Routledge Studies in Applied Linguistics

METACOGNITION IN LANGUAGE LEARNING AND TEACHING

Edited by
Åsta Haukås, Camilla Bjørke and Magne Dypedahl

Metacognition in Language Learning and Teaching

This volume offers an exhaustive look at the latest research on metacognition in language learning and teaching. While other works have explored certain notions of metacognition in language learning and teaching, this book, divided into theoretical and empirical chapters, looks at metacognition from a variety of perspectives, including metalinguistic and multilingual awareness and language learning and teaching in L2 and L3 settings, and explores a range of studies from around the world. This allows the volume to highlight a diverse set of methodological approaches, including blogging, screen recording software, automatic translation programs, language corpora, classroom interventions and interviews and, subsequently, to demonstrate the value of metacognition research and how insights from such findings can contribute to a greater understanding of language learning and language teaching processes more generally. This innovative collection is an essential resource for students and scholars in language teaching pedagogy and applied linguistics.

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Foreword

There can be little doubt that metacognition plays a key role in the processes of successful language learning and teaching. It is quite indisputable, for instance, that good language learners should possess a high level of awareness of the intricacies of the target language they are trying to master, how it compares to their mother tongue and other known languages, the challenges involved in the process, their own deep-seated beliefs about learning and teaching of additional languages, and the strategies that can be employed for this purpose. The same holds true for language teachers who, in order to teach more effectively, should clearly be not only aware of their instructional practices and their beliefs about those practices but also cognizant of the extent to which different instructional options fit in with learners' individual profiles or contextual considerations. It should also be kept in mind that teachers never cease to be learners themselves, either in regard to the language they teach, the additional languages they themselves might be learning or the various techniques and procedures that they can fall back on to make their lessons more engaging and beneficial to their students.

In light of the above, the present volume is undoubtedly a much-needed contribution to the fields of second language acquisition and multilingualism. While the importance of the issues that are touched upon provide ample justification for the publication of this edited collection, there are several other reasons why this volume stands a chance of becoming a major point of reference for all of those interested in theorising and researching metacognition, as well as those involved in fostering it in learners or pre-service and in-service teachers. For one thing, what should be commended is not only a very successful attempt to approach metacognition from the perspective of both learners and teachers, but also the effort to make the so urgently needed connections between theory, research and classroom practice. Another strength of the edited collection is that it brings together contributions from both experienced researchers and scholars who are relatively new to the field, representing different nationalities and areas of expertise, and thus being able to show the significance of metacognition for different aspects of language learning and teaching, in relation to various languages, cultures and educational levels. No less important is the

fact that metacognition has been considered in contexts that have thus far been neglected by researchers, such as digitalised environments. Many of the reported research projects have also drawn on unique methodological approaches together with innovative sources of data, such as teacher trainees' blogs, language corpora or keystroke-logging software. These are often employed in combination to offer a more multifaceted picture of participants' metacognitive processes. It is for all of these reasons that the volume is bound to provide food for thought and a valuable source of inspiration not only for academics wishing to obtain fresh insights into this crucial attribute but also for teacher educators intent on fostering metacognition in prospective teachers, and practitioners willing to become more reflective in their own teaching and to enhance the awareness of languages and language learning in their students.

<div style="text-align: right">Mirosław Pawlak</div>

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1 Introduction

*Åsta Haukås, Camilla Bjørke
and Magne Dypedahl*

Researchers increasingly point to the importance of metacognition in enhancing learning and teaching. Tarricone (2011) states, for instance, that metacognition is fundamental to learning, whereas Fairbanks et al. (2010) and Hattie (2012) hold that teachers involved in metacognition are better able to support their own and their students' development. Also, policy makers increasingly acknowledge the value of metacognition, which they classify as a key competency for meeting future individual and global challenges (Griffin, McGaw, and Care 2012; OECD 2005). So, what is metacognition? As will become clear from the discussion in Chapter 2 of this book, there is no general agreement on how to define this rather vague concept. In general terms, it is often described as "thinking about one's own thinking"; but in this book, it refers specifically to *an awareness of and reflections about one's knowledge, experiences, emotions and learning* in the contexts of language learning and teaching (see Haukås 2018, this volume).

Although metacognition is now regarded as an essential tool for lifelong learning and flexibility in ever-changing multilingual and multicultural societies, it can still be claimed that metacognition has not yet been recognised as an integral part of language learning and teaching by as many researchers and scholars as desired. The realisation of the importance of metacognition for language learning and teaching inspired a group of researchers from various institutions of higher education to gather in Cambridge, England, in 2015. The central aims of the seminar were to discuss existing research on metacognition in language learning and teaching and to identify important future directions in the field. Furthermore, even though a wealth of publications provide evidence of the growing recognition of the value of metacognition, it became clear that no edited books existed that focused specifically on metacognition in language learning *and* teaching. Thus, the idea for this anthology was born.

One way of accomplishing a stronger focus on metacognition in language learning and teaching would be to widen the range of voices writing about metacognition by stimulating contributions from representatives from various linguistic and educational backgrounds. For this reason, a mix of established scholars and newcomers to the field of metacognition were invited

to contribute to this book. Consequently, the book includes theoretical and empirical contributions by researchers who have written about metacognition in language learning and teaching from a great variety of perspectives. Moreover, the contributors represent a number of different countries, continents and languages. The result is a broad range of topics concerned with metacognition in learning and teaching in school and at the university level, and we firmly believe that insights from these studies are valuable across languages, contexts and cultures. The empirical chapters of the book also employ a wide variety of established as well as innovative methodological approaches to tap into learners' and teachers' metacognition. Examples of data that have been collected and analysed include language corpora, teacher trainees' blogs, learners' metalinguistic reflections about machine-translated texts, and data about language learning generated by using keystroke-logging software and screen-recording software combined with self-reports. Furthermore, a questionnaire for examining learners' metacognition when writing in digitised environments is presented for the first time in this volume. In this way, this book also contributes to the discussion of how researchers can best approach and investigate learners' and teachers' metacognition.

Who Is This Book Intended For?

The main audiences for this book are researchers in the field of applied linguistics, language teacher educators, teacher trainees and practising language teachers. Thus, the editors hope that this book will serve several purposes: (1) to provide readers with theoretical insights into the relevance of metacognition in researching, learning and teaching languages; (2) to familiarise readers with recent empirical research in metacognition in language learning and teaching in a variety of settings; (3) to introduce potential researchers to a variety of approaches for carrying out research in the field; and (4) to inform future and practising language teachers through theory and a wealth of empirical examples about central issues and approaches for becoming metacognitively oriented language teachers and fostering metacognition about language learning among their students.

The Organisation and Content of This Book

This book is divided into three parts. Part I consists of three papers (Chapters 2–4) discussing central theoretical issues about metacognition in language learning and teaching. Part II brings together six empirical chapters (5–11) which focus on metacognition in language learners. Part III contains two empirical papers, Chapters 12 and 13, on different aspects of metacognition in language teachers. However, theoretical discussions about metacognition in this field naturally include both teachers *and* learners. Fostering metacognition in learners typically involves teachers, while language

teachers would normally think about their learners when they are metacognitively active. In other words, there are no clear-cut boundaries between theory, learning and teaching. On the contrary, these fields are closely intertwined and will also be treated as such wherever it is relevant in the various chapters. Below, we provide a more detailed presentation of each chapter.

In the first part of Chapter 2, **Åsta Haukås** discusses the concept of metacognition. Just like many other concepts related to cognition and thinking, "metacognition" is understood and operationalised in different ways by researchers in the field. However, common to all definitions is the fact that people are consciously aware of their own thinking. In this context, Haukås refers to metacognition as "an awareness of and reflections about one's knowledge, experiences, emotions and learning" in language learning and language teaching. Thus, this broad definition of metacognition includes all aspects of thinking about language learning and teaching. In the second part of the chapter, Haukås gives an outline of methodologies for doing research on metacognition in language learning and teaching, whereas in subsequent sections she discusses various pedagogical approaches that have the potential to foster metacognition in learners and teachers. Finally, Haukås discusses which competences are needed for teachers to enhance metacognition both in themselves and among their learners.

A central subcomponent of metacognition in this context is multilingual language learners' metalinguistic and crosslinguistic awareness. In Chapter 3, **Ulrike Jessner** provides insights into cognitive and metacognitive differences between multilinguals and monolinguals, whereby she argues that multilinguals' increased knowledge of languages and language learning potentially makes them more capable of reflecting on their own knowledge and experiences. Jessner takes the Dynamic Model of Multilingualism (DMM), which is based on Dynamic Systems and Complexity Theory (DSCT), as the framework for her discussion of multilinguals' metacognition, stating that the languages in multilinguals' repertoire should not be regarded as separate entities in the brain, but rather as belonging to one dynamic psycholinguistic system in which the languages influence each other in sometimes unpredictable ways. Even though multilingualism is associated with certain cognitive and metacognitive advantages, Jessner emphasises that it should not be regarded as an automatic asset. She goes on to present several studies from the Austrian and South Tyrolean contexts that demonstrate how multilingual pedagogical approaches with a focus on metacognition can foster multilingualism further. In Jessner's final section, she argues that learners' metacognition concerning self-assessment of their own language proficiencies should receive more emphasis in both teaching and research.

In Chapter 4, **Magne Dypedahl** explores principles for designing courses in language teacher education that can enhance a metacognitive approach to the development of intercultural competence. In the first section of the chapter, Dypedahl argues that a consistent metacognitive approach to

intercultural learning requires a coherent course design, i.e, consistency between how the concept of intercultural competence is understood, how knowledge about intercultural communication is presented to the students, and assessment. Then, he discusses how metacognition can be integrated with the concept of intercultural competence by focusing on the internal outcome (metacognition) as well as the external outcome (appropriate communication) of this learning process. This conceptual synthesis is also visualised in a model of intercultural competence presented for the first time in this volume. The next section introduces intercultural communication as a field of study. Dypedahl points out that there often seems to be a gap between this field of study and language studies, which there is good reason to avoid. Furthermore, he gives examples of teaching approaches for the development of metacognitive intercultural competence, such as using critical incidents and role play in a way which prevents stereotyping. Another example is how a seemingly traditional culture-specific approach to target cultures can be used for metacognitive learning. Finally, he discusses a metacognitive approach to the assessment of intercultural competence.

The first two empirical chapters in Part II focus on learners' metalinguistic awareness. In Chapter 5, **Eva Thue Vold** presents an innovative study which combines learners' critical reflections of automatically machine-translated texts with an analysis of learners' metalinguistic reflections of the same texts. Divided into groups based on proficiency levels, L1 Norwegian upper secondary learners of L3 French were given a text in L1 Norwegian and two automatically translated versions of the same text into L3 French. When analysing the recorded group work, Vold was mainly interested in investigating how the learners talked about the text and to what extent they used grammatical terminology when doing so. Furthermore, she examined which language errors the learners focused on and how and to what extent the learners' reflections differed between proficiency levels. The data analysis revealed that most learners discussed the text using an everyday language, typically without supporting their views with concrete examples. They were mainly occupied with easily detectable lexical errors; whereas syntactical and morphological errors, for instance, often remained uncommented. Only the most proficient students used grammatical terminology when talking about the texts. These learners also tended to spend more time on the task than less proficient learners. Whereas many teachers express scepticism towards machine translations, believing that they can prevent learners from investing time and effort in the language learning process, Vold argues that such texts can be valuable tools for enhancing learners' metalinguistic awareness when used in appropriate ways. This study thus gives interesting insights into what learners focus on when assessing automatically translated texts, many of which they likely use themselves, and how they talk about them. In addition, the study is an example of a pedagogical approach for enhancing learners' critical metacognition about languages and the use of automatic translation tools.

