitte?	Pardon?	Indicator (global – clarification request)
Student A:	Uhm, was kaufst du normalerweise mit deinem Geld?	Uhm, what do you normally buy with your money?	Response (expansion)
Student B:	Ah, OK. Ich kaufe Kleidung, viele Kleidung und manchmal Computerspiele und Musik.	Ah, Ok. I buy clothes, a lot of clothes and sometimes computer games and music.	Reaction to response (task appropriate)

Here, the trigger was content related. Participants had talked about job applications previously. Hence, the question about what to buy seemed out of context. After the question was elaborated on, a task-appropriate response was given, which indicates full comprehension.

In order to summarise and cover the individual strands of negotiation routines more comprehensively, the different stages of NoM routines will be outlined separately below, including further examples not detailed previously.

Triggers:

As elaborated on in the previous chapter, a variety of trigger types was observed. In many cases, triggers were caused by misunderstandings or lexical issues. At other times, triggers were caused by problems with the content of a message owing to the beginner level of participants and a resulting abruptness or lack of transitional language knowledge.

Syntactical triggers were observed the least. These interfered with participants’ understanding, mostly caused by errors in tense formulation, as shown in Excerpt 4.

Excerpt 4: Trigger of negotiation (syntactic)

Participant	Task 2	English translation	Code
Student A:	Und was macht du in den letzten Wochenende gemacht?	And what do you do in the last weekend?	Trigger (syntactic)

Even though syntactic triggers and negotiations centred on grammar were rare, this does not indicate the absence of errors in grammar. All transcripts contained syntactic errors but these generally did not hinder communication and therefore triggered no discourse management tools.

Indicators:

Participants' main ways to signal their misunderstanding were global statements of non-understanding, as illustrated in Excerpt 1, Excerpt 2 and Excerpt 3. However, other signals were found in the transcripts as well. For example, in some instances an incorrect answer to a previous question was used as a signal to transmit misunderstanding (see Excerpt 5).

Excerpt 5: Indicator in negotiation (inappropriate response)

Participant	Task 1	English translation	Code
Student A:	Uh, hast du Haustiere?	Uh, do you have pets?	
Student B:	Ja, ich habe einen Hund. Uhm, er heißt Dexter. Hast du /, hast du (2) Haustiere?	Yes, I have a dog. Uhm, he is called Dexter. Do you /, do you have (2) animals?	Trigger (comprehension)
Student A:	/Oh/ Nein, ich habe keine Schwester und Bruder.	/Oh/ No, I have no brothers or sisters.	Indicator (inappropriate response)

These indicators mainly occurred in instances of overlapping talk, like in the example above, or in situations where the sound quality was poor. Some instances of inappropriate responses due to lexical difficulties were also reported in the data.

Local indicators identified the cause of the problem directly. In many cases, participants first signalled lack of comprehension with a global statement of non-understanding and, if the problem could not be solved through repetition of the problematic utterance or phrase, they asked for direct clarification in the L2. This might be explained by participants' tendency to avoid admitting to non-understanding directly. Rather, students pretended that listening issues obstructed comprehension.

Visual indicators were mostly used together with global statements of non-understanding to highlight non-understanding. Typically, those visual indicators consisted of pointing to the headset or the ear, but instances of head tilts towards the camera with a puzzled look were also recorded.

Interestingly, only three examples of purely visual signals were recorded. The least common indicator was of a non-verbal nature, where participants resorted to short grunts, such as "Huh?" to signal a communication breakdown.

Responses:

Responses or reactions to the communication breakdown was the category with the most variations. Participants were focused on fixing issues in communication and solved these problems in most cases, rather than abandoning them through changing the subject.

Most types of responses have already been described in previous examples, apart from reduction, which is illustrated in Excerpt 6 below. Almost all cases of reduction strategies were caused by confirmation checks, where participants directly sought to clarify a specific term.

Excerpt 6: Response in negotiation (reduction)

Participant	Task 2	English translation	Code
Student A:	Was hast du letztes Wochenende gemacht?	What did you do last weekend?	Trigger (comprehension)
Student B:	Nächste?	Next?	Indicator (confirmation check)
Student A:	Letzte.	Last.	Response (Reduction)

Reactions to response:

Transcripts of the interactions show that the reaction to response prime occurred in most negotiation routines and therefore can be considered an important part of meaning negotiation. The majority of communication breakdowns could be solved with a task-appropriate response, however short at times. There were a few instances of incomplete responses, such as the reaction recorded in Excerpt 7.

Excerpt 7: Reaction to response in negotiation (incomplete response)

Participant	Task 3	English translation	Code
Student A:	Ah, uhm, uhm, sparst du dein Taschengeld?	Ah, uhm, uhm do you save your pocket money?	Reaction (repetition)
Student B:	Sparst du? Uh, ja ich denke (2) vielleicht. Uhm, (2).	Do you save? Uh, yes I think, (2) maybe. Uhm (2).	Reaction to response (incomplete response)

It is quite apparent that Student B was unsure about the question and guessed the answer, indicated by the hesitation and the choice of words. However, technically, the answer is not wrong but could be improved with further explanation.

At other times, the reaction to response consisted of a simple “yes” or “no” type answer. It depended on the context of the question whether this was coded as task-appropriate or as minimal response. In some cases, students answered a closed question with “yes” or “no”, classified as task-appropriate response, but it seemed they were embarrassed by their misunderstanding and, as a consequence, were intent on moving on quickly, rather than expanding on their short answer, as demonstrated in Excerpt 8 below.

Excerpt 8: Reaction to response in negotiation (short task-appropriate answer)

Participant	Task 3	English translation	Code
Student A:	Nein, aber ich möchte einen Job. (6) / Möchtest du einen Job? (4) Hallo?	No, but I would like a job. (6) / Would you like a job? (4) Hello?	Trigger (comprehension)
Student B:	/Uh/ Nochmal bitte.	/Uh/ Again please.	Indicator (global – clarification request)
Student A:	Uh, möchtest du einen Job?	Uh, would you like a job?	Response (repetition)
Student B:	Äh, ja.	Ah, yes.	Reaction to response (task appropriate)
Student A:	Ich muss jetzt los.	I must go now.	

It seems both interlocutors were embarrassed by the comprehension issues and were focused on ending the conversation. Student B's answer was coded as a task-appropriate response, albeit consisting of a "yes" only. Student A seemed to have waited for an elaboration or another question but decided to conclude the interaction when Student A continued to provide one-word answers. Furthermore, this example provides a justification for the inclusion of content triggers. After the problematic question was repeated, comprehension occurred, which points to a lack of listening skills rather than lexical issues. In sum, it is evident that the CMC interactions contain numerous types of NoM functions, which are mainly clarification requests, repetitions, elaborations, and self-corrections.

4.1.3 Communication strategies

Supporting the above findings related to repairing discourse, the following section is concerned with the additional strategies participants utilised, mainly to avoid communication breakdowns, but also to establish proximity to interlocutors and self-correct their L2 use. Thus, this section presents the main CSs found in student interactions and a qualitative analysis of discourse data reveals how CSs are employed and function in CMC interactions.

Learners employed various CSs during their video chats. The most common strategies were self-repair (not triggering NoM routines) and the use of fillers and repetitions. Participants used fillers to keep the conversational flow going. Additionally, they were used in cases of comprehension problems or in instances where learners struggled to formulate an idea.

Often participants repeated their partner's question in order to give them more time to plan their answer and to avoid a gap and communication breakdown in the conversation. Excerpt 9 demonstrates this strategy and signals that both interactants used fillers.

Excerpt 9: Indirect communication strategy (CS): Processing time pressure-related: Filler and repetition

Participant	Task 1	English translation	Code
Student A:	Uhm, was machst du in deiner Freizeit?	Uhm, what do you do in your free time?	Filler
Student B:	Uhm, in meiner Freizeit? Ich lese Bücher und spiele Computergames.	Uhm, in my free time? I read books and play computer games.	Filler and repetition

The increased time to think before speaking makes L2 learners seem more fluent, or, at the very least, indicates their active engagement as opposed to silently searching for an answer. However, despite a lesson on fillers and conversational language before the intervention, most fillers were not lexical fillers, such as “well”. Rather, students resorted to non-lexical fillers such as “uhm” when confronted with an issue in communication. Thus, the frequent occurrence of time-gaining strategies, and non-lexical fillers in particular, indicates that the video chats were challenging, probably due to the fast pace of the interactions, resembling an F2F interaction. Moreover, long pauses between individual words or phrases also point to difficulties in the fast-paced environment. Despite not being a category of CSs, students made use of pauses in order to collect their thoughts, search for lexical terms or attempt to make meaning of input. Both fillers and extended pauses were observed in each transcript.

Self-repair featured highly in the online chats, which indicates that these beginner-learners could attend to form, monitor their own language use, and modify their output accordingly. Hence, language awareness did not necessarily require a higher level of L2. Notably, most self-corrections occurred in the last interactions, possibly on account of students feeling more at ease with their speaking partners and the chat environment. Despite the fast pace of video chat, students found the time to focus on form, which is even more significant when considering that no self-repair was carried out due to a signal of non-understanding. Excerpt 10 illustrates that Student A encountered some difficulties in structuring a sentence in the future tense but succeeded in a second attempt.

Excerpt 10: Direct CS: Own-performance problem-related: Self-repair

Participant	Task 4	English translation	Code
Student A:	Ühm, was hast du in den letzten Ferien gemacht? Äh nein. Was wirst du in den nächsten Ferien machen?	Uhm, what did you do in the last holidays? Ah, no. What will you do in the next holidays?	Self-repair

Equally, self-rephrasing was used to make a message clearer or to fill a gap in the conversation. This is illustrated in Excerpt 11.

Excerpt 11: Direct CS: Own-performance problem-related: Self-rephrasing

Participant	Task 4	English translation	Code
Student B:	Und, uhm, hast du Haustiere? (4) Oder, I don't know, hast du eine Katze?	And, uhm, do you have pets? (4) Or, I don't know, do you have a cat?	Self-repair

In this example, there was a pause after the question regarding pets. Student B tried to elicit an answer by rephrasing his question. Similar to self-repair was retrieval, which describes the recovery of a lexical item by uttering the item in an incorrect form before finding the correct one. Excerpt 12 illustrates the use of retrieval as strategy.

Excerpt 12: Direct CS: Resource deficit-related: Retrieval

Participant	Task 3	English translation	Code
Student A:	Ah, really? I mean, ah wirklich? (3) Uh, wann?	Ah, really? I mean, ah really? (3) Uh, when?	Retrieval

Another frequently used strategy was code-switching. This strategy also occurs in NoM routines where participants switch to their shared L1 in order to repair a problem in communication. In contrast, here the goal is a different one and participants used English words or phrases when they had difficulties expressing ideas in German or when trying to increase social proximity.

Although there were no overt corrections of speaking-partners, participants used recasts to correct their interlocutors. The repetition of an utterance with an in-built correction helped students focus on form. However, not all recasts triggered an uptake on part of the hearer. Excerpt 13 shows that Student A did not explicitly react to the modified input related to his grammatical mistake regarding the word order and did not change his output accordingly. Instead, a simple acknowledgement followed, which leaves it unclear as to whether the feedback has been noticed.

Excerpt 13: Direct CS: Other-performance problem-related: Other-repair (Recast)

Participant	Task 2	English translation	Code
Student A:	Ich, ah, ich Tennis spiele.	I, uh, I Tennis play.	Type (grammar)
Student B:	Hmm, ich spiele Tennis.	Hmm, I play Tennis.	Recast
Student A:	Yeah, ja.	Yeah, yes.	Uptake (acknowledgement)

Fostering peer interactions in online learning environments

Related to the above strategy is co-construction, that is, the completion of an utterance between two speakers. Co-construction helps learners build language skills in the process of constructing an utterance. Excerpt 14 illustrates that each student contributed to making sense of the conversation and consequently an emergence of peer assistance and affiliation among L2 peers could be observed.

Excerpt 14: Direct CS: Other-performance problem-related: Other-repair (Co-construction)

Participant	Task 1	English translation	Code
Student A:	Mein Hobby ist Tennis uhm (2).	My hobby is tennis uhm (2)	Type (lexical)
Student B:	Spielen?	To play?	Co-construction
Student A:	Uh, spielen Tennis, spielen Golf, spielen mit Freunden.	Uh, play Tennis, play Golf, play with friends.	Uptake (repetition)

Despite the uptake, the example also shows that Student A did not seem to have grasped the interactant's implicit feedback. Instead, he simply repeated the co-constructed part of the phrase but incorporated it into a different phase while confusing the word order of that utterance.

A less commonly used strategy was feigning understanding. Students tended to anticipate the questions and base their response on this, while ignoring the actual question. Excerpt 15 shows a simple introductory question, typically used at the beginning of each interaction. Student B, however, anticipated another common question and answered accordingly. A repetition of the question achieved mutual understanding.

Excerpt 15: Indirect CS: Other-performance problem-related: Feigning understanding

Participant	Task 3	English translation	Code
Student A:	Wie heißt du?	What is your name?	
Student B:	Ich bin gut.	I am good.	Feigning understanding

It seems that Student B was focused on keeping the channels of communication open by feigning understanding in an attempt to continue the interaction in spite of a misunderstanding. The use of message abandonment also appeared, but was generally not signalled clearly. Since video chat follows F2F interactions, participants had little time to think about how to re-phrase their message and had to make decisions on the spot, as shown in Excerpt 16.

Excerpt 16: Direct CS: Resource deficit-related: Message abandonment

Participant	Task 2	English translation	Code
Student A:	Ich spiele Sport (4) und ja. Ich sehr mag geschlafen, schlafen, ja.	I play sports (4) and yes. I very like slept, sleeping, yes.	Message abandonment

The topic prior to the message abandonment was on sport, which Student A could not engage with, indicated by a pause of four seconds. Consequently, the talk was changed to a different leisure activity.

Restructuring occurred when participants could not continue a turn owing to a lack of vocabulary. In Excerpt 17 the student tried to find the German word for “nothing” (nichts), used the word for “no” instead and, after a pause, decided to create a different answer.

Excerpt 17: Direct CS: Resource deficit-related: Restructuring

Participant	Task 2	English translation	Code
Student A:	Was machst du am Wochenende?	What do you do on the weekend?	
Student B:	Uhm, kein (2) Ok, ich weiss nicht \$. Uhm, ja, und du?	Uhm, no (2) OK, I don't know. Uhm, yes, and you?	Restructuring

When participants were unsure about an L2 expression, they used verbal strategy markers in English, such as “I do not know how to say that” to indicate their lack of certainty before or after a strategy usage and to notify their speaking partner about incorrect language that may necessitate an additional effort to be understood. Due to the L2 level of participants, however, this only occurred in the L1 and was usually carried out as a request for help as opposed to an attempt to produce an L2 lexical item.

Therefore, these instances were counted as lexical triggers under the NoM model. Foreignisation was used infrequently and word coinage was not used at all.

Occasionally, all-purpose words were used. Commonly, these described general lexical items to substitute a specific term. Excerpt 18 shows such an example.

Excerpt 18: Direct CS: Resource deficit-related: All-purpose words

Participant	Task 3	English translation	Code
Student A:	Was kaufst du?	What do you buy?	
Student B:	Ich kaufe, uhm, ich gehe ab und zu kaufen und ich kaufe Kleidung, Schmuck, nein \$, uhm, und uhm Zeitschriften und, und andere Dinge.	I buy, uhm, I go shopping now and then and I buy clothes, jewellery, no \$, uhm, and, uhm, magazines, and, and other things.	All-purpose word

In summary, participants used a variety of CSs to maintain their conversations and actively tried to keep the flow of their interactions going. The most salient strategies were fillers and self-corrections, which points to the fact that these students were not only concentrating on their interlocutor’s output but were equally focused on their own output.

4.1.4 Social presence

This section presents how L2 learners managed their online discourse from a social viewpoint and particularly how they created interpersonal connections. As described previously, three categories of SP indicators were used to categorise the concept of SP. Examples of affective, interactive and cohesive responses are described in this section, and the most commonly employed responses will be explored along with how students incorporated these into their discourse.

Affective responses were the most commonly used indicators of SP. Specifically, students used humour and the expression of emotions or empathy to establish a connection with speaking partners.

Participants also used interactive responses as a strategy but these were observed less than affective responses. Within this category, complimenting and expressing appreciation were the most frequent indicators. As expected, cohesive indicators outside of the tasks appeared seldom. There was difficulty in coding and analysis of indicators in this category. This was due to the nature of the task, which functioned as conversations with the aim to get to know people and therefore included and required salutations and personal questions. Additionally, it seems problematic to make this classification, since it is difficult to determine which parts of the conversations were purely task related and which went beyond the immediate task.

As mentioned, humour was an indicator that participants employed frequently to express SP and it was used for different purposes. First, students used humour to establish

proximity with the interlocutor and, second, to gloss over problems in communication (see Excerpt 1).

In Excerpt 19 below, students show a number of indicators of SP. First, Student A proclaims he is sick; Student B is not satisfied with the answer and inquires about the reasons for this. She then humours Student A by asking if he has a headache. He agrees and, in turn, asks Student B about her well-being. She answers the question and then tells her partner to stay at home in order to get better. This indicates a certain empathy on both parts.

Excerpt 19: Affective social presence (SP) response: Humour and emotions

Participant	Task 1	English translation	Code
Student A:	Ich bin ziemlich krank.	I am quite sick.	
Student B:	Oh, warum?	Oh, why?	
Student A:	Uh (2) ich habe keine Idee.	Uh (2) I have no idea.	
Student B:	\$\$\$ Hast du Kopfschmerzen?	\$\$\$ Do you have a headache?	Affective Humour
Student A:	Ja, ziemlich. Ja, und du? Wie geht's?	Yes, quite. Yes, and you? How are you?	
Student B:	Ah, mir geht's gut, danke. Du musst zu Hause bleiben.	Ah, I am good, thank you. You have to stay at home.	Affective Emotions

Notably, humour was used in different forms. Mostly, teasing and joking with each other occurred over several turns. However, the use of humour was not always reciprocal and one-liners were also found in the data. For instance, one participant tried to end a chat with humour in saying: “Ja, ja. Uhm, ich muss meine Haare waschen. Tschüs.” (Yes, yes. Uhm, I have to wash my hair. Bye.) (WBHS03, Task 1).

It was observed that the amount of SP differed significantly between students and across the four tasks. Hence, while some participants stayed close to the task and simply answered questions without additional details, others extended their interactions beyond the immediate context. For instance, one student engaged socially in wishing good luck to another when talking about a job application. Other participants signalled their agreement with their speaking partners with a thumbs-up sign or a quick clapping of the hands.

Excerpt 20 below illustrates SP and how participants continue a thread. Despite the fact that they are on task, they clearly bring their own opinions into the conversation and form a bond over the book series they both like. From the extract, it is evident that participants found a mutual basis in social talk, supported each other and maintained their conversation in a social context.

Excerpt 20: Interactive SP response: Agreement and asking questions

Participant	Task 3	English translation	Code
Student A:	Uhm, ja mein Lieblingsbuch ist Skulduggery Pleasant.	Uhm, yes, my favourite book is Skulduggery Pleasant.	
Student B:	Oh ja. Ich mag Skulduggery Pleasant.	Oh, ja. I like Skulduggery Pleasant.	Interactive Agreement
Student A:	Ach ja? Aber ich habe nicht die neues Buch lesen.	Oh, yes? But I have not read the new book.	
Student B:	Oh, nein. Du musst.	Oh, no. You must.	Affective Emotions
Student A:	Ja. Aber ich kann nicht finden das.	Yes. But I cannot find it.	Interactive Agreement
Student B:	Wirklich?	Really?	Interactive Asking questions
Student A:	Ja.	Yes.	
Student B:	Ich habe es schon gesehen.	I have seen it already.	
Student A:	Ah, OK.	Ah, OK.	
Student B:	Es ist sehr toll.	It is really great.	
Student A:	Hast du das gekauft?	Have you bought it?	Interactive Asking questions
Student B:	Ja.	Yes.	
Student A:	Ok.	OK.	
Student B:	Ich habe, ich habe nicht, uhm, die (3) ich habe nicht das siebensten Buch gekauft, aber ich habe das gelesen.	I have, I have not, uhm, the (3) I have not bought the 7 th book but I have read it.	

Less frequent was self-disclosure. Two instances only were recorded, one of which is outlined in Excerpt 21 below.

Excerpt 21: Affective SP response: Self-disclosure

Participant	Task 3	English translation	Code
Student A:	Ja, ich spiele, uhm, ein bisschen Piano.	Yes, I play, uhm, a bit of piano.	
Student B:	Klavier? Ja, ich auch.	Piano? Yes, me too.	Interactive Agreement
Student A:	Ja, yes, Klavier. (3) Ja, es ist sehr entspannend. Relaxing.	Yes, yes, piano. (3) Yes, it is very relaxing. Relaxing.	Interactive Agreement
Student B:	Uhm, not for me. /Ich muss. Ja, ich muss uhm, zwei Stunden pro Woche, uh pro Tag, ich muss Klavier üben. Ja. / Pretty hard-core.	Uhm, not for me. /I must. Yes, I must uhm, practise two hours per week, uh per day. I have to practise the piano. Yes. / Pretty hard-core.	Affective Self-disclosure
Student A:	Wow. /Bist du ein \$ Bist du professionell? Zwei Stunden? Klavier? Das ist / das ist sehr gut. Wow.	Wow. / Are you a \$ Are you a professional? Two hours of piano? That is / that is very good. Wow.	Affective Emotions Humour Interactive Complimenting
Student B:	Nein \$\$ Ja, ich ja, mein Leben ist schon hektisch und ich habe keine Zeit für Hausaufgaben.	No \$\$ Yes, I yes, my life is rather hectic and I have no time for my homework.	Affective Self-disclosure
Student A:	Oh well.	Oh well.	Response (L1)

Fostering peer interactions in online learning environments

Student B explains about her hectic and intense piano practice programme and alludes to the fact that it is not a leisure activity but rather a chore for her, which does not permit her much free time. Student A seems sympathetic and impressed at first, expressing both emotion and empathy.

As described in the example above, interactive factors were also present. Within this category, agreement was used the most and enabled participants to establish proximity and common ground. This was often expressed via short expressions, such as “Ich auch” (Me too). Less frequent was complimenting. However, the above example shows Student A praising Student B on her daily piano training. Additionally, in Tasks 2 and 4, one participant complimented another student on the prettiness of her name.

Participants did generally not quote from other chats due to the random selection of interactants. However, in some instances the same speaking partners had two interactions with each other and continued their talk while referring back to things discussed in the first chat.

Another interactive strategy was to ask questions. Again, the nature of the task demanded personal questions. Yet, in Excerpt 20, a variety of questions regarding a book series shows that participants can go beyond the immediate and basic context of a conversation and ask questions out of personal interest.

Despite the issues in coding cohesive indicators, examples of these categories were recorded. For instance, during Task 4 a female participant walked past the computer screen of one of her peers. The male interlocutor recognised her from a previous interaction and confirmed with his speaking partner that it was indeed one of his previous interactants. Waving and salutations ensued after which participants continued with the task.

Another cohesive indicator was found in Task 2 where one female student asked her speaking partner if he would like to go to the cinema with her and her friend, who had previously interacted with that participant. In calling the female student and her friend by name, the male participant created the feeling of a group, inclusiveness, and familiarity while replying to the invitation.

Phatic expressions, such as small talk or talk about the channels of language itself, are a vital element in social talk and encouraged in the NCEA *interact* assessment and its practice resources. Therefore, this was partly incorporated in the task and students were prepared with some interactional, phatic phrases beforehand, as outlined in the Methodology chapter. The use of phatic expressions is illustrated in Excerpt 22.

Excerpt 22: Cohesive SP response: Phatic expressions

Participant	Task 3	English translation	Code
Student A:	(loud chatter from next computer) Ich kann dich nicht hören. (touches left earphone, leans into computer)	I can't hear you.	Cohesive phatics
Student B:	Uh, tja. Ich will ein Geschenk für meinen Freund kaufen. Hast du einen Vorschlag?	Oh, well. I would like to buy a present for my friend. Do you have a suggestion?	Cohesive phatics

Here, Student A talked about comprehension problems, caused by loud background noises. Student B reacted to the statement with the surprising phatic expression of “Uh, tja” (Oh, well). Given the L2 level of participants, however, the student might have reacted to the best of his ability, at least trying to acknowledge the problem somehow. This also points to the need for effective language instruction in interactional, social language in order to ensure students fully understand the culturally and linguistically appropriate usage of these filler words.

As stated before, greetings and leave-takings were common features of the interactions, partly due to the tasks but also due to participants’ wish to maintain social cohesion. For instance, while most exchanges began with a short greeting and a question about the other’s wellbeing, most chats ended quite abruptly with a short phrase of “Ich muss jetzt los” (I must go now). Some students farewelled each other in more elaborate ways, such as “Es war schön mit dir zu sprechen” (It was nice to talk to you) and showed attempts to develop interpersonal skills and create connections and social proximity with their peers.

Emerging from the transcripts of student interactions three themes concerning SP were developed. These are mutual consideration and support, an emotional connection, and a sense of community.

4.2 Summary of findings for Research Question 1

The findings as presented above show that participants made use of numerous discourse management tools to repair and maintain discourse. Even though students did not receive much training on how to cope with communication breakdowns, they were, overall, able to solve communicative problems themselves and could do so in the L2.

The main findings relating to Research Question 1 are summarised briefly below.

Fostering peer interactions in online learning environments

Research Question 1:

What interactional features are evident in verbal videoconferencing interactions of L2 learners?

- Participants used a variety of interactional strategies to facilitate comprehension of input and output without code-switch to the shared L1
- Instances of NoM were plentiful and could mostly be resolved with various techniques, such as repetitions and elaborations
- Most NoM routines were triggered by comprehension issues
- Indicators were mostly global and the most common way to signal non-understanding was through clarification checks in the L2
- These indicators predominantly showed conversational language to ask for specific clarifications or repetitions
- Thus, responses were frequently a repetition of the trigger
- Most cases of NoM could be pushed back up to a normal flow of conversation with a task-appropriate response, which often consisted of a short answer
- Students used a variety of CSs as discourse strategies with the most prominent strategies being fillers and self-corrections, which indicates a focus not only on comprehensible input but also on students' own output
- Participants used recasts and co-construction to correct and aid their interlocutors, which points to an emergence of peer assistance
- Affective responses were the most commonly used indicators of SP. Specifically, students used humour and the expression of emotions or empathy to establish a connection with their speaking partners
- In addition, participants agreed with each other and asked questions beyond the immediate context, which enabled them to find a mutual basis of social talk, support each other, establish an emotional connection and maintain their social discourse.

Based on these findings, the next section will focus on students' perceptions of the conversations. A particular focus will be placed on participants' perception of their own interactional abilities, their levels of FLA and whether they found ways to improve their discourse.

4.3 Research Question 2: Participants' experiences of the interactions

After having examined interactional structures in the CMC chats, the analysis will now turn to students' perceptions of the interactions in terms of their ability to interact and achieve shared meaning, as well as FLA levels and ways to improve the interactions. In this section, results of the FLCAS, reflections after each chat, Skype anxiety scale, as well as additional questionnaire items pertaining to strategies to alleviate nervousness in speaking will be presented. Following the results from questionnaires, data from open-ended questions and semi-structured interviews will give an insight into participants' views of the intervention and reveal the motivating and debilitating factors of these online activities.

4.3.1 Foreign language classroom anxiety scale pre-test and post-test

The following section provides findings related to FLA levels as reported by the students before and after the intervention. Participants' anxiety levels were measured by an adapted version of the FLCAS (Horwitz et al., 1986). For the original FLCAS, Horwitz et al. delineated a Cronbach's alpha of 0.93 (N = 108). For the current research, the pre-test scale's reliability was also measured by means of Cronbach's alpha. The scale was found to be reliable with a score of 0.941. The internal consistency measurement of the post-test FLCAS was Cronbach's alpha = 0.948, which shows a high internal consistency. A copy of the scale can be found in APPENDIX H.

The general FLCAS contains 20 items with a maximum score of 5 each. Consequently, the possible range of scores is 20 to 100, with lower numbers representing a lower level of FLA. For the present study anxiety scores prior to the online interactions ranged between 27 and 74 with a mean score and median of 47. After the treatment, participants demonstrated FLCAS scores between 24 and 80 with an average score of 46.14 and a median of 45.

Out of a possible 5 on the Likert-scale, which indicates a high level of FLA, the mean anxiety score for the FLCAS pre-test was 2.35 (SD= 0.697) and 2.31 (SD= 0.730) post-test. Table 13 shows FLCAS scores in detail.

Table 13

Foreign Language Classroom Anxiety Scale (FLCAS) Scores Pre- and Post-test

Student	FLCAS score pre-test	FLCAS score post-test
WBHS01	3.05	4.00
WBHS02	2.20	1.70
WBHS03	2.75	1.85
WBHS04	1.85	2.75
WBHS05	1.95	1.95
WBHS06	3.70	3.70
WBHS07	2.90	2.90
WBHS08	2.30	2.25
WBHS09	2.65	2.95
WBHS10	2.60	2.85
WBHS11	3.25	2.55
WBHS12	2.65	1.95
WGHS01	1.45	1.40
WGHS02	1.50	1.70
WGHS03	3.05	2.60
WGHS04	3.05	2.70
WGHS05	1.60	1.85
WGHS06	2.45	1.85
WGHS07	1.35	1.50
WGHS08	1.65	2.25
WGHS09	1.40	1.20
Mean	2.35	2.31
SD	0.70	0.73

A one-way repeated measures ANOVA based on FLA scores pre- and post-test was carried out to investigate if results changed significantly over time. The one-way ANOVA did not reveal a significant decrease in FLA over the course of the study, [$F(1,40) = 0.038$, $MSE = 0.51$, $p = 0.8469$, $p > 0.05$]. It must be noted at this juncture that the sample size is reasonably small and, in that regard, any results of inferential analyses must inevitably be treated with caution – a particular concern if FLA had been found to decrease significantly.

In order to compare apprehension levels pre- and post-task, gain scores were calculated by subtracting participants' pre-test scores from their post-test score. Gain scores ranged from -18 to +19 with a mean gain score of $M -0.48$ and a SD of 9.84. Eight

Fostering peer interactions in online learning environments

participants showed an increase in their FLA, three students maintained their anxiety level and 10 students displayed a reduction in speaking apprehension, as shown in Figure 4.

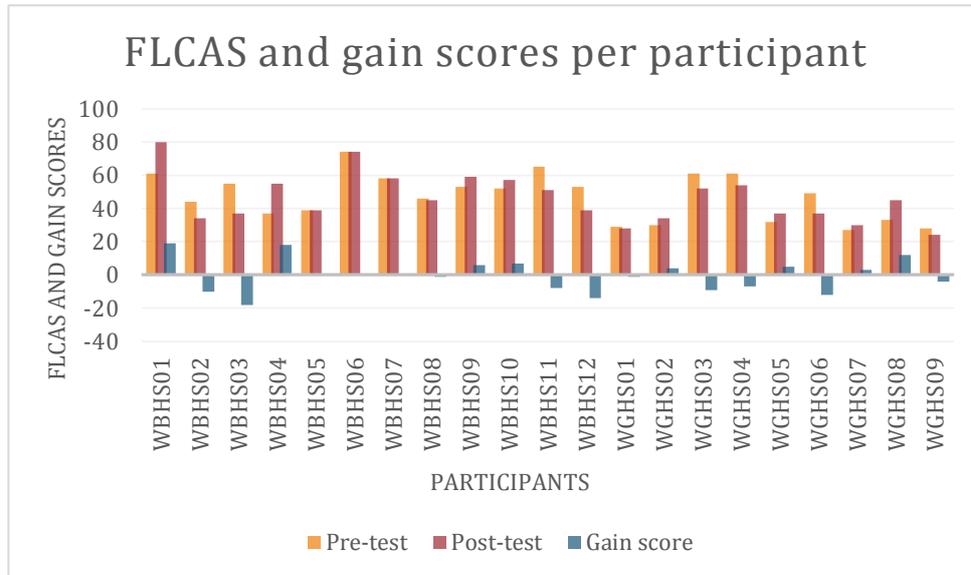


Figure 4. Foreign Language Classroom Anxiety Score (FLCAS) Gain Scores per Participant.

To better classify participants' anxiety levels, FLCAS scores were organised into three categories of low-, medium-, and high-communication apprehension scores. Participants with a total score of 74 and above showed a high level of FLA, scores ranging from 47 to 73 demonstrated a medium level of nervousness and scores of less than 46 were counted as a low level of apprehension.

An analysis of the FLCAS according to the three categories, presented in Table 14, reveals that, prior to the videoconferencing intervention, 10 participants each scored low and medium FLCAS scores, with 1 student showing a high anxiety score. After the intervention, 12 low scores, 7 medium scores, and 2 high FLA scores were recorded.

Table 14

FLCAS Levels Categorised into Low, Medium, and High scores

Anxiety level	Total in pre-test	Percentage	Total post-test	Percentage
Low scores (20-46)	10	47.6%	12	57%
Medium scores (47-73)	10	47.6%	7	33%
High scores (74-100)	1	4.8%	2	10%

Fostering peer interactions in online learning environments

To establish which parts of speaking created FLA, and whether there was a change after the interactions, each item of the FLCAS was given a mean and percentage of agreement, as shown in Table 15. The table, found on the following page, illustrates that the items that caused the most anxiety were generally related to speaking in the L2. In addition to the similarities found, some differences in students' post-intervention ratings were observed. Attitudes towards speaking in class have changed after the intervention. Students generally felt less nervous about oral production and more confident and less self-conscious when speaking in the L2 after the study (Items g, l, and m). Moreover, participants felt more at ease with spontaneous output in their L2 class (Items f, k, and r).

The pre-test FLCAS suggests that 39% of students begin to panic when having to speak in German without preparation, compared to 19% after the study. (Item f). Item k received positive responses from 62% of participants with only 10% disagreeing. Additionally, a high number of students worried less about making mistakes after the intervention (Item b). This increase from 48% to 58% is supported by students' responses to item a, which also indicates an increase in speaking confidence. Furthermore, participants seemed less threatened by negative teacher input after the study (Item t). On the other hand, there was a slight increase in participants' FLA for Item c, which suggests that students get anxious when being called on in class.

Additionally, students increasingly claimed to forget language structures and vocabulary they normally know out of nervousness (Item h). This rise from 5% to 14% might stem from students' NoM problems during the online interactions. Participants also may have felt more intimidated by other students and feared being ridiculed by their peers (Item q).