In Chapter 6, **Hilde Hasselgård** explores the potential of increasing learners' metacognition about languages using corpus data. In the first part of her study, she uses a parallel corpus of English and Norwegian to contrastively examine three lexico-grammatical constructions, namely the modals *skal/vil* vs. *shall/will*, the collocation of modal verbs with certain modal adverbs, and the use of so-called topic identifiers. The findings from this analysis are compared with data from two corpora containing written texts by L1 Norwegian advanced learners of L2 English and by L1 English students. The linguistic analysis reveals interesting differences between the languages and language users. For example, the Norwegian *skal* is used 20 times more often than the English counterpart *shall* and is also overused by the Norwegian L2 students of English. However, Hasselgård's data demonstrate that frequencies in the L1 are not automatically transferred to the L2. Norwegian *vil* is, for example, less frequently used than English *will*, but the L2 students overuse the construction. Similarly, even though topic identifiers, such as *when it comes to* and *in connection with*, are not grammatically incorrect in English, both professional translators and L2 students tend to overuse these expressions. By studying parallel corpora, language learners can become aware of the typical usage in the target language and in their own language, but they can also discover how learners from their own linguistic backgrounds deal with the various structures in the target language. This may in turn enhance the learners' awareness of their own language preferences and to what extent they need to change their language use. In the last section of her paper, Hasselgård presents and discusses students' reflections on the potential usefulness of being aware of similarities and differences between English and their first language. The learners generally agree that explicit knowledge of similarities and differences between languages is helpful when learning and teaching languages because it enhances positive transfer and also makes learners aware of which linguistic structures they should pay particular attention to. However, some learners reflect on the disadvantages of this knowledge as well, noting that it may result in the avoidance of certain structures.

When considering the typical means of communication a language learner needs to master, i.e. speaking, listening and writing, we would argue that writing is probably the most suitable tool for focusing on and developing metacognition. This is so because in contrast to speaking and listening, when writing, the learner normally has enough time to reflect on both the writing process and the product, at both the macro and micro level. Hacker, Bol, and Keener (2009) have even argued that writing as a whole can be called applied metacognition. Since writing is such a useful tool for developing metacognition, it is not surprising that three chapters in this book focus on learners' writing. In addition, Chapter 11 explores teacher trainees' metacognition in their practice experiences by using blogging.

In Chapter 7, **Yvonne Knospe** first gives an interesting overview of research on metacognition in writing. Based on previous research, she convincingly

summarises learners' metacognition concerning writing in a table that is useful not only to other researchers but also to teachers and students of languages. In the table, Knospe distinguishes between learners' *metacognitive knowledge about writing*, e.g. knowledge about their own strengths and weaknesses as language learners and writers as well as how to apply certain writing strategies, and learners' *metacognitive regulation of writing*, such as planning, drafting and revising. In her dissertation project, Knospe designed an intervention study to investigate secondary school foreign language learners' metacognition about writing and how their metacognition developed over time. The main aim of this part of Knospe's empirical study was to investigate one language learner's reflections about his own writing processes. Henry, a 16-year-old Swedish student, was taking part in a writing intervention together with his peers and had been learning German as a third language for four years when the intervention started. Keystroke-logging software and screen-recording software were applied during the writing processes and then used as a tool by the researcher for reflection with Henry in five interviews immediately following each writing session. In this contribution, Knospe is particularly interested in Henry's metacognitive knowledge about writing and to what extent his knowledge changes over time. When analysing the data, it became clear that when given the chance to reflect on his own writing process, Henry was well able to give detailed accounts of his metacognition concerning writing in a foreign language. From a methodological perspective, this gives evidence that the approach taken in this study can be useful to other researchers interested in tapping into learners' metacognition in writing. Interestingly, Henry was mainly occupied with his limitations—what he could not do, and much less so with what he could actually do—when reflecting on his learning processes. Knospe argues that these negative beliefs can result in the avoidance of challenging learning tasks and thereby be a hindrance to future learning. She therefore recommends that teachers give their students enough time to reflect on their learning processes and that they pay special attention to replacing learners' negative self-images with more positive ones based on what they actually can do and how they can improve themselves.

In another case study, this time from a school setting in the United Kingdom, **Karen Forbes** in Chapter 8 argues that the foreign language classroom is an ideal context for developing transferable metacognitive writing strategies. This is one of the very few studies which not only investigates the effect of a programme of strategy-based instruction on the foreign language itself, but also explores reverse transfer to the L1. Forbes reasons that foreign language teachers, compared with L1 teachers, typically tend to take a more structured, bottom-up approach to language learning and, as such, are particularly well positioned to contribute to developing metacognition and awareness about language more generally. This chapter reports on data from one learner of German who took part in a classroom-based intervention with an explicit focus on metacognitive strategy use in writing. Based

on analyses of the learner's written texts and retrospective interviews, the findings suggest that a foreign language classroom in which students are more aware of being consciously and actively engaged in thinking is highly conducive to the development of language-related metacognitive strategies, which can also positively affect writing in the L1. However, such transfer does not necessarily happen automatically and can be facilitated further when the links between strategy use in the foreign language and first language classrooms are made explicit.

Whereas Knospe and Forbes adopted a qualitative case study approach in their contributions and thus provided in-depth insights into individual learners' metacognition about language learning and writing, **Lawrence Jun Zhang** and **Tony Limin Qin** in Chapter 9 present a new quantitative tool, a questionnaire, for tapping into learners' metacognition about writing. Typically, language learners and users around the globe no longer write their texts on paper; instead, they write on computers. The use of digital devices when writing has an impact on students' learning in different ways. For example, automatic grammar and spelling programmes can help students write better texts. Furthermore, the possibilities of editing and reorganising texts are easier on computers than on paper. In addition, learners have rapid and effortless access to nearly unlimited online resources about the topics in question. However, being online may also pose many challenges to language learners, as they must evaluate and make choices between a seemingly unlimited array of alternatives. For the purpose of investigating EFL learners' metacognition in highly digitised societies, Zhang and Qin have developed the questionnaire, Language Learners' Metacognitive Writing Strategies in Multimedia Environments (LLMWSIME). This chapter reports on the validation of the tool and discusses its usefulness both as a research instrument and a pedagogical tool for enhancing leaners' metacognition about their online writing strategies. The questionnaire explores learners' strategies for planning their writing, monitoring strategies during the writing process, and evaluation strategies after writing. The questionnaire has been tested at a Chinese university by 400 students studying English in addition to various other subjects, and has been proven to be robust with good construct validity and reliability. To our knowledge, this is the first questionnaire to examine learners' metacognition when writing in online environments. Therefore, we expect this tool to be used in future research in different settings and await interesting comparisons of learners' metacognition when writing online.

As mentioned above, writing seems to lend itself particularly well to research on metacognition, but it also serves as a valuable pedagogical tool to enhance learners' metacognition. This does not mean, however, that a focus on metacognition in oral communication is not equally important. In Chapter 10, **Henrik Bøhn** and **Gro-Anita Myklevold** investigate learners' use and awareness of communication strategies in their study from a Norwegian lower secondary school context. During an intervention, EFL

learners in the instruction group learned about and practised three different strategies that are useful in communication—namely circumlocution, super-ordination and the use of fillers/stalling strategies—whereas learners in the control group received no such instruction. Prior to the intervention, learners in both groups responded to a background questionnaire about their grades, their L2 English motivation and their awareness of communication strategies. After the intervention, an equal number of students from each group were tested in their use of oral communication strategies and thereafter interviewed about their performance on the test. The analysis of the data indicated that the intervention impacted the instruction group's use of communication strategies positively, as they used a higher number of communication strategies than the learners in the control group. They also seemed to be more aware than the control group learners of the strategies they had been using. Interestingly, the researchers found no correlation between the learners' proficiency levels and their use of strategies. Even though this study had a small-scale design and should be followed up by further research, it nevertheless demonstrates the learning potential of exposing language students to metacognitive teaching approaches concerning the oral use and learning of languages.

Chapter 11 takes a rather different perspective on students' metacognition in language learning than the other chapters in Part 2 of this book. Here, **Ragnar Arntzen** and **Odd Eriksen** emphasise how important it is that learners with immigrant backgrounds reflect on their educational experiences in order to better understand past choices, present beliefs and reaction patterns. Furthermore, the authors believe that, by telling their stories of overcoming previous educational challenges to emphatic teachers, learners may increase their feelings of self-efficacy. At the same time, teachers' understanding and knowledge of their students' educational backgrounds are essential for supporting their learning endeavours. Arntzen and Eriksen invited eight students with immigration backgrounds at a university college to tell and reflect on their educational stories, starting in their home countries and finishing in Norway, their new home country. In this chapter, the stories of Babet and Yasmin, two students who have approached their past and present educational challenges and opportunities in quite different ways, are presented. The analysis of these stories provides the readers with interesting and inspiring insights into reflections on educational struggles, as well as how to overcome them.

Part III of this book is dedicated to metacognition in language teaching. To be a teacher is an intellectually challenging enterprise whereby a multitude of competences and knowledge sources must be activated to support students in their learning processes. However, teachers typically also experience many different emotions before, during and after a hectic and unpredictable workday. Golombek and Johnson (2004) argue that emotions are important driving factors in a teacher's professional development, as they may promote self-analysis and self-inquiry. However, it is important to

actively become aware of and reflect on one's emotions. Taking the famous poet William Wordsworth's phrase about "emotion recollected in tranquility" as her starting point, **Linda Fisher** in Chapter 12 presents a study of language teacher students at a British university who were given the opportunity to blog about their experiences during their one-year study to become qualified teachers. The students were encouraged to write a blog to be read only by the teacher educator, who is also the researcher in this study. Perhaps too often, students' writings are evaluated and given a pass or a fail. This blogging activity was quite different, however, since the students could write as many blog entries as they wanted and could expect to be read by a non-judging, supportive and understanding professional who only sporadically responded to the text, and always with positive regard. This chapter analyses the blogs of two teacher students, Nikhil and Daniela, whose writing for metacognition displays interesting insights into their emotions towards and experiences with becoming language teachers. Linda Fisher convincingly demonstrates through these two case studies how metacognition can support people in becoming aware of and finding meaning in negative as well as positive emotions and also support them in becoming confident professionals.