Fostering peer interactions in online learning environments

Table 15

All FLCAS Items Pre- and Post-Test with Percentages of Agreement

Item	Pre-test in %							Post-test in %						
	N	S	AH	U	A	M	SD	N	S	AH	U	A	M	SD
2(a) I never feel quite sure of myself when I am speaking in my German class.	10	33	43	14	0	2.62	0.86	10	43	29	19	0	2.57	0.93
2(b) I do not worry about making mistakes in German.	0	24	29	43	5	2.71	0.90	0	14	29	48	10	2.38	0.80
2(c) I get anxious when I know that I am going to be called on in German.	24	38	24	10	5	2.33	1.11	19	38	19	19	5	2.52	1.17
2(d) I get nervous when I do not understand what the teacher is saying in German.	5	57	19	19	0	2.52	0.87	10	48	29	14	0	2.48	0.87
2(e) I keep thinking that the other students are better at German than I am.	10	52	29	5	5	2.43	0.93	14	43	24	10	10	2.57	1.16
2(f) I start to panic when I have to speak German without preparation in class.	10	33	19	29	10	2.95	1.20	24	38	19	14	5	2.38	1.16
2(g) I feel self-conscious about speaking German in front of other students.	24	33	19	24	0	2.43	1.12	29	38	19	10	5	2.24	1.14
2(h) In language class, I can get so nervous I forget things I know.	24	57	14	5	0	2.00	0.77	19	52	14	14	0	2.24	0.94
2(i) I am embarrassed to volunteer answers in my German class.	33	38	19	5	5	2.10	1.09	33	33	19	10	5	2.19	1.17
2(j) Even if I am well prepared for German, I feel anxious about it.	29	33	29	5	5	2.24	1.09	14	48	29	5	5	2.38	0.97

Fostering peer interactions in online learning environments

Table 15 continued

Item	Pre-test in %							Post-test in %						
	N	S	AH	U	A	M	SD	N	S	AH	U	A	M	SD
2(k) I feel confident when I speak German in my language class.	5	14	33	43	5	2.71	0.96	5	5	29	38	24	2.29	1.06
2(l) I get nervous during oral exams.	5	33	29	19	14	3.05	1.16	5	19	43	29	5	3.10	0.94
2(m) I can feel my heart beating faster when I am asked to speak in German.	29	38	14	19	0	2.24	1.09	24	43	14	19	0	2.29	1.06
2(n) I feel more tense and nervous in German than in my other classes.	48	24	24	5	0	1.86	0.96	43	43	5	5	5	1.86	1.06
2(o) I get nervous and confused when I am speaking in my German class.	33	43	24	0	0	1.90	0.77	38	33	19	10	0	2.00	1.00
2(p) I feel that I can express myself easily when speaking in German.	0	24	48	14	14	2.81	0.98	10	14	48	19	10	2.95	1.07
2(q) I am afraid that the other students will laugh at me when I speak German.	57	29	14	0	0	1.57	0.75	52	33	10	0	5	1.71	1.01
2(r) I get nervous when the language teacher asks questions which I have not prepared in advance.	24	24	24	19	10	2.67	1.32	19	38	29	10	5	2.43	1.08
2(s) I feel intimidated when speaking German in the classroom.	43	43	10	5	0	1.76	0.83	52	33	5	10	0	1.71	0.96
2(t) I am worried that my teacher will correct every mistake I make when speaking German.	43	29	14	5	10	2.10	1.30	43	38	10	10	0	1.86	0.96

Note. N = Never like me; S = Seldom like me; AH = About half the time like me; U = Usually like me; A = Always like me

4.3.2 Self-ratings after each task

While the FLCAS measured students' anxiety levels before and after the treatment, a self-rating scale was administered immediately after each of the four tasks to account for participants' instant levels of confidence and nervousness. These videoconferencing reflection questionnaires were designed according to MacIntyre & Gardner's anxiety scale (1991), where students rate their levels of nervousness and confidence about speaking on a scale from 1 to 10 with 1 indicating low levels of anxiety and confidence.

An open-ended question followed the scale for participants to outline the reasons for their ratings and to comment on any other aspects of the interaction students deemed important. Participants' self-ratings after each task show an increase in confidence and a decrease in FLA (Figure 5).

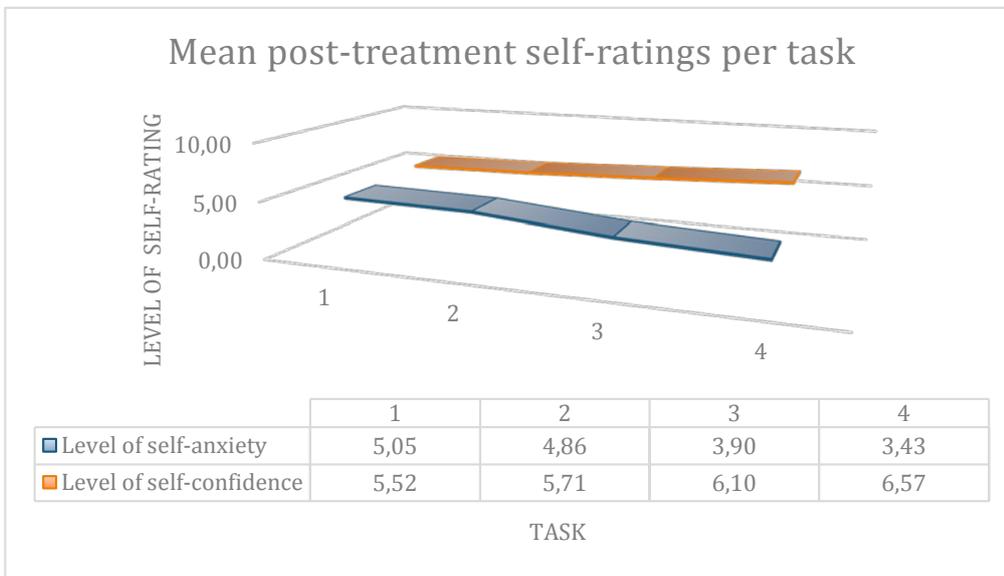


Figure 5. Participants' Anxiety and Confidence Self-Ratings Across All Four Interactions.

The reported level of FLA remained almost constant for the first two tasks but dropped for the two latter interactions. Similarly, there was a slight increase of confidence between Task 1 and 2 but students affirmed a much more noticeable surge of confidence after Task 3 and Task 4.

A repeated measures ANOVA was conducted to investigate possible effects for time on participants' self-ratings of confidence and anxiety. Results demonstrate statistically significant differences pre- and post-intervention.

The repeated measures one-way ANOVA yielded significant differences in regard to overall feelings of students' confidence [$F(3,60) = 3.011$, $MSE = 1.492$, $p = 8.048$, $p < 0.05$].

For participants' anxiety levels, results also show a significant difference between Task 1 and Task 4 [$F(3,60) = 9.425$, $MSE = 1.325$, $p = 13.048$, $p < 0.05$]. As noted above, however, due to the small sample size the results of these inferential analyses must be treated with caution.

Interestingly, these changes are more prominent compared to the general FLCAS. While a slight decrease in FLA levels was observed in the post-test FLCAS, students seemed more inclined to rate their perceived apprehension lower and confidence ratings higher immediately after each task. This is even more evident when classifying the ratings into low and high scores, as shown in Table 16.

Table 16

Participants' Anxiety and Confidence Self-rating Levels Categorised into Low and High Scores for Tasks 1 to 4

Anxiety level: Total after:	Task 1	Task 2	Task 3	Task 4
Low scores (1- 5)	57.1%	57.1%	81.0%	90.5%
High scores (6 - 10)	42.9%	42.9%	19.0%	9.5%
Confidence level: Total after:	Task 1	Task 2	Task 3	Task 4
Low scores (1-5)	52.4%	52.4%	38.1%	28.6%
High scores (6-10)	47.6%	47.6%	61.9%	71.4%

After the intervention, 90.5% of participants displayed low FLA scores and 71.4% scored confidence levels of 6 or above. While anxiety levels were low after Task 4, 28.6% of students still lacked confidence.

4.3.3 Skype anxiety rating scale

After task completion, a questionnaire measuring students' anxiety during the online chats was administered, which contained 15 Likert-style items with a possible range of 15 to 75. In order to investigate changes in communication apprehension, questions about the online interactions included additional items referring to students' perceived changes in nervousness and confidence after the study. These questions investigated how students responded to the communicative environment they worked in and what aspects of it they liked or disliked. The average score for the online interactions was 39.05 ($SD = 9.5$). Out of a possible 5 on the Likert-scale, which indicates a high level of anxiety, the mean FLA score for the online task was 2.6, as outlined in Table 17.

Table 17

Skype Scores per Participant

Student	Skype FLCA score	Mean per student
WBHS01	59	3.93
WBHS02	42	2.80
WBHS03	31	2.07
WBHS04	48	3.20
WBHS05	32	2.13
WBHS06	35	2.33
WBHS07	34	2.27
WBHS08	37	2.47
WBHS09	46	3.07
WBHS10	46	3.07
WBHS11	55	3.67
WBHS12	26	1.73
WGHS01	28	1.87
WGHS02	31	2.07
WGHS03	47	3.13
WGHS04	36	2.40
WGHS05	39	2.60
WGHS06	34	2.27
WGHS07	29	1.93
WGHS08	53	3.53
WGHS09	32	2.13
Mean	39.05	2.60
SD	9.48	0.63

A comparison of FLCAS and the Skype items reveals interesting patterns. For instance, the FLCAS for student WBHS01 is the highest score in the post-test (4.0), yet the Skype scale shows a relatively low score of 2.80. Similarly, WBHS06 has a pre- and post-test FLCAS of 3.70 but a low Skype score of 2.13. On the other hand, some students, such as WGHS05 and WGHS06 show a higher score for their Skype scale. Possibly, students found different elements to be more anxiety inducing than others: Some may have been more nervous when

Fostering peer interactions in online learning environments

speaking in a classroom context while others might have found the interactions via Skype more stressful.

Next, items of the Skype scale are listed with a distribution of student answers, in order to determine which elements of the dyadic online peer interactions students found the most enjoyable and which aspects they disliked (Table 18).

Table 18

Items of the Skype Scale According to Participants' Selection in Percentages

Items in percentages	N	S	AH	U	A	M	SD
3(a) I enjoyed the online-interactions.	10	10	14	48	19	2.43	1.21
3(b) I preferred carrying out the speaking exercises using videoconferencing.	10	24	38	19	10	3.05	1.12
3(c) The online chats did not improve my confidence about speaking German.	33	48	10	10	0	1.95	0.92
3(d) I felt less nervous about speaking German using Skype.	10	24	29	10	29	2.76	1.37
3(e) I was relaxed and comfortable during the interactions.	5	5	43	43	5	2.62	0.86
3(f) I think I speak more German in class now because of the Skype interactions.	5	29	43	19	5	3.10	0.94
3(g) I do not feel that online chat discussions give me a similar learning opportunity as our regular classroom activities.	14	57	19	5	5	2.29	0.96
3(h) I found it easy to express myself using Skype.	10	19	33	33	5	2.95	1.07
3(i) I felt rushed during the interactions.	29	33	19	14	5	2.33	1.20
3(j) I participated more in the online chats than in speaking activities in class.	10	24	24	29	14	2.86	1.24
3(k) I did not learn a lot from working on computers.	29	29	33	10	0	2.24	1.00
3(l) The regular online-discussions made me less nervous about speaking German.	5	24	10	43	19	2.52	1.21
3(m) It did not bother me when I did not understand everything my partner was saying.	5	14	29	29	24	2.48	1.17
3(n) Sometimes I struggled during the interactions.	0	24	43	24	10	3.19	0.93
3(o) I did not speak more German in my later online-sessions compared to my first one.	29	24	38	10	0	2.29	1.01

Note. N = Never like me; S = Seldom like me; AH = About half the time like me; U = Usually like me; A = Always like me

Fostering peer interactions in online learning environments

Participants' responses revealed a growing confidence in speaking in the L2, as is illustrated in Item c. With regard to students' stress levels, 5% strongly agreed to feeling relaxed during the interactions, with 43% usually feeling relaxed. A total of 10% of participants disagreed with this statement. This indicates that the addition of CMC in the classroom can provide a safe environment for learners to practise their oral skills in a non-threatening way.

Despite these positive aspects, the questionnaire revealed some concerns as well. According to 34% of students, there was no carry-on effect, with students reporting that they will not speak more German after the study. However, 53% of participants noted that they spoke more German as the interactions progressed, with 10% disagreeing (Item o).

Even though the majority of students are accustomed to the challenges of articulating themselves in a different language, 10% of students did express a level of FLA, particularly in the areas of not feeling relaxed and comfortable during the exchanges. The same percentage of students stated that the online chats did not improve their confidence about speaking German.

A total of 34% of students admitted to struggling at times during the interactions, which is substantiated by the amount of communication breakdowns during the interactions. This is not to be seen as a lack of interactional skills, however, and rather shows that students learn to negotiate for meaning.

After having established the levels of student anxiety during various points of the intervention, data analysis will now turn to a more precise examination of which part participants associate with nervousness and what measures they can put into place in order to alleviate FLA. These findings are laid alongside interview data and the qualitative responses students gave in the questionnaires.

4.3.4 Reasons for foreign language anxiety

Additional questions on the FLCAS were used to determine how participants view FLA, and particularly reasons for their apprehension and strategies to alleviate the feeling of nervousness and improve L2 discourse. Participants were invited to list all causes that they perceived applied to them. In a second question, they were asked to give the most important cause for communication apprehension.

First, it was established which parts of communicating in an L2 participants associated most with anxiety. Then, answers from the pre-test and post-test questionnaire were compared in order to find out if students' perception of FLA had changed over the course of the study.

Fostering peer interactions in online learning environments

Emerging themes were derived from participants' answers regarding causes of anxiety. Key categories were (1) linguistic problems; (2) cognitive difficulties; and (3) the role of the interlocutor. Participants found linguistic issues to be the most challenging cause of FLA. Specifically, students rated the fear of not knowing enough vocabulary as a high cause of anxiety, both before and after the intervention. Another linguistic issue centred on grammatical problems. These were already noted as important causes of anxiety at the pre-test stage but were rated as the most important case of apprehension in the post-test. Cognitive issues included the fear of making mistakes, not being understood, being overwhelmed by the speaking situation and a general fear of failure (Table 19).

Table 19

All Causes of Foreign Language Anxiety (FLA) Pre-and Post-test

Question	Pre-test	Post-test	Trend
8(a) Freezing when asked to speak	14%	43%	↑
8(b) Being afraid of not being understood	33%	43%	↑
8(c) Being afraid of not understanding the other speaker	57%	48%	↓
8(d) Not being able to remember vocabulary	67%	67%	⇒
8(e) Worrying about my accent	24%	19%	↓
8(f) Struggling with grammar	57%	48%	↓
8(g) Being afraid of making mistakes	43%	29%	↓
8(h) Not making progress quickly enough	14%	19%	↑
8(i) Wanting to translate word for word	19%	24%	↑
8(j) Being afraid of being criticised	14%	24%	↑
8(k) Realising that German does not follow the same patterns as English	24%	19%	↓
8(l) Having had negative experiences with learning a language before	0%	0%	⇒
8(m) Being overwhelmed by having to process information and having to speak at the same time	57%	29%	↓
8(n) Realising that language learning is hard work	33%	24%	↓

In the pre-test, one of the highest causes of FLA was “Being overwhelmed by having to process information and having to speak” (12 answers). In the post-test questionnaire, this is a low cause of anxiety (6 answers) and appears to demonstrate that practice in both listening and speaking can help ease the feeling of being overwhelmed.

Fostering peer interactions in online learning environments

Participants rated being afraid of making mistakes as a one of the least important causes of anxiety in the post-test. In the pre-test, however, this got significant ratings. Conversely, freezing when asked to speak increased from 14% to 43% in the post-test. Overall, the pre-test questionnaire yielded more causes of FLA in comparison to the post-test, which might be explained by students' experiences and increased practice time and the resulting knowledge that some anxieties related to speaking in an L2 might be unfounded.

As shown in Table 20 below, the items that students identified as the most important causes of FLA before the study were struggling with grammar, their accent and not being understood or not understanding their partner.

Table 20

Most Important Cause of FLA Pre-and Post-test

Question	Pre-test	Post-test	Trend
9(a) Freezing when asked to speak	10%	14%	↑
9(b) Being afraid of not being understood	14%	5%	↓
9(c) Being afraid of not understanding the other speaker	14%	5%	↓
9(d) Not being able to remember vocabulary	10%	19%	↑
9(e) Worrying about my accent	14%	5%	↓
9(f) Struggling with grammar	14%	24%	↑
9(g) Being afraid of making mistakes	10%	0%	↓
9(h) Not making progress quickly enough	5%	10%	↑
9(i) Wanting to translate word for word	5%	5%	⇒
9(j) Being afraid of being criticised	0%	5%	↑
9(k) Realising that German does not follow the same patterns as English	5%	5%	⇒
9(l) Having had negative experiences with learning a language before	0%	0%	⇒
9(m) Being overwhelmed by having to process information and having to speak at the same time	0%	5%	↑
9(n) Realising that language learning is hard work	0%	0%	⇒

It is noteworthy that the percentage of students who selected issues related to accents and misunderstandings as the most important reason for anxiety was considerably lower

in the post-test questionnaire. This is particularly obvious for Items b and c with a decrease from 14% to 5% respectively. Interestingly, on the contrary, the factors of grammar and not being able to remember vocabulary almost doubled in the post-test. Thus, there was a slight shift from cognitive issues to linguistic causes of apprehension.

Despite these observations, however, participants still found some cognitive causes of FLA to be important in the post-test questionnaire. Specifically, these were grouped around issues relating to slow process, the fear of being criticised, not being able to respond on the spot and being overcome by having to process input and produce output simultaneously.

4.3.5 Strategies to cope with foreign language anxiety

In addition to naming causes of FLA, participants were invited to list strategies to alleviate the feeling of nervousness and to improve L2 interactions. Their responses helped to establish which strategies they deemed most helpful. Answers from the pre-test and post-test questionnaire were compared in order to find out if students' reported strategy use had changed during the intervention and whether they had developed new strategies.

In terms of strategies students chose, there was a slight difference between the pre- and post-test. Table 21 illustrates that, while students generally selected similar strategies, more students were able to select further strategies than prior to the intervention and seemed more aware of potential strategies than before the study.

Table 21

All Strategies to Combat FLA Pre-and Post-test

Question	Pre-test	Post-test	Trend
11(a) Telling myself that I can do this (complete the speaking task)	24%	33%	↑
11(b) Allowing nervousness but telling myself that this is a normal feeling	33%	48%	↑
11(c) Encouraging myself to take risks, such as guessing vocabulary and grammar structures.	62%	67%	↑
11(d) Allowing myself to make some mistakes	62%	67%	↑
11(e) Imagining that this speaking situation is just an informal chat with friends	29%	38%	↑
11(f) Trying to relax (for example: distracting myself or breathing slowly)	24%	33%	↑
11(g) Talking to others about my nervousness	5%	19%	↑
11(h) Rewarding myself when I do well in a speaking task	14%	14%	↔
11(i) Telling myself that the speaking task will not take long	29%	29%	↔
11(j) Rehearsing/practising a potential task	57%	52%	↓

This increase of reported strategies can be contrasted with the items on causes of anxiety, where fewer reasons were cited after the intervention. Main strategies students thought may help with FLA both prior to and after the study were to allow mistakes, take risks, and allow nervousness.

Concerning the most important strategies to deal with speaking apprehension, there was a switch from “Rehearsing/practising a task” to “Allowing myself to make some mistakes”, as shown in Table 22. In addition, positive reinforcement seemed to help students with the speaking situation. Allowing nervousness and telling themselves that they can complete the task were mainly chosen in the post-test and show that participants were focused on task completion.

Table 22

Most Important Strategy to Combat FLA Pre-and Post-test

Question	Pre-test	Post-test	Trend
12(a) Telling myself that I can do this (complete the speaking task)	0%	5%	↑
12(b) Allowing nervousness but telling myself that this is a normal feeling	5%	10%	↑
12(c) Encouraging myself to take risks, such as guessing vocabulary and grammar structures.	24%	19%	↓
12(d) Allowing myself to make some mistakes	24%	33%	↑
12(e) Imagining that this speaking situation is just an informal chat with friends	10%	0%	↓
12(f) Trying to relax (for example: distracting myself or breathing slowly)	10%	10%	⇒
12(g) Talking to others about my nervousness	0%	0%	⇒
12(h) Rewarding myself when I do well in a speaking task	0%	0%	⇒
12(i) Telling myself that the speaking task will not take long	5%	10%	↑
12(j) Rehearsing/practising a potential task	24%	14%	↓

It is noteworthy that “Allowing myself to make some mistakes” was elected the top strategy in the post-test questionnaire. It seems students became familiar with the idea of spontaneous talk and the mistakes that come with these unrehearsed exchanges. It might be argued that students did not have enough experience with authentic conversation and therefore neglected this strategy prior to the intervention and before gaining more experience in L2 discussions.

These findings appear to demonstrate that while students still acknowledge the need to practise a task, they are more aware of the unique features of spontaneous L2 conversation where mistakes are inevitable. This newfound strategy of allowing and anticipating mistakes to deal with FLA is also reflected in students’ comments in both the interviews and questionnaires, which will be presented below.

4.3.6 Results from Skype reflections 1 to 4: Open-ended questions

Students were invited to complete reflections after each task and were asked to comment on how they thought the chats went and what strategies they used to improve

them. First, the question of strategies will be answered here, followed by general comments on the Skype interactions, which will lead to the presentation of students' perceptions of the intervention after completion of the study in the next section.

In terms of strategies used, participants' answers can be classified into communication, cognitive and interpersonal strategies. The first category resembles CSs, described previously, and includes inventing words, clarifying misunderstandings and falling back into the L1 when the conversation is about to stall.

Cognitive strategies participants discovered were staying positive, imagining to skype with a friend, going over possible questions, and taking the time to think about what to say. Students thought of plenty of strategies classified in the third category, namely to be open and friendly, use humour, talk about other things when stuck on a topic and lastly keep things casual to avoid awkwardness. One participant summarised some of the above strategies in saying that

I find it helps to stay positive and bring some humour into the conversation. I also think it is no problem to sometimes clarify a misunderstanding. I think it adds to the fun of chatting. (WBHS05, reflection 2)

In addition, after Task 1, several students stated they used basic language and stuck to the suggested questions. Interestingly, in later tasks, this was not listed as a strategy any more. In addition, participants found they relied on the task sheet and the optional questions and answers much more at the beginning of the intervention than towards the end, where some students claimed to not refer back to the task sheet at all or less than in previous interactions.

I had a prompting sheet again, but I didn't refer to it as much as I have done in the past. The more interactions that happen the less I need the sheet to help me. (WBHS04, reflection 4)

Related to this, there was a substantial change from Task 3 onwards in that participants reported they could improve their interactions by talking about different subjects and extending themselves both linguistically and socially. This change in attitude is illustrated by the following remark:

I made other comments not regarding to the subject so we can keep the conversation going. It was more fun as we went off the tangent and talked about random subjects. (WGHS06, reflection 3)

Moreover, several students claimed that experiences from other interactions helped their confidence and speaking, since they became accustomed to what to expect from the interactions and how to use the equipment. Overall, the qualitative responses students gave in the questionnaires support a surge in confidence already observed in the self-ratings

Fostering peer interactions in online learning environments

after each task. While unfamiliarity with the video program, connection problems and general nervousness associated with talking to strangers debilitated a number of participants at first, most students noted a markedly more positive attitude after their later conversations. For example, one student said:

This interaction went really well. My partner and I had lots to talk about and we both felt quite confident. It was a casual talk and I wasn't anxious at all. We also chatted for quite a while and it felt like a normal, casual conversation. (WBHS12, reflection 3)

Regarding the question of how participants perceived the interactions, a variety of answers was recorded. Students mostly enjoyed the interactions and found they increased their confidence, particularly in speaking. The statement below provides further evidence for the increase in confidence revealed by the quantitative data:

The first interaction went reasonably well. I was quite nervous at first, but by the time five minutes was over I felt much more at ease, I think because we got to know each other a little better. I thought that five minutes was actually quite a long time to speak in German for, but this was a good thing because since you've never talked to the person before it had allowed time to get to know your speaking partner. Before the interaction, I was nervous because I really didn't know how well it would go, having not done many (if any) similar interactions in German before. However, by the end of the conversation I gained confidence in the fact that I could continue holding the conversation. (WGHS02, reflection 1)

It appeared that, while the student was quite nervous before the talk, the interaction showed her that she could sustain an L2 conversation. This notion of surprise about being able to hold an actual conversation in German was echoed by many participants and seems to demonstrate that students are not experienced in authentic conversations but, in line with the demands of the New Zealand curriculum, should be given increased opportunities to practise and engage in spontaneous interactions.

Student valued the opportunity to hold a full conversation and it seems that regular online-exchanges helped participants to become more accustomed to spontaneous, authentic talk in the L2 and to feel more at ease, as illustrated below:

The interaction on pocket money went really well. We both had a lot to say and I didn't have to ask filler questions to get my partner to talk. We just talked naturally about pocket money. I feel like I am getting better at talking spontaneously and I felt relaxed during the interaction. I really enjoyed this Skype session. (WGHS02, reflection 3)

Despite these positive comments, students voiced some concerns as well. Some participants found the interactions awkward and claimed there were many gaps caused by misunderstandings or not knowing what to say. For example, one student noted that her interlocutor had misunderstood the tense she was speaking in but was unsure of how to address this mistake and, consequently, moved on:

Fostering peer interactions in online learning environments

The interaction didn't go as well as I expected, because I was unsure of how to make comments about future trips. When I talked about the future trips, my interactor mistakenly thought I was referring to the past and made the wrong comment. I was unsure of how to correct it, but let it go. (WGHS06, reflection 4)

The above example is an illustration of an abandoned negotiation routine and shows that, while there were many instances of negotiated discourse, students sometimes were unable to engage with the language. Moreover, students disliked not knowing how to begin and close a conversation appropriately and therefore perceived the salutation and valediction phases to be quite abrupt at times. This also caused nervousness, particularly prior to the task and in closing the interaction.

Other concerns for students were difficulties with the internet connection, the Skype program or background noises. Furthermore, some participants were inexperienced in using the computers and the equipment and found this added to the anxiety of having to speak to strangers in a different language. Overall, however, students adapted to working with Skype, which, consequently, minimised their anxieties.

We talked for quite a long time and it was all fine. I enjoy chatting with people in general and find it quite easy to Skype in German now. My partner and I had fun talking about hobbies and free time activities and it definitely felt like a real, cool conversation. (WBHS05, reflection 2)

Even though students got accustomed to the CMC environment and the occasional technical difficulties over the course of the intervention, connection issues could impede participants' ability to talk freely. This sometimes resulted in students being frustrated:

There were about seven connection problems, which made talking very difficult. At first, I had some things to say, and felt confident, but afterwards I was blank. There was a point where my partner asked me something and I didn't know how to answer, which was bad. I didn't feel anxious, however. (WGHS04, reflection 4)

Overall, there was a consensus that the intervention increased students' confidence in various ways. Participants learnt to maintain conversations despite difficulties, such as sound problems, breakdowns in communication or general awkwardness. They learnt that they could in fact complete the speaking tasks and showed surprise as to the lengths of their interactions. In short, they learnt how to interact spontaneously in unrehearsed situations with people outside of their own class.

4.3.7 Findings from open-ended questions of the post-test questionnaire

Open-ended questions on the post-test FLCAS questionnaire elicited answers regarding students' attitudes and feelings towards the Skype interactions. These questions

were administered after the intervention. Data were grouped according to the following themes: Aspects participants liked and disliked, how the online chats helped their L2 learning and whether they felt different about L2 interactions after the Skype intervention.

4.3.7.1 Aspects of the intervention participants enjoyed

First, participants were asked what aspects of the online interactions they liked.

Students particularly enjoyed talking to new people in a social, unrehearsed way and outlined that having different partners each time made them more at ease with unprepared chats in the L2.

I liked that we were able to converse relatively freely and that we spoke to people outside of class. It made the interactions more real. I liked that we could practise authentic conversations where we didn't always know what our partner was going to say or ask. It was also good to hold a full conversation in German because normally in class we just answer in single words or short sentences. I also enjoyed the fact that I didn't feel so isolated in my German learning. Now I know there are others learning the language, having the same problems with it. It was good to see that I'm not the only one making mistakes. (WBHS03)

While participants valued the change in speaking partners, they stated that the quality of their exchanges was influenced by previous interactions and sensed a stronger social proximity to those students they had already chatted with previously. One student indicated that the interactions helped ease insecurities when speaking in the L2 and valued the opportunity to hold a full, genuine conversation:

I found the interactions really enjoyable. Particularly since we normally don't get to talk too much in German and not with other classes. I liked that I could see how easy it was for me to hold a long conversation. My longer ones were over 10 minutes and I never would have thought I'd be able to hold such a long conversation beforehand. I also enjoyed that we could talk about real things and really get to know the girls. Even though I knew some of them already I still felt we bonded over our language learning. (WBHS12)

Another aspect participants enjoyed was the technology used, including its user-friendliness. Additionally, students enjoyed the variety in tasks and speaking partners, which meant the discourse stayed spontaneous and unrehearsed.

I liked that it was reasonably easy to Skype and talk over Skype, because I didn't necessarily know who I was talking to and this meant I felt more confident about expressing my own opinions during the Skype interaction. I also liked that we talked to a new person every time and discussed a new subject every time because it meant nothing was ever predictable or the same, much like normal conversations. (WGHS07)

Similarly, another participant pointed out that the use of technology in L2 learning can combine different subject areas and prepare students better for future careers, where the use of technology might play an important part.

Fostering peer interactions in online learning environments

I also really enjoyed Skype as such. I think it's a fun way of learning and practising and kind of combines different subject areas, technology, and languages. It's also good practice for the job. We will probably use a lot of technology in business later on and this helps us become familiar with videoconferencing, which we might need in our jobs. (WBHS12)

4.3.7.2 Aspects of the intervention participants disliked

Negative comments were that Skype did not always work and that there were background noises and distractions.

I didn't like that the connections were not always good, some of the time the connection stopped, and I got lost. This made me more nervous, and I was more prone to making more mistakes. (WBHS04)

In addition, students disliked the embarrassment that an interaction in an L2 can carry, particularly related to having to ask for clarification and a lack of conversational language. This was particularly the case for opening and closing conversations in a natural way.

I disliked that the connection was bad sometimes and that we couldn't hear each other. It was embarrassing having to repeat questions or ask them to repeat things. Also, the beginnings and endings were quite awkward because I never knew what to say. That got better towards the end though, with more practice. (WBHS03)

Despite an initial awkwardness, the interactions seem to have given participants an impetus to improve in the area of natural language and to focus on language to conclude a conversation.

4.3.7.3 Ways the intervention aided participants' foreign language skills

Overall, the majority of participants stated that the exchanges helped their German because they were able to practise the L2 more than within class, while having an actual, realistic conversation. Students particularly liked to be able to video-call learners of German from another school and found that this showed them a wider range of L2 accents and different ways of expressing opinions in the L2. Furthermore, participants indicated that they were able to improve their interactive competences and discourse skills, as well as their confidence in speaking German.

I think it has helped me feel more confident about having normal conversations that aren't pre-planned or practiced beforehand. I feel like I can express my own opinions now more easily than before and I find it easier to talk about everyday topics. (WGHS07)

Students also felt they had improved their ability to speak in unfamiliar, natural and authentic situations.

Fostering peer interactions in online learning environments

I believe I can now speak more open and freely in German and I know how to open and end a conversation. I used to find it hard to talk naturally and to know what to say after the Task. Now I feel more relaxed and comfortable with casual conversations in German. (WBHS12)

On top of the benefits in terms of authenticity and phatic expressions, students also mentioned an increase in confidence, and the emergence of skills in troubleshooting in case of communication breakdowns. Moreover, students came to realise that mistakes are a normal part of holding everyday, spontaneous interactions.

Yes, they helped me become more confident. I am less afraid of making mistakes now and I know I can hold a decent, basic conversation in German. I also know how to ask for clarification in German. The Skype calls also helped me make learning more real. Normally we just learn within class and that's just not how it works in the real world. (WBHS03)

This viewpoint was supported by the strategies participants selected to improve interactions. Predominantly, students noted that allowing themselves to make mistakes helped them not only to ease feelings of apprehension but also gave them confidence to participate more in the interactions.

4.3.7.4 Participants' feelings about interacting over the course of the intervention

A common view amongst participants was that the regular Skype interactions helped increase confidence. Students had to process information quickly and think on the spot, which promoted confidence in speaking:

I definitely feel more confident and know more conversational language. The Skype calls were challenging to start with but helped me realise how much I can say in German. I won't worry too much about future interactions and I think my next internal assessment in interacting will improve too because I don't give up as easily and fall back into English. (WBHS03)

While some students noted no change, most participants claimed they feel more prepared for and less anxious about speaking tasks, know more strategies to cope with nervousness and look forward to speaking tasks. In the words of one participant, "speaking to people I didn't know was a new and daunting experience, so I think the Skype interactions made me feel better about facing the unknown" (WGHS04).

Participants were asked if they had found additional causes of FLA in the process of conducting the online tasks. Answers included:

- Being laughed at (high cause of anxiety)
- Wanting to use more natural complex language structures but not being able to do so (low cause of anxiety)
- Scared of being judged by peers (low cause of anxiety)
- Not being understood properly or not being heard correctly.

Fostering peer interactions in online learning environments

New strategies participants discovered during the course of the study were:

- Having friends around
- Practising a lot to improve self-confidence
- Practising not just the task and what to ask other students but also possible questions from your partner and how you would answer them
- Working on your spontaneity.

When asked if they used more strategies to help with speaking anxieties after the intervention compared to before, most students reported they used the same strategies as previously. Some participants, however, found that asking more and more questions, even if not directly related to the task, helped to keep the conversation going.

The majority of participants were of the opinion that it helped them if they tried to relax before the conversations and claimed that pushing themselves to take risks also helped their speaking:

Yes, I take more risks and I relax more. I try not to stress about interaction tasks and focus on being relaxed. I also think I use these strategies more consciously now, after having completed the questionnaire at the beginning where anxiety strategies were featured. (WBHS12)

The comment above also illustrates that there was a focus on strategies to improve interactions that emerged from the questionnaires. They helped students to actively think about how they might improve their interactions and use speaking strategies more effectively. The decision to take more risks, particularly related to more complex grammar structures, was echoed by many students and shows that students gained more confidence and realised they were allowed to make mistakes. Another strategy was to agree with the speaking partner, in order to create social proximity, which may improve the quality and flow of a conversation.

Also, agreeing with the others even if in real life you don't agree helps because it places you on common ground with the other person and it makes it easier to develop the conversation. (WGHS05)

Interestingly, one student referred directly to the videoconferencing environment and recommended a strategy to avoid comprehension problems related to sound glitches. Her suggestion was to speak very clearly and slowly and to practise parts of the task beforehand.

4.3.8 Findings from the interviews

The final set of data stems from semi-structured interviews with 12 participants after completion of the interactions via Skype. These students were selected via purposive quota

sampling, which focused on characteristics participants displayed in the FLCAS to facilitate comparisons between participants.

While students were invited to comment on any aspect of the intervention, analysis of these interviews follows the general outline of the findings chapter thus far, namely interviewees views on: Interactional strategies, SP, FLA and associated strategies to lower speaking apprehension, as well as the CMC environment.

4.3.8.1 Interactional features

Students were asked if they had experienced any problems in communication and how they dealt with any communication breakdowns. A common view of participants was that the online discussions were less structured than classroom exchanges and felt more spontaneous. One student established that the interactions made him improve his conversational language and enabled him to think better on the spot. He found, however, that he did not improve his vocabulary and grammar skills. In contrast, other students claimed that communication breakdowns and resulting meaning negotiations helped to reinforce new vocabulary. The repetition of new vocabulary during the interactions aided students in acquiring and consolidating new lexical items.

Generally, interviewees expressed that they could negotiate issues in communication better with practice. For example, one student learnt that, when she did not understand a word, she was still able to pick out the meaning of the whole phrase.

Other students were so focused on not making mistakes, and therefore causing communication breakdowns, that they stuck to simple structures rather than extending themselves linguistically. One student argued, "I found I was trying not to make mistakes but in doing so I didn't really challenge myself to try different structures and stuff" (WGHS04).

Another student suggested that instances of negotiation often occurred due to poor call quality. Miscommunication in these instances could only be resolved by asking to repeat questions, sometimes several times.

In terms of CSs and how students oriented themselves to the interactions, numerous comments illustrated that practice increased students' ability to maintain the flow of the conversations and avoid communication breakdowns. Not only did this create an improvement in students' verbal production but also a more spontaneous reaction to the output of their speaking partners. Hand in hand with this went a reported improvement in listening skills.

Fostering peer interactions in online learning environments

It's probably helped with my speaking and being able to do listening tasks better because I'm now more used to hearing German being spoken and also speaking it myself. (WBHS04)

Largely, participants found the conversations quite awkward to begin with and lacked the ability to open and close a conversation in the L2 appropriately. The following comment illustrates the problem: "I hated the endings. Because you didn't know what to say, so it was quite awkward" (WBHS11). Despite a lack of vocabulary, students employed CSs to enhance the interactions, for instance by falling back into the L1 or by inventing words:

I made more comments that are relevant to the interactor's life – something I probably would have said in English. When I didn't know a word I made it up, but made sure that they knew what I was saying. (WBHS11)

The fact that the student focused on his speaking partner and made sure he was being understood shows a social orientation of participants and the will to sustain and continue a conversation.