Whereas the teacher trainees in Fisher's study were preparing to become language teachers of French and Spanish in the United Kingdom, the participants in **Philip Hiver** and **George Whitehead's** study (Chapter 13) were experienced EFL teachers in secondary schools in South Korea. Similar to several contributors to other chapters in this book, Hiver and Whitehead argue that metacognition could be used by language teachers to obtain better insights into their own knowledge, emotions and experiences and to improve as professionals. In this study, data from 40 Korean EFL teachers taking part in a professional development programme were collected multiple times over 12 months. The amount of data is impressive and rich as it consists of multiple journal entries, observations via video recordings and in-depth interviews from each teacher. In the context of this study, the researchers wanted to investigate to what extent L2 teachers engage in metacognitive thought and action and what salient developmental mechanisms shape their capacity for L2 teacher metacognition. The researchers found that most participants were effective teachers capable of supporting their students in their learning processes. However, only around one-half of them seemed to be regularly involved in metacognition about their own teaching. Interestingly, and as a starting point for further research, Hiver and Whitehead hold that teacher metacognition should be regarded as a superordinate adaptive capacity, whereas reflection can be viewed as a component that can potentially foster metacognition and professional development. Reflection can also turn out to be counterproductive, however, if it results in endless negative thinking and is accompanied by self-doubt and confusion. The authors argue that language teacher metacognition can be triggered by several factors and contexts, such as teachers' cognitions about

themselves and their own instruction or when considering critical incidents that happened during language teaching.

Conclusion

As is evident from the overview above, the chapters of this book cover a great variety of contexts and perspectives on metacognition in language learning and teaching. Correspondingly, it is our hope that researchers, language teacher educators, teacher trainees and practising language teachers alike will be inspired by this contribution to start or continue their own research on and explorations of metacognition in language learning and teaching. There is a need for generating a stronger emphasis on metacognition in language teacher education, and for experienced and future teachers to become more interested in developing their own and their learners' metacognition. This requires shared knowledge. With the decision to make this book available as open access in addition to a printed version, our aim is to contribute to a more democratic sharing of knowledge by reaching as many readers as possible.

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2 Metacognition in Language Learning and Teaching

An Overview

Åsta Haukås

Introduction

Several factors correlate with success in language learning, such as high motivation (Masgoret and Gardner 2003), a rich amount of target language input (Ellis 2002), skill and dedication on the part of the teacher (Hattie 2009) and explicit language instruction (Norris and Ortega 2000). Yet researchers increasingly point to the importance of metacognition in enhancing language learning (for example, Anderson 2002, 2008; Chamot 2005; Wenden 1998). The learner is typically the main focus of most studies and overviews on metacognition (Wilson and Bai 2010), but in this introductory chapter, both language learners and language teachers will be at the centre of the discussion. The aim of the first part of the chapter is to clarify the concept of metacognition and discuss how metacognition relates to language learning and teaching. In the second part, I present and discuss common methodological tools and approaches to metacognition research. Thereafter, I focus on how learners' metacognition can be promoted and discuss central aspects of language teaching that teachers should be able to reflect on in order to enhance their own and their learners' metacognition. Finally, I discuss the extent to which language teachers have actually implemented a metacognitive instructional approach to language learning.

The Concept of Metacognition

The ability to reflect on one's own thoughts and experiences is probably a unique human capability; humans can reflect on their lives, thoughts and actions, whereas animals cannot. Furthermore, humans are the only species that can plan their future, think about their past and learn from their experiences, and to some extent also foresee what will happen to them. They can also imagine what it is like to be someone else; that is, they can feel empathy for others. Metcalfe (2008) argues that people's ability to reflect on their own thoughts, or metacognition, is a recent result of evolution; whereas animals are purely instinct and stimulus bound, metacognition allows humans to exert self-control over their actions.

Most researchers attribute the concept of metacognition to John Flavell. He defines metacognition as "one's knowledge concerning one's own cognitive processes and products or anything related to them" (1976, 232). Flavell (1979, 907) suggests three domains of metacognition, namely *metacognitive knowledge, metacognitive experiences* and *metacognitive strategies*. In the domain of *metacognitive knowledge*, person knowledge refers to knowledge of oneself and others as cognitive processors. It includes knowledge and beliefs about what people think they can and cannot do well. Further, it includes knowledge and beliefs about how and to what extent factors like age, gender, intelligence, motivation, personality and educational background influence learning. Task knowledge refers to an understanding of how a task should be managed and "how successful you are likely to be in achieving its goal" (1979, 907). Strategy knowledge refers to beliefs about which strategies are effective to achieve a goal. Flavell states that metacognitive knowledge typically involves a combination of these three types. Furthermore, Flavell (1979, 906) defines *metacognitive experiences* as "any conscious cognitive or affective experience that accompany and pertain to any intellectual enterprise". *Metacognitive strategies* refer to the deliberate use of strategies to control one's own cognition. Flavell (1987) later expanded the concept of metacognition to explicitly include not only cognitive but also affective variables. He also makes clear that the different domains of metacognition are often not easy to separate from each other.

Veenman, van Hout-Wolters, and Afflerbach (2006, 4) rightly state that "while there is consistent acknowledgement of the importance of metacognition, inconsistency marks the conceptualization of the construct". In fact, recent decades have seen a proliferation in attempts at defining and classifying metacognition. General and short definitions like "thinking about one's own thoughts" (Hacker 1998) and "reflections on cognition" (Schoenfeld 1987) are often cited, but definitions related exclusively to learning are also common. Thus, the field uses the concept of metacognition in a variety of ways and with different superordinate and subordinate categories depending on researchers' backgrounds and research interests. A further complicating factor is that other terms are also used for metacognitive knowledge, experiences and strategies, and it is therefore hard to set clear boundaries for the field. Examples of such concepts are belief, reflection, theory of mind, metamemory, critical thinking, awareness, cognition, autonomy, learning strategies, self-regulation and self-efficacy, and it is not always clear how these concepts relate to metacognition (Veenman, van Hout-Wolters, and Afflerbach 2006, 4). Also in the field of language learning and language teaching, several terms are used, partly interchangeably. However, it is not the goal of this chapter to provide an overview of the various usages (but see Tarricone 2011 for an attempt to make a comprehensive taxonomy), nor is it to conclude that one understanding of metacognition is better than another. Rather than taking an essentialist approach to research

on metacognition, I argue that researchers should aim at providing a clear presentation of their understanding of the concept in their respective studies (Janicki 2006).

The Concept of Metacognition in Language Learning and Teaching

Wenden (1987) was probably the first researcher to call attention to the importance of metacognition in language learning and teaching. In her review of research on metacognitive knowledge, she sets out to clarify how this research field relates to already established theories and research on language. Wenden understands metacognitive knowledge as knowledge about one's own learning. Drawing on Flavell, she acknowledges three categories of metacognitive knowledge, namely person knowledge, task knowledge and strategy knowledge. Furthermore, Wenden distinguishes between metacognitive knowledge and metacognitive strategies. Metacognitive strategies are defined as "general skills through which learners manage, direct, regulate, guide their learning, i.e. planning, monitoring and evaluating" (Wenden 1998, 519). In accordance with cognitive psychology, Wenden categorises planning, monitoring and evaluation as the three components of self-regulated learning. She refers to what learners already know about a subject as domain knowledge. Consequently, domain knowledge is viewed as separate from metacognitive knowledge, but Wenden underscores that both these knowledge types are necessary when solving a task.

Prior knowledge is regarded as one of the most important contributors to subsequent learning (Weinstein and Mayer 1986). Thus, reflecting on what is needed to master a task also involves reflecting on learners' prior knowledge of similar tasks and subjects. I would therefore argue that learners' and teachers' reflections on what they know and what they do not know comprise a central component of their metacognition. This understanding remains in agreement with general definitions of metacognition, such as "thinking about one's own thoughts" (Hacker 1998) and is in line with researchers like Tobias and Everson (2002) and Paris and Winograd (2013). Tobias and Everson (2002) refer to this component as knowledge monitoring, a fundamental or prerequisite process for further learning. Thus, a conscious analysis of what one knows about—for example, certain language structures or the city of London—is necessary for realising what still must be learnt and planning how learning can be achieved. Furthermore, an awareness of one's emotions is increasingly seen as a central component of metacognition (Fisher 2018, this volume; Hiver and Whitehead 2018, this volume; Papaleontiou-Louca 2008). Consequently, I have adopted a broad understanding of metacognition in this chapter. Metacognition thus refers to *an awareness of and reflections about one's knowledge, experiences, emotions and learning* in the contexts of language learning and teaching.

Included in this definition are all aspects of thinking about language, language learning and teaching; for example, what learners and teachers know or do not know about languages and language learning (see Vold 2018, this volume; Hasselgård 2018, this volume; Hiver and Whitehead 2018, this volume), what they think about their own abilities to learn and/or teach languages (see Knospe 2018, this volume; Fisher 2018, this volume), reflections on emotions concerning experiences related to language learning and/or teaching (see Arntzen and Eriksen 2018, this volume; Fisher 2018, this volume) and how to learn and teach as well as monitor one's own learning and/or teaching (see Forbes 2018, this volume; Hiver and Whitehead 2018, this volume).

Following from this definition, the concept of *language awareness* covers my understanding of metacognition to a large extent. On its website, the Association of Language Awareness (ALA)[1] defines language awareness as "explicit knowledge about language, and conscious perception and sensitivity in language learning, language teaching and language use". Consequently, the superordinate category, Metacognition, relates to an awareness of and reflection on one's knowledge, experiences, emotions and learning in all domains, whereas its subordinate category, Language awareness, relates to reflections on one's knowledge, experiences, emotions and learning in three subdomains: Language, Language learning and Language teaching (Figure 2.1).

Obviously, these domains are closely related, and metacognition in language teaching, for instance, typically involves reflection in all three domains simultaneously. Furthermore, each of these three subdomains can be divided into several new categories depending on the theoretical viewpoints and interests of the researchers. A consequence of this quite general understanding of metacognition is that many related research fields fit under the heading of metacognition. For example, investigations of teachers' and learners' beliefs, the teaching and use of learning strategies, metalinguistic and multilingual awareness, intercultural awareness and self-efficacy can be claimed
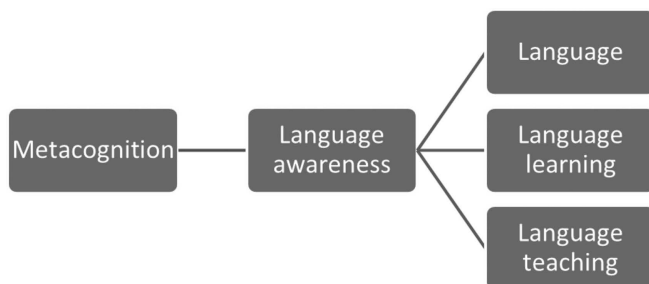
Figure 2.1 Metacognition in relation to language awareness and its subdomains.

to belong here. In later chapters of this volume, other authors will examine several of these topics more closely.

Methodological Tools and Approaches in Metacognition Research

Clearly, people's thoughts about their own thoughts cannot be directly observed. Thus, information about metacognition must be collected in indirect ways, either inferred from people's behaviour or based on self-reports. The most commonly used research instrument in metacognition research is probably the self-report questionnaire. Researchers have developed a large number of such questionnaires. Some set out to measure metacognition in general, such as the Metacognitive Awareness Inventory (MAI) developed for adults by Schraw and Dennison (1994) and its modified version, the Jr. MAI, which measures metacognition among children and teenagers (Sperling et al. 2002). The Strategy Inventory of Language Learning (Oxford 1990) can be claimed to take a general approach to metacognition in language learning, whereas other questionnaires have been developed for use in particular contexts and for particular learning tasks; for example, the Metacognitive Awareness Listening Questionnaire (Goh 2017; Vandergrift, Goh, Mareschal, and Tafaghodtari 2006) and the Metacognitive Awareness of Reading Strategies Inventory (Mokhtari and Reichard 2002). Furthermore, in Chapter 9 of this volume, Zhang and Qin (2018) present and discuss a new questionnaire developed to examine learners' metacognition when writing in online environments. Other questionnaires have been developed to measure teachers' and/or learners' beliefs about effective foreign language pedagogy, such as Horwitz' (1988) Beliefs About Language Learning Inventory (BALLI) (see also other questionnaires related to beliefs developed by Bell 2005; Lee 2009; Levine 2003).