4.3.8.2 Social presence

The interviews confirm that students valued the intervention as a positive addition to their speaking practice. The interviewees thought the interactions were fun. They particularly enjoyed learning about other people and what they liked and disliked. Participants showed a real interest in their partners and liked talking to other students of German to make their learning more real, particularly since they normally do not have many opportunities to speak German outside of class.

Participants felt a stronger sense of SP from those they had interacted with more recently. On the other hand, talking about this issue, one interviewee commented:

I liked that there were many different partners because, like having just one you might be more familiar with them and in real life you need to practise with real people so I thought that it was good to not know the other person completely but it was good to have that variation. (WGHS02)

This was echoed by another student who also thought that interacting with strangers was beneficial in terms of authenticity:

I think it was good to do more interaction outside of our small class where we know most people and are used to talking to them and the kind of way of doing things. (WBHS08)

Students were asked to indicate whether they viewed the interactions as social chats. This question elicited a range of responses. While some of the interviewed students saw the exchanges as purely task-based activities and stuck to the suggested questions, most

participants felt there was a mix between socially based interactions and task oriented questions. As one participant put it:

I'd say the interactions were a bit of both. They were kind of social but also kind of the tasks as well. We had something that we had to be talking about. And it was open to our opinion. So, we could convey what we liked or wanted to do even though it was restricted by the tasks. (WBHS04)

Overall, it appeared that the students appreciated being able to speak with other language learners and claimed it helped ease feelings of isolation, while fostering social and casual chats in the L2. When asked whether they were able to form opinions on their interlocutors, based on the interactions, students indicated that, while it was possible to get an impression of their partners, it was difficult nonetheless, due to their language deficiencies. For example, one student commented: "I could [form opinions on the speaking partners] but I don't want to because it wouldn't be fair. Because there's probably a whole bunch of other things they wanted to say but couldn't" (WBHS04). In a similar vein, other students remarked that the change of speaking partners prevented them from forming real opinions on them.

When probed to compare the Skype chats with their assessment interaction tasks, there was a consensus that, even though the tasks were similar, the Skype chats were more authentic and less rehearsed. One participant commented that:

You're actually talking. Like it's genuine. Because you're actually talking to the person and finding out. You actually learn a lot about them. Rather than when it's something you have to do when you sort of know what you might say. (WGHS04)

4.3.8.3 Foreign language anxiety (causes and strategies)

Interviewees offered a number of comments related to causes of FLA. Three main themes emerged. First, student felt anxious because of their inexperience in starting and maintaining a conversation in the L2. Second, they experienced nervousness related to the CMC environment, and third, FLA was caused by the novelty of interactions in German with strangers.

In addition, participants felt anxious because they had a fear of not being understood by their speaking partners. While students did not list many specific strategies to alleviate anxiety, there was an agreement that practice time improved their confidence and minimised communication apprehension. As one participant put it:

I got better over time. I wasn't quite as nervous as the interactions went on. And I wasn't quite as worried about making mistakes. Because everyone made mistakes during the interactions. I made mistakes and so did she. (WBHS04)

Fostering peer interactions in online learning environments

This comment suggests that, in addition to practice time, the knowledge that no participant was able to use correct L2 structures at all times helped to increase students' interactional abilities by making them feel more assured in their abilities.

This view was echoed by several interviewees who claimed that their main strategy was to allow themselves to make mistakes and to tolerate a certain level of stress. Furthermore, moving on from mistakes and choosing a different question was deemed an effective strategy.

Other responses to the question pertaining to the strategies participants used included practising at home after an interaction to avoid making the same mistakes again, guessing answers to keep the flow of the conversation going, and focusing on the fact that the conversation will only last about five minutes. One participant offered an interesting viewpoint on strategies that can improve FLA and the interactions in general, claiming that he needs to take more risks and get out of his comfort zone:

I think there was the holiday task for example. I just did the set questions and that was about all I did. So I think in a way, I need to just try to branch out, use a bit more fluent and conversational German, like that would help my speaking in particular. (WBHS08)

The above comment shows an increased awareness towards a more flexible attitude, in which one is prepared to take risks. Overall, the findings of the interviews corroborate those from the questionnaires in that students' confidence levels increased during the course of the intervention while their FLA levels decreased.

4.3.8.4 Videoconferencing environment

Each of the students interviewed deemed the online discourse helpful in terms of improvements in spontaneous talk, although some issues were identified as well. The interviews revealed a general problem with internet reliability, especially when numerous students used Skype at once.

The main issues were cut-up exchanges, connection time outs, and issues with the video mode not working. Additionally, students had difficulties hearing their speaking partner at times and claimed there was a lot of background noise, due to the computer lab environment. On several occasions students had to turn off the video mode, as it was causing a lag in the conversation. Another issue participants identified was that the lag in the audio and video often caused both interactants to ask questions at the same time, which resulted in confusion. This was often the reason for ensuing NoM. Despite these issues, students found it interesting to use videoconferencing for the interactions and enjoyed the ability to see themselves and their partner on screen.

Fostering peer interactions in online learning environments

Overall, participants reported that the CMC discussions improved their confidence and motivation in speaking in German and showed them that it was acceptable to make mistakes, while still getting their message across. One student, commenting on possible video conversations in the future, summarised the benefits of dyadic online interactions:

I think it would be beneficial because then you don't feel quite so isolated in your own class because when you're at school just learning a language you're stuck within your own class and no one else kind of gets what you're talking about on, uh, with the troubles of learning a language. And if you're speaking with someone from another school, you also get to know new people and talk to them about it. (WBHS04)

When asked whether they preferred interactions carried out via CMC to their classroom interactions, and in particular their *interact* assessments, students offered a variety of responses. Some students claimed it was easier to get a fluent conversation F2F, as there are no connection problems and they would be able to understand each other easier, without having to ask their interlocutors to repeat themselves. This, in turn, would minimise nervousness. They also observed that F2F interactions would be easier in terms of SP and may give them more opportunities to get to know new L2 learners. Students also noted that they would have preferred F2F interactions that were realistic and stated that it would be difficult to find other German classes in proximity to their own class. In addition, it would be a challenge to find suitable meeting times.

In sum, it appeared that most participants preferred the Skype interactions, since they got to know people and find out about them in a realistic way. Additionally, interviewees pointed out that they acted more in internally assessed speaking tasks and found them to be contrived, whereas the Skype chats felt more real and authentic but also more demanding in terms of thinking on the spot and speaking to strangers.

In relation to task-types, participants overwhelmingly preferred open-ended tasks to closed tasks. They found the online-tasks to be freer and less scripted than their classroom tasks and enjoyed the fact that that you can “expand and have more of a conversation than a set dialogue kind of thing” (WBHS08).

They also viewed the tasks differently in terms of their aims and argued that the *interact* assessment and tasks in class are more geared towards accuracy, as opposed to the online interactions which appeared to have an emphasis on free interaction, as illustrated in the following comment: “You focused mainly on getting the grammar and tenses right with this [the *interact* assessment] and with the Skype calls it was just spontaneous interaction.” (WBHS04). Nonetheless, students recognised the fact that, despite a difference in authenticity, the Skype interactions prepared them better for their *interact* assessments, particularly in the area of spontaneous output and interactional skills.

4.3.9 Holistic view of participant experiences

The last section of this chapter uses all data sets of three students to connect findings between the different research questions and to give an in-depth description of their experiences. By means of purposive quota sampling three interviewees with high, medium, and low FLA scores were chosen to have their FLCAS, questionnaire and interview responses, as well as their video transcripts analysed holistically.

Table 23 presents a comparison of anxiety and confidence levels of the chosen participants over the course of the intervention. Answers to all questionnaires administered are taken into account.

Table 23

Selected Participants' Anxiety and Confidence Levels Across all Questionnaires

Student	FLCAS pre	FLCAS post	Skype scale	Anxiety = A out of 10 max. Confidence = C out of 10 max.							
				Task 1		Task 2		Task 3		Task 4	
				A	C	A	C	A	C	A	C
WBHS01	3.05	4.00	3.93	8	4	10	6	10	3	9	4
WBHS11	3.25	2.55	3.67	6	5	3	5	4	5	5	4
WGHS02	1.5	1.7	2.07	4	7	2	5	1	8	1	8

First, a focus will be placed on the participant with the highest FLCAS post-test. Participant WBHS01 shows an increase in FLA towards the end of the study, with a relatively high Skype score. In terms of self-ratings, there were no substantial changes. Anxiety levels remained high after all four chats, while confidence levels stayed low. It seems that this student did not enjoy the online chats and found them challenging. This is supported by the videoconferencing transcripts, which reveal technical problems in two of the four interactions (Task 3 and 4). The last interaction in particular was interrupted three times due to technical problems and a new call had to be made each time with long waiting times in between.

The interview with this participant lends support to this issue related to technical problems. WBHS01 claimed that the technical problems he encountered prevented him from feeling more relaxed, even though he started out feeling relatively calm. In addition, the factor of not knowing the interactant and not being able to gauge his interactant's competencies in the L2 made him more nervous. WBHS01 stated explicitly that "you have

no idea what they know and what they don't know because you have no idea who they were. Just like did they understand you, could they hear you well?"

Nonetheless, the interview also demonstrated positive aspects. Aside from the connection problem, the student felt that the interactions went well overall and he valued the opportunity for increased output in German. Furthermore, the student noted he got more comfortable and confident towards the later interactions. Answers to the open-ended questions support this, even though this was not backed up by his self-ratings. In the open-ended questions, WBHS01 stated he has improved his ability to answer spontaneously and to have enjoyed the opportunity to meet new people. Furthermore, answers of the Skype scale also confirm these positive attitudes. WBHS01 strongly agreed that he enjoyed and preferred the online chats to regular classroom discussions, and strongly agreed to being less nervous using Skype, compared to F2F discourse.

Prior to the intervention, the main cause of nervousness for this participant was the "Fear of making mistakes" and the most important strategy was "Allowing myself to make some mistakes", with another selected strategy being "Trying to relax". This student nominated a number of reasons for FLA both before and after the intervention. While some causes included issues with grammar, the accent, and vocabulary, a fear of negative evaluation was the dominant cause of anxiety. WBHS01 was afraid of not being understood and/or being criticised.

His most important cause for FLA after the study was "Being afraid of being criticised" and he added "Being afraid of being laughed at" as a new cause of anxiety, which he identified as a high cause of anxiety. Hence, it seems that, just as prior to the study, a negative evaluation by his peers instilled most nervousness.

In terms of strategies, WBHS01 found no approaches to be helpful, apart from having the help sheet at hand and rehearsing at task. The most important strategy according to WBHS01 was "Telling myself that the task will not last long". Overall, this student did not use many strategies to begin with and was unable to expand on this over the course of the study.

The chat logs of WBHS01 are characterised by a relatively high ratio of negotiated turns to overall turns (61/105) and he initiated 15 NoM routines overall. This higher-than-average tendency towards NoM might be an indicator of the difficulties this participant encountered with the technology used. It could also signal comprehension problems and nervousness, a factor indicated in the interview. It is also noteworthy that, out of the 15 initiated negotiations, most were solved immediately after a response in the form of a repetition, which also indicates that comprehension or problems with sound were responsible for miscommunication.

Fostering peer interactions in online learning environments

In general, in line with the student's claim not to have used many strategies, WBHS01 used few CSs and was overall task-focused. In Task 3, he employed humour to gloss over his partner's failure to understand that he wanted to buy a computer game as a present for his friend, by stating that a whole computer would be too expensive. Moreover, he used fillers to gain time to think.

Turning to a student with a moderate FLA level, Participant WBHS11 was able to lower his FLCAS from 3.25 to 2.55. His Skype score was 3.67. His anxiety and confidence levels remained relatively stable. Both stayed at a moderate level, with his FLA levels being slightly higher in the first interaction. There was no apparent trend for an increase or decrease of his confidence or anxiety levels over time. Despite this, the participant maintained that he got slightly more confident as the interactions progressed and the open-ended questions revealed that he enjoyed communicating with students from another school and thought the chats helped him get better at improvising in the L2. Negatives were that he could not always understand his speaking partners.

The interview revealed that he felt nervous before every talk and that he disliked the awkwardness of the chat situation. In particular, WBHS11 disliked the ways in which each interaction was concluded and stressed that he never knew what to say in order to end an interaction in a natural manner. His high rating of the Skype scale item of "Sometimes I struggled during the interactions" lends support to this. However, he also rated the statement "I found it easy to express myself using Skype" with "Always like me". The absence of long pauses or abandoned NoM routines supports this. Rather, the interactions of WBHS11 were characterised by a fast pace and few negotiations overall.

Furthermore, there was a direct link between his feelings of anxiety and confidence and the tasks, albeit not being mirrored in his reflections, as he perceived Task 1 and 2 to be easiest in terms of finding things to talk about. The interviewee stated that introducing oneself was easy, since it only involved chatting about himself, which was a realistic experience for him. Another factor was that the student professed to be nervous at the beginning but got more comfortable as each interaction progressed. He also asserted that the filler words introduced prior to the study helped him in sustaining a more casual conversation.

"Being afraid of not being understood" was the highest cause of FLA for this student both before and after the intervention. Interestingly, prior to the online chats, he selected "Practising/rehearsing a potential task" as the most important strategy, while he nominated "Allowing myself to make some mistakes" as the most important strategy after the intervention. This was also echoed in the interview, where WBHS11 outlined to have used self-

corrections at times, as a back-up plan for inevitable mistakes. Moreover, his transcripts also reveal this focus on CSs, and particularly self-corrections. For instance, during Task 2, he corrected an incorrect use of a past participle and his interlocutor used a recast for a lexical issue, as illustrated in Excerpt 23.

Excerpt 23: Direct CS: Own-performance problem-related: Self-repair and Other-performance problem-related: Other-repair (Recast)

Participant	Task 2	English translation	Code
Student A:	Ich habe angeln gegeben.	I went fishing.	
Student B:	Angeln?	Fishing?	Recast
Student A:	Ja, gegangen.	Yes, went.	Self-correction

Excerpt 23 shows a focus on form by both interactants. In addition, the transcripts of this student were characterised by a lot of humour and a fast pace. WBHS11 had 110 turns overall, 30 of which were negotiated turns, which seems relatively low in terms of discourse management and compared to most other participants.

He initiated seven NoM routines, which could all be solved after a repetition or reformulation. WBHS11 declared the interactions to be social with some humour but asserted that, while there were social elements, the chats were mainly task-driven due to the recommended questions.

In contrast to the previous two participants, student WGHS02's FLA remained relatively low throughout the study and her Skype score of 2.07 was also below average. Self-ratings show a clear reduction of nervousness over time and an increase in confidence, particularly for the last two interactions. Her answer in the post-test questionnaire demonstrates this increased confidence but also shows her enjoyment:

At the beginning I felt nervous due to a lot of things, but through the more interactions completed I believed in myself more and I was more confident about doing the interactions. It was fun and by the end I did not feel nervous at all, even if we did pause during the conversation. (WGHS02)

In a similar vein, her interview revealed a conscientious effort to improve interactional skills. Additionally, she appreciated having the time to get to know other L2 learners.

The pre-test questionnaire uncovered that her biggest concern was the fear of not being understood and she found an additional cause of FLA: The slow pace of the L2 class as a whole and the frustration that comes with wanting to learn quicker than the majority of the class. She selected taking risks as the most important strategy. After the intervention, the biggest concern relating to FLA was struggling with grammar and, according to WGHS02, the most important strategy was "Allowing myself to make some mistakes". She

furthermore marked “Encouraging myself to take risks, such as guessing vocabulary and grammar structures” as a useful strategy. This focus on allowing mistakes is echoed in the open-ended question where the student stated:

I just practise and this makes me feel MUCH better about the interactions because I have nothing to worry about if I know what I'm saying in German and if I am good at it. The more I converse, the less nervous I become also because I know that any mistakes that I make will help me to become a better speaker. (WGHS02)

It is evident that she realised that mistakes are an inevitable part of L2 learning but that preparation also eases potential nervousness. This conscientious approach to SLA is echoed in the interview where she admitted to having felt worried and embarrassed when making mistakes or not knowing what to say but felt more relaxed as the conversations progressed.

The issues pertaining to grammar were directly related to her interactions in the sense that WGHS02 sometimes was confused about which tense the communication was meant to be in. Therefore, the chats directed her focus on grammar and made her more aware of her shortcomings in the area.

WGHS02 viewed the interactions as social chats and liked the fact that she could get to know people, learn about them in an L2 and also get her personality across in an enjoyable environment. This, in turn, helped her to feel more confident and have a sense of success. This is reinforced by a high occurrence of affective responses and in particular the expression of emotions or empathy to establish a connection with her interlocutors. In a similar vein, on the Skype scale, she selected “Always like me” for the statement “I participated more in the online chats than in speaking activities in class” and she claimed to have spoken more German in later exchanges compared to the first task.

The video transcripts show that WGHS02 had 24 negotiated turns, with 119 turns overall. She instigated six NoM routines. The low occurrence of negotiated turns could be explained by the student’s active effort to practise and rehearse, her positive attitude, and her attempt to relax during the interactions. Her efforts to improve interactions can also be observed in the transcripts, which contain numerous self-corrections, as well as recasts.

Overall, the experiences of the three selected participants show that interactions in the L2 are a complex construct. While the sole emphasis on FLCAS and Skype scales gives the impression of a high anxiety and low confidence and enjoyment rate, a closer look at students’ views on the interactions gives insights into a much more complex picture. It becomes evident that, even though students experienced fear, embarrassment, and frustration, they also acknowledged the need to be exposed to such situations in order to

improve their interactional and linguistic output, as well as the processing of input in authentic situations. It also seems that a positive attitude and an active participation in an attempt to create a social environment are not only beneficial for learner motivation and willingness to speak more, but also help ease feelings of communication apprehension.

In terms of strategies to combat FLA, the selected students used different techniques. WBHS01 feared negative evaluation but could not incorporate many strategies into his communications. WBHS11 was afraid of not being understood and tried to combat this by allowing mistakes and practising. Beyond this, he was unable to think of more strategies.

In contrast, WGHS02 struggled with grammar and found that allowing mistakes and taking risks helped her improve the interactions from an interactional and social point of view. She was also able to give additional suggestions for strategies, both in the interview and in the qualitative responses of the questionnaires, which points to a connection between conscious language learning and learner enjoyment.

4.4 Summary of findings for Research Question 2

With increased practice over time, participants regarded the intervention as a social activity and enjoyed the opportunity to get to know other L2 learners of German while holding sustained and authentic conversations. There was no significant decrease in FLCAS scores. However, a clearer reduction of anxiety and an increase in confidence was discovered in the results gained through the self-rating scales and interviews.

Regarding FLA, debilitating factors for students were mainly centred on issues related to grammar. In contrast, other issues related to interpersonal skills, such as the fear of not being understood, became less significant over the course of the intervention. To combat FLA and to improve their interactions, students increasingly focused on strategies, such as to have more realistic expectations of L2 interactions and to use positive self-talk.

Overall, students' feelings about the Skype chats were related to their interactants, the technology, and their own success in the interactions, as demonstrated in the summary of findings below.

Fostering peer interactions in online learning environments

Research Question 2: How do learners perceive their experience of these interactions, especially with regard to their anxiety and ability to interact in the L2?

- FLCAS scores decreased marginally from 2.35 (SD= 0.697) to 2.31 (SD= 0.730) post-test
- Even though FLCAS scores did not decrease significantly during the course of the study, self-rating scales, the Skype scales and interviews revealed a significant reduction in students' FLA levels and an increase in confidence
- Students valued the intervention as a positive addition to their L2 learning in terms of enhancing their interactional abilities through the experience of constructive, real-life interactions
- The intervention helped students focus on reasons for FLA and gave them the opportunity to develop strategies to cope with anxiety.

i) What aspects of the interactions do learners associate with anxiety?

- Items that participants identified as the most important cause of anxiety prior to the study were struggling with grammar, their accent and not being understood or understanding their partner
- After the online chats, the most important reasons for communication apprehension were struggling with grammar and not being able to remember vocabulary.

ii) What strategies do language learners use to cope with anxiety?

- Students claimed that using positive self-talk and allowing themselves to make mistakes were the most helpful strategies to overcome FLA
- They also found that taking more risks and having more realistic expectations of themselves and their interlocutors provided them with more confidence
- Participants indicated that they would benefit from the teaching of implicit skills, such as strategies to deal with nervousness and social skills, such as empathy, to improve L2 interactions, as opposed to the sole instruction of linguistic skills.

The next chapter will summarise, interpret and discuss the findings presented in this chapter and link these findings to previous research relevant to the current study. Furthermore, it will present conclusions that can be drawn from this research to provide a comprehensive view of student-centred L2 interactions via CMC, the phenomenon under investigation.

5 DISCUSSION

The aim of the current research was to examine interactions between near-beginner students of German as a L2 during four one-to-one Skype sessions to identify interactional features and other communication devices that the participants employed. Moreover, the study sought to examine how students oriented themselves towards each other socially.

Tying in with the ability to communicate effectively, this study investigated the influence of CMC on anxiety related to verbal communication in a L2 and gave participants an opportunity to reflect on their own potential FLA issues and strategies to overcome these speaking apprehensions.

After having presented the findings in the previous chapter, this chapter aims to discuss and categorise the findings, linking them back to the study's research questions, the literature review, and the underlying theoretical framework. First, themes and patterns related to interactional features will be presented in order to compare and contrast findings to those of previous research. Then, how individual discourse management strategies are employed by students to maintain and improve communication will be discussed. Finally, a summary of strategies will be given to conclude the discussion of findings related to the first research question.

Similarly, a summary of themes relating to the second research question will be presented first, followed by a discussion of the results regarding FLA. Then, it will be outlined how FLA and strategies to alleviate anxiety are related to participants' perceived ability to interact independently. Following this, students' perception of discourse management strategies will be put into context, as well as their view on the online chat environment. Finally, integrated findings of Research Question 2 will conclude this chapter.

5.1 Summary of themes for Research Question 1

This research explored how verbal CMC interactions influence the way in which L2 learners collaborate and solve their communicative problems. Findings have revealed the various discourse management tools participants used to maintain discourse. These will be summarised and put into context, comparing and contrasting them to previous findings.

Overall, more instances of NoM were recorded in this research compared to previous studies, which can partly be attributed to technical issues. Nonetheless, there were additional factors that caused discourse management issues, such as low listening skills and time-gaining strategies due to an inability to cope with the cognitive processes of having to listen to input, process it, and produce output in a short timeframe. Even though students did not receive much training on how to cope with communication breakdowns, they were generally able to solve problems themselves and could do so in the L2.

Indicators were mostly global and the most common way to signal non-understanding was through clarification checks. These were predominantly carried out in the L2, using conversational language to ask for clarification or repetition. Thus, responses were frequently a repetition of the trigger. Most cases of NoM could be pushed back up to a normal flow of conversation with a task-appropriate response, albeit often a short answer.

In terms of communication strategies, participants used fillers regularly to gain time to think. Self-corrections were also employed often and show that students are able to notice their own errors and monitor their own linguistic production. It is evident that students utilised various communication strategies in order to maintain their discourse.

Apart from interactive resources, the social orientation of interlocutors towards each other also began to play an important role. Specifically, students used affective triggers of SP, such as humour and the expression of emotions to establish proximity. Participants valued the opportunity to develop their interpersonal skills and create social connections with, and proximity to, other L2 learners.

5.1.1 Negotiation of meaning

Outcomes of this study indicate that beginner learners of German tend to draw on negotiation strategies in order to maintain L2 discourse. In line with previous research on NoM between NNSs in videoconferencing, the environment offers ample opportunities for negotiated episodes and seems ideal for communicative language learning (Y. Wang & Tian, 2013; Y. Wang, 2006; Yamada & Akahori, 2009; Y. Zhao & Angelova, 2010).

These findings support previous studies on output, which claim that L2 learners need to be presented with opportunities for pushed output in order to make progress in an L2 (Gass & Selinker, 2008; Swain, 1995). Through negotiation, participants were able to modify their output, which, in turn, elicited further input or feedback and served to help them practise structures already learnt in class.

The majority of communication breakdowns could be resolved by learners and aided the development of communication skills. Previous research confirms students' ability to co-construct meaning during communication breakdowns (Y. Wang, 2006; Yanguas, 2010). Low listening skills and nervousness tended to trigger communication breakdowns frequently, a factor already noted by Wang (2006). The proportion of negotiations to turns ranges from 25% to 33%, which is similar to previous findings (Smith, 2003a; Yanguas, 2010). However, since most tasks used in previous studies were seeded with unknown lexical items, a high number of NoM routines was therefore expected. In contrast, the current study employed open tasks, using vocabulary that had previously been taught in class. Therefore, it can be said that the rate of negotiations was higher compared to that of previous studies. Contrasting results from Grümpel et al. (2014), who found that only NNS interactions between high proficiency learners produced NoM routines, findings of the current study reveal that near-beginner L2 learners were indeed capable of negotiating discourse.

Learners used a variety of interactional strategies to facilitate comprehension of input and output and were able to resolve instances of non-understanding in the L2 without having to resort to English. In line with Wang's findings (2006), almost all negotiation routines reached the reaction-to-response stage. However, in contrast to the claim of Wang, participants in the current study possessed enough interactional skills to clarify meaning in the L2, mostly through repetitions and elaborations, and were generally not hindered by a lack of speaking skills.

Findings show that the most salient triggers were comprehension-related. This differs from previous findings where the majority of triggers were of lexical nature (Blake, 2000; Smith, 2003a; Yanguas, 2010). The current study revealed that the inclusion of a comprehension trigger was necessary to account for a lack of listening skills, pronunciation issues, or sound problems caused by the videoconferencing program. As previously stated by Zhao and Angelova (2010), mispronunciation often triggered non-understanding or misunderstanding. Since participants were not familiar with each other and are normally more accustomed to speaking with their teacher, it seems that phrases taught by another teacher or unfamiliar ways of pronunciation further complicated the already cognitively and socially challenging tasks. In addition to pronunciation errors and strong accents, the

videoconferencing environment was challenging in terms of comprehension and sound quality. Despite numerous benefits for SLA, the CMC environment therefore might pose problems in terms of students' pronunciation developments.

There were few syntactic triggers, which is in line with Blake's (2000) claim that syntactic problems hinder communication less than issues with lexis. The current research concurs with the findings of Yanguas (2010) and Zhao and Angelova (2010) in that most indicators were global statements of non-understanding in the L2. However, in contrast to the latter study, local indicators were also frequently employed by participants of the current study. Due to the pressure for keeping the conversation going, an echo with a rising intonation provided a quick way to clarify the source of non-understanding.

In addition, participants of the current study also used incorrect responses frequently in an effort to keep the conversation going and, thus, indicated non-understanding. Due to participants' lack of advanced language skills and their shared L1, it seemed appropriate to include an indicator and a response in the L1. Conversely, in opposition to Malmqvist's (2005) research on LREs amongst beginner-learners of German, participants in this study tended to maintain their discourse in the L2, rather than to fall back to their L1 to discuss language-related issues. In most cases, the use of L1 indicators and responses occurred after other ways of discourse management failed. Contrary to Kitade's (2000) claim that NNSs tend to translate problematic utterances, while NSs modify the item, in this study NNS participants avoided the translation of indicators whenever possible.

Notably, despite the videoconferencing setting, few visual indicators were observed, and if they were, this mostly occurred in combination with other indicators. Students possibly need additional training, both in using the software in general and on how to make use of additional resources, such as visual cues. In a similar vein, Lee (2007) recommended that "sufficient training on how to communicate effectively using the available visual channel of this medium is necessary to maximize its potential use" (p. 642).

With regard to responses, a variety of reactions to indicators was recorded. Wang (2006) also noted this, but an L2 tutor with a mother-tongue-like command of the language gave the responses in her study. Hence, a wide range of replies was expected. The variety of responses by L2 learners observed in this study, which includes repetition, rephrasal, translation, and expansion, shows an ability and willingness among learners to clear up communication issues before continuing the interaction by using a range of linguistic and communicative resources. Despite the low proficiency of participants, output modifications were employed frequently to modify the triggers causing misunderstanding. This consistent

use of rephrasal and expansion is contrary to Foster and Ohta's findings (2005) in F2F settings, where intermediate L2 learners used output modifications infrequently.

Unlike findings previously reported by Wang (2006) and Yanguas (2010), participants did not use gestures or signs to resolve issues in communication, which might be explained by the fact that participants did not want to embarrass themselves using motions. It seems that participants were unfamiliar with the unique settings in videoconferencing and found it too challenging to use visual cues, either to signal non-understanding or to mime words in order to clarify issues in communication. Just as for visual indicators, as described above, students possibly need more videoconferencing practice to use these cues effectively. In addition, learners may have been overwhelmed by the various cognitive processes required to maintain a conversation in the L2. Furthermore, the frequently occurring low picture quality possibly made the effective use of gestures impossible. The only time gestures were involved was when participants tried to signal misunderstanding and this was generally done in combination with other indicators.

Contrary to the claim of Varonis and Gass (1985), the reaction-to-response phase was not optional and included full responses in most cases, which indicates participants' clear task focus. There was no metalinguistic talk, which opposes previous research (Bower & Kawaguchi, 2011; Smith, 2003a). Several reasons for this are possible. The tasks were not seeded with unknown lexical items and had more than one possible outcome. Additionally, it seems that it is difficult for beginner L2 learners to discuss the language they are using in the L2, while completing a task with unfamiliar speaking partners via videoconferencing, a new communication medium for learners. Even though most NoM routines terminated in correct responses, these were often short or did not signal a clear understanding or uptake. For instance, sometimes negotiations ended in a "yes" or "no" and, without a stimulated recall, it cannot be fully explored whether participants guessed the answer or simply deemed a short answer to be sufficient.

Therefore, learners seemed more focused on maintaining a friendly and social discourse overall than on achieving fully comprehensible input and output, a finding already pointed out by Zhao and Angelova (2010). Notably, NOM routines decreased in number from Task 1 to Task 4, as confirmed by Ma and Kawaguchi (2012) who observed a similar trend using 3 tasks. They demonstrated that the fewer instances of corrective feedback and negotiations were needed, the more students, and here particularly NNSs with lower L2 proficiency, grew accustomed to the interactions.

5.1.2 Communication strategies

The following section discusses how CSs were employed during dyadic peer-to-peer tasks. Moreover, some plausible explanations will be given on the differential uses of some CSs.

In general, students employed a variety of interactional strategies, both to avoid communication breakdowns and to repair problems that arose during the interactions. Participants utilised different CSs to achieve shared meaning, including direct and indirect strategies to modify original speaking plans.

The most common direct strategies were self-repairs, and most participants were able to focus their own output and make some adjustments using self-corrections to establish mutual understanding. Findings from the present study corroborate those of Lee (2001, 2002) in that self-repairs were among the most popular CSs.

Another use of CSs was to fall back into the L1 to ease challenges in communication. Even though code-switching featured highly, it was not among the most employed strategies as previously claimed by Kost (2008). This is surprising, given the novice level of participants and their shared L1, and points to a strong desire to maintain communication in the L2.

The use of fillers was the most frequently used indirect strategy. This was commonly used to maintain the flow of the interaction, or in cases of difficulties in expressing an idea. Most fillers were non-lexical and consisted of short utterances such as “Uhm”. Furthermore, in an attempt to avoid a long gap or a communication breakdown in the conversation, participants often resorted to repeating their partner’s question in order to give them more time to plan their answer. This, in combination with the frequent occurrence of time-gaining strategies and pauses indicates that the video chats were challenging, probably due to the fast pace of the communication and the need to process information quickly while attending to input and output.

CSs were frequently used in combination. Particularly, the use of fillers, repetitions, and restructuring occurring together often, possibly because participants were able to think of more appropriate strategies while using the first CS they could find. Hence, one strategy led to another. In addition to gaining time to improve their discourse, the combination of CSs might also point to an increased effort on behalf of participants to ensure that their message was understood by their interactant.

As observed in the literature, the use of CSs seems to depend on students’ proficiency levels (Kost, 2008; Lee, 2002; Nakatani, 2005). Findings from the present study confirm this.

More complex strategies, such as other-repair were used sparingly, possibly due to participants' low proficiency levels.

Although there were no overt corrections of speaking-partners, students used recasts to correct their interlocutors implicitly. This shows that, while participants may not possess the linguistic ability to use overt corrections, they were still able to recognise some mistakes and rectify them, while maintaining their social discourse.

Moreover, the use of collaborative processes to construct utterances was predominant throughout the intervention. Consequently, through co-construction, learners mutually tried to build utterances in order to aid each other and give feedback. They were therefore able to pool their linguistic and interactional resources, which can be related back to Swain's collaborative dialogue (2000), where language use and language learning occur and develop hand in hand through shared problem-solving and decision-making.

The examples of co-construction show that shared creation of syntactic structures can be developed through interaction. It can therefore be argued that near-beginner L2 learners position themselves to both the communication of meaning and accuracy by using self-initiated repair, recasts, and co-construction.

However, it seemed that some exchanges were dominated by one of the two interactants, who asked most questions. This offered few opportunities for L2 development. The same can be said in cases where both partners tried to dominate the chat and were therefore not receptive to the adjustments offered by their interactant.

Hence, regarding negative feedback and explicit corrections, the findings corroborate those of Jepson (2005), who maintained that NoM occurs far more than other-repair. Reasons for this could be that participants did not notice mistakes, were unable to give feedback due to a lack of linguistic resources, or felt uncomfortable correcting their partner explicitly due to either wanting to save their interlocutor's face or not wanting to boast or give the impression of being more competent.

However, contrary to the claims put forward by Jepson (2005) and Grümpel et al. (2014) that NNSs refrain from using self-corrections due to their lack of L2 knowledge, lack of focus on accuracy or a fear of focusing on mistakes, the findings of the current research show that participants indeed incorporated self-repair regularly into their discussions. Interviews also revealed that students found it satisfying that they were able to correct their output themselves without interrupting the flow of conversation.

Notably, most self-corrections were recorded in the last interactions, possibly on account of students feeling more at ease with their speaking partners and the chat-environment. Despite the fast pace of video chat, students managed to focus on form to some

extent, which is even more significant when considering that no self-repair was carried out due to a signal of non-understanding.

Similar to previous research adopting a socio-cognitive approach to SLA (Kost, 2008; Reinhardt, 2008) participants in this study did not solely engage in discourse management in cases of communication breakdown. They also engaged in discourse management in order to advance their interactions and fulfil their task-related goals.

Specifically, self-repair was mainly used in instances where mutual understanding was achieved. Consequently, these modifications aided students in rehearsing their own output through consolidation of lexical items and grammatical structures.

The analysis demonstrates that the group of near-beginner-learners of German made use of a variety of strategies to get their messages across, modified their original plans, or engaged their partners in their efforts to solve communication problems. Hence, the use of CSs served as effective tools for communicating in order to sustain interactions, and these interactional modifications may lead to an increase in accuracy or complexity.

Due to the interactive nature of L2 communication, the CSs used by participants in this study include both productive and receptive skills. Even though the focus of the framework employed lies on productive CSs, both the speaker and the learner who receives a message employ CSs.

This ties in with intrapersonal or interpersonal differences that influence the use of CSs. While some participants used a variety of communication strategies, others restricted themselves to the use of fillers and repetitions. Despite the fact that individual learner differences should not be ignored, this finding points to the assumption that increased training in CSs in order to make L2 learners aware of how to use these strategies effectively might help students not only to select these more effectively but also encourage reticent learners to use more CSs, and specifically more achievement strategies (Maleki, 2010; Nakatani, 2010).

In summary, the social online-interactions seem beneficial for students, since they allow students to negotiate meaning, engage in CSs and receive instant feedback in an authentic environment (Lee, 2007; Y. Wang & Chen, 2007). The most prominent discourse strategies were fillers and self-corrections, which indicates that participants were not only focused on obtaining comprehensible input but also valued their own output through linguistic adjustments.

5.1.3 Social presence

Research has shown that CMC can help L2 learners perform a variety of social language functions and engage in different types of dialogue (Ko, 2012; Yamada & Akahori, 2007, 2009). The present study corroborates those conclusions and shows that L2 beginner learners performed a variety of SP indicators. Findings show that the main indicators of SP in this research were of an affective nature. Participants mainly used humour and the expression of emotions or empathy to establish a connection with their peers.