Self-report questionnaires include statements or questions concerning participants' knowledge, beliefs and/or activities during learning or teaching. Typically, the respondents are asked to indicate on a Likert scale how often they perform a learning or teaching activity or to what extent they agree with a certain statement. Clearly, questionnaires have many advantages. They can be distributed to a substantial number of participants, are less time-consuming than other instruments, are efficient in terms of financial resources, and allow for quantitative analyses (Dörnyei and Taguchi 2010, 6). However, self-report questionnaires, especially the general ones, have also been criticised for having low validity (e.g. Bråten and Samuelstuen 2007; Cohen 2011; Woodrow 2005). For example, how accurately can learners and teachers give reports on what they generally do? How differently are the scale points on the Likert scale (e.g. often, sometimes) interpreted by participants of different ages, cultures and educational backgrounds? And which important strategies are not included in a questionnaire

that might shed light on learners' and teachers' metacognition? To attempt to meet these challenges, researchers suggest various procedures. For example, Bråten and Samuelstuen (2007, 3) propose a set of guidelines which may increase the validity of self-reports:

> First, a specific task (e.g., a text) must be administered, to which the items on the questionnaire are referring. Second, the task must be accompanied by an instruction. This instruction should include information about the task purpose (e.g. reading purpose). Additionally, individuals should be directed to monitor their strategies during subsequent task performance and informed that they will be asked questions afterwards about how they proceeded. Third, to minimize the retention interval, the strategy questionnaire itself must be administered immediately after task completion. Fourth, in referring to recent episodes of strategic processing, the wording of task-specific items would have to be different from more general statements. That is, general-item stems such as 'when I study' or 'in this course' must be omitted in task-specific items.

Evidently, Bråten and Samuelstuen's suggestions are also valuable when designing other types of self-report studies, such as interviews. Other researchers, e.g. Dinsmore, Alexander, and Loughlin (2008), emphasise the value of triangulation when doing research on metacognition, since an analysis of different data types from the same participants may give deeper and more valid insights into the phenomenon of metacognition than each instrument alone. For example, Lee (2009) let language teachers report both on their beliefs about correction and their actual correction procedures when giving feedback on learners' written texts. In addition, Lee analysed teachers' actual written feedback and interviewed a number of the teachers about both their questionnaire responses and their written feedback. This triangulation of methods made it possible for Lee to identify several mismatches between what teachers said and what they actually did.

Researchers in the field now more often publish studies which combine several data collection tools, such as self-reports with various types of behaviour observations. In addition to classroom observation or observation of individual learners, approaches such as eye tracking, keystroke logging and screen recording are increasingly applied (see, for example, Knospe 2018, this volume). With such methods, we can "build tasks that may not only instigate awareness, reflection, or regulation, but that will also document subtle moves and actions with minimum intrusion" (Dinsmore, Alexander, and Loughlin 2008, 406). Furthermore, several authors in this volume provide examples of other innovative methodological approaches that have been shown to provide valuable insights into learners' and teachers' metacognition. Examples include the use of spoken narratives (Arntzen and Eriksen, Chapter 11), blogging (Fisher, Chapter 12) and learners' group

discussions of machine translated texts to tap into learners' metalinguistic awareness (Vold, Chapter 5).

Data on metacognition collected in the ways described above are frequently used in combination with other data types. Such studies commonly examine to what extent high scores on metacognition are associated with high proficiency. For example, metacognitive judgements measure how well participants can assess their knowledge, abilities and strategies, i.e. what they know and what they do not know about a certain topic or task or how successful they will be at solving a task. Typically, the self-ratings of the participants are either preceded or followed by the completion of a test to compare actual knowledge and the participants' own ratings (Schraw 2009). In this field of metacognition research, the concept of self-efficacy is often used to refer to learners' beliefs in their ability to perform a task. Studies have shown that participants' self-efficacy beliefs are strong predictors of performance, and are often stronger than other personal variables and learners' actual abilities (Bandura 1997). Consequently, two learners with similar abilities but with different measures of self-efficacy are likely to succeed in their language learning to varying degrees. For example, Mills, Pajares, and Herron (2007) examined whether university language learners' self-efficacy beliefs would predict their achievement as measured in grades at the end of the semester. They found that students who thought they were capable of using effective metacognitive strategies to monitor their studies of a foreign language were more likely to have academic success than students who thought they were less capable of monitoring their work. Metacognitive judgements can be made in several ways. The most common approach is to make a continuous confidence judgement that ranges from no confidence to complete confidence; for example, a Likert-type scale ranging from 0 (not confident at all) to 7 (completely confident) for items in Mills, Pajares, and Herron's (2007) study.

Finally, intervention studies examine to what extent teachers' pedagogical approaches aimed at enhancing learners' metacognition have an impact on learners' awareness of their knowledge, abilities and learning processes and/or on their proficiency. Well-designed intervention studies include two or more independent learner groups in a pre- and post-test design. Macaro and Erler's (2008) examination of the impact of reading strategy instruction may serve as an example in this context. In their study, three intact classes of year 7 to year 8 students of French as a foreign language took part in a reading strategy instruction programme with a duration of 14 months. During these 14 months, their teachers, who had been instructed by the researchers, spent an average of 10 minutes per week from normal class time on the strategy programme. Similar to other metacognition instructional approaches (see below), this programme consisted of cycles of awareness raising, modelling, trying out strategies in the classroom with and without teacher support, and evaluation. Before and after the intervention, the researchers measured the learners' French reading comprehension,

their reading strategy use, and their attitudes towards French. The same measures were carried out in a comparison group of 54 learners, also from three intact classes at the same age level. These learners did not receive any strategy instruction. Results showed that while there were no differences between the groups before the intervention had started, the learners of the intervention group outperformed the learners of the comparison group on measures of reading comprehension in the post-test. Furthermore, the intervention group tended to report more frequent use of independent strategies than the comparison group, who seemed to use more teacher-reliant strategies, such as "Wait for the teacher to explain the text". Finally, the intervention group reported significantly more positive attitudes towards reading in French than the comparison group in the post-test. Thus, the conclusion of this particular study is that regular but short intervals of strategy instruction can have positive impacts on learners' language skills, language learning knowledge, and even their motivation. Several studies reported on in this volume included an intervention; Knospe (Chapter 7) and Forbes (Chapter 8) examined learners' metacognition in writing in the context of their intervention studies, whereas Bøhn and Myklevold (Chapter 10) investigated the effect of a metacognitive instructional approach to learning communication strategies.

Promoting Metacognition in Language Learners

When reviewing research on metacognition, it becomes clear that certain principles are part of most metacognitive instructional models: the activation of learners' prior knowledge, reflections on what learners know and want to learn, explanations and modelling of learner strategies by the teacher, and learners' own involvement in making goals for monitoring and evaluating the learning process. For example, Anderson (2002, 2008) suggests that metacognition about learning consists of five primary components or skills which can be trained in the language classroom. For all components, the teacher has a key role in explaining, modelling and creating an atmosphere which encourages reflective discourse. The following components are suggested by Anderson:

(1) Preparing and planning for learning. Students reflect on what they need or want to accomplish and what they can do to accomplish their learning goals.
(2) Selecting and using learning strategies. Anderson (2002, 3) states that "the metacognitive ability to select and use particular strategies in a given context for a specific purpose means that the learner can think and make conscious decisions about the learning process".
(3) Monitoring strategy use. Students should be trained to keep track of their strategy use. While in a learning process, students could, for example, ask themselves questions about their strategy choices, how well

these particular strategies work, and to what extent they use them the way they intended.

(4) Orchestrating various strategies. For most learning tasks, students must apply several strategies. Thus, it is beneficial to students in their learning process to effectively coordinate the various strategies they know.

(5) Evaluating strategy use and learning. The fifth component is summed up in four questions that Anderson suggests should be asked cyclically during the learning process: (1) What am I trying to accomplish? (2) What strategies am I using? (3) How well am I using them? (4) What else could I do? Anderson emphasises that these questions can be regarded as the essence of the first four components and that all of them work best together.

Several questionnaires have been developed to assist teachers and learners in their metacognitive reflections. Within language learning, Oxford's (1990) SILL (Strategy Inventory of Language Learning) is probably the most well-known and widely used tool, both for research and for reflection with learners. The questionnaire consists of 50 statements formulated as learning strategies; for example, "I look for words in my own language that are similar to new words in English" and "I encourage myself to speak English even when I am afraid of making a mistake". The strategies are divided into six categories: memory, cognitive, metacognitive, social, compensatory and affective strategies. Learners are asked to decide the frequency of use for each strategy on a five-point Likert scale ranging from "Never or almost never true of me" to "Always or almost always true of me". Questionnaires such as the SILL can be useful for enhancing learners' metacognition in several ways. First, by filling out the SILL and analysing the results, learners can become aware of which strategies they tend to use in their language learning process and also which strategies are rarely employed. They can then make plans for expanding their strategy repertoire by trying out new strategies. Second, having learners take the SILL may help teachers obtain an overview of which strategies their learners prefer, and also which strategies are being under-used. This information can be valuable in deciding which strategies should be explained, modelled and tried out in the classroom.

Whereas Oxford's SILL provides an overview of learners' strategy use, but has frequently been criticised for being too general (see, for example, Cohen 2011; Woodrow 2005), other questionnaires are directed at specific aspects of students' knowledge and/or concentrate on certain skills. For example, the Metacognitive Awareness Listening Questionnaire (MALQ) by Vandergrift et al. (2006) can be used in the classroom as a starting point for raising learners' and teachers' awareness of listening comprehension and listening strategies. The MALQ should be administered directly after language learners have completed a listening task. Thus, there is a close link between the actual task and the metacognitive activity, which is likely to increase the learning outcome compared with using more general questionnaires, such

as the SILL (Oxford 1990). Similarly, the questionnaire, Language Learn-ers' Metacognitive Writing Strategies in Multimedia Environments (LLM-WSIME), by Zhang and Qin (2018, this volume) can enhance learners' metacognition of their writing processes when applied and reflected on in combination with online writing tasks.

While the approaches discussed above are mainly concerned with meta-cognition about the language learning process, other approaches are aimed at learners' knowledge monitoring. One example is the use of the so-called KWL model. The objective of this model is to help learners become aware of their prior knowledge (Know), what they still must learn (Want to know) and what has been learned (Learned). This model was originally developed to enhance learners' awareness of their reading processes and increase their reading proficiency (Ogle 1986). However, this approach is also a good starting point for helping learners become aware of and assess their knowl-edge more generally (e.g. as a reflection tool in teacher education, Mok et al. 2006; and for enhancing students' mathematics achievement, Tok 2013). Typically, learners use a chart with one column each for Know, Want to know and Learned. In the first column, learners jot down what they already know about a given topic. In the second column, they ask questions about the things they still do not know and want to learn. After having processed information through reading, listening and/or communicating with oth-ers, learners write down what they have learned in the third column. These activities can be done individually or in groups. The teacher's role is to explain the purpose of the KWL approach, show through modelling how it can be used, continuously support the students when using the model, and reflect on, with the students, the usefulness of such approaches for learn-ing. Of course, the KWL model may also be a valuable tool for teachers to monitor what their learners already know, which topics should be dealt with in class, and what students have and have not learned from teachers' instruction.

The Common European Framework of Reference for Languages (CEFR) (Council of Europe 2001a) explicitly encourages learners to become aware of what they know about language(s), about intercultural encounters, what they do when communicating, and how they can become better language learners. Together with the CEFR, the European Language Portfolio (ELP) was introduced by the Council of Europe in 2001 (2001b) and is an exam-ple of materials that can foster learners' metacognition. The ELP has both a documenting and pedagogic function, whereby it encourages learners to document their linguistic resources for all the languages they know and are learning and to reflect on their language learning and intercultural aware-ness in a systematic manner. First, it consists of a Language Passport section in which learners can document their language proficiency for all the lan-guages they know and are learning. Second, it includes a section called Lan-guage Biography, which aims at facilitating learners' reflections on language and intercultural encounters, as well as planning and assessing their learning

process. Furthermore, the Language Biography encourages learners to state what they can do in each language and to document their linguistic, cultural or language learning knowledge. Finally, the Dossier invites learners to include materials which can illustrate and document achievements or experiences reported in the Language Biography or Passport. However, despite attempts at implementing the ELP in several countries, the ELP seems to be unknown to many teachers and is rarely used in the language learning classroom (Heyder and Schädlich 2014; Larssen and Høie 2012; Little, Goullier, and Hughes 2011; Mikalsen and Sørheim 2012). Instead, teachers primarily rely on course textbooks (Bachmann 2004). In light of this tendency, it is vital for language textbooks to include tasks which encourage students to be metacognitively active: for example, to explore similarities and differences between languages and cultures, to reflect on their knowledge and abilities, and to explore how they can try out, monitor and evaluate various learning strategies.

Language Teachers' Metacognition

Teachers often find themselves in highly unpredictable settings; every day, they meet students with varying abilities and motivations who are placed together in groups with different and constantly changing dynamics. In other words, teachers must be reflective in a constantly changing environment (Lin, Schwartz, and Hatano 2005). Metacognitively aware teachers reflect on their knowledge, beliefs and teaching practices; they plan, implement, monitor and evaluate their own teaching as well as students' learning on a daily basis and use their insights to improve teaching. Regarding language teachers, they should ideally have a reflective approach to their work in at least four different ways (see Svalberg 2007 for a related discussion, and Hiver and Whitehead 2018, this volume), namely as:

(1) Language users: Language teachers should be proficient in their language(s) and know how to serve as language models for their learners.
(2) Language analysts: Language teachers should have a well-developed metalinguistic knowledge of language(s) to be aware of their own linguistic choices and able to explain language(s) to their learners. Metalinguistic knowledge in this context refers to "an individual's ability to focus attention on language as an object in and of itself, to reflect upon language, and to evaluate it" (Thomas 1988, 531). Included in this understanding is an awareness of similarities and differences across languages, which are referred to by some researchers as crosslinguistic or multilingual awareness (James 1996, 139; Jessner 2018, this volume).
(3) Culture educators: Teachers have a key role in promoting learners' intercultural competence. For this reason, they need to have knowledge of intercultural communication as well as how they can help learners adjust their own thinking and behaviour in interaction with other

people. Dypedahl (2018, this volume) explores some general principles for designing courses in language teacher education that can enhance such a metacognitive approach to intercultural learning. He suggests that intercultural awareness should be regarded as one integral component of intercultural competence, defining it as *the conscious monitoring and adjustment of one's own thinking and interaction with other people.* Among other things, this involves "a conscious understanding of the role culturally based forms, practices, and frames of understanding can have in intercultural communication, and an ability to put these conceptions into practice in a flexible and context specific manner in real time communication" (Baker 2012, 66). Furthermore, teachers should reflect on how they can assist their learners in the process of becoming more aware of culturally based norms, beliefs and behaviours. This should be combined with broad cultural knowledge of the teacher's own country and the countries where the target language is spoken.

(4) Language learning educators: Language teachers must have knowledge of how languages are learned and how they can help learners enhance their own learning by assigning an active role to the learners. Language teachers should motivate their learners to reflect on what they know about language(s), culture(s) and language learning and how they can develop their knowledge further.

Clearly, language teacher education should play a key role in training future teachers to reflect on their own knowledge and practices as well as in implementing a metacognitively oriented pedagogy.

The European Portfolio for Student Teachers of Languages (EPOSTL) (Newby et al. 2007) was developed to assist student teachers in reflecting on their knowledge about central aspects of language teaching, monitoring their progress, and recording their experiences during teacher education. The EPOSTL consists of an introductory section which encourages student teachers to reflect on their language teaching experiences from a learner's point of view and formulate their expectations of the language teacher education course(s) they take. The main part of the EPOSTL, the self-assessment section, consists of 193 can-do statements related to central aspects of teaching foreign languages. These are divided into seven general categories, each with several sub-categories: Context, Methodology, Resources, Lesson Planning, Conducting a Lesson, Independent Learning and Assessment of Learning. Examples of statements include "I can critically assess my teaching in relation to theoretical principles", "I can select texts appropriate to the needs, interests and language level of the learners" and "I can evaluate and select activities which enhance the learners' intercultural awareness". The intention of the EPOSTL is to make student teachers reflect on these statements individually, together with peers and teacher educators as well as with their mentors in schools. The student teachers are encouraged to record the dates for when they "can do" a certain statement.

However, when considering the implications of each of the statements above, it seems clear that a thorough reflection on each statement requires not only knowledgeable students, but also a lot of time. Each of the 193 statements requires time to reflect, seek out relevant knowledge, try out and monitor various practices in the classroom, and evaluate the outcome individually and with colleagues. To go through all the statements during teacher education may easily appear too overwhelming for the students and could likely lead to a superficial treatment of each of them. Thus, the EPOSTL should rather be seen as a starting point for reflection which continues after teacher education is completed, something which has also been suggested by the authors (Newby et al. 2007). Actually, the EPOSTL could perhaps better be regarded as a valuable tool for lifelong reflection in an ever-changing profession, and thus could be named the European Portfolio for Teachers of Languages (EPOTL). This change could also make in-service teachers realise its relevance more easily. The testing and implementation of the EPOSTL is still in an early phase, and the tool likely needs further revision (Burkert and Schwienhorst 2008). Vetter (2012), for example, criticises the lack of a multilingual perspective in the EPOSTL. Nevertheless, first reports suggest that both student teachers and teacher educators find the use of the EPOSTL helpful in terms of enhancing reflection and self-assessment (Cakir and Balcikanli 2012; Fenner 2012).

In addition to self-reflection regarding knowledge and beliefs, it is critical that teachers know how they can create a learning environment where students can be involved in metacognition, i.e. to reflect on and explore their knowledge and beliefs about languages and cultures, abilities and learning. In this volume, Jessner (Chapter 3) provides several examples of how teachers have successfully fostered increased metacognition with respect to learners' metalinguistic and multilingual awareness, whereas Dypedahl in Chapter 4 discusses and suggests how metacognition of intercultural competence can be emphasised in language teacher education.

Teachers' Knowledge about Metacognition in Language Learning

Little is known about teachers' knowledge and beliefs about metacognition and to what extent they have actually implemented a metacognitive instructional approach (Hiver and Whitehead 2018, this volume). However, Wilson and Bai (2010) imply that an emphasis on metacognition is not widespread in classrooms and that teachers are still "more likely to test comprehension than teach comprehension" (271). Wilson and Bai thus wonder whether teachers have understood what is required of them to create a learning environment which can enhance metacognition. Findings from two studies in the Norwegian context may shed more light on this issue.

A questionnaire study (Haukås 2012) investigated language teachers' perceived importance of reflection in language learning in the classroom. The

questionnaire consisted of both attitudinal questions and factual questions. The attitudinal questions were related to teachers' perceived importance of spending time on students' language learning processes and on implementing language learning as a part of the curriculum. The factual questions asked the teachers to report on how frequently they worked on enhancing learners' metacognition. In all, 145 teachers participated in the study. The data analysis showed that most teachers find it important that their students learn and reflect on how languages can be more efficiently acquired. Furthermore, the majority of the teachers report that they regularly spend time in the classroom explaining various learning strategies to their learners. Some also show through modelling how strategies can be used. However, in most classrooms, metacognition instruction seems to stop there; very few teachers report giving their learners the opportunity to try out various learning strategies for themselves, reflect on their learning with others, set goals for their own learning, and, ultimately, evaluate their own performance. Thus, the key elements of metacognition instruction—that is, letting learners be active in exploring and reflecting on their own knowledge and learning—seem to be missing in Norwegian language learning classes. As Wilson and Bai (2010) suggested, many teachers admit that their knowledge of metacognition instruction, i.e. developing learners' knowledge of learning strategies in this study, is limited: 67% report needing to learn more about enhancing learners' metacognition about language learning and how to teach before spending time on these issues in their classrooms.

An interview study of 12 third language teachers on their beliefs and practices regarding a multilingual pedagogical approach (Haukås 2016) generated similar findings as in Haukås (2012). Within a multilingual pedagogical approach, learners' already acquired linguistic and language learning knowledge is regarded as a prerequisite for further language learning (see also Jessner 2018, this volume). This means that teachers should assist learners in becoming aware of and drawing on their existing knowledge to enhance further language learning. In the classroom, learners should be engaged in various activities which are meant to help them become aware of what they already know about a given topic from previous language learning and whether this knowledge can be applied in further language learning. During the interviews, the teachers reported that they frequently point to similarities and differences between languages the students already know and are learning. However, their students are seldom given the chance to activate prior language knowledge or to explore similarities and differences between languages on their own, i.e. to reflect on and look for transfer opportunities between old and new knowledge. Furthermore, the teachers report that they rarely reflect on the language learning process with their students or to what extent learning strategies used for acquiring previous languages can be transferred to new language learning contexts.

In sum, the two studies discussed above reveal that teachers have a positive attitude towards focusing on learners' metacognition, i.e. activating

their prior knowledge and enhancing their language learning awareness. However, the teachers seem to have restricted knowledge of how to implement an approach which may enhance learners' metacognition. Above all, learners are not given an active role in their own learning. Neuner (2009) states that changes in how teachers approach their teaching can succeed only if the following three conditions are met: (1) teachers are convinced that curriculum changes will lead to more efficient and motivated learning, (2) teachers receive sufficient training in the new approach and (3) teachers have access to teaching materials that can facilitate their work. Obviously, if teachers lack the recognition that a metacognitive approach to teaching may be more efficient, then these teachers will be resistant to implementing it. Consequently, teachers clearly need to learn more about metacognition and metacognition instruction before they can see how such an approach can enhance their students' learning.