These findings align with those of Abrams (2013), who claimed that L2 learners can transfer their social skills to the L2 and, with increased practice, gradually incorporate humour into their L2 exchanges. The use of humour was not always reciprocal and one-liners were also found in the data.

However, in most cases, teasing and joking took place over several turns involving both speaking partners. Consequently the use of humour offers an opportunity for participants to expand their sociolinguistic competence. In addition to humour, social connections were evident in greetings and leave takings.

The literature furthermore claims that social cohesiveness can help create environments where learners are willing to get out of their comfort zone, express emotions, take risks and allow themselves to make mistakes (Kehrwald, 2008; Ko, 2012). This was manifested in the video chat transcripts, which showed a variety of emotions and instances where participants extended their linguistic and interactional resources.

For instance, similar to the findings of Rourke et al.'s investigation (2001), some participants opened up through self-disclosure. This display of sharing feelings, attitudes, and experiences helps to build trust and support among L2 peers. While few instances of overt self-disclosure were observed in this study, students still shared feelings and attitudes frequently, for example by expressing likes and dislikes, which enabled them to make personal connections.

It was interesting to observe that, while the tasks encouraged the sharing of personal opinions, debates about these opinions were not explicitly expected or set out in the tasks. Yet, the transcripts reveal many instances of dis/affiliative comments related to interlocutors' opinions and discussions about these. Findings also show that L2 learners project themselves in a social and emotional manner (Rourke et al., 2001). Similar to the results from Darhower's study (2002), where participants performed a variety of social discourse functions, such as greetings and phatic expressions, these speech acts enabled the sharing of feelings, which in turn helped create a community of learners, in which students actively created identities and a shared sense of social learning communities.

5.2 Integrated findings of Research Question 1

As described in the previous sections, participants used a variety of interactional strategies for different purposes. Most of the strategies outlined above are interwoven in student interactions and should not be seen as isolated discourse management tools. Rather, it seems favourable to examine students' overall orientation to their peers in discourse.

Code-switch, for instance, was not only used to fill a gap in the L2 or to solve problems but also to show affiliation and emotions. Generally, the element of social dynamics was an important part of the chats. Even though participants were task-focused, they acknowledged the social nature of the task.

Overall, fewer NoM routines were observed in the latter interactions and they could be solved quicker than in the earlier sessions. These findings suggest that the intervention raised participants' awareness and ability to make their speech more comprehensible to avoid communication breakdowns.

Participants used interactional resources despite a lack of explicit training in the use of these strategies. Even though there is scope for the teaching of interactional strategies, students employed these among each other, which indicates that interactional resources do not simply depend on the teacher or interactions with NSs but can develop in interactions between NNSs and at a beginner L2 learner level.

CSs, such as feigning understanding or anticipating a question, seem to be closely related to NoM. Both mark an attempt to improve communication and the analysis of the transcripts confirms that interactional resources are connected and should be regarded and examined holistically.

Equally, the use of NoM and CSs, such as co-construction, marked an emergence of peer assistance and affiliation among interlocutors that tied in with, and was strengthened by, tenets of SP that participants also employed to establish proximity with their speaking partners. Hence, these interactional strategies seem to go hand in hand and the sum of them appears to enrich student discourse.

From the transcripts, it is evident that students took ownership of the CMC setting and the interactions by creating an active, learner-centred community through the discussion of familiar topics, social cohesiveness, and belonging. This is to say that participants were able to develop their sociolinguistic competence, while having enjoyable conversations. These social, cognitive, and affective roles of L2 interaction align with the interactional and sociocultural view of SLA.

5.3 Summary of themes for Research Question 2

The second research question sought to determine students' opinions on their interactions and whether their FLA levels decreased over the course of the study.

As exposed in the review of relevant literature, most previous studies have calculated FLCAS scales by comparing different task modes with a pre-test post-test design. Therefore, generalisations are difficult to draw and transfer to the current study. However, comparison can be made by way of concentrating on previous findings drawn from audio and video data.

While FLCAS scores did not decrease significantly, a clearer reduction of anxiety and an increase in confidence could be deducted from results obtained through the self-rating scales and the findings from the interviews. Regarding FLA, debilitating factors for students were mainly centred on issues related to grammar. This remained a problem for students after the study, while other issues, such as the fear of not being understood, ceased to be a major concern after the intervention. To combat FLA, students started to focus on strategies, such as to allow mistakes, to have more realistic expectations of L2 interactions and to use positive self-talk.

Students viewed the four tasks as social activities and liked the fact that that they offered them the opportunity to meet new people, and particularly other L2 learners of German. Moreover, participants enjoyed the tasks and valued the authenticity of the activities. They also liked the ability they offered them to hold a sustained, real conversation, as opposed to the rehearsed classroom exchanges with peers they are familiar with.

In terms of the technology used, the videoconferencing environment was perceived differently by participants. Some liked the novelty of the environment and the fact they could use equipment, such as headsets. Others found it distracting and felt that it caused more nervousness, which could be attributed to inexperience with the equipment or issues with sound or video quality.

Participants employed more interactional strategies than expected, which indicates that novice L2 learners can use these among themselves and need not rely on a more competent speaker of the L2 or a teacher. However, it seems there is further demand to teach these skills in L2 classes. Particularly, students reported that they would benefit from the teaching of implicit skills, such as strategies to deal with anxiety and social skills, empathy, and to improve L2 communication instead of only being instructed in linguistic skills. Problems in social interactions extend to the L1 as well. Hence, the need for these skills might be explained by participants' relatively low ages and by their communication skills in the L1, which are still developing. It is also noteworthy that it was easier for some students to use interactional resources than for others. This was particularly the case for

students who displayed low levels of speaking apprehension and those who claimed to find mistakes and difficulties in L2 interactions to be a normal part of learning.

As explained above, this research could not report much reduction in terms of students' FLA. Possible reasons might be a newfound focus on anxiety due to questionnaire questions, technical issues, time constraints, and disruptions, either due to the technology used or due to other people sharing the same computer room.

The last point leads to social cohesion, which is generally said to be higher in comfortable environments. Again, some students considered the interactions to be social and excelled in making personal connections in a relatively short time-frame; others found this difficult and would have needed much more time. In general, most students agreed that the online discussions helped them develop personal relationships with their interlocutors at some level. Students' feelings about the Skype chats changed over time and were tied to their speaking partners, the technology, the tasks, and their own perceived success in the interactions.

In what follows, themes relating to students' perception of the Skype treatment will be explored. This will aid in building a more detailed description of L2 learners' experiences with the online interactions, particularly in terms of their reasons for selecting specific communication strategies.

5.3.1 Foreign language classroom anxiety scale results

Notably, FLCAS scores did not decrease significantly after the intervention. There are several plausible reasons for the lack of decrease in FLCAS scores post-test. In line with the findings of Baralt and Gurzynski-Weiss (2011), the novelty of the chat environment for L2 interactions may have caused increased anxiety levels. Even though some participants were familiar with chatting online, this would normally occur in their L1 and therefore the novelty of having to use L2 in chat could have led to increased levels of speaking apprehension.

Furthermore, the Skype conversations lasted a longer time than normal classroom exchanges, which could have also contributed to FLA levels. This was confirmed by participants in the interviews and open-ended questions, in which several participants stated to normally only participate in their language class by giving one-word answers or short phrases. Another reason may be the FLCAS questionnaire itself. Several participants pointed out that, while the questionnaires helped them focus on strategies, they also drew attention to issues in speaking that may increase anxiety levels. It is interesting to note that, for some participants, feelings of apprehension decreased after the online task while they

increased for others. The CMC chats may have caused some students to rethink and reduce their speaking inhibition, while it increased for other students and drew attention to the anxiety that communication with strangers in an L2 can cause (Arnold, 2007).

Another cause for FLA, already confirmed by Arnold (2002), is listening skills. Not only speaking seemed to have caused students' problems but processing messages also triggered anxieties, especially when input was obstructed by mispronunciation, unfamiliar accents, background noises, or lack of call quality.

The dual nature of conversations, which is the connection and processing of input and output, seems to be neglected in the literature on FLA related to speaking in an L2 but should be regarded as connected issues when studying learner anxieties. As further proof of this, data from the interviews also reveal students' concerns with listening skills in addition to speaking anxieties.

Due to the two schools' different timetables, some interactions were carried out with time pressure. At times, there was some off-task behaviour caused by students' passing through or waiting their turn. These disturbances may have led to an increased level of anxiety.

Previous research has confirmed that L2 learners report a general decrease in FLA levels when being able to see their speaking partner and use body language to convey messages (Arnold, 2007; de los Arcos et al., 2009). According to the participants, technical issues, such as unreliable internet connections in both schools, causing latency in the transmission of image and or sound, impacted negatively on the interactions. This is consistent with Wang (2004) and Poza (2011), who claim that problems with bandwidth and latency are the main complications in video CMC.

Moreover, participants in this study experienced a number of computer crashes. According to Wang (2004), these crashes deter learners from using video chat applications, which can be contrasted to the findings of the current study. While participants acknowledged that crashes and connection problems hindered the conversations somehow, these did not discourage them.

Participants claimed that the screen went blank at times and that the flow of conversation was disturbed by connection issues, yet they continued and managed to complete the task. In terms of anxiety, mixed results were recorded. Some students reported that the issues with transmission of sound and image increased anxiety, while others agreed they made conversation harder, yet this did not increase their feelings of nervousness.

5.3.2 Reasons and strategies for foreign language anxiety

Students selected a variety of possible reasons for anxiety. Particularly the pre-test yielded a variety of answers, mainly related to vocabulary, making mistakes and being overwhelmed by the cognitive processes involved. The post-test questionnaire showed that students selected different items, according to their experiences of the interactions. Items changed, away from a fear of making mistakes to reasons that are more relevant to the actual interactions, such as “Freezing when asked to speak on the spot” or “Being afraid of not being understood”. Overall, participants selected fewer reasons in the post-test questionnaire, which could be due to students increased speaking practice time and the resulting knowledge that some of their anxieties might not apply in real life L2 learning.

Regarding the most important reasons for FLA, prior to the intervention students identified not being understood or not understanding their partner, struggling with grammar, and their accent as the most important causes of anxiety. Conversely, after the study students deemed problems relating to misunderstandings as much less important and there was a shift away from cognitive factors towards linguistic causes of FLA. Students claimed that not being able to remember vocabulary and struggling with grammar were stronger reasons for their nervousness.

Again, this may be explained by their actual practice time and the fact that, despite some communication problems, mutual understanding was generally achieved. Hence, students grew less worried about comprehensible input and output, which enabled them to focus on more detailed problems of their interactions, such as specific grammar and vocabulary issues.

Logs of the online chats and participant interviews reveal that the issue with a lack of vocabulary was twofold. Students were afraid of not knowing enough lexical items to achieve a fluid interaction but also had issues retrieving the correct vocabulary item. Another linguistic issue was grammatical problems. This was already a high cause of anxiety in the pre-test but was rated as the most important cause of nervousness in the post-test. A possible reason for this may be that Task 4 specifically requested the use of past and future tense, which confused some participants.

Despite a focus on linguistic reasons for FLA, participants also deemed cognitive causes of anxiety to be important in the post-test questionnaire. Students found the following items to cause apprehension: The fear of stalling when asked to speak, not making enough progress, the fear of being criticised, and being overwhelmed by having to process information and having to speak at once. This indicates that students are able to reflect on

their experiences of interacting, fear negative evaluation by peers, and feel the need to improve.

Turning now to strategies to help with FLA, there was a difference to the pattern observed for causes of anxiety. Here, participants selected similar strategies in both pre- and post-test. However, students were able to select more strategies after the intervention than before.

Concerning the most important strategy to deal with FLA there was a shift from “Rehearsing/practising a potential task” to “Allowing myself to make some mistakes”. This is noteworthy in that students seemed to have realised that the interaction tasks are difficult to rehearse due to their spontaneous nature and that accuracy is not the main goal of these activities.

Moreover, the emphasis on allowing mistakes ties in with the quoted reasons for FLA, where the fear of making mistakes also declined over the course of the study. This indicates that students became more aware of the unique features of spontaneous L2 interactions in which mistakes are an inevitable part. In addition, participants utilised positive reinforcement to help relieve anxiety levels. They remarked, for instance, that allowing nervousness and telling themselves that they can complete the task helped them deal with FLA. These findings corroborate those of Hauck and Hurd (2005) who also claimed that self-management skills, such as using positive self-talk can help with the speaking situation.

5.3.3 Self-rating scales

Even though FLCAS scores did not decrease significantly during the course of the study, students reported an increase in confidence through regular online discussions, which is in line with previous research (Arnold, 2007; Satar & Özdener, 2008). These findings furthermore show a clear decrease of anxiety over the course of the interactions.

These results support Arnold’s (2002) findings, who also noted a decrease in FLA. She attributed this to increased practice time. Open-ended questions, administered with the self-rating scale of the present study, confirm Arnold’s results. They also reveal an added factor, which is the use of strategies to lower FLA and increase confidence.

Since participants were invited to reflect and comment on strategies, findings are twofold. On the one hand, as previously stated by Arnold (2002), the opportunity to practise L2 interactions helped lower speaking apprehension. On the other hand, students were actively encouraged to find strategies to help them with problems related to L2 communication which, in turn, helped them to link social and cognitive factors of speaking.

Hence, it seems that particularly young L2 learners need to be made aware of both strategic and interactional resources, in addition to linguistic resources.

The self-rating scales possibly yielded more positive results due to the proximity to the tasks. In contrast, the general FLCAS scale was administered during the lesson before and after the intervention and might have given students more time to reflect on their feelings, whereas the self-rating scales show a more immediate reaction to the treatment. Nonetheless, this cannot be said for the Skype scale, which was distributed together with the post-test FLCAS and also showed clearer support for the Skype intervention.

5.3.4 Skype scale

Results of the Skype scale yielded slightly different results to the general FLCAS. Here, students valued the impact of the intervention more, particularly in the areas of increase in confidence, participation, L2 output, and a decrease of anxiety. Most participants affirmed they participated more in the Skype chats compared to classroom activities, spoke more German in the later interactions and felt more confident doing so. With regard to output, previous research confirms that the autonomy given in student-centred activities can trigger increases in motivation and L2 output (Blaurock, 2011; Yanguas, 2010).

Arnold (2007) administered similar items and found that 52% of participants stated an increase in self-confidence with 47% of students claiming a reduction of FLA for the synchronous CMC group. These results are superseded by those of the present research, where 81% of participants noted an increase of confidence and 62% declared themselves to be less anxious after the Skype chats.

This reported surge in confidence and decrease in anxiety is supported by the self-rating scales, which also show a more prominent change in FLA compared to the general FLCAS. Concerning students' stress levels, 5% strongly agreed to feeling relaxed during the interactions with 43% usually feeling relaxed. A total of 10% of participants disagreed with this statement. This indicates that the addition of CMC in the classroom can provide a safe environment for learners to practise their oral skills in a non-threatening way.

In a similar vein, 67% of participants claimed to have enjoyed the online chats, with 20% disagreeing. A number of studies have already confirmed the enjoyment students can get out of collaborations among peers in new technological environments (Hampel & Hauck, 2006; Hampel & Stickler, 2012; Lee, 2007).

In spite of these positive opinions, students expressed some concern as well. Even though 53% of participants stated that they spoke more German as the interactions

progressed, according to 34% of students there was no carry-on effect, in that they will not speak more German in class after the study.

Hence, while participants made progress in the interactions, this was often considered as a specific type of peer-to-peer exercise that does not translate to further work in the L2 classroom. In addition, a relatively high number of students (34%) claimed to have struggled at some point during the interactions. The high amount of NoM routines supports this. This is not to be seen as a lack of interactional skills, however. Rather, it shows that students learn to negotiate for meaning. Furthermore, the difficulties participants experienced could be interpreted as negative or positive, since problems in discourse can either help students focus to improve their discourse by showing them some shortcomings or could deter them from being engaged and increase anxiety.

5.3.5 Participants' views on interactional features

Students perceived the interactions to be an intense activity in the sense that they had to form increased linguistic output in a new, immediate, and authentic environment, using authentic tasks that promoted student contributions. This was apparent in both the video transcript data and the qualitative responses students gave in the questionnaires and interviews. The latter gave more comprehensive insights on participants' attitudes towards the Skype interactions.

According to the majority of participants, the online chats provided them with more opportunities for sustained output and forced them to speak more than in class with peers they are familiar with already. Hence, the intensity of the linguistic environment pushed students to develop and modify their L2 interactional strategies and caused them to focus on discourse management in order to sustain their interactions, rather than to focus on form, as already pointed out by Philp et al. (2014). This, in general, allowed participants to take more risks and pushed them towards finding alternative ways of mutual understanding.

However, fear of losing face was an issue for some participants who did not want to admit their non-understanding, as it might be regarded negatively. This fear of criticism, either from peers or from self-directed blame, has been reported by Zwaard and Bannink (2014), and findings point to the suggestion that students need to be assured that negotiations are a normal part of SLA that foster L2 learning.

Some students found it challenging to hear their interlocutors, decipher their pronunciation and react accordingly on the spot, as confirmed by Zhao and Angelova's study (2010). It appears that students sometimes found the input they received to be either

lexically, grammatically or phonetically challenging. In fact, comprehension and pronunciation-related triggers were the predominant cause for discourse breakdowns in the current study.

While some of these instances can be attributed to connection troubles, participants mainly had difficulties concentrating on input and output at the same time, which is substantiated by statements gathered in the interviews and questionnaires. To a lesser extent, listening skills were considered to be problematic due to a difficulty with perceiving the sounds well, especially in instances of problems with sound transmission.

Student answers indicate that fostering CSs could affect their interactional competences positively and strengthen their confidence in speaking. Most participants did not express the wish to produce L1-like output but rather claimed they lacked strategies to maintain discourse in a confident manner. Thus, findings support the arguments of Dörnyei (1995), Nakatani (2005) and Kim (2014) who promote the teaching of CSs.

While participants were capable of identifying their shortcomings in terms of using discourse management strategies, they were mostly unable to identify the concrete strategies they used to maintain discourse. When reflecting on their interactions, students claimed to have invented words and fallen back into their shared L1 to achieve mutual understanding, but aside from these reflections, participants' main contribution to CS skills was to simply practise and speak more in order to improve discourse management.

Participants' attitudes regarding peer feedback aligned with Philp et al.'s (2014) findings that learners' fear of being impolite, their perceived lack of proficiency, and a focus on meaningful communication prevented them from using more error corrections. Therefore, social factors and learner perceptions should be included when conducting research within an interactionist perspective (Mackey, 2012).

In terms of resource deficit related CSs, it is possible that students used these more due to the openness of the chat topics. Since the topics only gave an overall guide, participants were able to steer the interaction towards different topics when they lacked linguistic resources without interrupting the flow of conversation.

Therefore, avoidance techniques, such as message abandonment, were used and often not signalled clearly. Instead, students integrated them into their discourse, as confirmed by some interview answers in which students claimed to have simply transitioned to a different question or a different topic altogether when faced with difficulties. Despite an emphasis on behalf of students to maintain a smooth discourse, in light of the outlined benefits of NoM and CSs on SLA, these avoidance strategies should not be encouraged.

Rather, educators should focus on achievement strategies that encourage learners to take risks and experiment with the L2.

Even though participants did not use many lexical fillers and other CSs that were taught beforehand, interview answers reveal that the short session on fillers, conducted prior to the online interactions, nonetheless helped students to focus their attention on discourse strategies. Participants noticed that they became more willing to ask for assistance or manage their discourse more actively. As the intervention progressed, familiarity with Skype increased and their feelings towards the partner class and the collaboration took more shape. This, in turn, may have positively influenced their anxiety levels as well and made them feel more comfortable interacting in an L2.

5.3.6 Participants' views on social presence

The main factors that students related to SP were having a sense that their partners were real and that they could become familiar with them and form a community of L2 learners. However, social proximity depended on a number of factors.

Tu and McIsaac (2002) posit that the location and environment of CMC have an impact on learners' feelings of privacy and, as a consequence, on SP. A public space, such as a classroom or computer laboratory, can be regarded as less private than, for example, the home of a participant. This lends support to findings of the current study where several participants considered the environment to be a debilitating factor for their social conversations. They found it stressful to talk in an L2 with other students being in the same room and would have preferred a quieter environment to connect with their speaking partners.

In addition, some students reported that the proximity to their peers made a difference to how they perceived SP. While a number of students preferred to speak with partners they were already familiar with from previous interactions, most participants claimed that chats with unfamiliar students were more beneficial for them in terms of authenticity and spontaneous interaction skills. That is to say, a lower level of intimacy can aid SLA, while there may be an issue with too much SP deterring learners from fully engaging in experimenting with language structures, a factor already confirmed by Rourke et al. (2001).

In terms of establishing proximity to their interlocutors, participants employed various strategies and felt that the interactions were, in part, social. However, due to the change of speaking partners and the shortness of the exchanges, participants found they could only form opinions on their speaking partners to a certain point. Interviews revealed

that students were aware of the presence of their interactant and the need to position themselves in a social manner. This was evident in one student's proposition to agree with their partners even when this did not reflect their own opinions. The participant believed this complete agreement would create a more even discussion with a positive, harmonious tone.

Furthermore, data from this research demonstrates that humour contributes to more natural L2 use. First, the use of humour helps create the feeling of authenticity. Second, it eases feelings of FLA, and third, it contributes to the development of confidence through positive encouragement. Interestingly, language proficiency also played an important role. Students felt they could not engage fully with their peers due to their limited L2 knowledge. These findings concur with those of Kehrwald (2008, 2010) who posits that both the quantity and quality of interactions are pivotal for the building of trust and empathy.

Furthermore, in line with Tu and McIsaac's (2002) suggestions that, while the online environment provides an opportunity for SP to enhance learners' self-esteem and interactional skills through peer-to-peer interactions, it should not be seen as a substitute for formal L2 instructions. Participants supported this view in stating that they feared that a lack of focus on grammar disadvantaged them in creating social proximity and were particularly concerned that the low quality of their L2 knowledge could obstruct social cohesiveness.

Nevertheless, participants were interested in, and enjoyed finding out about, each other. They valued making personal connections with other learners, a factor already confirmed by Wang and Chen (2007), and felt the online chats helped ease the isolation they encounter in their L2 course. The study of a L2 is not a compulsory element of the New Zealand curriculum and participants noted a sense of belonging through the online collaborations and realised that other learners of German struggle with the same feelings of isolation and frustration that can be a part of SLA.

Even though most students considered the collaborations to be real-life interactions with real people, there was also an element of social disguise or the masking of their own personality to conform to their partner's expectations. As outlined above, some students felt this helped them to agree with their interlocutors at all times, despite their own (different) opinions, or to feign understanding when, in fact, they were unsure of the meaning of a phrase. Participants claimed this also helped to create smooth interactions and a more positive atmosphere in which they could bond with their partners.

This points to the assumption that students were able to read the social context to a certain degree and consequently manipulated their output accordingly. Additionally, it

supports the notion that students preferred social chats over accuracy of communication. These differences in students' perception of SP have already been pointed out in previous studies. Dunlap and Lowenthal (2014) assert that students have different needs related to SP and that their feelings of comfort in online discussions rest on their view of SP. Therefore, it seems difficult to incorporate these elements of achieving social proximity into a teaching environment, similar to the issues with the teachability of CSs described previously.

Remarkably, even though the video chat transcripts revealed that all participants used salutations, the interviews and questionnaires showed a different picture. Here, students stated they felt ill-prepared for leave taking and ending a conversation in particular. Even though all participants acknowledged the need for social interactions, they felt that they were unable to transfer their L1 knowledge of how to conduct a social conversation to the L2. This observation is validated by the video transcripts, which also reveal a lack of non-lexical fillers.

The few instances of lexical fillers were mainly used inappropriately and show a lack of deeper understanding of the phrases beyond the immediate meaning. Again, this may be attributed to the fast pace of the interactions, which some participants confirmed when claiming that they did not have enough time to think about their answers in detail. Whilst this caused anxiety for some students, others valued the very fact that the chats felt like a real conversation, in which mistakes are expected.

However, all students felt the need to be better equipped in terms of conversational language. As the review of the literature revealed, this is not an easy task, since strategic competence also relies on competencies in the L1 and includes individual strategies that are not easily taught.

Nonetheless, the video intervention had an impact and marked an emerging of SP. Interviews showed that the majority of participants regarded their interlocutors as real people and found they could make personal connections.

5.3.7 Participants' views on foreign language anxiety and confidence

In the interviews, students quoted as main causes of FLA: (1) inexperience in starting and maintaining a conversation in the L2; (2) inexperience with Skype; and (3) the novelty of interactions in the L2 with strangers. Similarly, Hauck and Hurd (2005) state that speaking in front of others is one of the most anxiety-inducing situations. However, the apprehension related to the phatic expressions of a conversation has not been discussed in previous literature. A possible reason is the relative novice-level of participants in this

study, while most other studies on FLA have concentrated on older L2 learners with more experience.

Moreover, all four tasks used in this study demand the use of phatics and the nature of videoconferencing also requires speakers to signal the start and the end of a conversation. Students were possibly not used to this task format and, as a consequence, developed feelings of anxiety.

Akin to the answers given regarding strategies concerning FLA, the interview data revealed that a positive attitude was pivotal to perceived success in the interactions. Students recognised the need to focus on achievements, such as being able to sustain a conversation for ten minutes, rather than to dwell on their deficiencies. This corroborates Arnold's (2002, 2007) findings that the feeling of achievement leads to increased self-esteem and learner enjoyment.

Nonetheless, similar to McNeil's findings (2014a), participants tended to compare themselves to their speaking partners at first, which increased feelings of FLA. As the interactions progressed, however, participants realised that near NS-like output was impossible to achieve and that this was an unattainable goal. Rather, they began to appreciate that mistakes and taking risks are a normal part of L2 learning. Participants found that they understood this concept through experience with their speaking partners, and the realisation that everybody makes mistakes helped them to have more realistic expectations of the conversations. Here, participants' views confirm Arnold's (2002) observation that learners become less focused on accuracy and instead increasingly concentrate on the message delivery of their interactions.

Student answers also make it clear that the intervention helped them focus on reasons for FLA and gave them the opportunity to develop strategies to cope with anxiety. Several participants stated that the questionnaire questions and the FLCAS items drew their attention to issues and solutions concerning nervousness and confidence in speaking in an L2, made them think about how to improve interactions, and revealed resolutions they had not thought about themselves before. Consequently, students expressed a desire for more concrete practice on strategies to combat FLA.

Items that participants identified as the most important causes of anxiety prior to the study were struggling with grammar, their accent, and not being understood or not understanding their partner. After the online chats, the most important reasons for communication apprehension were struggling with grammar and not being able to remember vocabulary.

Fostering peer interactions in online learning environments

Students considered that using positive self-talk (Hauck & Hurd, 2005) and allowing themselves to make mistakes were the most helpful strategies to overcome speaking apprehensions. They also asserted that taking more risks and having more realistic expectations of themselves and their speaking partners provided them with more confidence.

In addition, the open-ended parts of the Skype reflections were intended to elicit additional causes for anxiety and new strategies participants may have found. Reasons for apprehension included: Being laughed at, wanting to use more natural complex language structures but not being able to do so, being scared of being judged by peers, and not being understood properly or not being heard correctly.

Interestingly, two of these cited causes tie in directly with findings from the interviews, where participants also stated that a major difficulty was to move away from formulaic expression and instead move towards an engagement in realistic, natural conversation. In addition, issues related to the chat environment were raised in the interviews as well. Students felt mutual understanding was hindered sometimes, not only due to mispronunciation, but also caused by technical problems related to the sound and lagging of Skype. The other two reasons, related to peer-pressure, were considered low causes of FLA. Here, the follow-up interviews revealed that students were mainly concerned with grammar issues and tenses in particular. However, only two students remarked on this and one could directly link the feeling back to Task 4, where she felt confused about the formation of the present perfect and the future.

New strategies participants discovered during the course of the study were having friends around, practising to improve self-confidence, rehearsing not just the task and what to ask other students but also possible questions from the interactant and how to answer them, as well as working on spontaneity. At first, these strategies seem to be in opposition. However, most participants stressed that, while they were concerned about knowing what to ask and how to answer the questions, as well as using appropriate German, their focus was on spontaneous, natural output, a factor also confirmed by the reasons for anxiety listed above. Students found that, after they had anticipated and rehearsed the activity to a certain extent with the help of the task sheet, they could then concentrate on adding spontaneous language. Moreover, it is interesting to see that students seemed less and less focused on their own output, but increasingly took the output of their interlocutors into consideration, as evidenced by the strategic practice of anticipating questions.

5.3.8 Participants' views on the videoconferencing environment

Answers from the open-ended questions provided some insights into how the online chats helped students' self-confidence and language acquisition. Findings confirm that students valued the intervention as a positive addition to their speaking practice. Students enjoyed the fact that they were able to have an actual, realistic conversation and three students particularly liked to be able to video-call learners of German from other schools. These findings indicate that CMC can be used effectively to assist the acquisition of interactive competence and discourse skills. Previous research has pointed out similarities, such as visual cues, between video CMC and F2F communication (Lee, 2007; Y. Wang, 2006; Y. Wang & Tian, 2013; Yanguas, 2010).

Student responses confirm that the Skype environment was also seen as a near-F2F setting and many students preferred the Skype environment over classroom interactions, similar to the findings of Craig and Kim (2012). Some participants, however, would have preferred carrying out the exchanges F2F in order to have an even more realistic experience devoid of technical issues (Jebali, 2014).

Barriers to using Skype included technical problems and, for some participants, a lack of time to complete the activities. Technical problems were quoted as the main negative aspect. Specifically, latency in the transmission of sound and/or image had a negative impact on the interactions. This might also partly explain the anxiety students felt, even after having had experience with Skype. In a similar vein, Wang (2004) warns that "more than one crash during a videoconferencing session will deter students from using it" (p. 383). Even though students became more accustomed to Skype over the course of the study, some problems related to sound and image quality could not be solved by them. As described previously in the discussion on NoM routines, the chat-environment amplified mispronunciation and interrupted the smoothness of communication, which, at times, was a frustrating experience for participants. It therefore seems beneficial to anticipate potential problems and put in place some student training (Develotte et al., 2010; Guichon, 2010) to discuss solutions for technical problems with learners prior to the use of CMC in a similar way to the suggestions of Heiser et al. (2013).

Nonetheless, students found it motivating and enriching to talk to students outside their own class and reported that they felt less isolated in their L2 learning and appreciated the opportunity to get to know other L2 learners and find out about them in a social environment. These findings correlate with those of Yamada and Akahori's study (2007) that focused on videoconferencing interactions between L2 learners, who deemed the

video-environment helpful and motivating for their L2 learning. Student answers indicate that the Skype environment offered them the opportunity to carry out realistic interactions, where the main focus was on maintaining discourse which, according to participants, is often lacking in classroom activities (Bueno Alastuey, 2011). In addition, students felt that the inclusion of videoconferencing not only helped them with their interactional competencies related to SLA but also provided them with practice for the use of technology, which spans several curriculum areas and might prepare them better for future careers, in which the use of communicative technology might be pivotal (Dooly, 2015).

Participants' opinions about the tasks and the chat environment reveal an agreement about increased practice time. That is to say, almost all interviewees stated they had spent more time on task online, compared to speaking tasks completed in class. In addition, the majority of students claimed these interactions had been the longest sustained oral discourse in the L2 they had ever completed. These findings align with those of Bueno Alastuey (2011), who also maintained that synchronous CMC encourages learners to practise more. Students benefited from regular task practice, which increased their familiarity with the learning environment and encouraged them to produce more output in a confident manner. Equally, the increase in practice time may have lowered feelings of anxiety, a factor already confirmed by Craig and Kim (2012).

Connected to this is student satisfaction with the relevance of the tasks. Numerous participants commented positively on the fact that the online tasks were closely linked to both their interaction assessments and their personal interests and therefore provided relevant speaking practice. The majority of participants enjoyed the relative freedom surrounding the task topics and specifically valued the ability to deviate from the suggested questions.

Often, mutual interests led students to different topics, which in turn influenced their social orientation towards each other and the tasks. This is evident in the video transcripts, which reveal a wide-ranging and rich content that is seldom observed in traditional classroom settings (Darhower, 2002). To sum up, on the whole, students enjoyed communicating in CMC and found the experience of collaborating with another class motivating and fulfilling in terms of SLA and making personal connections.

5.4 Integrated findings of Research Question 2

Findings related to the question about students' perceptions and feelings regarding the CMC environment, the interactions and their feelings of anxiety are multi-layered. It is

evident that participants considered the online chats to be complex in terms of their cognitive and social load.

Students realised that the online chats were not merely a means to improve L2 skills, but also provided them with an opportunity to partake in authentic real-life interactions, and aided them in developing interactional skills and focusing on linguistic shortcomings. Equally, students could develop skills to control feelings of FLA, while gaining confidence through sustained interactions.

Students felt that the process of collaborating with other L2 learners enabled them to improve their interactions in different ways. First, it helped ease the feeling of anxiety and isolation a speaking situation can cause (Hauck & Hurd, 2005). Second, it aided them in establishing closeness, and, as a result, SP with their interlocutors. Third, it helped them build a learning community, and fourth, the collaboration enabled students to produce more output and interactional language, compared to F2F classroom tasks.

Another important finding is that participants seemed to be made more aware of strategies to lower communication apprehensions. Yet, in contrast, interviewees were unable to give detailed descriptions of interactional skills, which points to the need for increased work in L2 classes on aiding students in recognising and selecting discourse strategies that help them improve their interactional abilities and make them feel more at ease when speaking the L2.

Confidence levels in particular increased significantly over the course of the intervention. The questionnaires and interviews validate this finding in that students overall had a more favourable attitude towards the interaction tasks and their own performance as the interactions progressed.

Nonetheless, while the Skype chats encouraged most students to take more risks in speaking, some found the activities made them focus more on their linguistic and interactional shortcomings, which, therefore, increased anxiety levels.

The comparison of experiences of three selected participants lends support to the above findings that L2 discussions are complex in terms of interactional, linguistic, and social load. While the experience might not always be agreeable, and rather turns learners' attention to gaps and deficiencies in the L2, these authentic interactions seem necessary to ensure students are exposed to such situations, in order to improve the processing of input, as well as output in the L2.

5.5 Summary

This chapter has placed this study's findings into context and has shown a variety of conclusions. Findings indicate that learners use a range of interactional strategies to facilitate comprehension of input and output and are able to resolve instances of non-understanding in the L2 without having to resort to English. Moreover, the organisation of turn-sequences shows that beginner-learners' discourse contains interactional elements beyond the immediate context, such as acknowledgements and dis-affiliate comments.

Data from this study suggest that conversations conducted via videoconferencing have a positive impact on students' interactional abilities and enable them to experience constructive, real-life interactions whilst attending to communicative problems.

On the one hand, they enabled students to practise grammar structures, lexical items and interactional filler language, and on the other hand, the online chats enabled them to interact with L2 learners outside their class. The cooperation and collaboration created a rich learning environment that would not have been achieved in solitary learning.

Interactional patterns show that students were more focused on maintaining a friendly discourse that progressed, rather than producing L1-like target forms. Furthermore, interactions between same-proficiency high-beginner dyads did indeed produce high rates of NoM, contrary to what has been previously claimed in the literature (Foster & Ohta, 2005; Rouhshad et al., 2015).

Aside from interactional skills, participants were able to develop their social skills as well and they did not shy away from revealing or altering their social orientation. This is evident in students' self-disclosure and their admission to feigning understanding at times or agreeing with others, when it did not reflect their own opinion.

Pertaining to FLA, results reveal that CMC can provide an enriching environment for interactions, in which L2 learners can rehearse speaking in a safe environment. Even though FLCAS scores did not decrease significantly during the course of the study, self-rating scales and interviews revealed a reduction in students' anxiety levels and an increase in confidence.

Despite these positive findings, it seems that, regardless of the chat environment, the most important factor for students' confidence in speaking is practice time in engaging, authentic environments with other learners in order to realise that interactions in an L2 can be achieved by moving beyond the comfort zone, by taking risks in speaking and by realising that mistakes are an inevitable part of authentic, real-life interactions in an L2.