Conclusion

The aim of this chapter has been to provide a theoretical basis for understanding the concept of metacognition and establishing the importance of metacognition as a tool for learning and professional development within language learning and teaching. Students should become aware of how they can build on their existing knowledge to enhance the language learning process, but at the same time be able to define their knowledge gaps and set goals for how these gaps can be overcome. Language teachers play a key role in supporting their students in their language learning efforts by reflecting on and modelling what learners know and how languages can be learnt. However, in order to support students in their language learning, language teachers themselves must be metacognitively aware in several respects.

Note

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3 Metacognition in Multilingual Learning

A DMM Perspective

Ulrike Jessner

Introduction

During recent years, research interest in the contact between more than two languages and the phenomenon of multilingualism has increasingly been expressed. Attitudes towards multilingualism among individuals and society at large have changed from being negative to seemingly embracing a higher level of awareness of the complexity and dynamics of the phenomenon. In this chapter, metacognition in multilingual learning and use is the focus. Following Haukås (2018, this volume), metacognition in this context refers to an "an awareness of and reflections about one's knowledge, experiences, emotions, and learning". Concerning reflections about one's knowledge, Gombert (1992), for instance, viewed metalinguistic activities as a subfield of metacognition, He defined metalinguistic activities as activities of reflection on language and its use as well as subjects' ability to intentionally monitor and plan their own methods of linguistic processing, in comprehension and production (Gombert 1992, 13). To be aware of one's learning means the ability to reflect upon, understand and control one's learning. Thus, metacognitive knowledge is an important variable in the process of learning that underlies language learning strategies, "which are the techniques or procedures that facilitate a learning task" (Chamot 2001, 25).

Since holistic approaches to bi- and multilingualism present the adequate prerequisite to understanding that the contact between languages leads to transfer phenomena not only on the linguistic but also on the cognitive level, the discussion in this chapter will begin with the work of Grosjean (1985) and Cook (1991) before moving on to Herdina and Jessner's (2002) Dynamic Model of Multilingualism (hereafter DMM). The crucial role that emergent properties of the multilingual system, such as metalinguistic competences, have been assigned in the DMM will be emphasised. Due to the interaction between all languages in the multilingual system, new qualities, such as an enhanced level of multilingual awareness, are developed which distinguish bi- and multilingual speakers from their monolingual counterparts. These are addressed as the Multilingualism-factor, or M-factor, and are discussed in more detail in studies on multilingual awareness in third

language acquisition (TLA), self-assessment and strategy building in multilingual learners. A stronger focus on metacognition in research on multilingual development and education will also be recommended.

Metacognitive and Metalinguistic Factors in the DMM

As already pointed out above, research on bi- and multilingualism has moved from reductionism to holism so that, these days, work on specific cognitive abilities in bi- and multilinguals has been frequently addressed. The DMM (Herdina and Jessner 2002) was the first published monograph to address the application of dynamic systems and/or complexity theory (DSCT) in language learning. The authors drew on work by Grosjean (1985), who was the first to view a bilingual person as a competent, but specific, speaker-hearer. This was followed by Cook (1991), who based his concept of multicompetence on Grosjean's concept of bilingualism. According to Cook (2002, 4–8), second-language users are characterised as follows:

1. the L2 user has other uses for language than does the monolingual;
2. the L2 user's knowledge of the second language is typically not identical to that of a native speaker;
3. the L2 user's knowledge of his or her language is in some respects not the same as that of a monolingual;
4. L2 users have different minds from those of monolinguals.

Hence, Cook's ideas about the integration continuum, which captures different relationships between two language systems in the same mind from separation to integration, fits with the DMM. In other words, "it sees the language system of the L2 user as a whole rather than as an interaction between separate language components" (Cook 2003, 11).

From a more educational perspective, Cummins (1991) introduced common underlying proficiency as a feature of the interdependence hypothesis by using the iceberg metaphor. He described linguistic knowledge in bilinguals as comprising more than simply the characteristics of both languages in contact. The development of a think tank or common underlying proficiency—in contrast to separate underlying proficiencies—enables the learner to transfer cognitive and/or academic skills from one language to the other. The development of these processes is interpreted as crosslinguistic interaction in the DMM, as the processes describe not only a kind of overlap between two systems but also a complete metamorphosis of the substances involved as, when mixed, they acquire properties that neither of the substances initially had. This was referred to as the "paradox of transfer" by Herdina and Jessner (1994). Cummins (1991) also established the idea of thresholds in the discussion of multilingual development and thereby paved the way for a novel approach to changes in bi- and multilingual development, as emphasised by Herdina and Jessner (2002). According to DSCT,

many processes and phenomena can become discernible or noticeable *if* they pass a threshold which makes them visible. This is referred to as "liminality" (Aronin and Jessner 2015).

In the meantime, a number of scholars have taken up the ideas of DSCT and applied them mostly to second language acquisition (SLA) research (e.g. De Bot, Lowie, and Verspoor 2007; Larsen-Freeman and Cameron 2008). From a DSCT perspective, two features of a multilingual system play a key role in understanding development: emergent properties and sensitive dependence on initial conditions.

Emergent Properties

From countless individual interactions, emergent properties evolve. Emergent phenomena are the products of interactions between the parts of a system, but they are not merely the sum of their parts. Emergent phenomena acquire properties that are different from the properties of their parts. Viral infections, traffic jams, tornados, piles of sand and school classes—they all demonstrate unpredictable behaviour and are therefore examples of emergent phenomena. The now-confirmed special quality of bilinguals is the addition to their knowledge in their two systems, L1 and L2, and the special quality possessed by trilinguals is beyond the sum of their skills in their two previous languages (Aronin and Jessner 2015).

That emergent metalinguistic abilities reflect underlying changes in cognitive abilities was already pointed out by Vygotsky, who stated that ". . . a child's understanding of his native language is enhanced by learning a foreign" (Vygotsky 1986, 160; see also Forbes 2018, this volume). Vygotsky had thus already related the positive cognitive effect of learning a foreign language in children to the development of metalinguistic abilities.

In the 1990s, Bialystok commenced her famous work on bilingual children, which was later supplemented by her studies on bilingual processing in adults. In this regard, Bialystok et al. (2004) suggested that lifelong bilingualism protects older adults from cognitive decline. A number of scholars have applied Bialystok's model of analysis and control as the metalinguistic dimensions of bilingual proficiency when investigating the impact of bi- and multilingualism on cognitive skills (e.g. Jessner 2006; Ricciardelli 1992). Analysis of linguistic knowledge is described as the skill component responsible for making explicit those representations that have previously been implicit or intuitive, whereas control of linguistic processing is understood as the ability to selectively attend to specific aspects of a representation, particularly in misleading situations. Bialystok's (2011) conclusion was that there are no universal advantages for bilinguals, but that high levels of proficiency in both languages lead to advantages on tasks requiring more analytical linguistic knowledge. Recently, research concerning the executive functions in the brain has received substantial attention, because these functions seem to influence bilingual processing mechanisms (see Kroll and Bialystok 2013).

Sensitive Dependence on Initial Conditions

Sensitivity to initial conditions is a key feature of complex systems inherent to multilingualism. As pointed out by Aronin and Jessner (2015), this feature materialises in problems related to language learning in a school context, linguistic minority issues as well as new languages in a society, or new linguistic varieties. The discussion of sensitivity to initial conditions is known as the "butterfly effect", which was modelled by Edward Lorenz for the study of meteorology to demonstrate sensitive dependence on initial conditions—that is, noticeable changes occasioned by the very slightest change. We can find a good illustration of sensitivity to specific factors in studies dealing with the status of the L2 in TLA.

Perhaps the most crucial question in research on TLA is the status of the L2. A number of studies have concluded that speakers do not rely on their L1 as expected in L3 production, but instead on their L2. The L2 seems to assume the role of a source, default and supplier language during the production of the L3, especially when the L3 learner has not yet reached a high level of proficiency in the language (Hufeisen 1991). In research dealing specifically with learning an L3 of Indo-European origin, results have shown that L3 learners whose L1 is typologically unrelated to their L2 and/or L3 have a tendency to transfer linguistic and language learning knowledge from their L2 and not from their L1 (e.g. Bartelt 1989; Cenoz, Hufeisen, and Jessner 2003; Hufeisen 1991). This finding has been corroborated by studies which have investigated learners whose complete language repertoire consists of Indo-European languages (De Angelis 2007; for an overview, see also Aronin and Hufeisen 2009).

In recent work on crosslinguistic influence in multilingual systems, it has become clear that the factor of multilingual awareness needs more attention. It has been argued that future research needs to encompass more work dedicated to crosslinguistic interaction which per se focuses on both linguistic and cognitive aspects of multilingual development (see De Angelis, Jessner, and Kresic 2015). Several factors related to multilingual awareness in its metalinguistic awareness and language (learning) awareness forms have been identified as salient in crosslinguistic processes in TLA. These factors include psychotypology (perceived linguistic distance between languages), recency of use, level of proficiency in the target language, the foreign language effect, which refers to the tendency in language learners to activate an earlier learned foreign language in L3 performance, and the learner's perception of the correctness of a target word.

The M(ultilingualism)-Factor

In the DMM, multilingual proficiency is defined as the dynamic interaction between the various psycholinguistic systems (LS_1, LS_2, LS_3, LS_n) in which the individual languages (L1, L2, L3, Ln) are embedded,

crosslinguistic interaction, and what is called the M(ultilingualism)-factor. The M(ultilingualism)-factor refers to all the effects in multilingual systems which distinguish a multilingual from a monolingual system. It includes all those qualities which develop in a multilingual speaker/learner due to increases in language contact(s) (see studies on the M-factor by e.g. Török 2017). Crosslinguistic interaction (CLIN) in multilinguals also refers to cognitive phenomena. This is a view which has also been adopted by other researchers working on crosslinguistic influence, such as Jarvis and Pavlenko (2008), who focused particularly on the process of conceptualisation.

Moreover, the M(ultilingualism)-factor is an emergent property which can contribute to the catalytic or accelerating effects in TLA. In addition to the multilingual system being in a state of constant change, the multilingual learner also develops certain skills and abilities which the monolingual speaker lacks. The key component of the M-factor is multilingual awareness, which can affect the following domains: linguistic development in general, the development of cognitive, metacognitive and information-processing abilities, and the development of literacy skills. These skills form part of multilingual development, management of linguistic resources and maintenance of proficiency levels in the various language systems involved or the multilingual system itself, which is constantly subject to change.

Metalinguistic awareness, via its close relationship to metacognitive knowledge and awareness of that knowledge, has been studied from an increasing number of research perspectives in the field of multilingual development. Metalinguistic awareness can be described as the ability to both focus on linguistic form and switch focus between form and meaning. Individuals who are metalinguistically aware will be able to both categorise words into parts of speech and switch their focus between form, function and meaning. They will also be able to explain why a word has a particular function. Consequently, the distinction between explicit and implicit learning is linked to the development of levels of metalinguistic awareness (see e.g. Ellis 2015; Jessner 2006).

As discussed before, TLA differs from SLA in various respects (De Angelis 2007; Jessner 2008a, 2008b). Metalinguistic awareness has been identified in the DMM as occupying a key role in the process of learning an additional language among, for instance, bilingual speakers growing up with two languages or among those monolinguals who have already learned one foreign language—and therefore can also be labelled bilinguals. During the learning process, students develop different levels of consciousness concerning structural characteristics of their languages and comparisons between them. That is, they learn through language and with language. In a number of TLA studies that have dealt with the learning and development of three or more languages, metalinguistic awareness has been the focus.