Concerning strategies to improve speaking and combat FLA, findings show that the questionnaire questions helped students focus on strategies they would not have thought

Fostering peer interactions in online learning environments

about themselves. This suggests that students could benefit from more concrete practice in strategies. Specifically, strategies that were deemed most helpful were positive self-talk and taking more risks.

Concluding this thesis, and building on the discussion of findings presented above, the final chapter will consider the study's pedagogical and methodological implications. Lastly, it will outline the limitations of the research and give recommendations for further research.

6 CONCLUSION

Data from this study indicate that peer interactions aid students' interactional abilities and enable them to experience constructive, real-life interactions whilst attending to communicative problems. The interactions promoted collaboration, provided communication practice, and helped students to develop both their L2 skills and to reflect on them.

Students felt that the process of collaborating with other L2 learners facilitated their L2 learning in a number of ways. The interviews revealed that, from a cognitive point of view, the online exchanges enabled students to produce sustained output and interactional language. Viewed from a sociocultural perspective, the chats helped decrease feelings of anxiety and supported students in establishing closeness with their interlocutors in creating a social network of L2 learners.

These findings have implications for L2 interactions in secondary education. They show that conversations conducted via CMC can have an authentic context, connect L2 learners, and free up teaching time by means of a student-centred approach to communication. The current research intended to fill a gap by connecting interactional features and students' perceptions of interactions in an L2, while most previous studies have only considered either of these.

Subsequently, theoretical, methodological and, most importantly, pedagogical implications of the study will be considered in this chapter. This will be followed by limitations of the intervention and suggestions for further research to expand and improve on the current findings.

6.1 Implications

6.1.1 Theoretical and methodological implications

This research adopted an alternative theoretical framework to investigate L2 interactions and negotiation by combining a sociocultural and interactionist framework. While some previous research has also adopted this framework (Philp et al., 2014; Reinhardt, 2008; Zuengler & Miller, 2006), the current study's central theoretical contribution consists of offering a more holistic view of dyadic L2 peer-to-peer interactions. In addition, the environment in which the discussions took place also aligns with this socio-interactionist framework of collaborative interactions and aimed to fill a void identified in previous research (Mackey & Goo, 2012; O'Rourke, 2005). In line with their recommendations, the current investigation aimed at eliciting students' perceptions and feelings about the Skype discourse, as opposed to singling out the affordances of CMC without putting them into context.

The findings support the need to take attitudes and social factors into account when conducting research adopting an interactionist lens that focuses on cognitive skills (Mackey, 2012). As outlined in previous chapters, the recent focus on peer-to-peer interactions is grounded in both a cognitive perspective and a sociocultural perspective where learning is regarded as a mutual process during communication (Philp et al., 2014). Therefore, it is argued that, through rehearsing social activities, both communication and cognitive language skills are strengthened, corresponding to the following paradigm:

As an NfM analysis makes explicit, the role of transactional or ideational meaning, a socio-cognitive interpretation of the interaction illuminates the role of interpersonal meaningfulness from the participant's perspective. The purpose of this dual approach is to offer insight into the relationship between research epistemology and pedagogy, thereby informing the future design of classroom-based computer-mediated language learning environments. (Reinhardt, 2008, p. 220)

Following this theoretical shift to combine sociocultural and interactionist theory, the present study set out to build on and combine analytical models of L2 interactions. This was done to overcome the limitations of previous models, which mainly singled out one part of L2 interactions but neglected the connections of discourse functions.

It seemed appropriate to analyse NoM routines with an adapted version of the Varonis and Gass model (1985), due to its focus on precise recordings of discourse management, which lends itself well to the NoM routines of beginner L2 learners, which generally contain less complex structures and L1 use. However, the method gave insights

into one aspect of interactions only. Therefore, it was strengthened by the inclusion of the Dörnyei and Scott model to measure CSs (1997), and Rourke et al.'s model for SP (2001). In addition to examining negotiation routines through a model influenced by a cognitive-inspired framework, this study also examined these interactions from an emic perspective in order to study how and when negotiation routines were initiated and what occurs before and after these instances of non-understanding.

Related to this theoretical shift, the adoption of a mixed methods design with a combination of quantitative and qualitative data permitted integration and synthesis of the data, whereas the inclusion of only one type of data would not have allowed such rigorous data integration. In particular, the inclusion of interviews and quantitative rating scales lent insight into student perceptions of the Skype intervention that may not have emerged from the quantitative findings of the FLCAS or the qualitative analyses of the videoconferencing transcripts alone.

Additionally, the current research investigated a CMC environment in its own right without drawing on comparisons between F2F and CMC settings, in an attempt to understand peer-to-peer discourse in an online environment. This is a step away from research conducted with a control group. Not only are these studies problematic in terms of their validity in controlling a variety of variables, such as the task types and speaking conditions, but they also fail to take into account the unique contexts a CMC environment offers for SLA.

6.1.2 Pedagogical implications

Findings of this research provide several pedagogical implications for the use of videoconferencing in L2 teaching and learning. Even though participants value F2F interactions in the L2, they embraced the chance to use new ways to advance their speaking skills in the L2 and findings suggest that connecting L2 classes via CMC may be beneficial to students for improving their proficiency in the L2, mainly in the areas of interactional skills and fluency. In addition to speaking skills, the intervention provided learners with a space in which they could also practise their listening skills and their ability to process input.

The current research has shown that, while online interactions can be a valuable and enriching addition to the L2 classroom in terms of students' enthusiasm and interest in speaking, preliminary measures to maximise these positive effects should be taken. Teachers may familiarise their students with the technological tools prior to the learning activities, outline possible pitfalls, and teach students strategies to cope with the various issues they may experience. These steps help ensure that students feel at ease with the

technology and facilitate the creation of a learning community. Aside from the technical element, teachers should also take into consideration students' social development and anticipate problems students may experience with spontaneous communication. As detailed in the Discussion chapter, equipping participants with interactional skills can aid them in becoming more confident speaking partners, who are able to maintain an L2 conversation, anticipate problems, and manage their discourse effectively.

6.1.2.1 Negotiation of meaning

Regarding NoM, it seems that first of all, L2 learners need to be assured that the negotiation process is to be seen as conducive to SLA, rather than an obstacle. From the interview data, it appears that some participants felt that having to ask for clarification, even in the L2, was a failure and signalled a lack of L2 competence. Hence, educators should first explain how and why NoM routines can enhance L2 learning, and that students' fear of losing face is unfounded.

Second, teachers could demonstrate successful examples of NoM, in order to enhance negotiations of L2 learners. Third, tasks should be designed that specifically equip learners with language that fosters discourse management. It is only possible for students to engage in NoM if they possess the lexical resources to ask for clarification and repair problems in the L2. Hence, the inclusion of interactional language in addition to regular topics seems useful.

6.1.2.2 Communication strategies

As the present study investigated various CSs used in CMC, the findings may contribute to L2 teaching by detailing a range of interactional strategies that can be used in CMC but also by demonstrating how these strategies may enhance the conversation. Equally, CSs foster students' autonomy and serve as a tool to push students to make the most of their interactive resources and get out of their comfort zones by taking risks.

Therefore, findings of the current investigation indicate that it may be beneficial for L2 teachers to incorporate the instruction of interactional resources into their teaching programme in order not only to provide students with linguistic devices, but also to equip them in terms of discourse management and social interactions. More work on this could strengthen their interactional abilities further and findings suggest that more research might need to be carried out in the area of teacher and student training on discourse management skills. While it seems beneficial to teach these strategies to a certain extent, it is the teacher's responsibility to ensure that students select these strategies according to

their individual L2 learning needs. In terms of progressing with the L2, it seems favourable for L2 instructors to foster and encourage the use of L2-based skills, rather than avoidance strategies.

Furthermore, an over-emphasis on CSs should be avoided. Otherwise students may rely on the use of discourse management skills without taking risks in the L2 and consequently without making much progress in it.

6.1.2.3 Social presence

Similar to the recommendations relating to CSs, the current study has found evidence for the need to include the teaching of social cues in the L2 classroom. Not only can an increased SP help students achieve more personal connections with other learners of the L2, but it can also help increase their own confidence in speaking.

Whilst these social cues, just like CSs, are inherent in the L1, younger learners in particular may not be able to transfer these skills to the L2. It could consequently be helpful for practitioners to remind students of the tenets of SP in selecting tasks that specifically call for indicators of SP, such as humour, self-disclosure, or the expressions of emotions.

However, since both CSs and SP are individual constructs that differ from person to person, a useful teaching tool prior to peer-to-peer interactions could be to model possible scenarios of these discourse strategies and discuss these and their effects with students without enforcing one approach on all learners.

The inclusion of online learning requires adaptability from instructors and students. Due to a growing focus on incorporating blended learning into L2 programmes, such as the inclusion of computer-assisted and mobile L2 learning, SP becomes more and more important for SLA, since learners are required to orient themselves towards each other in different media in new ways.

These blended learning environments create challenges and opportunities and should be explored by educational practitioners, particularly in terms of how F2F and CMC communication in different modes may be combined in order to maximise L2 learning outcomes.

Even though interactions for the current research were student-centred, teachers still play an important part. For online collaborations to be effective, teachers are required to facilitate social and interactional connections by modelling positive examples of social proximity and interactional modifications and by motivating students to participate in the verbal exchanges.

6.1.2.4 The videoconferencing environment

The findings suggest that accessing other L2 learners via videoconferencing can be beneficial for learners in order to improve their language proficiency in terms of fluency and interactional skills. Moreover, collaborations between classes can help decrease feelings of FLA, build a community of learners, and establish a feeling of connectedness among L2 learners, particularly for less common languages. Synchronous CMC offers a relatively easy, convenient, and inexpensive way to achieve collaboration and interaction between L2 classes.

Overall, it can be said that the technology used had a bigger impact on the research than expected. Prior to the intervention, some problems related to the bandwidth and the set-up of Skype were expected. However, during the intervention it became apparent that secondary schools are often not well equipped for the simultaneous use of CMC on numerous computers.

In addition, different teaching schedules do not lend themselves to collaborations during class-time and require careful planning on the teachers' part in order to find a suitable time for these interactions. In order for teachers to be able to establish these collaborations, practitioners, administrators, and curriculum designers need to work together closely. Otherwise, these online projects remain time-consuming, experimental one-off projects used for research purposes only.

Aside from the planning stage, the teacher has a particularly demanding part to play in online collaborations. Practitioners are required to facilitate the online collaborations in taking on the role of an expert. They need to be able to troubleshoot and assist with technical problems, provide motivation to students, and oversee the online activities.

However, in addition to the teacher, students equally need to be trained in online communication, in order to make the most out of online applications for L2 learning. As delineated in the Discussion chapter, in addition to general technical competencies, it is vital for learners to be accustomed to the unique affordances of CMC tools.

Therefore, training sessions and explanations on how to maximise the technology used prior to an online intervention can help students become more at ease with the technology and give them useful tools to collaborate and interact online more effectively. Moreover, results from this study also suggest that student participation can be increased by closely linking online activities and formal assessments, by giving students enough time to engage with the online work, and by giving them a choice of where to complete the tasks.

For the integration of CMC in the secondary L2 classroom to work, the support of educational stakeholders, principals, the IT department, and other teachers is needed.

Mostly, however, the success of online collaborations rests on the technical support so that teachers are able to integrate technology into the L2 classroom without too many barriers, which may deter instructors and students from using the technology.

6.1.2.5 Foreign language anxiety

Pedagogical implications regarding student FLA in speaking situations will be discussed in this section. It is recommended that L2 educators become more aware of the areas of speaking that cause the most anxiety for their students and, consequently, create a learning environment that encourages student interactions in the L2.

It is evident from student answers that confidence plays an important role in L2 interactions. Therefore, instructors should provide students with many opportunities to succeed and feel a sense of achievement in online tasks. For instance, even though the activities used in this research were challenging in some parts, such as the use of future and past tense, they allowed for more than one possible outcome. Instead of focusing on closed tasks with a single correct solution, students were encouraged to sustain interactions in the L2, regardless of possible mistakes in grammar or syntax. Besides, the research findings suggest that student-centred activities can help improve confidence in letting learners take ownership of their learning experiences.

Furthermore, students valued the opportunity to reflect on strategies in order to improve their discourse and to think about causes of anxiety in depth. Hence, teachers should first acknowledge the existence of FLA and, second, include discussions and activities to identify the reasons for nervousness. This acknowledgement of speaking apprehensions might help students realise that anxiety is a common feeling they share with many of their peers and may reduce the fear of negative evaluation several participants identified as their main cause of FLA.

Another issue instructors should incorporate into their teaching is how to avoid unrealistic expectations of L2 interactions and the common fear of making errors and mistakes. The fear of making mistakes was the second main cause of FLA for the current investigation and findings confirm that, once participants were assured that mistakes were a normal part of interacting in an L2 and that L1-like output was neither necessary nor attainable for mutual understanding to occur, they had more positive feelings towards the online chats.

Hence, ample opportunities for L2 interactions are needed for students to modify negative feelings regarding their perception of FLA and to realise that successful communication can be achieved without NS-like accuracy and fluency. In addition, educational practitioners can ensure that learners are well prepared for communication by

demonstrating techniques and strategies students can use prior to the tasks, such as positive self-talk and practising similar tasks to a certain extent. Aside from positive self-talk, it seems that the creation of friendly environments and a community of learners, in which students can make real connections, also help to lower FLA.

6.1.2.6 The *interact* assessment

The current study aimed to examine collaborative L2 peer-to-peer interactions in an online environment. Findings regarding the interactional features of CMC chats have implications on how the *interact* assessment may be carried out more effectively in terms of students' ability to interact and the time-management and authenticity of the tasks. This research has shown ways to increase student engagement by providing student-centred, authentic and collaborative learning environments enhanced by technology and may serve as a model for educational professionals to assess speaking activities.

By focusing on student-centred activities, teachers' workload could be decreased, while student engagement, responsibility, and, consequently confidence rises. Although all interactions in this study were conducted during class time, mainly due to the specific recording requirements of both audio and video, there are ample possibilities for the use of CMC outside of the L2 classroom. Homework tasks could be assigned via CMC with a peer and students could work on speaking tasks or their *interact* assessments collaboratively across classes to ensure greater authenticity and spontaneity. Additionally, student-centred projects could include not only NNS discussions but also projects involving NSs. These interactions could be included in students' portfolios for NCEA assessment and the student-centred activities would free up teaching time and allow for more learner autonomy, while motivating students in connecting them with other L2 learners and NSs.

Moreover, the *interact* assessment requires authentic, unrehearsed L2 output, which can be difficult to achieve in the classroom. Findings of the current study suggest that conversations carried out via CMC give students the opportunity to engage in spontaneous L2 discourse that can serve as practice tasks but can also be used as evidence to succeed in the *interact* assessment. In collaborating with different classes and recording the exchanges, students can produce unrehearsed, spontaneous interactions, while still being able to select a range of evidence for their assessment. This supports the notion that teachers should allow students to hand in samples of their genuine L2 use for assessment, instead of regarding the assessments as a one-off activity that serves as an individually assessed test (East, 2015). Rather, students should be given ongoing opportunities to connect with other learners and engage in realistic conversations to facilitate SLA and to build interactional and

social skills, in order to cope in authentic speaking situations. This, in turn, is expected to make a positive impact on students' future performance in speaking assessments. This is confirmed by East's claim as follows:

If interact is to remain in its current form, stakeholders need to be supported in shifting understanding towards the validity of embedding assessments seamlessly within normal classroom work, thereby moving students' attention away from the high-stakes nature of the assessment and allowing the inclusion of evidence gathered from normal day-to-day activities. Teachers would also need to embrace the notion anticipated by the assessment developers that instances of interaction outside the classroom (e.g., an interaction taking place on a trip overseas and recorded on a mobile device such as a cell phone) should be accepted as evidence. (p. 115)

6.2 Limitations

There are several limitations to this study that are a consequence of the design of a small-scale, in-depth investigation. Access to participants was limited, since the study required Year 11 learners of German, who were enrolled in the NCEA pathway. This was therefore a small convenience sample of 21 learners.

The investigation focused on a short series of exchanges set within one academic term. This does not lend itself to conclusions about the long-term implications of videoconferencing in the language classroom. Future research is required to investigate whether regular online chats over an extended period have the potential to enhance successful negotiation routines and whether and how students maintain what they have acquired through NoM. Whilst CSs were employed to sustain conversations, further examination is necessary to study the effectiveness of these strategies on SLA.

Even though the present research has examined SP, this was not the main focus of the investigation and a new taxonomy has not been developed due to lack of frequency of the interactions investigated (four overall), the fact that SP is typically examined in online courses (the current study only used CMC as a classroom intervention and hence marks only the beginning of a virtual community of learners), and the unreliability of the video recording functions (the screen froze during several online chats, or the video was too fuzzy to clearly identify and check for indicators of SP).

Moreover, recommendations about long-term changes in students' attitudes and success both in classroom interactions and in subsequent NCEA interactions cannot be made, since the research project concentrated only on one year-level. This study did not include a comparison group and therefore judgments about participants' communication practices in different communication modes cannot be made.

Lastly, even though participants were able to reflect on their personal use of interactional strategies to some extent, the majority of students had difficulties expressing exactly how they felt and why they selected certain strategies. Specifically, they were unable to identify their own CSs use in the interviews. While this investigation aided participants to a degree in focusing their attention on interactional adjustments to improve L2 communication, it seems that student reflections could have been elicited closer to completion of each task in order to attempt to record student perceptions more accurately.

6.3 Suggestions for further research

Even though this research touched on the linguistic elements of SLA, the current study's main aim was to investigate interactional features of L2 peer-to-peer interactions. In future studies, linguistic effects might be explored in more detail, especially in the field of uptake and retention of vocabulary. In particular, further research might focus on learners' noticing and uptake after online discussions and potential long-term effects on their SLA regarding responses to corrective feedback.

This research project has surveyed student interactions in terms of participants' interactional resources, their social orientation towards each other and perceived feelings of FLA. However, each of these strands could be examined in more detail. Despite an attempt to select individual participants for a closer analysis, findings would be enriched by analysing how individual participants differ in terms of their selection of discourse strategies and perception of SP. In addition, this could be compared and contrasted to their feelings of anxiety related to interacting in an L2.

The findings show that students do indeed incorporate a variety of CSs into L2 peer-to-peer interactions. More research is needed on developing approaches to make L2 learners aware of these CS strategies. Additionally, how students incorporate them and whether CSs contribute to successful SLA could be examined.

To this end, it would be interesting for students to keep a diary of CSs in order to accurately record and review the use of these strategies. Just as Rourke et al. (2001) have done for text-based CMC, further research might establish reliable measures to examine SP within video interactions. Furthermore, future studies could compare the difference in SP as the tasks progress and establish on a quantitative level whether SP increases with more time spent on online-tasks.

The inclusion of voice, audio, group, and text chat in popular online applications such as Google and Skype brings with it opportunities to utilise several different modes for

language learning. Further research on how the inclusion of text chat and group discussions could aid one-to-one videoconferencing may add to our knowledge on how multimodal learning environments can enhance L2 learning and may provide further ways for students to collaborate in both speaking and writing.

The interactions in this investigation were conducted during class time due to the complex recording requirements. Another potential aspect to explore would be L2 learner conversations carried out outside of class time. It could be enriching to see how students benefit from student-centred speaking activities designed as curricular supplements.

Even though this study advocates research into CMC environments in their own right, a replication of the study with different groups, such as a group of multimodal chat, a group of video chat and a F2F group of L2 learners would provide comparisons in order to ascertain whether and how interactional patterns and FLA levels differ in the different communication modes. Whilst this research has concentrated on interactional resources, its findings would benefit from the addition of a valid and reliable oral-proficiency measuring instrument to determine students' progress more precisely.

Lastly, the study has revealed a new gap in the literature relating to listening skills in FLA. Most previous research was conducted in an effort to find out how different environments affect spoken output and anxiety related to the speaking situation, but the dual and interactive nature of communication with a need for well-developed listening and speaking skills has not been adequately described previously.

6.4 Concluding remarks

The literature review revealed a need for research to examine both interactional routines and speaking inhibitions in an authentic video environment, which the current study aimed to undertake. Participants were given the opportunity to engage in realistic conversations, in which they had to focus on their language input and output.

Therefore, participants benefited from this research by improving their interactional skills and fluency through the spontaneous use of the L2. Specifically, students' attention was steered towards discourse management and interpersonal skills. Moreover, the study provided a platform for students to form a community of learners, in which they could practise and rehearse language in a supportive, student-centred environment.

This investigation has provided a multidimensional perspective on discourse strategies and suggests that adolescent L2 learners, for the most part, negotiate meaning successfully in that they reach the reaction-to-response phase. Additionally, even though participants incorporated a wide range of CSs, findings revealed the need to raise learners'

Fostering peer interactions in online learning environments

awareness of discourse strategies to foster interactional competencies in dyadic peer-to-peer interactions. Furthermore, findings confirm that videoconferencing for regular verbal online chats can lower participants' anxiety levels and equip them with strategies to overcome speaking anxiety.

Findings of this intervention may contribute to more informed classroom practices in order to enhance the academic achievement of students by providing them with a wider array of opportunities to become more proficient communicatively and to succeed to the standard required for L2 qualifications. This research project may also be relevant to educational stakeholders in that it provides a theoretical framework for the inclusion of up-to-date, authentic, learner-centred speaking activities.

Turning back to the argument proposed in the introduction to the current investigation - that the ability to communicate effectively among peers in an L2 is central to SLA and that L2 learning is seen as the construction of meaning through interactive negotiation between L2 learners - it seems that the more opportunities students can get to engage in meaningful and authentic interactions to make L2 learning real and relevant, the more likely they are to become independent, connected and confident learners.

To conclude, the key argument of this thesis is that CMC, and videoconferencing in particular, allows L2 learners to collaborate and interact more easily in the L2, particularly in cooperation with other classes, and offers unique ways of connecting input and output, and attending to discourse management. Thus, this study has provided a lens for educational practitioners to explore and implement interaction practices via CMC and to plan future collaborations.

REFERENCES

- Abrams, Z. (2008). Sociopragmatic features of learner-to-learner computer-mediated communication. *CALICO Journal*, 26(1), 1–27. doi:10.11139/cj.26.1.1-27
- Abrams, Z. (2013). Say what?! L2 sociopragmatic competence in CMC: Skill transfer and development. *CALICO Journal*, 30(3), 423–455. doi:10.11139/cj.30.3.423-445
- Alderson, P., & Morrow, V. (2011). *The ethics of research with children and young people: A practical handbook* (2nd ed.). London, England: Sage.
- Aljaafreh, A., & Lantolf, J. P. (1994). Negative feedback as regulation and second language learning in the zone of proximal development. *The Modern Language Journal*, 78, 465–483. doi:10.2307/328585
- Andersen, P. (2007). *What is Web 2.0?: Ideas, technologies and implications for education*. Bristol, England: JISC. Retrieved from [http://21stcenturywalton.pbworks.com/f/What is Web 2.0.pdf](http://21stcenturywalton.pbworks.com/f/What%20is%20Web%202.0.pdf)
- Angelova, M., & Zhao, Y. (2014). Using an online collaborative project between American and Chinese students to develop ESL teaching skills, cross-cultural awareness and language skills. *Computer Assisted Language Learning*, (ahead of print), 1–19. doi:10.1080/09588221.2014.907320
- Antón, M. (2015). Shifting trends in the assessment of classroom interaction. In N. Markee (Ed.), *The handbook of classroom discourse and interaction* (pp. 74–89). Hoboken, NJ: Wiley-Blackwell. doi:10.1002/9781118531242.ch5
- Arnold, M. N. (2002). *Computer-mediated communication: Writing to speak without foreign language anxiety? (Doctoral dissertation)*. University of Texas, Austin. Retrieved from ProQuest Dissertations & Theses. (Publication No. AAT 3101195)
- Arnold, M. N. (2007). Reducing foreign language communication apprehension with computer-mediated communication: A preliminary study. *System*, 35(4), 469–486.

doi:10.1016/j.system.2007.07.002

- Baralt, M., & Gurzynski-Weiss, L. (2011). Comparing learners' state anxiety during task-based interaction in computer-mediated and face-to-face communication. *Language Teaching Research*, 15(2), 201–229. doi:10.1177/0265532210388717
- Beushausen, U. (2009). *Sprechangst*. Idstein, Germany: Schulz-Kirchner.
- Blake, R. J. (2000). Computer mediated communication: A window on L2 Spanish interlanguage. *Language Learning & Technology*, 4(1), 120–136. Retrieved from <http://llt.msu.edu/vol4num1/blake/default.html>
- Blake, R. J. (2005). Bimodal CMC: The glue of language learning at a distance. *CALICO Journal*, 22(3), 497–511. doi:10.11139/cj.22.3.497-511
- Blaurock, C. A. (2011). *Skype™: A portal into the 21st century in a secondary spanish classroom. (Doctoral dissertation)*. Kent State University, USA. Retrieved from ProQuest Dissertations and Theses. (UMI No. 3459154)
- Boudah, D. J. (2010). *Conducting educational research: Guide to completing a major project*. London; England: Sage.
- Bower, J., & Kawaguchi, S. (2011). Negotiation of meaning and corrective feedback in Japanese/English eTandem. *Language Learning & Technology*, 15(1), 41–71. Retrieved from <http://llt.msu.edu/issues/february2011/bowerkawaguchi.pdf>
- Bowles, M. A., & Adams, R. J. (2015). An interactionist approach to learner-learner interaction in second and foreign language classrooms. In N. Markee (Ed.), *The handbook of classroom discourse and interaction* (pp. 198–212). Hoboken, NJ: Wiley-Blackwell. doi:10.1002/9781118531242.ch12
- Brown, H. D. (2007). *Principles of language learning and teaching* (5th ed.). New York, NY: Pearson.
- Bueno Alastuey, M. C. (2011). Perceived benefits and drawbacks of synchronous voice-based computer-mediated communication in the foreign language classroom. *Computer Assisted Language Learning*, 24(5), 419–432. doi:10.1080/09588221.2011.574639
- Bueno Alastuey, M. C. (2012). Focus on form and negotiation of meaning in synchronous voice-based computer mediated communication: Effect of dyad. *Procedia-Social and Behavioral Sciences*, 34, 39–44. doi:10.1016/j.sbspro.2012.02.009
- Canale, M. (1983). From communicative competence to communicative language pedagogy. In J. Richards & R. Schmidt (Eds.), *Language and Communication* (pp. 2–27). London, England: Longman.
- Canale, M., & Swain, M. (1980). Theoretical bases of communicative approaches to second language teaching and testing. *Applied Linguistics*, 1(1), 1–47. Retrieved from <http://ibatefl.com/wp-content/uploads/2012/08/CLT-Canale-Swain.pdf>

- Chapelle, C. (2005). Interactionist SLA theory in CALL research. In J. Egbert & G. Petrie (Eds.), *CALL research perspectives* (pp. 53–64). Mahwah, NJ: Lawrence Erlbaum.
- Chapelle, C. (2009). The relationship between second language acquisition theory and computer-assisted language learning. *The Modern Language Journal*, 93(S1), 741–753. doi:10.1111/j.1540-4781.2009.00970.x
- Cochran-Smith, M., & Lytle, S. L. (2009). *Inquiry as stance: Practitioner research for the next generation*. New York, NY: Teachers College Press.
- Council of Europe. (2001). *Common European Framework of Reference for languages: Learning, teaching, assessment*. Cambridge, England: Cambridge University Press.
- Craig, D. A., & Kim, J. (2012). Performance and anxiety in videoconferencing. In F. Zhang (Ed.), *Computer-enhanced and mobile-assisted language learning: Emerging issues and trends* (pp. 137–157). Hershey, PA: IGI. doi:10.4018/978-1-61350-065-1
- Creswell, J. W. (2007). *Educational research: planning, conducting, and evaluating quantitative and qualitative research* (3rd ed.). Upper Saddle River, NJ: Pearson.
- Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage.
- Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). Advanced mixed methods research designs. In C. Teddlie & A. Tashakkori (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 209–240). Thousand Oaks, CA: Sage.
- Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. Thousand Oaks, CA: Sage.
- Darhower, M. (2002). Interactional features of synchronous computer-mediated communication in the intermediate L2 class: A sociocultural case study. *CALICO Journal*, 19(2), 249–277. doi:10.1558/cj.v19i2.249-277
- De Freitas, S., & Neumann, T. (2009). Pedagogic strategies supporting the use of synchronous audiographic conferencing: A review of the literature. *British Journal of Educational Technology*, 40(6), 980–998. doi:10.1111/j.1467-8535.2008.00887.x
- de los Arcos, B. (2010). *Emotion in online distance language learning: Learners' appraisal of regret and pride in synchronous audiographic conferencing. (Unpublished Doctoral dissertation)*. The Open University, England, Milton Keynes.
- de los Arcos, B., Coleman, J. A., & Hampel, R. (2009). Learners' anxiety in audiographic conferences: A discursive psychology approach to emotion talk. *ReCALL*, 21(01), 3–17. doi:10.1017/S0958344009000111
- Develotte, C., Guichon, N., & Vincent, C. (2010). The use of the webcam for teaching a foreign language in a desktop videoconferencing environment. *ReCALL*, 22(3), 293–312. doi:10.1017/S0958344010000170
- Dooly, M. (2015). Learning to e-function in a brave new world: Language teachers' roles in educating for the future. In A. Turula, B. Mikolajewska, & D. Stanulewicz (Eds.), *Insights*

into technology enhanced language pedagogy (pp. 11–25). Bern, Switzerland: Lang.

- Dörnyei, Z. (1995). On the teachability of communication strategies. *TESOL Quarterly*, 29(1), 55. doi:10.2307/3587805
- Dörnyei, Z., & Scott, M. L. (1997). Communication strategies in a second language: Definitions and taxonomies. *Language Learning*, 47(1), 173–210. doi:10.1111/0023-8333.51997005
- Dunlap, J. C., & Lowenthal, P. R. (2014). The power of presence: Our quest for the right mix of social presence in online courses. In A. P. Mizell & A. A. Piña (Eds.), *Real life distance education: Case studies in practice* (pp. 41–66). Greenwich, CT: Information Age.
- East, M. (2011). Assessing students' interaction in the target language: Exploring the potential of the interact standard in year 11. *The New Zealand Language Teacher*, 37, 58–65. Retrieved from <http://search.informit.com.au/fullText;dn=785654528060228;res=IELHSS>
- East, M. (2012). *Task-based language teaching from the teachers' perspective: Insights from New Zealand*. Amsterdam and Philadelphia, PA: Benjamins.
- East, M. (2015). Coming to terms with innovative high-stakes assessment practice: Teachers' viewpoints on assessment reform. *Language Testing*, 32(1), 101–120. doi:10.1177/0265532214544393
- East, M. (in press). *Assessing foreign language students' spoken proficiency: Stakeholder perspectives on assessment innovation*. Singapore: Springer.
- Ellis, R. (2001). Introduction: Investigating form -focused instruction. *Language Learning*, 51(1), 1–46. doi:10.1111/j.1467-1770.2001.tb00013.x
- Ellis, R. (2003). *Task-based language learning and teaching*. Oxford, England: Oxford University Press.
- Ellis, R. (2005). *Instructed second language acquisition: A literature review*. Wellington, New Zealand: Ministry of Education.
- Ellis, R. (2009). Task-based language teaching: sorting out the misunderstandings. *International Journal of Applied Linguistics*, 19(3), 221–246. doi:10.1111/j.1473-4192.2009.00231.x
- Erlam, R. M., Sakui, K., & Ellis, R. (2006). *Instructed second language acquisition: Case studies*. Wellington, New Zealand: Ministry of Education.
- Færch, C., & Kasper, G. (1983). *Strategies in interlanguage communication*. London, England: Longman.
- Foster, P., & Ohta, A. S. (2005). Negotiation for meaning and peer assistance in second language classrooms. *Applied Linguistics*, 26(3), 402–430. doi:10.1093/applin/ami014
- Gass, S. M. (2003). Input and interaction. In M. Long & C. Doughty (Eds.), *The handbook of*

- second language acquisition* (pp. 224–255). Oxford, England: Blackwell. doi:10.1002/9780470756492.ch9
- Gass, S. M. (2012, September 3). Interactionist perspectives on second language acquisition. *Oxford Handbooks Online*. doi:10.1093/oxfordhb/9780195384253.013.0015
- Gass, S. M. (2015). Comprehensible input and output in classroom interaction. In N. Markee (Ed.), *The handbook of classroom discourse and interaction* (pp. 182–197). Hoboken, NJ.: Wiley-Blackwell. doi:10.1002/9781118531242.ch11
- Gass, S. M., Mackey, A., & Pica, T. (1998). The role of input and interaction in second language acquisition: Introduction to the special issue. *The Modern Language Journal*, 82(3), 299–307. doi:10.1111/j.1540-4781.1998.tb01206.x
- Gass, S. M., & Selinker, L. (2008). *Second language acquisition: An introductory course*. London, England: Routledge.
- Gass, S. M., & Varonis, E. M. (1984). The effect of familiarity on the comprehensibility of nonnative speech. *Language Learning*, 34(1), 65–87. doi:10.1111/j.1467-1770.1984.tb00996.x
- Giles, A., Heidemann, A., & Shepherd, C. (2001). *Anstoss GCSE Student's Book: Pupil's Book*. London, England: Hodder Education.
- González-Lloret, M. (2011). Conversation analysis of computer-mediated communication. *CALICO Journal*, 28(2), 308–325. doi:10.1558/cj.v28i2.308-325
- Gregersen, T. S., & Horwitz, E. K. (2002). Language learning and perfectionism: Anxious and non anxious language learners' reactions to their own oral performance. *The Modern Language Journal*, 86(3), 562–570. doi:10.1111/1540-4781.00161
- Grümpel, C., Stoll, P., & Cifuentes, J. L. (2014). L3-task: Language acquisition in a multilingual context: Blended tandems, L3-German/Spanish and a common second language. *Revista Española de Lingüística Aplicada*, 27(2), 382–404. doi:10.1075/resla.27.2.07gru
- Gruson, B., & Barnes, F. (2012). Case study investigation of CMC with young language learners. *Journal of E-Learning and Knowledge Society*, 8(3), 79–90. Retrieved from http://je-lks.org/ojs/index.php/Je-LKS_EN/article/viewFile/644/643
- Guichon, N. (2010). Preparatory study for the design of a desktop videoconferencing platform for synchronous language teaching. *Computer Assisted Language Learning*, 23(2), 169–182. doi:10.1080/09588221003666255
- Gunawardena, C. N., & Zittle, F. J. (2009). Social presence as a predictor of satisfaction within a computer-mediated conferencing environment. *American Journal of Distance Education*, 11(3), 8–26. doi:10.1080/08923649709526970
- Hampel, R. (2006). Rethinking task design for the digital age: A framework for language teaching and learning in a synchronous online environment. *ReCALL*, 18(01), 105. doi:10.1017/S0958344006000711

- Hampel, R., Felix, U., Hauck, M., & Coleman, J. A. (2005). Complexities of learning and teaching languages in a real-time audiographic environment. *German as a Foreign Language*, 3, 1–30. Retrieved from http://www.gfl-journal.de/3-2005/hampel_felix_hauck_coleman.html
- Hampel, R., & Hauck, M. (2006). Computer-mediated language learning: Making meaning in multimodal virtual learning spaces. *The JALT CALL Journal*, 2(2), 3–18. Retrieved from http://oro.open.ac.uk/5418/1/Hampel_%252526_Hauck.pdf
- Hampel, R., & Stickler, U. (2012). The use of videoconferencing to support multimodal interaction in an online language classroom. *ReCALL*, 24(02), 116–137. doi:10.1017/S095834401200002X
- Hatch, E. (1978). *Second language acquisition: A book of readings*. Rowley, MA: Newbury.
- Hauck, M., & Hurd, S. (2005). Exploring the link between language anxiety and learner self-management in open language learning contexts. *European Journal of Open, Distance and E-Learning* II, 2005(2), n.p. Retrieved from http://www.eurodl.org/materials/contrib/2005/Mirjam_Hauck.htm
- Heiser, S., Stickler, U., & Furnborough, C. (2013). Ready, steady, speak-online: Student training in the use of an online synchronous conferencing tool. *Calico Journal*, 30(2), 226–251. doi:org/10.11139/cj.30.2.226-251
- Hesse-Biber, S. N. (2010). *Mixed methods research: Merging theory with practice*. New York, NY: Guilford Press.
- Horwitz, E. K. (1986). Preliminary evidence for the reliability and validity of a foreign language anxiety scale. *Tesol Quarterly*, 20(3), 559–562. doi:10.2307/3586302
- Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign language classroom anxiety. *The Modern Language Journal*, 70(2), 125–132. doi:10.1111/j.1540-4781.1986.tb05256.x
- Jacoby, S., & Ochs, E. (1995). Co-construction: An introduction. *Research on Language & Social Interaction*, 28(3), 171–183. doi:10.1207/s15327973rlsi2803_1
- Jauregi, K., de Graaff, R., van den Bergh, H., & Kriz, M. (2012). Native/non-native speaker interactions through video-web communication: A clue for enhancing motivation? *Computer Assisted Language Learning*, 25(1), 1–19. doi:10.1080/09588221.2011.582587
- Jebali, A. (2014). Does CMC reduce foreign language classroom anxiety? In P. Zaphiris & A. Ioannou (Eds.), *Learning and collaboration technologies. Technology-rich environments for learning and collaboration* (pp. 277–287). Cham, Switzerland: Springer. doi:10.1007/978-3-319-07485-6_28
- Jepson, K. (2005). Conversations - and negotiated interaction - in text and voice chat rooms. *Language Learning & Technology*, 9(3), 79–98. Retrieved from <http://www.llt.msu.edu/vol9num3/jepson/default.html>

- Johnson, R. B., & Onwuegbuzie, A. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14–26. doi:10.3102/0013189X033007014
- Kehrwald, B. (2008). Understanding social presence in text-based online learning environments. *Distance Education*, 29(1), 89–106. doi:10.1080/01587910802004860
- Kehrwald, B. (2010). Being online: Social presence as subjectivity in online learning. *London Review of Education*, 8(1), 39–50. doi:10.1080/14748460903557688
- Kenning, M. M. (2010). Collaborative scaffolding in online task-based voice interactions between advanced learners. *ReCALL*, 22(02), 135–151. doi:10.1017/S0958344010000042
- Kim, H. Y. (2014). Learning opportunities in synchronous computer-mediated communication and face-to-face interaction. *Computer Assisted Language Learning*, 27(1), 26–43. doi:10.1080/09588221.2012.692386
- Kim, S. (2009). Questioning the stability of foreign language classroom anxiety and motivation across different classroom contexts. *Foreign Language Annals*, 42(1), 138–157. doi:10.1111/j.1944-9720.2009.01012.x
- Kinginger, C. (2002). Defining the zone of proximal development in US foreign language education. *Applied Linguistics*, 23(2), 240–261. doi:10.1093/applin/23.2.240
- Kitade, K. (2000). L2 learners' discourse and SLA theories in CMC: Collaborative interaction in internet chat. *Computer Assisted Language Learning*, 13(2), 143–166. doi:10.1076/0958-8221(200004)13:2;1-D;FT143
- Ko, C.-J. (2012). A case study of language learners' social presence in synchronous CMC. *ReCALL*, 24(01), 66–84. doi:10.1017/S0958344011000292
- Kost, C. R. (2008). Use of communication strategies in a synchronous CMC environment. In S. Magnan (Ed.), *Mediating discourse online* (pp. 153–189). Amsterdam, Netherlands: Benjamins.
- Krashen, S. D. (1985). *The input hypothesis: Issues and implications*. London, England: Longman.
- Lantolf, J. P. (2004). Sociocultural theory and second and foreign language learning: An overview of sociocultural theory. In K. van Esch & O. S. John (Eds.), *New insights into foreign language learning and teaching* (Vol. 9, pp. 13–34). Frankfurt am Main, Germany: Lang.
- Lantolf, J. P. (2012). Sociocultural theory: A dialectical approach to L2 research. In S. M. Gass & A. Mackey (Eds.), *Handbook of second language acquisition* (pp. 57–72). New York, NY: Routledge.
- Lantolf, J. P., & Poehner, M. (2014). *Sociocultural theory and the pedagogical imperative in L2 education: Vygotskian praxis and the research/practice divide*. New York, NY: Routledge.

- Lantolf, J. P., & Thorne, S. L. (2006). *Sociocultural theory and the genesis of second language development*. Oxford, England: Oxford University Press.
- Lapkin, S., Swain, M., & Smith, M. (2002). Reformulation and the learning of French pronominal verbs in a Canadian French immersion context. *The Modern Language Journal*, 86(4), 485–507. doi:10.1111/1540-4781.00157
- Lawson, T., Comber, C., Gage, J., & Cullum-Hanshaw, A. (2010). Images of the future for education? Videoconferencing: A literature review. *Technology, Pedagogy and Education*, 19(3), 295–314. doi:10.1080/1475939X.2010.513761
- Lee, L. (2001). Online interaction: Negotiation of meaning and strategies used among learners of Spanish. *ReCALL*, 13(02), 232–244. doi:10.1017/S0958344001000829a
- Lee, L. (2002). Synchronous online exchanges: A study of modification devices on non-native discourse. *System*, 30(3), 275–288. doi:10.1017/S0958344001000829a
- Lee, L. (2004). Learners' perspectives on networked collaborative interaction with native speakers of Spanish in the US. *Language Learning & Technology*, 8(8), 83–100. Retrieved from <http://llt.msu.edu/vol8num1/lee/default.html>
- Lee, L. (2007). Fostering second language oral communication through constructivist interaction in desktop video conferencing. *Foreign Language Annals*, 40(4), 635–649. doi:10.1017/S0958344009990231
- Lee, L. (2008). Focus-on-form through collaborative scaffolding in expert-to-novice online interaction. *Language Learning & Technology*, 12(3), 53–72.
- Leeser, M. (2004). Learner proficiency and focus on form during collaborative dialogue. *Language Teaching Research*, 8(1), 55–81. doi:10.1191/1362168804lr134oa
- Levy, M. (1997). *Computer-assisted language learning: Context and conceptualization*. Oxford, England: Oxford University Press.
- Levy, M., & Stockwell, G. (2006). *CALL dimensions: Options and issues in computer-assisted language learning*. Mahwah, NJ: Routledge.
- Liddicoat, A. J. (2011). *An introduction to conversation analysis*. London, England: Continuum.
- Lin, H. (2014). Establishing an empirical link between computer-mediated communication and SLA: A meta-analysis. *Language Learning & Technology*, 18(3), 120–147. Retrieved from <http://llt.msu.edu/issues/october2014/lin.pdf>
- Liu, M., Moore, Z., Graham, L., & Lee, S. (2002). A look at the research on computer-based technology use in second language learning: A review of the literature from 1990–2000. *Journal of Research on Technology in Education*, 34, 250–273. Retrieved from <http://www.cal.org/resources/digest/0311leloup.html>
- Lodico, M. G., Spaulding, D. T., & Voegtle, K. H. (2010). *Methods in educational research: From theory to practice*. San Francisco, CA: Jossey-Bass.

- Loewen, S. (2005). Incidental focus on form and second language learning. *Studies in Second Language Acquisition*, 27, 361–386. doi:10.1017/S0272263105050163
- Long, M. (1983). Native speaker/non-native speaker conversation and the negotiation of comprehensible input. *Applied Linguistics*, 4(2), 126–141. doi:10.1093/applin/4.2.126
- Long, M. (1996). The role of the linguistic environment in second language acquisition. In W. Ritchie & T. K. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 413–468). New York, NY: Academic Press.
- Long, M., & Robinson, P. (1998). Focus on form: Theory, research, and practice. In J. Williams & C. Doughty (Eds.), *Focus on form in classroom second language acquisition* (pp. 15–41). Cambridge, NY: Cambridge University Press.
- Lowenthal, P. R. (2010). The evolution and influence of social presence theory on online learning. In S. Dasgupta (Ed.), *Social Computing: Concepts, Methodologies, Tools and Applications* (pp. 113–128). Hershey, PA: IGI.
- Luppici, R. (2007). Review of computer mediated communication research for education. *Instructional Science*, 35, 141–185. doi:10.1007/s11251-006-9001-6
- Ma, Y., & Kawaguchi, S. (2012). Corrective feedback, negotiation of meaning and grammar development: Learner-learner and learner-native speaker interaction in ESL. *Open Journal of Modern Linguistics*, 2(2), 57–70. doi:10.4236/ojml.2012.22008
- MacIntyre, P. (2007). Willingness to communicate in the second language: Understanding the decision to speak as a volitional process. *The Modern Language Journal*, 91(4), 564–576. doi:10.1111/j.1540-4781.2007.00623.x
- MacIntyre, P., & Gardner, R. C. (1991). Language anxiety: Its relationship to other anxieties and to processing in native and second languages. *Language Learning*, 41(4), 513–534. doi:10.1111/j.1467-1770.1991.tb00691.x
- Mackey, A., & Goo, J. (2012). Interaction approach in second language acquisition. In C. Chapelle (Ed.), *The Encyclopedia of Applied Linguistics* (pp. 2748–2758). Oxford, England: Wiley-Blackwell. doi:10.1002/9781405198431.wbeal0551
- Maleki, A. (2010). Techniques to teach communication strategies. *Journal of Language Teaching and Research*, 1(5), 640–646. doi:10.4304/jltr.1.5.640-646
- Malmqvist, A. (2005). How does group discussion in reconstruction tasks affect written language output? *Language Awareness*, 14(2-3), 128–141. doi:10.1080/09658410508668829
- Mazur, J. M. (2004). Conversation analysis for educational technologists: Theoretical and methodological issues for researching the structures, processes and meaning of on-line talk. In D. H. Jonassen (Ed.), *Handbook of research on educational communications and technology* (Vol. 2, pp. 1073–1098). Hillsdale, NJ: Lawrence Erlbaum.
- McMillan, J. H., & Wergin, J. F. (2006). Introduction to reading educational research. In J. H. McMillan & J. F. Wergin (Eds.), *Understanding and evaluating educational research* (3rd

ed., pp. 1–12). Upper Saddle River, NJ: Pearson.

- McNeil, L. (2014a). Ecological affordance and anxiety in an oral asynchronous computer-mediated environment. *Language, Learning & Technology*, 18(1), 142–159. Retrieved from <http://llt.msu.edu/issues/february2014/mcneil.pdf>
- McNeil, L. (2014b). Integrating computer-mediated communication strategy instruction. *Computer Assisted Language Learning*, (ahead of print), 1–20. doi:10.1080/09588221.2014.935439
- Mercer, N. (2005). Sociocultural discourse analysis: Analysing classroom talk as a social mode of thinking. *Journal of Applied Linguistics*, 1, 137–168. Retrieved from <http://www.equinoxpub.com/JAL/article/viewArticle/1443>
- Mercer, N. (2010). The analysis of classroom talk: Methods and methodologies. *The British Journal of Educational Psychology*, 80(1), 1–14. doi:10.1348/000709909x479853
- Ministry of Education. (2007). *The New Zealand Curriculum*. Wellington, New Zealand: Learning Media Limited.
- Ministry of Education. (2011). What's new or different? Retrieved July 27, 2012, from <http://seniorsecondary.tki.org.nz/Learning-languages/What-s-new-or-different>
- Nakatani, Y. (2005). The effects of awareness-raising training on oral communication strategy use. *The Modern Language Journal*, 89(1), 76–91. doi:10.1111/j.0026-7902.2005.00266.x
- Nakatani, Y. (2006). Developing an oral communication strategy inventory. *The Modern Language Journal*, 90(2), 151–168. doi:10.1111/j.1540-4781.2006.00390.x
- Nakatani, Y. (2010). Identifying strategies that facilitate EFL learners' oral communication: A classroom study using multiple data collection procedures. *The Modern Language Journal*, 94(1), 116–136. doi:10.1111/j.1540-4781.2009.00987.x
- Neuman, W. L. (2006). *Social research methods: Qualitative and quantitative approaches* (6th ed.). Boston, MA: Pearson.
- O'Dowd, R. (2007). Evaluating the outcomes of online intercultural exchange. *ELT Journal*, 61(2), 144–152. doi:10.1093/elt/ccm007
- O'Dowd, R. (2010). Online foreign language interaction: Moving from the periphery to the core of foreign language education? *Language Teaching*, 44(03), 368–380. doi:10.1017/S0261444810000194
- O'Rourke, B. (2005). Form-focused interaction in online tandem learning. *CALICO Journal*, 22(3), 433–466. doi:10.11139/cj.22.3.433-466
- Ohta, A. S. (2000). Rethinking interaction in SLA: Developmentally appropriate assistance in the zone of proximal development and the acquisition of L2 grammar. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 51–77). Oxford, England: Oxford University Press.

- Oliver, R. (2002). The patterns of negotiation for meaning in child interactions. *The Modern Language Journal*, 86(1), 97–111. doi:10.1111/1540-4781.00138
- Oliver, R., & Philp, J. (2014). *Focus on oral interaction*. Oxford, England: Oxford University Press.
- Onwuegbuzie, A., & Collins, K. (2007). A typology of mixed methods sampling designs in social science research. *The Qualitative Report*, 12(2), 281–316. Retrieved from <http://www.nova.edu/ssss/QR/QR12-2/onwuegbuzie2.pdf>
- Onwuegbuzie, A., & Leech, N. (2004). Enhancing the interpretation of “significant” findings: The role of mixed methods research. *The Qualitative Report*, 9(4), 770–792. Retrieved from <http://carbon.videolectures.net/v005/de/32jy3suaxgv6xtmtvivthk7nm7wtroi7.pdf>
- Ozvire, I., & Herrington, J. (2011). Authentic activities in language learning: Bringing real world relevance to classroom activities. In T. Bastiaens & M. Ebner (Eds.), *Proceedings of EdMedia: World Conference on Educational Media and Technology 2011* (pp. 1423–1428). Chesapeake, VA: AACE.
- Peterson, M. (2009). Learner interaction in synchronous CMC: A sociocultural perspective. *Computer Assisted Language Learning*, 22(4), 301–321. doi:10.1080/09588220903184690
- Phillips, M. (2010). The perceived value of videoconferencing with primary pupils learning to speak a modern language. *Language Learning Journal*, 38(2), 221–238. doi:10.1080/09571731003790532
- Philp, J., Adams, R., & Iwashita, N. (2014). *Peer interaction and second language learning*. New York, NY: Routledge.
- Philp, J., & Tognini, R. (2009). Language acquisition in foreign language contexts and the differential benefits of interaction. *IRAL-International Review of Applied Linguistics in Language Teaching*, 47(3-4), 245–266. Retrieved from <http://www.degruyter.com/view/j/iral.2009.47.issue-3/iral.2009.011/iral.2009.011.xml>
- Pica, T. (1994). Research on negotiation: What does it reveal about second-language learning conditions, processes, and outcomes? *Language Learning*, 44(3), 493–527. doi:10.1111/j.1467-1770.1994.tb01115.x
- Pica, T., Lincoln-Porter, F., Paninos, D., & Linnell, J. (1996). Language learners’ interaction: How does it address the input, output, and feedback needs of L2 learners? *TESOL Quarterly*, 30(1), 59. doi:10.2307/3587607
- Poza, M. I. (2011). The effects of asynchronous computer voice conferencing on L2 learners’ speaking anxiety. *The International Association for Language Learning Technology Journal*, 41(1), 33–63. Retrieved from http://www.iallt.org/iallt_journal/the_effects_of_asynchronous_computer_voice_conferencing_on_l2_learners_speaking_anxiet

- Radnor, H. (2001). *Researching your professional practice: Doing interpretive research*. Buckingham, England: Open University Press.
- Rajamanickam, M. (2001). *Statistical methods in psychological and educational research*. New Delhi, India: Concept.
- Reinhardt, J. (2008). Negotiation meaningfulness: An enhanced perspective on interaction in computer-mediated foreign language learning environments. In S. Magnan (Ed.), *Mediating discourse online* (3rd ed., pp. 219–244). Amsterdam, Netherlands: Benjamins.
- Révész, A. (2012). Coding second language data validly and reliably. In A. Mackey & S. M. Gass (Eds.), *Research methods in second language acquisition: A practical guide* (pp. 203–221). Chichester, England: Wiley-Blackwell.
- Richards, J. (2001). *Curriculum development in language teaching*. Cambridge, England: Cambridge University Press.
- Rouhshad, A., Wigglesworth, G., & Storch, N. (2015). The nature of negotiations in face-to-face versus computer-mediated communication in pair interactions. *Language Teaching Research*, (ahead of print), 1–21. doi:10.1177/1362168815584455
- Rourke, L., Anderson, T., Garrison, D. R., & Archer, W. (2001). Assessing social presence in asynchronous text-based computer conferencing. *International Journal of E-Learning & Distance Education*, 14(2), 50–71. Retrieved from <http://www.ijede.ca/index.php/jde/article/view/153/341>
- Sarré, C. (2011). Computer-mediated negotiated interactions: How is meaning negotiated in discussion boards, text chat and videoconferencing? In L. B. Sylvie Thouësny (Ed.), *Second language teaching and learning with technology: Views of emergent researchers* (pp. 189–210). Dublin, Ireland: Research-Publishing.net.
- Satar, H. M. (2011). *Social presence in online multimodal communication: A framework to analyse online interactions between language learners. (Doctoral dissertation)*. The Open University, Milton Keynes, England. Retrieved from <http://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.533112>
- Satar, H. M., & Özdener, N. (2008). The effects of synchronous CMC on speaking proficiency and anxiety: Text versus voice chat. *The Modern Language Journal*, 92(4), 595–613. doi:10.1111/j.1540-4781.2008.00789.x
- Seedhouse, P. (2004). *The interactional architecture of the language classroom: A conversation analysis perspective*. Oxford, England: Wiley.
- Sheen, Y. (2008). Recasts, language anxiety, modified output, and L2 learning. *Language Learning*, 58(4), 835–874. doi:10.1111/j.1467-9922.2008.00480.x
- Short, J., Williams, E., & Christie, B. (1976). *The social psychology of telecommunications*. London, England: Wiley.

- Smith, B. (2003a). Computer-mediated negotiated interaction: An expanded model. *The Modern Language Journal*, 87(1), 38–57. doi:10.1111/1540-4781.00177
- Smith, B. (2003b). The use of communication strategies in computer-mediated communication. *System*, 31(1), 29–53. doi:10.1016/s0346-251x(02)00072-6
- Storch, N. (2001). How collaborative is pair work? ESL tertiary students composing in pairs. *Language Teaching Research*, 5(1), 29–53. doi:10.1177/136216880100500103
- Storch, N. (2002). Patterns of interaction in ESL pair work. *Language Learning*, 52(1), 119–158. doi:10.1111/1467-9922.00179
- Swain, M. (1985). Communicative competence: Some roles of comprehensible input and output in its development. In S. M. Gass & C. Madden (Eds.), *Input in second language acquisition* (pp. 235–253). Rowley, MA: Newbury.
- Swain, M. (1995). Three functions of output in second language learning. In G. Cook & B. Seidlehofer (Eds.), *Principle and practice in applied linguistics: Studies in honour of HG Widdowson* (pp. 125–144). Oxford, England: Oxford University Press.
- Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 97–114). Oxford, England: Oxford University Press.
- Swain, M. (2005). The output hypothesis: Theory and research. In E. Hinkel (Ed.), *Handbook of research in second language teaching and learning* (pp. 471–484). Mahwah, NJ: Lawrence Erlbaum.
- Swain, M., & Lapkin, S. (1995). Problems in output and the cognitive processes they generate: A step towards second language learning. *Applied Linguistics*, 16(3), 371–391. doi:10.1093/applin/16.3.371
- Swain, M., & Lapkin, S. (2002). Talking it through: Two French immersion learners' response to reformulation. *International Journal of Educational Research*, 37(3-4), 285–304. doi:10.1016/S0883-0355(03)00006-5
- Swan, K., & Shih, L. F. (2005). On the nature and development of social presence in online course discussions. *Journal of Asynchronous Learning Networks*, 9(3), 115–136. Retrieved from http://www.academia.edu/399290/On_the_Nature_and_Development_of_Social_Presence_in_Online_Discussions
- Sykes, J. M. (2005). Synchronous CMC and pragmatic development: Effects of oral and written chat. *CALICO Journal*, 22(3), 399–431. doi:10.11139/cj.22.3.399-431
- Szeto, E., & Cheng, A. Y. (2014). Towards a framework of interactions in a blended synchronous learning environment: What effects are there on students' social presence experience? *Interactive Learning Environments*, (ahead of print), 1–17. doi:10.1080/10494820.2014.881391
- Tarone, E. (1981). Some thoughts on the notion of communication strategy. *TESOL*

Quarterly, 15(3), 285–295. doi:10.2307/3586754

- Tashakkori, A., & Teddlie, C. (2010). *Sage handbook of mixed methods in social & behavioral research*. Thousand Oaks, CA: Sage.
- Teddlie, C., & Yu, F. (2007). Mixed methods sampling: A typology with examples. *Journal of Mixed Methods Research*, 1(1), 77–100. doi:10.1177/2345678906292430
- ten Have, P. (2007). *Doing conversation analysis*. Thousand Oaks, CA: Sage.
- Terrell, S. R. (2012). Mixed-methods research methodologies. *Qualitative Report*, 17(1), 254–280. Retrieved from <http://nsuworks.nova.edu/tqr/vol17/iss1/14>
- Thorne, S. L., & Black, R. W. (2007). Language and literacy development in computer-mediated contexts and communities. *Annual Review of Applied Linguistics*, 27, 133–160. doi:10.1017/S0267190508070074
- Tian, J., & Wang, Y. (2010). Taking language learning outside the classroom: Learners' perspectives of eTandem learning via Skype. *Innovation in Language Learning and Teaching*, 4(3), 181–197. doi:10.1080/17501229.2010.513443
- Tognini, R., Philp, J., & Oliver, R. (2010). Rehearsing, conversing, working it out: Second language use in peer interaction. *Australian Review of Applied Linguistics*, 33(3), 28.1–28.25. doi:10.2104/ara.v33i3.2060
- Toyoda, E., & Harrison, R. (2002). Categorization of text chat communication between learners and native speakers of Japanese. *Language Learning & Technology*, 6(1), 82–99. Retrieved from <http://www.llt.msu.edu/vol6num1/toyoda/default.html>
- Tu, C.-H. (2000). On-line learning migration: from social learning theory to social presence theory in a CMC environment. *Journal of Network and Computer Applications*, 23(1), 27–37. doi:10.1006/jnca.1999.0099
- Tu, C.-H., & McIsaac, M. (2002). The relationship of social presence and interaction in online classes. *American Journal of Distance Education*, 16(3), 131–150. doi:10.1207/S15389286AJDE1603_2
- Van den Branden, K. (2006). Introduction: Task-based language teaching in a nutshell. In K. Van den Branden (Ed.), *Task-based language education: From theory to practice* (pp. 1–16). Cambridge, England: Cambridge University Press.
- van der Zwaard, R., & Bannink, A. (2014). Video call or chat? Negotiation of meaning and issues of face in telecollaboration. *System*, 44, 137–148. doi:10.1016/j.system.2014.03.007
- Van Deusen-Scholl, N. (2008). Online discourse strategies: a longitudinal study of computer-mediated foreign language learning. In S. Magnan (Ed.), *Mediating discourse online* (pp. 191–217). Amsterdam, Netherlands: Benjamins.
- Varonis, E. M., & Gass, S. M. (1985). Non-native/non-native conversations: A model for negotiation of meaning. *Applied Linguistics*, 6(1), 71–90. doi:10.1093/applin/6.1.71

- Vygotsky, L. S. (1978). *Mind in society*. Cambridge, MA: Harvard University Press.
- Wang, S., & Vásquez, C. (2012). Web 2.0 and second language learning: What does the research tell us? *CALICO Journal*, 29(3), 412–430. doi:10.1558/cj.v29i3.412-430
- Wang, Y. (2004). Distance language learning: Interactivity and fourth-generation internet-based videoconferencing. *CALICO Journal*, 21(2), 373–396. Retrieved from https://calico.org/html/article_277.pdf
- Wang, Y. (2006). Negotiation of meaning in desktop videoconferencing-supported distance language learning. *ReCALL*, 18(1), 122–145. doi:10.1017/S0958344006000814
- Wang, Y., & Chen, N.-S. (2007). Online synchronous language learning: SLMS over the internet. *Innovate: Journal of Online Education*, 3(3), 178–179. Retrieved from http://www.innovateonline.info/pdf/vol3_issue3/Online_Synchronous_Language_Learning_-_SLMS_over_the_Internet.pdf
- Wang, Y., & Chen, N.-S. (2012). The collaborative language learning attributes of cyber face-to-face interaction: The perspectives of the learner. *Interactive Learning Environments*, 20(4), 311–330. doi:10.1080/10494821003769081
- Wang, Y., & Tian, J. (2013). Negotiation of meaning in multimodal tandem learning via desktop videoconferencing. *International Journal of Computer-Assisted Language Learning and Teaching*, 3(2), 41–55. doi:10.4018/ijcallt.2013040103
- Warschauer, M. (1996). Comparing face to face and electronic discussion in the second language classroom. *CALICO Journal*, 13(2&3), 7–26. doi:10.11139/cj.13.2%263.7-26
- Warschauer, M. (2005). Sociocultural perspectives on CALL. In J. Egbert & G. M. Petrie (Eds.), *CALL Research Perspectives* (pp. 41–51). New York, NY: Lawrence Erlbaum.
- Wellington, J. (2001). *Educational Research: Contemporary issues and practical approaches*. London, England: Continuum.
- Whyte, S. (2011). Learning to teach with videoconferencing in primary foreign language classrooms. *ReCALL*, 23(03), 271–293. doi:10.1017/S0958344011000188
- Williams, J. (1999). Learner-generated attention to form. *Language Learning*, 51, 303–346. doi:10.1111/j.1467-1770.2001.tb00020.x
- Williams, J. (2001). The effectiveness of spontaneous attention to form. *System*, 29(3), 325–340. doi:10.1016/S0346-251X(01)00022-7
- Yamada, M. (2009). The role of social presence in learner-centered communicative language learning using synchronous computer-mediated communication: Experimental study. *Computers & Education*, 52(4), 820–833. doi:10.1016/j.compedu.2008.12.007
- Yamada, M., & Akahori, K. (2007). Social presence in synchronous CMC-based language learning: How does it affect the productive performance and consciousness of learning objectives? *Computer Assisted Language Learning*, 20(1), 37–65. doi:10.1080/09588220601118503
- Yamada, M., & Akahori, K. (2009). Awareness and performance through self- and partner's

image in videoconferencing. *CALICO Journal*. doi:10.11139/cj.27.1.1-25

- Yanguas, Í. (2010). Oral computer-mediated interaction between L2 learners: It's about time! *Language Learning and Technology*, 14(3), 72–93. Retrieved from <http://lt.msu.edu/issues/october2010/yanguas.pdf>
- Young, D. J. (1990). An investigation of students' perspectives on anxiety and speaking. *Foreign Language Annals*, 23(6), 539–553. doi:10.1111/j.1944-9720.1990.tb00424.x
- Young, D. J. (1991). Creating a low-anxiety classroom environment: What does language anxiety research suggest? *The Modern Language Journal*, 75, 426–439. doi:10.2307/329492
- Zhao, H., Sullivan, K., & Mellenius, I. (2013). Participation, interaction and social presence: An exploratory study of collaboration in online peer review groups. *British Journal of Educational Technology*, 45(5), 807–819. doi:10.1111/bjet.12094
- Zhao, Y., & Angelova, M. (2010). Negotiation of meaning between non-native speakers in text-based chat and videoconferencing. *US-China Education Review*, 7(5), 12–26.
- Zheng, D., Young, M. F., Wagner, M. M., & Brewer, R. A. (2009). Negotiation for action: English language learning in game-based virtual worlds. *The Modern Language Journal*, 93(4), 489–511. doi:10.1111/j.1540-4781.2009.00927.x
- Zuengler, J., & Miller, E. R. (2006). Cognitive and sociocultural perspectives: Two parallel SLA worlds? *TESOL Quarterly*, 40(1), 35–58. doi:10.2307/40264510

APPENDICES

APPENDIX A ACHIEVEMENT STANDARD FOR THE *INTERACT* ASSESSMENT

Achievement Standard

Subject Reference	German 1.3		
Title	Interact using spoken German to communicate personal information, ideas and opinions in different situations		
Level	1	Credits	5
		Assessment	Internal
Subfield	Languages		
Domain	German		
Status	Registered	Status date	9 December 2010
Planned review date	31 December 2018	Date published	20 November 2014

This achievement standard involves a range of interactions using spoken German to communicate personal information, ideas and opinions in different situations.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none"> • Interact using spoken German to communicate personal information, ideas and opinions in different situations. 	<ul style="list-style-type: none"> • Interact using convincing spoken German to communicate personal information, ideas and opinions in different situations. 	<ul style="list-style-type: none"> • Interact using effective spoken German to communicate personal information, ideas and opinions in different situations.

Explanatory Notes

6. This achievement standard is derived from the Learning Languages Communication Strand Curriculum Level 6 of *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, and is related to the material in the *Teaching and Learning Guide for Languages*, Ministry of Education, 2010 at <http://seniorsecondary.tki.org.nz>.
7. Curriculum Level 6 includes the communication skills, language and cultural knowledge needed to communicate personal information, ideas and opinions.
8. Definitions
Interact refers to a range of culturally appropriate spoken and gestural exchanges in German. The interactions are to be for a given purpose and could be face to face or technologically facilitated.

Interactions are characterised by:

a genuine purpose
negotiating meaning
initiating and maintaining
participating and contributing
natural language
using different language for different purpose(s)
using conventions (eg cultural, courtesies, gestures)
contextually appropriate language
using simple interactive strategies such as fillers, questioning, thanking, apologising, pausing, prompting, seeking clarification.

Not all characteristics may be evident in one interaction.

Interaction may be hindered in some places by inconsistencies in:

language features
understanding
pronunciation
intonation
rhythm patterns
delivery speed or audibility
stress patterns
tones.

Personal information includes opinions, ideas and information that relate to the student's life, and may include formal cultural responses.

Formal cultural responses refer to language and cultural responses in formal situations and rituals (eg rituals and protocols around food, gift giving, different ways of interacting with elders).

Different situations include a selection of transactional, social, conversational, formal cultural, and routine contexts.

Communicate personal information, ideas and opinions means to share information, ideas and opinions that are relevant to the context (eg conversations about past and future events, incidental social exchanges, short plays and unprepared interactions on areas of most immediate relevance).

Areas of most immediate relevance refer to language related to basic personal information and past, present and/or future experiences (eg family, shopping, local area, events and activities).

Convincing spoken German refers to interaction showing use of a range of language that is fit for the context and generally successful selection from a repertoire of language features and strategies to support the interaction. Interaction is not significantly hindered by inconsistencies.

Effective spoken German refers to interaction showing successful use of a range of language that is consistently fit for the context and skilful selection from a repertoire of language features and strategies to support the interaction. Interaction is not hindered by inconsistencies.

9. At all times, the quality of the selection of interactions, considered as a whole, is more important than the length.
10. Conditions of Assessment related to this achievement standard can be found at <http://ncea.tki.org.nz/Resources-for-Internally-Assessed-Achievement-Standards>.

APPENDIX B INTERACTION TASK SHEETS TASK 1-4



Task: Online chats!

You love learning German but your friends don't. You have decided that you need some new friends who share your love for German. So you are using an online chat service to get to know new people to practise German and to maybe find a date. The following examples detail the interactions which you may interact in:

Interaction 1: Introductions

<p>Interaction 1: Interaction in order to get to know someone (discussing personal information and sharing of opinions)</p>	<p>The first Skype conversation: exchange of personal information such as age, physical descriptions, hobbies, likes and dislikes.</p> <p>You could talk about:</p> <ul style="list-style-type: none"> ▪ How old you are/birthday ▪ What you look like ▪ Where you live and how you like it/ what you can do there ▪ Your school life/ teachers/ subjects ▪ What your hobbies are and what you did recently ▪ What you like/don't like ▪ What you're looking for in a friend
--	---

VOKABELHILFE:

<p>Kannst du dich beschreiben?</p>	<p>Ich habe lange, braune Haare und blaue Augen. Ich bin mittelgross und sehr sportlich. Ich trage manchmal eine Brille, aber ich mag sie nicht...</p>
<p>Wo wohnst du den?</p>	<p>Ich wohne in der Nähe von Albany auf einem Bauernhof.</p>
<p>Wie findest du deine Schule?</p>	<p>Ich gehe ganz gern zur Schule. Wir haben über 2000 Schüler und ich mag meine Lehrer eigentlich gern. Nur den Mathelehrer finde ich ein bisschen langweilig. Erdkunde ist mein Lieblingsfach, weil ich mich total für Vulkane interessiere.</p>

Fostering peer interactions in online learning environments

Was hast du am Wochenende gemacht?	Also ich spiele oft Hockey, meistens so 3 bis 4 mal pro Woche. Am Wochenende war ich auf einem Hockeyturnier. Ich habe auch einen Film im Kino gesehen.
Liest du gerne?	Nein, nicht so gerne. Ich sehe aber gern fern und ich mag Krimis. Dokumentarfilme finde ich aber sehr langweilig.
Wie sollte dein idealer Freund sein?	Ein guter Freund muss gut zuhören können. Er sollte auch freundlich und hilfsbereit sein. Es wäre auch toll, wenn ...

Ich hoffe, du hast einen neuen Freund gefunden, mit dem du Deutsch sprechen kannst! 😊

Interaction 2: Free time and a date

<p><u>Interaction 2:</u> Interaction with a new friend (personal exchange, sharing and justifying ideas and opinions with critical reflection)</p>	<p>You get to know each other better and talk about your free time. You get along well and decide to meet up with your new friend. Talk about your planning for this and make arrangements for a date.</p> <p>You could talk about:</p> <ul style="list-style-type: none"> ▪ What you do in your free time ▪ Where you go and who with ▪ Your favourite books /music /movies/ sports ▪ What you did last weekend ▪ What you plan to do this weekend ▪ Finding a suitable time to meet up ▪ What to wear ▪ What movie to go and see/ what to do ▪ When and where it is on ▪ Who is in it and why you think it will be good to see ▪ Where and when you are going to meet ▪ How to get there ▪ Giving direction to the cinema/ meeting place
---	--

VOKABELHILFE:

Was machst du so in deiner Freizeit?	Ich gehe oft in den Jugendclub. Manchmal spiele ich auch Tennis, aber das finde ich nicht so toll.
Und mit wem gehst du dahin?	Meistens mit meinen Freunden.
Was ist dein Lieblingsbuch/film/ Sport / deine Lieblingsmusik?	Mein Lieblingsfilm ist Herr der Ringe. Ich habe das schon vier Mal gelesen.
Was hast du letztes Wochenende gemacht?	Am Wochenende habe ich am Computer gespielt und ich war mit meiner Familie am Strand.
Was wirst du nächstes Wochenende machen?	Oh, mal sehen. Ich weiß noch nicht genau, aber ich denke, ich werde schwimmen gehen.
Sollen wir uns am Wochenende treffen? Hast du am Wochenende Zeit?	Ja, toll. Ich habe Zeit.

Fostering peer interactions in online learning environments

Was ziehst du an?	Ich werde meinen neuen Pullover anziehen. Er ist total cool.
Welchen Film sollen wir sehen? Was kommt im Kino? Was sollen wir machen?	Ich würde gerne 'The Lone Ranger' sehen. Johnny Depp spielt eine Hauptrolle und ich denke, der Film ist lustig.
Wann beginnt der Film? Und wo ist das Kino?	Der Film beginnt um ...Uhr. Das Kino ist direkt neben der Bushaltestelle und in der Nähe vom Rathaus.
Wie komme ich genau zum Kino?	Nimm Bus Nummer 40 bis zum Marktplatz. Dann geh die erste Straße rechts. Das Kino ist auf der linken Seite.
Wann treffen wir uns?	Treffen wir uns um ... Uhr.