Whereas cognitive style was investigated in earlier studies on bilingualism, more recent research has shown interest in the process of bilingual thinking (Baker 2011). Research on metalinguistic awareness in studies

of multilingualism has thus far mainly been initiated to explore the effects of bilingualism on third language learning and the conditions of artificial learning (see below).

In a number of studies, mainly carried out in Scandinavia and the Basque territory, an additive effect of bilingualism on third language learning, which in these cases was English, was found (Cenoz and Valencia 1994; Lasagabaster 1997; Ringbom 1987; Safont 2003; Thomas 1992). Cenoz (2003) presented a detailed, critical review of studies on the effects of bilingualism on cognitive development, which she based on an extensive overview of research on bilingualism and additional language learning. Her conclusion was that most studies on general proficiency indicate a positive effect of bilingualism on TLA. Furthermore, she stated that this effect can be explained as being related to learning strategies, metalinguistic awareness and communicative ability, particularly in cases where the languages in contact are typologically close (see also Jessner 1999, 202ff.).

As discussed in detail in Jessner (2006), in research on multilingualism, the construct of metalinguistic awareness, which most commonly refers to grammatical knowledge, must be widened in order to encompass the requirements of research on multilingual learning and use. The relationship between crosslinguistic interaction—that is, the activation of languages other than the target language during third language production—and metalinguistic awareness has been the main concern of studies on third language learning processes in bilingual (German/Italian) students of English in order to shed light on the dynamic interplay between crosslinguistic interaction and metalinguistic awareness as key variables comprising part of the M-factor. James (1996, 139) defined crosslinguistic awareness as knowledge held at the explicit (declarative) level of metacognition.

In her introspective study on lexical searches in third language production, Jessner (2006) found that crosslinguistic awareness and metalinguistic awareness, tested in the form of explicit metalanguage, exerted influence on the activation of the individual languages in the multilingual mental lexicon. Crosslinguistic awareness in multilingual production is described as (a) tacit awareness shown by the use of cognates in the supporter languages (mainly in the use of combined strategies) and (b) explicit awareness in the case of switches that are introduced by metalanguage. In another study, Jessner (2005) showed that the application of metalinguistic knowledge, thereby showing learners' awareness of the knowledge, as well as the application of metalanguage, can influence multilingual processing. This was supported by her student, Graus, in a study on crosslinguistic lexical influence from English (L2) on Italian (L3) in spontaneous written production (see Jessner, Megens, and Graus 2016). Different levels of awareness seem to govern differentiation and selectivity in multilingual production and therefore call into question a number of phenomena which so far have been seen as bipolar, such as implicit versus explicit learning (see also Leow et al. 2011).

The findings in Jessner, Megens, and Graus (2016) also showed that the application of multilingual compensatory strategies reveal a close relationship between crosslinguistic awareness and linguistic awareness. The study participants applied various types of strategic processing: German-based strategies, Italian-based strategies, and strategies in which the subjects utilised both of these languages to find the right word in English. Regarding their function, strategies used to compensate for lexical insecurity or complete deficiency in the target language were used alongside compensatory strategies for determining lexical alternatives. Simplification, facilitation and avoidance strategies were also detected as part of the strategic processing.

Multilingual Strategy Use and Development

In 1990, Oxford pointed out that "meta-cognitive strategies help learners to regulate their own cognition and to focus, plan, and evaluate their progress as they move toward communicative competence" (1990, 8). In that sense, learners who are capable of using metacognitive strategies become aware of their knowledge and skills and are thus able to control their learning process, which in turn leads them towards becoming autonomous learners. Likewise, Thomas (1992, 535) rightly noted that "students' prior linguistic experience affects the strategies they subsequently adopt, their level of consciousness about which strategies are effective, and their ultimate success in the foreign language classroom".

Furthermore, studies on the learning of artificial languages (e.g. Nation and McLaughlin 1986; Nayak et al. 1990) evidenced the positive transfer of learning strategies insofar as expert learners outperformed their less experienced counterparts. Later, Kemp (2001) found that the performance of multilingual learners on grammaticality tests depended on the number of languages they knew. As a group, multilinguals turned out to be more proficient in the explicit than the implicit parts of the metalinguistic tests. All these authors suggested that multilinguals were more capable of structuring their strategies to the requirements of the task at hand, leading to the conclusion that one reason for their superior performance was their greater flexibility in switching strategies. In fact, in recent studies, not just the learning of artificial (including miniature and semi-artificial) languages but also existing yet unknown languages to learners have become part of TLA and multilingualism methodology.

In a French school context, Dahm (2015) reported on a large-scale strategy study in which students were confronted with three unknown languages: Dutch, Italian and Finnish. The three successive sessions focused on metasemantic, metasyntactic and metaphonological activities. The findings of this highly innovative multilingual strategy training showed that the choice of strategy mainly depended on the perceived linguistic distance between the source and target languages. It also highlighted the necessity of introducing strategy training in L2 English in order to benefit from the transferability of

strategies and the increase of creative transfer. This is supported by Haukås (2015), who found that the L3 learners of German in her study used fewer strategies, and used them less frequently, than L2 learners of English. She therefore suggested that many learners must become aware of the strategies they are using in their L2 English and that these strategies can and should be transferred from one language to the other.

Two studies carried out in the Greek school context should also be mentioned here as recent evidence for these assumptions. Psaltou-Joycey and Kantaridou (2009) investigated the possible relations between degrees of plurilingualism and strategy use. The subjects were 1,555 Greek university students learning foreign languages in an academic context. The results of the study indicated that the trilingual students used more strategies more frequently than their bilingual peers, especially those strategies that promoted metalinguistic awareness, and that more advanced trilinguals made more frequent use of strategies that mainly belonged to the cognitive and metacognitive categories. Mitits (2015) carried out a large-scale study with over 1,200 participants attending junior high schools in Komotini, Thrace. She concentrated on the question of whether multilingual early adolescent language learners transfer language learning strategies from their L2 Greek to FL English. In the study, the multilinguals exceeded the monolinguals in the use of strategies for learning EFL, which can be attributed to prior language learning being beneficial for multilingual learners insofar as they tend to transfer the strategies they already employ in the languages they have been using and developing.

Multilingual Approaches to Language Learning within a DMM Framework

In recent studies on both the primary and secondary educational level carried out at Innsbruck University by the DyME (Dynamics of Multilingualism with English) research group, multilingual language learners had a significant advantage in the development of their metalinguistic skills. It became clear that in two obviously different sociolinguistic contexts, Austria and South Tyrol, the learners developed an enhanced level of multilingual awareness based on various multilingual teaching approaches (Jessner 2014; see also below).

Jessner, Allgäuer-Hackl, and Hofer (2016) presented a multilingual approach to learning and teaching based on language awareness within the theoretical DMM. The examples and classroom activities described have been observed or used in multilingual classes in South Tyrol and Austria with students in different age groups, varying combinations of languages spoken and learnt, and differing levels of linguistic competency. Multilingual activities can be designed for multilingual classes but also adapted to foreign language classes in such a way that they can support the development and use of the target language. They can also be integrated into subject

teaching in general and will, as is our claim, contribute to more efficient (language) learning and teaching. Multilingual approaches motivate students to develop more language learning strategies and expand the types of strategies they use (see Mißler 1999). This ties in with the notion of the different quality of language learning skills in trained multilinguals (see Hofer and Jessner 2016; Jessner, Allgäuer-Hackl, and Hofer 2016).

Similarly, Allgäuer-Hackl (2017) conducted a study on multilingual awareness in a multilingual seminar in an upper secondary school in Vorarlberg, the westernmost province of Austria. The multilingual seminar was designed as an optional subject of one lesson per week offered during the school year to students aged 16–18. Research was conducted on the question of whether this type of training influences metalinguistic awareness positively. The testing, which was carried out on metalingual and crosslinguistic awareness and language proficiency, made clear that pupils who had received multilingual training outperformed their peers on all levels. The degree of difference was statistically significant for tasks in which rules had to be drawn up and applied in an unknown language on the basis of examples. Instruction in how to do this was not given in the multilingual seminar, which was thus interpreted as a case of an emergent property, just as postulated in the DMM.

One of the main elements used and taught in the multilingual seminar was crosslinguistic awareness. Not only did any contact with other languages help reinforce the networking of all languages in the pupils' overall system and allow new system properties to be formed, it also revealed the influence of these language systems in all directions. This means that, for example, the L4 (Spanish) influenced the L3 (French) and vice versa; likewise, the L1 and L2 influenced further languages and were influenced by languages learned later on (Jessner and Allgäuer-Hackl 2015).

In a study of primary school children in South Tyrol, it was noted that regular and systematic reference to structural phenomena and language forms in all three languages served to reinforce the pupils' meta- and crosslinguistic awareness and enabled them to perceive and exploit potential synergies. In this case, the pupils attended special classes called *Reflessione Lingua*, where multilingual awareness in the form of grammatical and crosslinguistic awareness was taught (see Hofer and Jessner 2016; see also the supportive South Tyrolean study by De Angelis and Jessner 2012, which found positive correlations in written production between all three languages of the students).

In Allgäuer-Hackl's (2017) multilingual seminar and in the above-mentioned *Reflessione Lingua* class in South Tyrol, teachers allowed, and at times invited, switches to other languages if they felt that doing so would promote comprehension and communication. Switching was therefore not condemned as deviant or deficient language use, but was instead accepted as a strategic means of activating available resources. No language was excluded from the classroom. Instead, non-target languages were allowed to assume the role of a supporter language.

In two large-scale studies on linguistic awareness in language attrition carried out in both Tyrolean and South Tyrolean contexts (LAILA and LAILA-BICS, headed by Ulrike Jessner[1]), young adult students were asked to produce introspective think-aloud protocols during the decoding of a Romanian text, a language hitherto unknown to the students. At the time of the study, the Tyrolean students in both contexts had been in touch with at least three languages (German/English/Latin and/or Italian or French) during their school career. The think-aloud protocols showed that the students used compensatory strategies and a high degree of creativity in the application of problem-solving activities. The examples from the LAILA and LAILA-BICS studies provided extensive evidence of the emergent properties of the multilingual users when dealing with an unknown foreign language in a multilingual complex system. The examples demonstrate the study participants' metalinguistic as well as crosslinguistic awareness based on language typology and grammatical awareness, in addition to language transfer via the use of supporter languages, such as German, English, French, Italian and Spanish, as well as Latin.

For instance, as illustrated in the following example given by Jessner and Török (2017), during a linguistic search to decode the unknown language, the subject turned to her L2 English, then her L3 French, and then translated the word *impresionant* into her L1 German. The second term, *nivelul*, first triggered the subject's L3 French, but she then turned to her L2 English (by choosing the word *level*, which is semantically related to the word *floor*) in order to finally translate the term with her L1 German word, *stock*. It should be noted that the participant avoided using the German word *Niveau*, the false friend of *floor*.