Interaction 3: Pocket money

<p><u>Interaction 3:</u> Discussion with friends (exploring views of others and developing and sharing personal perspectives)</p>	<p>You have spent a lot of money at the movies with your Skype friend and also went shopping last week. Somehow there never seems to be enough money.....You have a conversation with your new friend on Skype about pocket money.</p> <p>You could chat about:</p> <ul style="list-style-type: none"> ▪ What you bought at the mall and what it is like ▪ How much pocket money you get per week/month ▪ Is that enough ▪ What do you buy with your pocket money ▪ Do you earn any extra money ▪ If so doing what ▪ Are you saving for something special? If so what ▪ Planning to buy a present for a friend ▪ Make suggestions as to what to buy
--	---



VOKABELHILFE:

Was hast du im Einkaufszentrum gekauft?	Ich habe eine neue Jacke gekauft. Sie ist blau und ganz bequem
Wie viel Taschengeld bekommst du?	Ich bekomme..... 10/20/50 Dollar pro Woche/im Monat

Fostering peer interactions in online learning environments

Was kaufst du normalerweise mit deinem Geld?	Ich kaufe.....Kredit für mein Handy/neue Klamotten/CDs/Turnschuhe/Make-up/Computerspiele/Modezeitschriften/ein neues Handy
Sparst du dein Taschengeld? Warum? Worauf sparst du?	Ich spare,.....um Guthaben für mein Handy/neue Klamotten/CDs/Turnschuhe/Make-up/Computerspiele/Modezeitschriften/ein neues Handy zu kaufen Ich spare auf ein neues Handy, vielleicht das neue Samsung S4
Hast du einen Nebenjob?	Ja, ich arbeite Samstags im Kino Nein, aber ich muss ab und zu zu Hause helfen
Wieviel verdienst du in der Woche?	Ich verdiene ... Dollar pro Woche
Ich will ein Geschenk für meine Freundin kaufen. Hast du einen Vorschlag?	Ja, wie wäre es mit einem iTunes Gutschein?



Interaction 4: Holidays

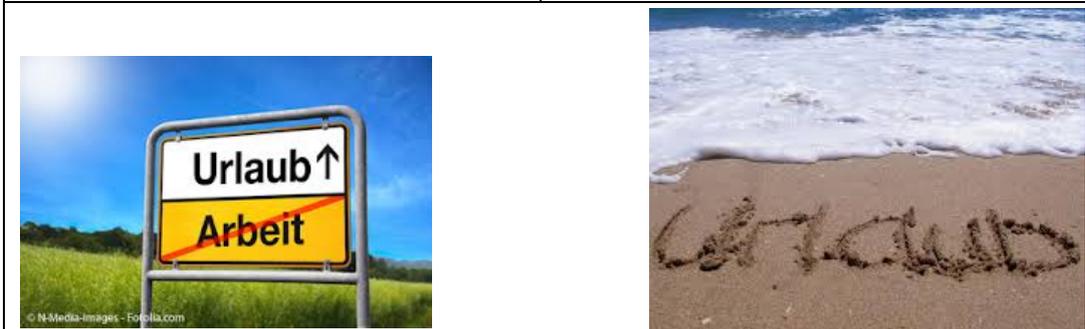
<p>Interaction 4: Discussion with a friend (discussing future events, critical reflection and sharing of opinions)</p>	<p>The holidays are finally coming up and you are planning your next trip. You chat with your friend about the upcoming holidays.</p> <p>You could talk about:</p> <ul style="list-style-type: none"> ▪ Where you are going to go / what you are going to do ▪ Who will go with you ▪ What will you do and see ▪ Where you went on your last trip ▪ What you did then ▪ What went wrong on your last trip ▪ Would you rather go somewhere else <p>Since you are learning German you would like to visit a German speaking country. Discuss with your friend which country you would like to visit most and why: You could take into account the different:</p> <ul style="list-style-type: none"> ▪ foods, ▪ sightseeing ▪ landscapes ▪ concerts, music, the arts etc.
---	--

Vokabelhilfe:

Wohin fährst du in den Ferien? Und mit wem?	Ich werde mit meinen Eltern nach Australien fliegen.
Was wirst du dir dort ansehen?	Ich will mich am Strand entspannen, aber ich will auch viele Museen sehen...und natürlich zu Dreamworld gehen.
Wo warst du in den letzten Ferien?	In den letzten Ferien bin ich nach Queenstown

Fostering peer interactions in online learning environments

	gefahren. Es war super.
Mit wem warst du dort?	Ich war mit meiner Familie dort.
Was hast du dort gemacht?	Ich bin jeden Tag Snowboard gefahren. Leider bin ich in meine Mutter gefahren und wir haben uns beide den Arm gebrochen. Das war total schade.
Würdest du lieber nach Deutschland fahren?	Ja, ich denke, ich würde lieber nach Rarotonga statt nach Australien fliegen. Aber am liebsten würde ich nach Deutschland gehen.
Was magst du am liebsten an Deutschland?	Am liebsten mag ich deutsches Essen. Besonders mag ich Currywurst.
Ist Deutschland anders als Neuseeland? Gibt es mehr zu tun?	Ja, ich denke man kann dort mehr Museen besuchen. Es gibt auch mehr Schlösser und Parks.



APPENDIX C PRACTICE WORKSHEETS FOR TASK 1



Chatten und sich kennenlernen!

Hallo! Wie geht's? Ich bin Nina und ich komme aus Milford in Auckland. Ich bin 15 Jahre alt und ich bin total schüchtern, aber ganz nett. Und du? Wie bist du so? Ich gehe total gerne in die Stadt, um ins Kino zu gehen. Manchmal gehe ich auch einkaufen. OK, OK, ich gehe echt oft einkaufen. Letzte Woche, zum Beispiel war ich im Einkaufszentrum und habe drei neue Pullover gekauft. Die sind supercool. Gehst du gerne in die Stadt? Und was machst du in deiner Freizeit? Also ich spiele auch gerne Fussball, aber am liebsten gehe ich reiten. Das mache ich viermal in der Woche. Ich mag mein Pferd total. Magst du Tiere? Nina, 15 Jahre

Hi! Was gibt's Neues? Bei mir ist nichts los. Die Schule nervt und meine Eltern sind auch ziemlich doof. Wie findest du deine Familie? Und wie bist du? Ich bin echt kreativ und designe gern Computerspiele. Ich gehe auch gerne in den Jugendclub und spiele Billard. Ich bin ziemlich gut darin. Samstags gehe ich auch oft ins Kino. Ich sehe am liebsten Krimis, weil sie so spannend sind. ‚Arrow‘ ist meine Lieblingssendung. Was ist dein Lieblingsfilm? Und was machst du in deiner Freizeit? Ich suche immer neue Freunde. Ein guter Freund sollte immer für mich da sein und nett sein. Peter, 14 Jahre



Hey, ich bin Sarah. Ich komme aus England, aber ich wohne in Neuseeland. Woher kommst du? Ich mag Tiere total gerne und ich habe zwei Hunde und ein Meerschweinchen. Meine Hunde heissen Rammstein und Kraftwerk und mein Meerschweinchen heisst Schneeball. Mein Lieblingsfach in der Schule ist Kunst und meine Lieblingsfarbe ist blau. Wenn ich mit der Schule fertig bin, möchte ich Architektur studieren. Ich hoffe, in Deutschland zu arbeiten. Viele meiner Freunde haben tolle Handys, wie zum Beispiel ein iPhone - mit Kamera, Internet, Apps und Computer-Spielen. Ich möchte auch ein modernes Handy, aber sie kosten so viel Geld und meine Eltern sagen „Nein“. - sie zahlen schon 20 Euro im Monat für meinen Vertrag. Und ich bekomme nicht genug Taschengeld, um mir ein iPhone zu kaufen. Sarah, 15 Jahre



Wie geht's? Ich habe heute Mathe, deshalb geht's mir nicht so gut. Ich hasse Mathe und mein Lehrer ist extrem langweilig. Letzte Woche hatte ich sieben Stunden Mathe. Das war der Horror. Geschichte und Sport mag ich aber total. Ich bin sehr sportlich und spiele jeden Tag Netball. Ich will bald in der Jugendmannschaft von Neuseeland spielen. Leider habe ich deshalb nicht viel Freizeit. Wenn ich Zeit habe, gehe ich an den Strand und schwimme viel. Ich lese auch oft am Strand oder treffe mich mit Freunden. Was machst du so nach der Schule? Sollen wir bald wieder chatten? Julian, 17 Jahre

Vokabeln: **besuchen** – to visit; **ein Handy** – a (mobile) phone; **ein Vertrag** – a contract

Answer the following questions in English.

- 1 What does Nina like doing in her spare time?
.....
- 2 What does Peter say about his family?
.....
- 3 What are Sarah's plans for the future?
.....
- 4 Name three things Sarah like about the newest types of mobile.
.....
- 5 Why can't Sarah have a smartphone. Give 2 reasons.
.....
- 6 What does Julian say about school?
.....
.....
- 7 What questions does he ask you?
.....
.....
- 8 Translate all other questions from the text into English.
.....
.....

In your exercise book:

- Write a reply to one of the texts in German.
- Create a list of possible questions for your chat partner. What would you like to ask him/her?

Hilfe: : Age/birthday; Where you live, What you look like; What your hobbies are and what you did recently, What you like/don't like; What you're looking for in a friend.

Ein Chat zum Kennenlernen:



Simon Cowell:	Hallo Gin, wie geht's? Wie bist du so? Kannst du dich ein bisschen beschreiben?
Gin Wigmore:	Hallo, Simon. Ich bin Gin und ich habe blonde, lange Haare. Ich spiele gerne Gitarre und ich singe ziemlich gut.
Simon Cowell:	Ah, echt? Toll. Wie findest du denn Macklemore?
Gin Wigmore:	Mein Freund findet ihn doof , aber ich glaube er ist sehr talentiert .
Simon Cowell:	Viele Leute finden ihn eingebildet und nicht so talentiert , aber ich glaube, er trägt die besten Klamotten.
Gin Wigmore:	Das finde ich nicht. Ich trage bessere Klamotten als er. Taylor Swift singt am besten, oder? Was meinst du?
Simon Cowell:	Hmm, also ich finde sie faul und doof .
Gin Wigmore:	Wie bitte?
Simon Cowell:	Ich habe gesagt, dass Taylor faul und doof ist .
Gin Wigmore:	Tja, das glaube ich nicht. Sie ist die beste Sängerin der Welt. Sie ist nett und hübsch .
Simon Cowell:	Naja, egal. Was machst du normalerweise, wenn du nicht singst?
Gin Wigmore:	Also, lass mich überlegen. Normalerweise lese ich ein Buch oder lasse neue Tattoos machen .
Simon Cowell:	Das hört sich gut an. Warst du schon einmal in Amerika ?
Gin Wigmore:	Ja, klar. Ich bin letztes Jahr nach Amerika geflogen, um dort zu singen und Musikproduzenten zu treffen . Es war total super. Ich habe Pink! getroffen.
Simon Cowell:	Wirklich? Das ist ja super! Ich werde sie am Montag treffen, dann werden wir zusammen essen gehen.
Gin Wigmore:	Das hört sich gut an. Ich würde gerne mitkommen.
Simon Cowell:	Schade! Das geht leider nicht. Wir wollen auch einen Film schauen.
Gin Wigmore:	Das verstehe ich total. Was wollt ihr denn sehen? Mein Lieblingsfilm ist Gambit. Was ist dein Lieblingsfilm?

Fostering peer interactions in online learning environments

Simon Cowell:	Ich sehe am liebsten Tarzan . Ich mag den Dschungel und Affen .
Gin Wigmore:	Ach was? Du bist ja verrückt.
Simon Cowell:	Natürlich nicht! Aber ich mag Tarzan eben. Hats du den Film schon mal gesehen?
Gin Wigmore:	Wie bitte? Ich verstehe dich leider nicht.
Simon Cowell:	Egal! Ich muss jetzt auch los. Ich muss Musiker kritisieren .
Gin Wigmore:	Ich auch! Bis bald!
Simon Cowell:	Mach's gut! 

1. Find the German translation in the text.

- a. A lot of people find him arrogant.
- b. I wear better clothes than him.
- c. What do you think?
- d. Normally I read a book.
- e. Let me think.
- f. That sounds good.
- g. You're crazy.

2. Practise the dialogue in pairs! (Change the words in bold)

APPENDIX D CONVERSATION FILLERS

Allgemeine Ausdrucksmöglichkeiten im Gespräch (conversation fillers)

Anfangen <i>(starting the chat)</i>	Hallo! Wie geht's?	Hi, how are you?
	Was gibt's Neues?	What's new?
Zustimmung <i>(agreement)</i>	Selbstverständlich!/ Natürlich!/Klar!/Na klar! Logisch!	Of course!
	Sehr gerne!	I'd love to!
	Aber sicher!	For sure!
	Prima! / Super!	Great!
Uneinigkeit <i>(disagreement)</i>	Das ist Unsinn/Blödsinn!	That is nonsense
	Auf keinen Fall!	No way!
Nachfragen <i>(requesting)</i>	Kannst du das bitte wiederholen?	Could you please repeat that?
	Kannst du die Frage bitte anders formulieren?	Could you rephrase the question?
	Was ist das auf Englisch?	What is that in English?
	Ich verstehe dich leider nicht.	Unfortunately, I don't understand you.
	Kannst du mir das bitte erklären?	Could you explain that please?
	Kannst du bitte lauter/langsamer sprechen?	Could you please speak louder/slower?
	Nochmal bitte!	Once more please!
	Wie bitte?	Beg your pardon!
	Was meinst du?	What do you think?
	Wie ist das bei dir?	How is that for you?
Stellungnahme <i>(comment)</i>	Ich glaube .../ Ich denke ...(nicht)	I think ...(not)
	Natürlich nicht!	Of course not!
	Du hast Recht!	I agree./You're right.
	Eigentlich nicht!	Not really!
	Das ist mir egal!	It's all the same to me.
	Einverstanden!	That's all right with me!
	Auf jeden Fall!	Absolutely!
	Das hört sich gut an!	That sounds good!
	Tja!	Oh well!
	Ach so!	Oh I see!
	Ach ja!	Right!
	Ach was!	Nonsense!

Fostering peer interactions in online learning environments

Überrascht sein <i>(Being surprised)</i>	Wirklich?/ Echt?	Really?
	Wahnsinn!	That's crazy!
	Ach ja?	Really?
Mitfühlen <i>(Sympathising)</i>	Du Arme(r)!	You poor thing!
	Ach, herrje!	Oh dear!
	Schade!	What a shame!
	Das verstehe ich total!	I totally understand!
	Ich auch!	Me too!
Das Gespräch beenden <i>(finishing the chat)</i>	Ich muss jetzt los.	I have to go now.
	Mach's gut!	Take care!
	Bis bald!	See you soon!

APPENDIX E EXERCISES TO PRACTISE FILLERS

Übungen zu Fillers

Finde die englische Bedeutung!	
Kannst du das bitte wiederholen?	What do you think?
Was gibt's Neues?	Oh dear!
Eigentlich nicht!	Could you please repeat that?
Schade!	What is that in English?
Tja!	What's new?
Wirklich?/ Echt?	What a shame!
Ach, herrje!	That's all right with me!
Einverstanden!	Not really!
Was meinst du?	Really?
Wie bitte?	That sounds good!
Das hört sich gut an!	Pardon?
Was ist das auf Englisch?	Oh well!



Übersetze!

Kannst du mir das bitte erklären? _____	Of course! _____
Ich muss jetzt los. _____	Was ist das auf Englisch? _____
Das ist Unsinn! _____	Ach ja! _____
It's all the same to me. _____	Could you please speak louder? _____
What a shame! _____	

In einem Gespräch mit deinem Lehrer... Was sagst du in Deutsch, wenn ...?

... du die Aufgabe nicht verstanden hast?

... du überrascht bist?

... du zustimmen möchtest?

... du das Gespräch beenden möchtest?

APPENDIX F CONVERSATION ANALYSIS CONVENTIONS ADOPTED FROM TEN HAAVE (2007)

Sequencing

[*A single left bracket* indicates the point of overlap onset.

] *A single right bracket* indicates the point at which an utterance or utterance-part terminates vis-à-vis another.

= *Equal signs*, one at the end of one line and one at the beginning of a next, indicate no 'gap' between the two lines. This is often called *latching*

Timed intervals

(1.0) *Numbers in parentheses* indicate elapsed time in silence by tenth of seconds, so (7.1) is a pause of 7 seconds and one-tenth of a second.

(.) *A dot in parentheses* indicates a tiny 'gap' within or between utterances.

Characteristics of speech production

Word *Underscoring* indicates some form of stress, via pitch and/or amplitude; an alternative method is to print the stressed part in *italics*.

:: *Colons* indicate prolongation of the immediately prior sound. Multiple colons indicate a more prolonged sound.

- *A dash* indicates a cut-off.

.,??. *Punctuation marks* are used to indicate characteristics of speech production, especially intonation; they are not referring to grammatical units.

. *A period* indicates a stopping fall in tone.

, *A comma* indicates a continuing intonation, like when you are reading items from a list.

? *A question mark* indicates a rising intonation.

,? *The combined question mark/comma* indicates a stronger rise than a comma but weaker than a question mark; an alternative is an italicised question mark: ?

The absence of an utterance-final marker indicates some sort of 'indeterminate' contour.

Fostering peer interactions in online learning environments

↑↓ Arrows indicate marked shifts into higher or lower pitch in the utterance-part immediately following the arrow.

WORD *Upper case* indicates especially loud sounds relative to the surrounding talk.

° Utterances or utterance parts bracketed by *degree signs* are relatively quieter than the surrounding talk.

< > *Right/left carets* bracketing an utterance or utterance-part indicate speeding up.

·hhh A *dot-prefixed row of hs* indicates an inbreath. Without the dot, the *hs* indicate an outbreath.

w(h)ord A parenthesized *h*, or a *row of hs within a word*, indicates breathiness, as in laughter, crying, etc.

\$ A \$ or a row of \$\$\$ indicates laughter

Transcriber's doubts and comments

() *Empty parentheses* indicate the transcriber's inability to hear what was said. The length of the parenthesized space indicates the length of the untranscribed talk. In the speaker designation column, the empty parentheses indicate inability to identify a speaker.

(word) *Parenthesized words* are especially dubious hearings or speaker identifications.

(()) *Double parentheses* contain transcriber's descriptions rather than, or in addition to, transcriptions.

APPENDIX G SAMPLE TRANSCRIPT OF STUDENT INTERACTION

Name: Task 1 WBHS07 and WGHS02

Duration: 13:16,9

Transcript Entries: 110

Turn	Content	Speaker
1	Hallo.	WBHS07
2	Hallo. Kannst du mich hören?	WGHS02
3	Wie bitte? ↑	WBHS07
4	Uhm, kannst du mir hören?	WGHS02
5	Ja.	WBHS07
6	Äh, wie geht's?	WGHS02
7	Ah, ich bin gut, und du?	WBHS07
8	Was ist dein Name?	WGHS02
9	< Ich heiße Daniel. >	WBHS07
10	Uh, ich heiße Iulia. Hallo =	WGHS02
11	=Wie geht's?	WBHS07
12	Was hast du, uh, ich bin gut ↓, uh, es geht mir gut, danke. Uhm, was sind deine Hobbys?	WGHS02
13	Uhm, ich mag Tennis spielen, uhm, ich spiele auf dem Computer, ja.	WBHS07
14	Oh, uh, World of Warcraft?	WGHS02
15	Uh, uhm, ich habe das mit mein, meinen Freunden gespielt.	WBHS07
16	Ah, OK.	WGHS02
17	Ein bisschen. & (6) Uhm, was ist dein Hobbys?	WBHS07
18	Uh, ich tanze und ich schwimme und uhm ich auch lese gern.	WGHS02

Fostering peer interactions in online learning environments

19	OK. Was ist deine Lieblingsbuche?	WBHS07
20	Uhm, \$ uhm, Lord of the Rings.	WGHS02
21	Ah, OK.	WBHS07
22	Uhm, siehst du, uhm, siehst du, uhm sehr, uhm, siehst du Filme?	WGHS02
23	Wie bitte?	WBHS07
24	Uh, siehst du gern Filme?	WGHS02
25	Ja, ich s (2) sehe gern Filme. Uhm mein Lieblingsfilme ist Monsters Inc.	WBHS07
26	Oh \$ /cool. ↑	WGHS02
27	/Ja, ja/ Es ist unique \$. Aber Lord of The Rings, <u>Herr der Ringe</u> ist sehr toll.	WBHS07
28	\$ Ja. Uhm, möchtest du mit mir ins Kino gehen?	WGHS02
29	Ja. Uhm, möchtest du (5) Was Filme ist gut?	WBHS07
30	Oh, könntest du das bitte wiederholen?	WGHS02
31	Uhm, was Film im Kino ist gut?	WBHS07
32	Oh, ähm, hast du Rush, Rush gesehen?	WGHS02
33	Uhm, nein, aber das hört sich gut an.	WBHS07
34	Uh ja. Uhm, möchtest du das sehen?	WGHS02
35	Ja, OK. Hast du Zeit am Sonntag?	WBHS07
36	Uh, nein.	WGHS02
37	Sonntag?	WBHS07
38	Uh, nein.	WGHS02
39	Nächstes Woche, am Wochenende?	WBHS07
40	Äh ja.	WGHS02
41	Ah, OK.	WBHS07
42	Am Samstag?	WGHS02
43	OK.	WBHS07
44	Am Samstag/. Was Uhr?	WGHS02

Fostering peer interactions in online learning environments

45	/Ja/ was Uhr?	WBHS07
46	Uhm, um drei Uhr.	WGHS02
47	OK \$	WBHS07
48	Gut.	WGHS02
49	Ja.	WBHS07
50	\$ Uhm, was hast du in den Ferien gemacht? Gemacht?	WGHS02
51	Uhm, (3) ich, ich habe nichts gemacht. Es war sehr langweilig.	WBHS07
52	Oh, das ist nicht gut. Hast du, uhm, hast du studieren?	WGHS02
53	Nein, aber das ist nicht, < ich soll das tun. > Hast du studieren?	WBHS07
54	Ein bisschen aber ich, uhm, sehr viel gelest, uh, gefernsehen.	WGHS02
55	Ok. Das ist gut.	WBHS07
56	Uh, hast du Haustiere?	WGHS02
57	Ja, ich habe einen Hund. Uhm, er heißt Dexter. Hast du, / hast du (2) Haustiere?	WBHS07
58	/Oh/ Nein, ich habe keine Schwester und Bruder.	WGHS02
59	Wie bitte?	WBHS07
60	Ich habe keine Haustiere und ich habe keine Schwester oder Bruder.	WGHS02
61	Ah, OK. Ich habe zwei Brüder. Das ist nicht gut.	WBHS07
62	Ah, OK \$ sie ner(hh)vig?	WGHS02
63	Uhm, (2) mein kleiner Bruder aber mein alter Bruder ist OK.	WBHS07
64	Oh, OK. / Uhm, wie alt sind deine Brüder?	WGHS02
65	/Ja/ uhm, meine älter Brüder sind (3) siebzehn Jahre alt / ein kleiner Bruder sind fünfzehn Jahre alt.	WBHS07
66	/Ah, OK/. OK.	WGHS02
67	Wie alt bist du?	WBHS07
68	Bist du sechzehn?	WGHS02
69	Uh, nein ich bin auch fünfzehn.	WBHS07

Fostering peer interactions in online learning environments

70	Oh, OK↓	WGHS02
71	Mein kleiner Bruder ist mein twin.	WBHS07
72	Oh, Oh, das ist cool. ↑	WGHS02
73	Ein bisschen.	WBHS07
74	Was heißt er?	WGHS02
75	Uh, mein kleiner ist, uhm, heißt Matthew. Mein alter Bruder heißt George. Ja.	WBHS07
76	Cool. Was, wir was hast du, was willst du in das Wochenende machen?	WGHS02
77	Uhm, nicht, ich, ich sollte studieren. Ich, ich weiß nicht.	WBHS07
78	< Wann sind deine Prüfungen für die ↑Schule? >	WGHS02
79	Wie bitte?	WBHS07
80	Uhm, was sind deine Prüfungen und Tests? (2) Für die Schule? (5) \$ Uh, when are your school tests?	WGHS02
81	Ah, uhm, meine erste ist am (2) neunzehn, nein, neunundzwanzigsten Oktober. (3) Uhm, ich weiß nicht.	WBHS07
82	Ah, OK.	WGHS02
83	Uhm, ich denke es ist accounting, aber ich weiß nicht.	WBHS07
84	Ah, was sind deine Fächer?	WGHS02
85	(2) Wie bitte?	WBHS07
86	Uhm, was sind deine Fächer?	WGHS02
87	Was ist Fächer auf Englisch?	WBHS07
88	Uhm, what are your subjects?	WGHS02
89	Oh, uhm, (3) Maths, Chemie, uhm Deutsch, accounting und (5) uh und du?	WBHS07
90	Uh, Mathe, Englisch, Deutsch, business, accounting, und Naturwissenschaft.	WGHS02
91	Ah, OK. Magst du accounting?	WBHS07
92	Ja, uh, es ist toll. / Ich liebe business.	WGHS02

Fostering peer interactions in online learning environments

93	/Yes/ Ah, Ok. Ja. Uhm, (5) bis nächstes Sonntag.	WBHS07
94	Am Sonntag? Ich gehe zum Strand. Und ich schwimme.	WGHS02
95	Ja, toll. OK. \$	WBHS07
96	\$ Und du?	WGHS02
97	Uhm, (3) ich weiß nicht, ich.	WBHS07
98	Spielst du am Computer?	WGHS02
99	Wie bitte? (6) Ja.	WBHS07
100	(3) Bitte?	WGHS02
101	(6) Kannst du die Frage bitte wiederholen?	WBHS07
102	\$ uh, spielst du am, uhm, am Computer?	WGHS02
103	Uhm, ja, ich werde Rome Zwei spielen.	WBHS07
104	Oh, OK.	WGHS02
105	Ja. (4) OK. Uhm, also (3) bis in nächstes Wochenende zum der Kino gehen.	WBHS07
106	Ja \$ und wir sehen Rush um drei Uhr.	WGHS02
107	OK. Bis näch::stes Wochenende.	WBHS07
108	OK.	WGHS02
109	Tschüs.	WBHS07
110	Ja, Tschüs.	WGHS02

APPENDIX H PRE-INTERACTION FLCAS QUESTIONNAIRE

*** Required Information**

page 1

Pre-interaction questionnaire

Thank you for agreeing to take this survey. Please provide some information about yourself and your language learning.

1. Please enter your unique code (for example WGHS1).

*** 2. Are you male or female? (Select one option)**

- Male
 Female

*** 3. What language do you speak most often at home? (Select one option)**

- English
 Korean
 Chinese
 Te Reo Maori
 Other (please specify) _____

*** 4. Have you ever learned any other foreign language(s) besides German? (Select one option)**

- Yes
 No

5. If so, please specify which other language(s) and how long you have learnt them for:

*** 6. Have you ever spent a period of time around native speakers of German where you spoke German on a regular basis?**
(Select one option)

- Yes
- No

7. If so, please specify the length of that period:

*** 8. How often do you use computers, smartphones, tablets or other devices to go online?** (Select one option)

- several times a day
- once a day
- several times a week
- sometimes
- never

*** 9. For what purposes do you use these? Tick all that apply.**

- school
- work
- entertainment/fun

*** 10. What do you do with electronic devices on a regular basis?**
Tick all that apply.

- Social networks (FB, Pinterest etc.)
- Word processing
- E-mail
- Surfing the web
- Chat rooms
- PowerPoint (or other presentation tools)
- Skype/Gmail (or other chat programs)
- YouTube

Design applications

Gaming

Other (please specify) _____

page 2

Below is a list of statements that refer to how you feel about learning in class. Please indicate whether the statements are: · Always like me · Usually like me · About half of the time like me · Seldom like me · Never like me Please give your first reaction to each statement and mark one answer for EVERY statement.

I would like to know how you feel when learning/speaking German

11. Please mark the response that best describes your attitudes and feelings. There are no right or wrong answers.

	Always like me	Usually like me	About half of the time like me	Seldom like me	Never like me
* (a) I never feel quite sure of myself when I am speaking in my German class.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (b) I do not worry about making mistakes in German.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (c) I get anxious when I know that I am going to be called on in German.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (d) I get nervous when I do not understand what the teacher is saying in German.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (e) I keep thinking that the other students are better at German than I am.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (f) I start to panic when I have to speak German without preparation in class.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (g) I feel self-conscious about speaking German in front of other students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (h) In language class, I can get so nervous I forget things I know.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (i) I am embarrassed to volunteer answers in my German class.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (j) Even if I am well prepared for German, I feel anxious about it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (k) I feel confident when I speak German in my language class.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (l) I get nervous during oral exams.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Fostering peer interactions in online learning environments

* (m) I can feel my heart beating faster when I am asked to speak in German.	<input type="radio"/>				
* (n) I feel more tense and nervous in German than in my other classes.	<input type="radio"/>				
* (o) I get nervous and confused when I am speaking in my German class.	<input type="radio"/>				
* (p) I feel that I can express myself easily when speaking in German.	<input type="radio"/>				
* (q) I am afraid that the other students will laugh at me when I speak German.	<input type="radio"/>				
* (r) I get nervous when the language teacher asks questions which I have not prepared in advance.	<input type="radio"/>				
* (s) I feel intimidated when speaking German in the classroom.	<input type="radio"/>				
* (t) I am worried that my teacher will correct every mistake I make when speaking German.	<input type="radio"/>				

page 3	
Causes of anxiety	
<p>12. Please think about your experiences when speaking in a foreign language and the nervousness this may cause. Below is a list of possible causes of speaking anxiety. Tick the ones that apply to you (you can tick as many or few as you like).</p>	
	Please tick here (no limit)
(a) Freezing when asked to speak	<input type="checkbox"/>
(b) Being afraid of not being understood	<input type="checkbox"/>
(c) Being afraid of not understanding the other speaker	<input type="checkbox"/>
(d) Not being able to remember vocabulary	<input type="checkbox"/>
(e) Worrying about my accent	<input type="checkbox"/>
(f) Struggling with grammar	<input type="checkbox"/>
(g) Being afraid of making mistakes	<input type="checkbox"/>
(h) Not making progress quickly enough	<input type="checkbox"/>
(i) Wanting to translate word for word	<input type="checkbox"/>
(j) Being afraid of being criticised	<input type="checkbox"/>

Fostering peer interactions in online learning environments

(k) Realising that German does not follow the same patterns as English	<input type="checkbox"/>
(l) Having had negative experiences with learning a language before	<input type="checkbox"/>
(m) Being overwhelmed by having to process information and having to speak at the same time	<input type="checkbox"/>
(n) Realising that language learning is hard work	<input type="checkbox"/>

13. Select the one cause of speaking anxiety that applies to you most.

	Tick the most important one (one tick ONLY)
(a) Freezing when asked to speak	<input type="radio"/>
(b) Being afraid of not being understood	<input type="radio"/>
(c) Being afraid of not understanding the other speaker	<input type="radio"/>
(d) Not being able to remember vocabulary	<input type="radio"/>
(e) Worrying about my accent	<input type="radio"/>
(f) Struggling with grammar	<input type="radio"/>
(g) Being afraid of making mistakes	<input type="radio"/>
(h) Not making progress quickly enough	<input type="radio"/>
(i) Wanting to translate word for word	<input type="radio"/>
(j) Being afraid of being criticised	<input type="radio"/>
(k) Realising that German does not follow the same patterns as English	<input type="radio"/>
(l) Having had negative experiences with learning a language before	<input type="radio"/>
(m) Being overwhelmed by having to process information and having to speak at the same time	<input type="radio"/>
(n) Realising that language learning is hard work	<input type="radio"/>

14. If you can think of any more causes of anxiety, please describe them below and state whether these would be ranked as high, low or medium causes of anxiety for you.

Strategies that can help to lower anxiety	
<p>15. Please think about strategies you could use when speaking in a foreign language. Below is a list of possible strategies that can help to lower speaking anxiety. Tick the ones that apply to you (you can tick as many or few as you like).</p>	
	Please tick here (no limit)
(a) Telling myself that I can do this (complete the speaking task)	<input type="checkbox"/>
(b) Allowing nervousness but telling myself that this is a normal feeling	<input type="checkbox"/>
(c) Encouraging myself to take risks, such as guessing vocabulary and grammar structures.	<input type="checkbox"/>
(d) Allowing myself to make some mistakes	<input type="checkbox"/>
(e) Imagining that this speaking situation is just an informal chat with friends	<input type="checkbox"/>
(f) Trying to relax (for example: distracting myself or breathing slowly)	<input type="checkbox"/>
(g) Talking to others about my nervousness	<input type="checkbox"/>
(h) Rewarding myself when I do well in a speaking task	<input type="checkbox"/>
(i) Telling myself that the speaking task will not take long	<input type="checkbox"/>
(j) Rehearsing/practising a potential task	<input type="checkbox"/>
<p>16. Select the one strategy that applies to you most.</p>	
	Tick the most important one (one tick ONLY)
(a) Telling myself that I can do this (complete the speaking task)	<input type="radio"/>
(b) Allowing nervousness but telling myself that this is a normal feeling	<input type="radio"/>
(c) Encouraging myself to take risks, such as guessing vocabulary and grammar structures	<input type="radio"/>
(d) Allowing myself to make some mistakes	<input type="radio"/>
(e) Imagining that this speaking situation is just an informal chat with friends	<input type="radio"/>
(f) Trying to relax (for example: distracting myself or breathing slowly)	<input type="radio"/>
(g) Talking to others about my nervousness	<input type="radio"/>
(h) Rewarding myself when I do well in a speaking task	<input type="radio"/>
(i) Telling myself that the speaking task will not take long	<input type="radio"/>
(j) Rehearsing/practising a potential task	<input type="radio"/>
<p>17. If you can think of any more strategies that can help to lower anxiety, please describe them below and state whether these would be ranked as high, low or medium causes of anxiety for you.</p> <p>_____</p> <p>_____</p> <p>_____</p>	

APPENDIX I POST-INTERACTION FLCAS QUESTIONNAIRE

*** Required Information**

page 1					
<p>Post-interaction questionnaire</p>					
<p>Thank you for agreeing to take this survey. Please provide some information about yourself and your language learning.</p>					
<p>* 1. Please enter your unique code (for example WGHS1).</p>					
<p>_____</p> <p>_____</p>					
<p>Below is a list of statements that refer to how you feel about learning in class. Please indicate whether the statements are: · Always like me · Usually like me · About half of the time like me · Seldom like me · Never like me Please give your first reaction to each statement and mark one answer for EVERY statement.</p>					
<p>I would like to know how you feel when learning/speaking German</p>					
<p>2. Please mark the response that best describes your attitudes and feelings. There are no right or wrong answers.</p>					
	Always like me	Usually like me	About half of the time like me	Seldom like me	Never like me
* (a) I never feel quite sure of myself when I am speaking in my German class.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (b) I do not worry about making mistakes in German.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (c) I get anxious when I know that I am going to be called on in German.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (d) I get nervous when I do not understand what the teacher is saying in German.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Fostering peer interactions in online learning environments

*(e) I keep thinking that the other students are better at German than I am.	<input type="radio"/>				
*(f) I start to panic when I have to speak German without preparation in class.	<input type="radio"/>				
*(g) I feel self-conscious about speaking German in front of other students.	<input type="radio"/>				
*(h) In language class, I can get so nervous I forget things I know.	<input type="radio"/>				
*(i) I am embarrassed to volunteer answers in my German class.	<input type="radio"/>				
*(j) Even if I am well prepared for German, I feel anxious about it.	<input type="radio"/>				
*(k) I feel confident when I speak German in my language class.	<input type="radio"/>				
*(l) I get nervous during oral exams.	<input type="radio"/>				
*(m) I can feel my heart beating faster when I am asked to speak in German.	<input type="radio"/>				
*(n) I feel more tense and nervous in German than in my other classes.	<input type="radio"/>				
*(o) I get nervous and confused when I am speaking in my German class.	<input type="radio"/>				
*(p) I feel that I can express myself easily when speaking in German.	<input type="radio"/>				
*(q) I am afraid that the other students will laugh at me when I speak German.	<input type="radio"/>				
*(r) I get nervous when the language teacher asks questions which I have not prepared in advance.	<input type="radio"/>				
*(s) I feel intimidated when speaking German in the classroom.	<input type="radio"/>				
*(t) I am worried that my teacher will correct every mistake I make when speaking German.	<input type="radio"/>				

Please provide some info about your videoconferencing interactions specifically.

3. Please mark the response that best describes your attitudes and feelings. There are no right or wrong answers.

	Always like me	Usually like me	About half of the time like me	Seldom like me	Never like me
* (a) I enjoyed the online-interactions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (b) I preferred carrying out the speaking exercises using videoconferencing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (c) The online chats did not improve my confidence about speaking German.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (d) I felt less nervous about speaking German using Skype.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (e) I was relaxed and comfortable during the interactions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (f) I think I speak more German in class now because of the Skype interactions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (g) I do not feel that online chat discussions give me a similar learning opportunity as our regular classroom activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (h) I found it easy to express myself using Skype.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (i) I felt rushed during the interactions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (j) I participated more in the online chats than in speaking activities in class.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (k) I did not learn a lot from working on computers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (l) The regular online-discussions made me less nervous about speaking German.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (m) It did not bother me when I did not understand everything my partner was saying.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (n) Sometimes I struggled during the interactions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (o) I did not speak more German in my later online-sessions compared to my first one.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Additional questions: Please provide a few comments regarding your experience with the online chat:

*** 4. What aspect(s) did you like?**

*** 5. What aspect(s) did you dislike?**

*** 6. Do you think the Skype interactions helped your German and if so how?**

*** 7. How do you feel about interacting in German now compared to the beginning of the Skype activities?**

page 3

Causes of anxiety

8. Please think about your experiences when speaking in a foreign language and the nervousness this may cause. Below is a list of possible causes of speaking anxiety. Tick the ones that apply to you (you can tick as many or few as you like).

	Please tick here (no limit)
(a) Freezing when asked to speak	<input type="checkbox"/>
(b) Being afraid of not being understood	<input type="checkbox"/>
(c) Being afraid of not understanding the other speaker	<input type="checkbox"/>
(d) Not being able to remember vocabulary	<input type="checkbox"/>
(e) Worrying about my accent	<input type="checkbox"/>
(f) Struggling with grammar	<input type="checkbox"/>
(g) Being afraid of making mistakes	<input type="checkbox"/>
(h) Not making progress quickly enough	<input type="checkbox"/>
(i) Wanting to translate word for word	<input type="checkbox"/>

Fostering peer interactions in online learning environments

(j) Being afraid of being criticised	<input type="checkbox"/>
(k) Realising that German does not follow the same patterns as English	<input type="checkbox"/>
(l) Having had negative experiences with learning a language before	<input type="checkbox"/>
(m) Being overwhelmed by having to process information and having to speak at the same time	<input type="checkbox"/>
(n) Realising that language learning is hard work	<input type="checkbox"/>

9. Select the one cause of speaking anxiety that applies to you most.

	Tick the most important one (one tick ONLY)
(a) Freezing when asked to speak	<input type="radio"/>
(b) Being afraid of not being understood	<input type="radio"/>
(c) Being afraid of not understanding the other speaker	<input type="radio"/>
(d) Not being able to remember vocabulary	<input type="radio"/>
(e) Worrying about my accent	<input type="radio"/>
(f) Struggling with grammar	<input type="radio"/>
(g) Being afraid of making mistakes	<input type="radio"/>
(h) Not making progress quickly enough	<input type="radio"/>
(i) Wanting to translate word for word	<input type="radio"/>
(j) Being afraid of being criticised	<input type="radio"/>
(k) Realising that German does not follow the same patterns as English	<input type="radio"/>
(l) Having had negative experiences with learning a language before	<input type="radio"/>
(m) Being overwhelmed by having to process information and having to speak at the same time	<input type="radio"/>
(n) Realising that language learning is hard work	<input type="radio"/>

10. If you can think of any more causes of anxiety, please describe them below and state whether these would be ranked as high, low or medium causes of anxiety for you.

Strategies that can help to lower anxiety	
11. Please think about strategies you could use when speaking in a foreign language. Below is a list of possible strategies that can help to lower speaking anxiety. Tick the ones that apply to you (you can tick as many or few as you like).	
	Please tick here (no limit)
(a) Telling myself that I can do this (complete the speaking task)	<input type="checkbox"/>
(b) Allowing nervousness but telling myself that this is a normal feeling	<input type="checkbox"/>
(c) Encouraging myself to take risks, such as guessing vocabulary and grammar structures.	<input type="checkbox"/>
(d) Allowing myself to make some mistakes	<input type="checkbox"/>
(e) Imagining that this speaking situation is just an informal chat with friends	<input type="checkbox"/>
(f) Trying to relax (for example: distracting myself or breathing slowly)	<input type="checkbox"/>
(g) Talking to others about my nervousness	<input type="checkbox"/>
(h) Rewarding myself when I do well in a speaking task	<input type="checkbox"/>
(i) Telling myself that the speaking task will not take long	<input type="checkbox"/>
(j) Rehearsing/practising a potential task	<input type="checkbox"/>
12. Select the one strategy that applies to you most.	
	Tick the most important one (one tick ONLY)
(a) Telling myself that I can do this (complete the speaking task)	<input type="radio"/>
(b) Allowing nervousness but telling myself that this is a normal feeling	<input type="radio"/>
(c) Encouraging myself to take risks, such as guessing vocabulary and grammar structures.	<input type="radio"/>
(d) Allowing myself to make some mistakes	<input type="radio"/>
(e) Imagining that this speaking situation is just an informal chat with friends	<input type="radio"/>
(f) Trying to relax (for example: distracting myself or breathing slowly)	<input type="radio"/>
(g) Talking to others about my nervousness	<input type="radio"/>
(h) Rewarding myself when I do well in a speaking task	<input type="radio"/>
(i) Telling myself that the speaking task will not take long	<input type="radio"/>
(j) Rehearsing/practising a potential task	<input type="radio"/>

13. If you can think of any more strategies that can help to lower anxiety, please describe them below and state whether these would be ranked as high, low or medium causes of anxiety for you.

*** 14. Do you use more strategies to deal with nervousness now compared to the beginning of the Skype activities? If so why? Have you found other causes of anxiety? Have you discovered other techniques that can help with anxiety and interacting in German? Please answer based on all the online-sessions you have had.**

APPENDIX J SKYPE REFLECTION TASK 1-4

*** Required Information**

page 1										
Please provide some feedback about the online-interaction you have just completed.										
1. Please enter your unique code below. (for example WGHS1)										
<input style="width: 100%; height: 20px; border: none; border-bottom: 1px solid black;" type="text"/> <input style="width: 100%; height: 20px; border: none; border-bottom: 1px solid black;" type="text"/>										
* 2. How anxious did you feel during the interaction? Please indicate your level of anxiety on the scale below. (Select one option)										
Not anxious at all										Very anxious
1	2	3	4	5	6	7	8	9	10	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* 3. How confident did you feel during the interaction? Please indicate your level of confidence on the scale below. (Select one option)										
Not confident at all										Very confident
1	2	3	4	5	6	7	8	9	10	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* 4. How did the interaction go? Please explain why you felt that way during the interactions.										
<input style="width: 100%; height: 20px; border: none; border-bottom: 1px solid black;" type="text"/> <input style="width: 100%; height: 20px; border: none; border-bottom: 1px solid black;" type="text"/>										
* 5. What strategies did you use to deal with anxiety and/or improve your interactions?										
<input style="width: 100%; height: 20px; border: none; border-bottom: 1px solid black;" type="text"/> <input style="width: 100%; height: 20px; border: none; border-bottom: 1px solid black;" type="text"/>										

APPENDIX K INDICATIVE INTERVIEW QUESTIONS

- Please tell me about your experience of interacting with another student of German via Skype.
- What part of the online interactions did you like the most?
- What did you like the least (or you didn't like)?
- Did you have any problems? (Please describe them.)
- Describe how you felt talking with your partner.
- Did you feel nervous? (Why?)
- Did you feel comfortable? (Why?)
- Would you have been more/less nervous had the chats been carried out within the class? (What are the reasons?)
- Have your feelings about speaking in German changed and if so how?
- Do you think the interactions affected your German? (How?)
- Did you and your partner make any mistakes or had misunderstandings? (What happened?)
- Would you say the interactions have improved your German? (In what ways?)
- Do you think your pronunciation in German has improved?
- Do you think you can now talk more in German?
- Have you found any strategies that helped you ease any nervousness? (Please describe them.)
- Have you found you got better over time at using these strategies?
- Describe the differences between the Skype interactions and your classroom interactions or assessments.

APPENDIX L PARTICIPANT INFORMATION SHEETS AND CONSENT FORMS

The University of Auckland
Private Bag 92601, Symonds Street
Auckland 1150, New Zealand
Ph: 64 9 6238899

[insert date]



THE UNIVERSITY OF AUCKLAND
FACULTY OF EDUCATION

Te Kura Akoranga o Tamaki Makaurau
INCORPORATING THE AUCKLAND COLLEGE OF EDUCATION

PARTICIPANT INFORMATION SHEET: PRINCIPAL/BOARD OF TRUSTEES

Project title: The influence of technology on verbal interaction skills of foreign language learners in New Zealand secondary schools.

Name of Researcher: Martina Kopf

Dear [insert name],

My name is Martina Kopf and I am the HoD European Languages at [insert name of school]. For my doctoral studies at the Faculty of Education with the University of Auckland, I am exploring the use of technology for the development of verbal skills in language acquisition.

One of the main aims of language learning in New Zealand Secondary schools is to replicate real-life situations, which is clearly set out in the NZ curriculum. Language is meant to be meaningful and effective, and to convey personal opinions. Opportunities for authentic linguistic exchanges between students are, however, often limited in the classroom or put students on the spot and cause language anxiety.

For my doctoral study, I would like to research the interactional gains of on-line videoconferencing between [insert name of school] and one other secondary school of similar social demographic. This will be done by asking students to conduct four verbal interactions in German via Skype, as practice for their NCEA 1.3 Internal tasks. The study will provide students with opportunities to practise authentic oral tasks with the aims of promoting interaction and reducing anxiety in second language classrooms. I would like to investigate whether the use of computer-mediated communication for verbal language learning makes a difference to students' interactional abilities, and I would like to invite your school to participate in the research project.

If you agree to allow me to access your school, this research will involve students conducting the online conversations, a pre- and post-study questionnaire including short reflections after each chat session for all participants, as well as semi-structured interviews with 12 students out of all participants. I would like to carry out this research with Year 11 students of German between Term 3 and 4 in 2013. This timing complements the language curriculum in that students will have acquired sufficient language structures to engage with the activities set. The research will take up a maximum of five German lessons. In the majority of cases, it is anticipated that interactions will take place during class time. However, some schools and students may wish to conduct these at lunchtime. In these exceptional cases, the decision will be left to the discretion of the class teacher/students. All online interactions will be video recorded with the students' and their parents'/caregivers' permission. Each Skype call is expected to last between 3 and 6 minutes. The pre- and post-test questionnaires will take about 20 minutes each and the reflections are expected to take around 7 minutes. Non-participants will be given independent German work during this time. This work will be left to the discretion of the class teacher to decide what is appropriate in the specific context.

All information on this project along with Participant Information Sheets and Consent Forms will be issued to students and parents / caregivers. While this study is designed to complement existing curriculum input, as well as to assist students with their internal assessments, participation in this project is entirely voluntary. Students who do not wish to participate in the research will complete speaking

Fostering peer interactions in online learning environments

activities within their class and no data from these students will be collected for research purposes. You have the right to withdraw the school from this project at any time, and to withdraw any information provided up until the 30th of November 2013. Data analysis will be conducted by me. Findings from this study will be used for my PhD thesis and may contribute to future publications and conference presentations. The information from this project will contribute to developing a better understanding of how online chats can support students to improve their interactional abilities in a foreign language.

Since I am the teacher of invited students from [insert name of school], every effort will be made to avoid a power differential. It will be made clear to students that their participation in this project is entirely voluntary and all information will be given out by a colleague. Furthermore, the research-related analysis of students' work and the interviews will take place from Term 4 onwards, when students are on study leave already and all grades have been finalised.

Anonymity of the data cannot be assured because I will view and transcribe the videos and conduct interviews with students. With regard to reporting the data, however, confidentiality is assured as I will not be naming, or in any other way identifying, your school, teacher or students in any report or publication. Any data will only be accessible to my supervisors and me. You may request access to any publications that arise from this project if you wish to see them.

I hope that you will be able to give your permission for this research to take place at your school and will provide you with a form where you consent in writing to the research procedures described here. My main supervisor, Dr Martin East, will keep all Consent Forms and data for this study in locked storage in his office at the Faculty of Education, the University of Auckland. All forms and data will be destroyed after a period of six years following the university's procedures. Written material will be shredded, computer files erased and digital recordings wiped.

I seek your assurance that the decision of the teacher of German to participate or not to participate in the study will not affect his/her standing within the school in any way. I also seek your assurance that the decision of any student to participate or not to participate in the study will not affect his/her relationship with the school, nor will it affect his/her grades.

Thank you for your willingness to consider participation in this study. If you have any queries regarding this project, please contact my supervisors, the Head of School, or me.

Martina Simone Kopf EdD Student School of Curriculum and Pedagogy Faculty of Education [insert telephone and e-mail address]	Dr Martin East Associate Dean (Research Development) Faculty of Education Senior lecturer School of Curriculum and Pedagogy The University of Auckland [insert telephone and e-mail address]
--	--

Dr Constanza Tolosa Lecturer School of Curriculum and Pedagogy Faculty of Education The University of Auckland [insert telephone and e-mail address]	Professor Judy Parr Head of School School of Curriculum and Pedagogy Faculty of Education The University of Auckland [insert telephone and e-mail address]
---	---

Yours sincerely
Martina Kopf

For any queries regarding ethical concerns you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Office of the Vice Chancellor, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 extn. 83711.

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 07/03/2013 for 3 years, Reference Number 9075

Fostering peer interactions in online learning environments

The University of Auckland
Private Bag 92601, Symonds Street
Auckland 1150, New Zealand
Ph: 64 9 6238899



THE UNIVERSITY OF AUCKLAND
FACULTY OF EDUCATION

Te Kura Akoranga o Tamaki Makaurau
INCORPORATING THE AUCKLAND COLLEGE OF EDUCATION

[insert date]

CONSENT FORM: PRINCIPAL/ BOARD OF TRUSTEES

This consent form will be kept for a period of six years.

Project title: The influence of technology on verbal interaction skills of foreign language learners in New Zealand secondary schools.

Name of Researcher: Martina Kopf

I have read the Principal/Board of Trustees' Information Sheet and have been given an opportunity to consider the participation of the school in this project and to ask any questions, and to have them answered to my satisfaction.

I understand that:

- Participation in this research is entirely voluntary.
- The teacher of German will be asked to take part in this research project.
- Consent forms from this study will be kept in locked storage in Dr Martin East's office at the Faculty of Education, the University of Auckland and will be destroyed after a period of six years.
- Data will be kept in locked storage in Dr Martin East's office at the Faculty of Education, the University of Auckland and will be destroyed after a period of six years.
- I have the right to withdraw the school from this project at any time up until the 30th of November 2013.
- Results from this research may be used by the researcher in her doctoral thesis, conference presentations and publications.
- Any presentations and publications of the research writing will not name the school or the teacher and there will be no reference to individual participants.
- I may request a copy of the research report.

I give assurance that:

- The teacher's decision to participate/ or not to participate in this research project will not affect her standing within the school.
- The students' decision to participate/ or not to participate in this research project will not affect their relationship with the school, nor will it affect their marks.

I give my consent for the research project to be carried out at my school and permission for the teacher of German, [insert name of teacher], to participate in this research.

Name: _____

Title: _____

Signed: _____

Date: _____

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 07/03/2013 for 3 years, Reference Number 9075

The University of Auckland
Private Bag 92601, Symonds Street
Auckland 1150, New Zealand
Ph: 64 9 6238899



THE UNIVERSITY OF AUCKLAND
FACULTY OF EDUCATION
Te Kura Akoranga o Tamaki Makaurau
INCORPORATING THE AUCKLAND COLLEGE OF EDUCATION

[insert date]

PARTICIPANT INFORMATION SHEET: TEACHER OF GERMAN

Project title: The influence of technology on verbal interaction skills of foreign language learners in New Zealand secondary schools.

Name of Researcher: Martina Kopf

Dear [insert name],

My name is Martina Kopf and I am the HoD European Languages at [insert name of school]. For my doctoral studies at the Faculty of Education with the University of Auckland, I am exploring the use of technology for the development of verbal skills in language acquisition. One of the main aims of language learning in New Zealand Secondary schools is to replicate real-life situations, which is clearly set out in the NZ curriculum. Language is meant to be meaningful and effective, and to convey personal opinions. Opportunities for authentic linguistic exchanges between students are, however, often limited in the classroom or put students on the spot and cause language anxiety. My doctoral study is designed to research the interactional gains of on-line videoconferencing between [insert name of school] and one other Secondary school of similar social demographic. This will be done by asking students to conduct verbal interactions in German via Skype, as practice for their NCEA 1.3 Internal tasks. The study will provide students with opportunities to practise authentic oral tasks with the aims of promoting interaction and reducing anxiety in second language classrooms.

Your Principal has given permission for this research project and I would like to invite you as teacher of German to participate in the research project. If you agree, this research will involve students conducting four online conversations lasting between 3 and 6 minutes each, a pre- and post-study questionnaire including short reflections after each chat session for all participants, as well as semi-structured interviews with 12 students out of all participants. I would like to carry out this research between Term 3 and 4 in 2013. Overall, the study is expected to take up a maximum of five teaching lessons.

This timing complements the language curriculum in that students will have acquired sufficient language structures to engage with the activities set. Your students will be matched up with partners from [insert name of schools] and I will organise all activities. Topics will match the curriculum and will follow NCEA guidelines closely. Participation in this project is expected to increase students' independence, willingness to participate in speaking activities and overall competence in German. We would conduct the interactions at a time convenient for all classes and dependent on the availability of computers. My teaching assistant will pair up students and give them each a code. A list will be maintained to link participants with the questionnaires. Students will be asked to use the same code on their questionnaires, which will be completed immediately before and after the Skype chats. Students will need to know their code so they will be able to withdraw their questionnaires should they wish to do so. The pre- and post-test questionnaires will take about 20 minutes each and the reflections are expected to take around 7 minutes. Non-participants will be given independent German work during this time. This work will be left to the discretion of the class teacher to decide what is appropriate in the specific context.

All online interactions will be video recorded with the students' and their parents'/caregivers' permission. Students can ask to have the recording stopped or re-played at any time. Any data will only be accessible to my supervisors and me. Any marked work will be peer-marked by another German teacher to avoid power issues. Since the students are younger than 16 all information on this project along with Participant Information Sheets and Consent Forms will be issued to students and parents / caregivers. While this study is designed to complement existing curriculum input, as well as to help students achieve in their internal assessments, participation in this project is entirely voluntary. Students who do not wish to participate in the research will complete the activities within their class, but no data from these students will be collected for research purposes. You have the right to withdraw

Fostering peer interactions in online learning environments

your participation from this project at any time, and to withdraw any information provided up until the 30th of November 2013.

Anonymity of the data cannot be assured because I will view and transcribe the videos and conduct interviews with students. With regard to reporting the data, however, confidentiality is assured as I will not be naming, or in any other way identifying, you, the school or students in any report or publication. Data analysis will be conducted by me. Findings from this research will be used for my PhD thesis and may contribute to future publications and conference presentations. The information from this project will contribute to developing a better understanding of how online chats can support students to improve their interactional abilities in a foreign language. You may request access to any publications that arise from this project if you wish to see them. I hope that you will be able to give your permission for this research to take place in your class and will provide you with a form where you consent in writing to the research procedures described here. Consent forms and data for this study will be kept in locked storage in the office of my main supervisor, Dr Martin East, at the Faculty of Education, the University of Auckland and will be destroyed after a period of six years. All forms and data will be destroyed after a period of six years following the university's procedures. Written material will be shredded, computer files erased and digital recordings wiped.

I am assured by your principal that your decision to take part/ not to take part in the study will not affect your standing within the school. I seek your assurance that the decision of any student to participate or not to participate in the study will not affect his/her relationship with the school, nor will it affect his/her grades.

Thank you for your willingness to consider participation in this study. If you have any queries regarding this project, please contact my supervisors, the Head of School, or me.

Martina Simone Kopf EdD Student School of Curriculum and Pedagogy Faculty of Education The University of Auckland [insert telephone and e-mail address]	Dr Martin East Associate Dean (Research Development) Faculty of Education Senior lecturer School of Curriculum and Pedagogy The University of Auckland
--	---

Dr Constanza Tolosa Lecturer School of Curriculum and Pedagogy Faculty of Education The University of Auckland [insert telephone and e-mail address]	Professor Judy Parr Head of School School of Curriculum and Pedagogy Faculty of Education The University of Auckland [insert telephone and e-mail address]
---	---

Yours sincerely,

Martina Kopf

For any queries regarding ethical concerns you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Office of the Vice Chancellor, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 extn. 83711.

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 07/03/2013 for 3 years, Reference Number 9075

The University of Auckland
Private Bag 92601, Symonds Street
Auckland 1150, New Zealand
Ph: 64 9 6238899



THE UNIVERSITY OF AUCKLAND
FACULTY OF EDUCATION
Te Kura Akoranga o Tamaki Makaurau
INCORPORATING THE AUCKLAND COLLEGE OF EDUCATION

[insert date]

CONSENT FORM: TEACHER OF GERMAN

This consent form will be kept for a period of six years.

Project title: The influence of technology on verbal interaction skills of foreign language learners in New Zealand secondary schools.

Name of Researcher: Martina Kopf

I have read the Participant Information Sheet and have understood the nature of the research. I have had the opportunity to ask questions about this research and to have them answered to my satisfaction.

I understand that:

- Participation in this research is entirely voluntary.
- My decision to participate/ not to participate in this research does not affect my standing with the school.
- I will be asked to help set up an online chat partnership between my Year 11 German class and Year 11 German classes from [name of schools].
- I will spend up to five lessons on the online interactions.
- The online chats will be video recorded and that I will need to make computers available.
- Students who consent to be involved in the study will be required to complete the online chats, questionnaires and have the interactions analysed.
- Students can ask to have the recording stopped or re-played at any time.
- Any marked work will be peer-marked by another German teacher to avoid power issues.
- The researcher's teaching assistant will pair up students and assign them a code each, which they will use for the questionnaires.
- Consent forms for this study will be kept in locked storage in Dr Martin East's office at the Faculty of Education, the University of Auckland and will be destroyed after a period of six years.
- Data will be kept in locked storage in Dr Martin East's office at the Faculty of Education, the University of Auckland and will be destroyed after a period of six years.
- I have the right to withdraw my contribution from this project at any time up until the 30th of November 2013.
- Results from this research may be used by the researcher in her doctoral thesis, conference presentations and publications.
- Any presentations and publications of the research writing will not use my name or identify my school or students.
- I may request a copy of the research report.

I give assurance that:

- The students' decision to participate/ or not to participate in this research project will not affect their relationship with the school, nor will it affect their marks.

I give my consent to participate in this research.

Name: _____

Signed: _____

Date: _____

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 07/03/2013 for 3 years, Reference Number 9075

The University of Auckland
Private Bag 92601, Symonds Street
Auckland 1150, New Zealand
Ph: 64 9 6238899



THE UNIVERSITY OF AUCKLAND
FACULTY OF EDUCATION
Te Kura Akoranga o Tamaki Makaurau
INCORPORATING THE AUCKLAND COLLEGE OF EDUCATION

[insert date]

PARTICIPANT INFORMATION SHEET: PARENTS/ CAREGIVERS

Project title: The influence of technology on verbal interaction skills of foreign language learners in New Zealand secondary schools.

Name of Researcher: Martina Kopf

Dear parents/caregivers,

My name is Martina Kopf and I am the HoD European Languages at [insert name of school]. For my doctoral studies at the Faculty of Education with the University of Auckland, I am exploring the use of technology for the development of verbal skills in language acquisition. For my doctoral thesis I would like to investigate whether the use of computer-mediated communication for verbal language learning makes a difference to students' interactional abilities.

Your child has been invited to participate in this research because he is in my German class and all of the children in this group have been invited. The research would involve students conducting four brief online conversations with Year 11 German students from other schools, a pre- and post-study questionnaire including short reflections after each chat session for all participants, as well as semi-structured interviews with 12 students out of all participants. Participation in this project is expected to increase students' independence, willingness to participate in speaking activities and overall competence in German. The research will take up a maximum of two German lessons. In the majority of cases it is anticipated that interactions will take place at home as homework tasks. Any marked work will be peer-marked by another German teacher to ensure fairness.

My teaching assistant will pair up students and give them each a code. A list will be maintained to link participants with the questionnaires. Students will be asked to use the same code on their questionnaires, which will be completed immediately before and after the Skype chats. Students will need to know their code so they will be able to withdraw their questionnaires should they wish to do so.

With the students' and their parents'/caregivers' permission, all online interactions will be video recorded. Your child can ask to have the recording re-played or stopped at any time. Any data will only be accessible to me and my supervisors and the video recordings will not be circulated to third parties. Your child may be invited to an optional interview, which is expected to last about fifteen minutes. The interview will be video recorded. Your child can decline to answer any questions during the interview and can ask to have the recorder turned off at any time. Data analysis will be conducted by me. Findings from this study will be used for my PhD thesis and may contribute to future publications and conference presentations. The information from this project will contribute to developing a better understanding of how online chats can support students to improve their interactional abilities in a foreign language. Anonymity of the data cannot be assured because I will view and transcribe the videos and conduct interviews with students. With regard to reporting the data, however, confidentiality is assured as I will not be naming, or in any other way identifying, your child and his/her school or teachers in any report or publication.

Participation in the study will have no adverse effect on students' learning and will not cause disruption to normal classroom routines. My Principal and I give our assurance that neither participation nor non-participation will affect your child's grades or relationship with the school in any way.

Since I am the teacher of invited students from [insert name of school], every effort will be made to avoid a power differential. It will be made clear to students that their participation in this project is entirely voluntary and all information will be given out by a colleague. Furthermore, the research-

Fostering peer interactions in online learning environments

related analysis of students' work and the interviews will take place from Term 4 onwards, after all grades have been finalised.

While this study is designed to complement existing curriculum input, as well as to help students with their internal NCEA assessments, participation in this project is entirely voluntary. Should your child not want to participate in the research, he will complete speaking activities within class and no data from your child will be used in the research. Non-participants will be given independent German work, while participants complete the questionnaires. This work will be left to the discretion of the class teacher to decide what is appropriate in the specific context. The consent forms and any data collected in the project will be stored for a period of six years in a locked cupboard at my supervisor's office. All forms and data will be destroyed after a period of six years following the university's procedures. Written material will be shredded, computer files erased and digital recordings wiped. Participation in the programme is voluntary and you and your child can withdraw participation at any time up until the 30th of November 2013.

I will be pleased to give more information about the project on request. If you have any queries or concerns you wish to discuss please contact the nominated persons below.

Martina Simone Kopf EdD Student School of Curriculum and Pedagogy Faculty of Education [insert telephone and e-mail address]	Dr Martin East Associate Dean (Research Development) Faculty of Education Senior lecturer School of Curriculum and Pedagogy The University of Auckland [insert telephone and e-mail address]
Dr Constanza Tolosa Lecturer School of Curriculum and Pedagogy Faculty of Education The University of Auckland [insert telephone and e-mail address]	Professor Judy Parr Head of School School of Curriculum and Pedagogy Faculty of Education The University of Auckland [insert telephone and e-mail address]

I would very much appreciate your permission to carry out this project by signing the attached Consent form and returning it to your child's German teacher.

Yours sincerely,

Martina Kopf

For any queries regarding ethical concerns you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Office of the Vice Chancellor, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 extn. 83711.

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 07/03/2013 for 3 years, Reference Number 9075

The University of Auckland
Private Bag 92601, Symonds Street
Auckland 1150, New Zealand
Ph: 64 9 6238899



THE UNIVERSITY OF AUCKLAND
FACULTY OF EDUCATION
Te Kura Akoranga o Tamaki Makaurau
INCORPORATING THE AUCKLAND COLLEGE OF EDUCATION

[insert date]

CONSENT FORM: PARENTS/CAREGIVERS

This consent form will be kept for a period of six years.

Project title: The influence of technology on verbal interaction skills of foreign language learners in New Zealand secondary schools.

Name of Researcher: Martina Kopf

I have been given an opportunity to consider my child's participation in this project. I have had the opportunity to ask questions about this research and to have them answered to my satisfaction.

I understand that:

- My child's participation in this research is entirely voluntary.
- My child's decision to participate/ or not to participate in this research will not affect our relationship with the school, nor does it affect his grades.
- My child will be asked to take part in an online chat partnership with Year 11 German classes from other secondary schools as part of his regular German class.
- My child will be video recorded and the online chats will be transcribed and analysed by the researcher.
- My child may ask for the recording to be re-played or stopped at any time.
- Any marked work will be peer-marked by another German teacher to ensure fairness.
- The analysis of my child's work and any interviews will take place from Term 4 onwards, when students are on study leave and all grades have been finalised.
- My child will be asked to fill out coded questionnaires.
- My child may be involved in an interview lasting approximately fifteen minutes.
- The interview will be video recorded and my child can decline to answer any questions and have the recording stopped at any time.
- Consent forms from this study will be kept in locked storage in Dr Martin East's office at the Faculty of Education, the University of Auckland and will be destroyed after a period of six years.
- Data will be kept in locked storage in Dr Martin East's office at the Faculty of Education, the University of Auckland and will be destroyed after a period of six years.
- I have the right to withdraw my child's participation from this project at any time up until the 30th of November 2013.
- Results from this research may be used by the researcher in her doctoral thesis, conference presentations and publications.
- My child's name or other identifying criteria will not be disclosed by the researcher in the presentations or publications of the research findings.
- I may request a copy of the research report.

I give my consent to have my child take part in this research.

Signed: _____ Name: _____

Date: _____

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 07/03/2013 for 3 years, Reference Number 9075

The University of Auckland
Private Bag 92601, Symonds Street
Auckland 1150, New Zealand
Ph: 64 9 6238899



THE UNIVERSITY OF AUCKLAND
FACULTY OF EDUCATION
Te Kura Akoranga o Tamaki Makaurau
INCORPORATING THE AUCKLAND COLLEGE OF EDUCATION

[insert date]

PARTICIPANT INFORMATION SHEET: STUDENTS

Project title: The influence of technology on verbal interaction skills of foreign language learners in New Zealand secondary schools.

Name of Researcher: Martina Kopf

Dear students in my German class,

I am in the process of completing a Doctorate at the Faculty of Education with the University of Auckland. My main interest is to study the effect of technology on language learning and specifically on speaking skills. For my doctoral thesis, I want to investigate whether the use of videoconferencing improves students' abilities in speaking. Your Principal has given permission for this project.

You would have four online chats with other Year 11 students of German. Each individual chat will only last about three to six minutes. The Skype conversations will be video recorded and will only be accessible to me and my supervisors. You can ask to have the recordings played back to you. Even if you agree to being recorded, you may choose to have the recorder turned off at any time.

In most cases, the interactions will take place during your normal German class. Any marked work will be peer-marked by another German teacher to ensure you get a fair grade in your German course.

You will also be asked to complete a questionnaire about speaking in German before and after the study as well as short reflections after each individual chat on how you thought the online chats went. All questionnaires and reflections will be issued and completed in your German class. You will be asked to remember your unique code so that you can identify your questionnaires should you want to withdraw from the research. The questionnaires will take you about 20 minutes each and the reflections are expected to take around 7 minutes each.

You may be invited to an optional interview to discuss how you thought the interactions went. The interview will take about fifteen minutes and will be video recorded. You can ask to have the recorder stopped at any time. I will not be naming, or in any other way identifying you, the school, or your teacher in any report or publication about this project. If you want to, you can ask me to see the transcript of your recordings and you have the opportunity to edit the transcript.

I will transcribe and analyse the data from your interactions. Findings from this research will be used for my PhD thesis and may contribute to future publications and conference presentations. The information from this project will contribute to developing a better understanding of how online chats can support students to improve their interactional abilities in a foreign language.

I will keep the information from this project for a period of six years in a locked cupboard at my supervisor's office at the University of Auckland and then I will have it destroyed. You have the right to withdraw your participation from this project at any time up until the 30th of November 2013.

It is alright if you don't want to participate. Your Principal and I assure you that your decision to participate/ not to participate will not affect your relationship with the school or your grades in any way. It is important that you know that this project aims to enhance language teaching and learning and prepares you for interactions in German. If you don't want to participate in the research, you will complete the speaking activities with your classmates and no data from you will be used in the research.

If you are a student in my own German class, I will make every effort to avoid a power imbalance. All information about the research will be given to you by another teacher and it will be made clear to you that participation in this project is entirely voluntary. Furthermore, any analysis of your work and the

Fostering peer interactions in online learning environments

interviews will take place from Term 4 onwards, after your grades have been finalised. This is to prevent you from potentially feeling assessed unfairly dependent on whether or not you choose to participate in this study.

If you have any questions, you can contact me or my supervisors at the Faculty of Education. Please sign the letter attached to indicate that you want to participate in this project.

Martina Simone Kopf EdD Student School of Curriculum and Pedagogy Faculty of Education The University of Auckland [insert telephone and e-mail address]	Dr Martin East Associate Dean (Research Development) Faculty of Education Senior lecturer School of Curriculum and Pedagogy The University of Auckland [insert telephone and e-mail address]
--	--

Dr Constanza Tolosa Lecturer School of Curriculum and Pedagogy Faculty of Education The University of Auckland [insert telephone and e-mail address]	Professor Judy Parr Head of School School of Curriculum and Pedagogy Faculty of Education The University of Auckland [insert telephone and e-mail address]
---	---

Yours sincerely,

Martina Kopf

For any queries regarding ethical concerns you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Office of the Vice Chancellor, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 extn. 83711.

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 07/03/2013 for 3 years, Reference Number 9075

The University of Auckland
Private Bag 92601, Symonds Street
Auckland 1150, New Zealand
Ph: 64 9 6238899



THE UNIVERSITY OF AUCKLAND
FACULTY OF EDUCATION
Te Kura Akoranga o Tamaki Makaurau
INCORPORATING THE AUCKLAND COLLEGE OF EDUCATION

[insert date]

CONSENT FORM: STUDENTS

This form will be kept for a period of six years.

Project title: The influence of technology on verbal interaction skills of foreign language learners in New Zealand secondary schools.

Name of Researcher: Martina Kopf

I have been given an explanation of this project and an opportunity to consider my participation in this research. I have been able to ask questions and to have them answered to my satisfaction.

I understand that:

- My participation in this research is entirely voluntary.
- My decision to participate/ not to participate in this research will not affect my relationship with the school, nor will it affect my grades.
- I will be asked to take part in an online chat partnership with Year 11 German classes from other schools as part of my regular German class.
- My chats will be transcribed and analysed by the researcher.
- The online chats will be video recorded and will only be accessible to the researcher and her supervisors. I may ask for the recording to be re-played or stopped at any time.
- Any marked work will be peer-marked by another German teacher to ensure fairness.
- The analysis of my work and any interviews will take place from Term 4 onwards, after all course grades have been finalised.
- I will be asked to fill out questionnaires using my unique code.
- I may be involved in an interview lasting approximately fifteen minutes.
- The interview will be video recorded and I may ask for the recording to be stopped.
- I may request to view and edit the transcript of my recordings.
- Consent forms from this study will be kept in locked storage at the University of Auckland and will be destroyed after a period of six years.
- Data will be kept in locked storage at the University of Auckland and will be destroyed after a period of six years.
- I have the right to withdraw my participation from this project at any time up until the 30th of November 2013.
- Results from this research may be used by the researcher in her doctoral thesis, conference presentations and publications.
- My name or other identifying criteria will not be disclosed by the researcher in the presentations or publications of the research findings.

I agree / do not agree to take part in this project.

I agree / do not agree to be interviewed.

Signed: _____ Name: _____

Date: _____

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 07/03/2013 for 3 years, Reference Number 9075