> *PAR_LA-049_T1_Hotel: Und jetzt weiß ich immer noch nicht, wo das Restaurant ist, abgesehen davon, dass es eine wunderbare impresionant, @eng#*impression*, @fr#*impressionnant* . . . @ger#*eindrucksvoll* . . . @ger#*Impression* #*hat ja also eine eindrucksvolle Panoramaaussicht* ähm lasati-va, oder dass es, vielleicht, dass es im, im elften Stock ist, nivelul, vielleicht @fr#*niveau*, @eng#*level*, @ger#*Stock* (.) also ich bleibe dabei, dass es im elften Stock ist.

Translation:

> *PAR_LA-049_T1_Hotel: And now I still do not know where the restaurant is, apart from being a wonderful impresionant, @eng#*impression*, @fr#*impressionnant* . . . @ger#*eindrucksvoll* . . . @ger#*Impression* #*it has yes such an impressive panoramic view* um lasati-va, or maybe it is on the eleventh floor, nivelul, vielleicht @fr#*niveau*, @eng#*level*, @ger#*Stock* (.) so I'll stick with the eleventh floor.

The relationship between multilingual awareness, in the form of metalinguistic and crosslinguistic awareness, and crosslinguistic interaction should be mentioned here, particularly how evolving cognitive flexibility underlies heightened creativity in multilingual language users and therefore not only enhances multilingual awareness but also provides more evidence of the M-factor (see Jessner and Török 2017).

Self-Assessment in Multilinguals

In research on metacognition, self-assessment, such as perceptions of proficiency in multilingual development, deserve our attention. In the DMM, perceived communicative needs play a crucial role in the development of the multilingual repertoire and its use. These needs are identified as the driving force of language learning, choice and use. It should also be noted that the needs are psychologically and sociologically determined and are subject to change. The speaker decides which language to use with whom and in which situation. The speaker also decides when and why another language should be added to the multilingual's repertoire. According to Grosjean (2001), a trilingual person can function in a monolingual, bilingual or trilingual mode with various levels of activation (see also Stavans and Hoffmann 2015 on language choices). Thus, metacognitive decision-making in the process of language planning and use on the individual level is influenced by the speakers' perceived needs. The level of multilingual awareness plays a considerable role in all these processes; for instance, when comparing levels of proficiency between the languages of a speaker.

Related to the issue of perceived communicative needs is perceived level of proficiency or knowledge in language learners, which plays a vital role in self-assessment. Self-assessment is a useful method for learners to develop metacognitive skills, as they learn to recognise their own abilities and deficits. Metacognitive skills are generally divided into "self-assessment (the ability to assess one's own cognition) and self-management (the ability to manage one's further cognitive development)" (Ibabe and Jauregizar 2010, 246). Hence, students who are able to accurately self-assess their skills are more likely to develop strategies for their learning process and therefore perform better than those who are unaware of their strengths and shortcomings. Therefore, self-assessment and metacognition are closely intertwined, "since the ultimate goal of self-assessment is that students learn to self-assess their knowledge and to self-regulate their learning process, thus increasing their autonomy and intrinsic motivation" (Ibabe and Jauregizar 2010, 246). This observation is supported by Wenden, who noted that self-regulation is closely related to metacognitive knowledge or the "specialized portion of a learner's acquired knowledge base" (2014, 45). Thus, self-assessment promotes the use of metacognitive strategies, such as managing and organising learning, monitoring and observation of the learning process, and reflection on learning.

In the LAILA project mentioned above, which explored attrition processes in foreign language students in secondary Tyrolean schools, one part of the testing was dedicated to self-assessment of foreign language proficiency. The data analysis of self-assessment in the respective languages (English, French, Spanish, Italian) and C-tests, both before and after the final exam, showed a positive correlation between what students thought they knew after a longer period of non-use and their actual performance on the C-tests. The 182 participants were asked to self-assess their level of proficiency in all four skills (reading, writing, speaking, listening) in all foreign languages on a Likert scale (Kratky 2017). However, when exploring attrition processes in oral production, a marked discrepancy between students' subjective self-assessment of their language skills and the measured changes in output quality was documented. Subjects' feelings about how their language skills had improved or deteriorated since graduation did not mirror how their oral language production on the speaking tasks had actually changed. Whether this indicates that the testing population had poor self-assessment skills or the students felt their skills in a given foreign language had deteriorated—although the quality of the output did not actually change that much, the effort and difficulty required to produce that output did—is not clear. This discussion makes clear that self-assessment with respect to perceived proficiency in multilinguals does not always mirror learners' actual language progress or decay.

Conclusion

Interest in work on metacognition in learning has increased over the last few years, as has research on metacognition in language learning. Lately, the role that metalinguistic competences and awareness of multilingual competences play in research on second language learning, bi- and multilingualism has also been scrutinised more intensively. In so-called multicompetence approaches to multilingual learning and teaching—that is approaches based on the notion of multicompetence, drawing on the specific qualities of a multilingual speaker/hearer—this becomes obvious (Jessner 2008a, 2008b, 2016.

As the discussion in this chapter shows, the importance of multilingual awareness in the language learning process appears to increase alongside growth in the intensity and amount of exposure to other languages. This is also true of multilingual strategy use, another area of research which needs to be investigated from a multilingual and metacognitive perspective, thereby applying multilingual rather than monolingual norms to multilingual development (Jessner and Török 2017).

In the language classroom, it is essential that language teachers are aware of their own knowledge and beliefs about languages, cultures and language learning in order to support their students in their learning efforts (see Haukås 2018, this volume). Similarly, language students can profit from a conscious approach to the language learning process, as discussed in Jessner

(2006) and a number of subsequent publications. Clearly, there is a need for further investigations within TLA and multilingualism research, particularly on strategic processing within experienced multilingual language learners, given the fact that research within SLA does not offer an accurate framework for these kinds of studies and therefore cannot be applied to highly complex and dynamic systems as those represented by multilinguals. Schmidt (1993), who discussed strategy learning, awareness and attention, rightly pointed out that attention to input is a necessary condition to any learning, and that the attentional threshold for noticing is the same as that for learning. Consequently, a good language learner is one who is both experienced and able to make use of his or her multilingual competencies as a strategic resource to manage and steer further (or lifelong) language learning.

As self-assessment promotes control over learners' cognitive activities, students gradually learn which strategies suit them best for accomplishing learning objectives as well as how and when to apply them. As pointed out above, self-assessment in multilingual learning also includes thinking about levels of proficiency in each of the languages and how these are affected by changes in development. For teaching, this means that emphasis should be placed on training students to accurately self-assess and adequately use the results to acquire learner autonomy and thus gain control of the learning process.

From a research perspective, this means that only if we move away from a simplistic picture of language learning by taking the hypercomplexity of the multilingual mind into consideration will we be able to make progress in understanding how language learning takes place (see Aronin and Jessner 2015 for a more detailed discussion). To understand a multilingual person as someone who has a different way of using and knowing her or his languages in contrast to native speakers means acknowledging the cognitive opportunities that life as a multilingual can offer and profiting from the benefits of the contact with two or more languages.

Note

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4 A Metacognitive Approach to Intercultural Learning in Language Teacher Education

Magne Dypedahl

Introduction

Metacognition—which can be described as knowledge of cognition, regulation of cognition and cognition about cognition—is recognised as a pillar of effective learning (see Bransford, Brown and Cocking 2000, 18; Flavell 2004, 275). For that reason, metacognitive reflection is embedded in teacher education programmes all over the world, including those for language students. It is a means for teacher students to develop their capacities both as learners and as teachers of a foreign language. As Haukås (2018, this volume) points out, "in order to support students in their language learning, language teachers themselves must be metacognitively aware in several respects" (p. 25). One important aspect of this awareness is how language teacher students can best learn to be actively conscious of their knowledge and beliefs about the development of intercultural competence.

The aim of this chapter is to explore some general principles for designing courses in language teacher education that can enhance a metacognitive approach to intercultural learning. The courses in question may have the development of intercultural competence as the main learning goal or be more general language courses in which intercultural competence is one of many learning goals; for example, alongside literature or language proficiency. Although language teacher programmes will have to meet the requirements of national frameworks for higher education and institutional guidelines, much depends on course instructors, who are the main target group of the present chapter. Instructors can be regarded as key factors for intercultural learning for two reasons. First, they are in most cases the prime course designers with regard to syllabus, teaching and assessment. Second, their knowledge and beliefs about intercultural learning are likely to influence the teachers they educate.

A consistent metacognitive approach to intercultural learning requires a coherent course design. This entails consistency between (1) a metacognitive approach to the concept of intercultural competence, (2) the knowledge about intercultural communication presented to the students and (3) how intercultural competence is assessed. Accordingly, I will discuss central

aspects of intercultural learning with a main focus on metacognitive reflection in language teacher education. The chapter is divided into four main sections following this introduction. The first section discusses a metacognitive approach to the concept of intercultural competence and models of intercultural competence. The next section provides examples of knowledge of intercultural communication that can be included in courses. The third section explores some teaching techniques for the development of metacognitive intercultural competence, whereas the last section discusses a metacognitive approach to the assessment of intercultural competence.

The Concept of Intercultural Competence

In this chapter, I have chosen the term "intercultural competence" to describe the aim of intercultural learning. However, the literature contains an abundance of synonyms and near-synonyms that refer to the same concept, such as "intercultural intelligence" (Peterson 2004), "intercultural sensitivity" (Bennett 1998), "intercultural communicative competence" (Byram 1997), "postcultural competence" (Jensen 2011, 47–8) and "critical cosmopolitanism" (Holliday 2011, 12), just to mention a few (see Fantini 2009, 457). Course instructors may want to choose a term they feel is consistent with their understanding of culture and the general philosophical underpinnings of the course. For example, the use of the term "critical cosmopolitism" is inspired by the need to place "the issue of culture firmly within a global political arena" (Holliday 2011, 13). Another possibility is to use the term "transnational competence" to indicate that the course represents a *transnational paradigm*, which, according to Risager, is "based on an awareness of linguistic and cultural complexity" (Risager 2007, 216). Nonetheless, "intercultural competence" seems to be the generally preferred term among intercultural experts (see Deardorff 2004, 170). This may change with time, but well-established terms do not generally have to be replaced because of changing paradigms. What will be needed in the case of moving from one paradigm to another is to provide a compatible definition of the concept and a description of how it is understood.

Defining "Intercultural Competence"

Before discussing the understanding and definition of "intercultural competence", there is no way to escape a discussion of the word "culture", which has been famously referred to as "one of the two or three most complicated words in the English language" (Williams 1983, 87). Clearly, the word can be used with very different meanings. A traditional understanding of "culture" typically revolves around behaviours, norms, beliefs and values that are shared by a group of people or the majority of people in a society. By the same token, "culture" could refer to a national culture, as is often seen in language education, for example, in discussing the use of a target language

in a target culture. There are good reasons for maintaining this as *one* use of the word in language education. This means that certain behaviours, norms, beliefs and values are acknowledged as more dominant than others in a society.

Nevertheless, within a transnational paradigm, this understanding of culture *cannot* be transferred to the understanding of "intercultural communication". First of all, cultures do not communicate; people do. More importantly, however, many individuals do not share the dominant behaviours, norms, beliefs and values of their national culture. Or even if people generally do, there are many complementary sources of cultural influence that lead to considerable variation. Many of these sources, perhaps most, transcend national boundaries, such as impacts from popular culture. Although the use of "culture" within a transnational paradigm is not linked to national culture, communication is still closely intertwined with "culture". As Baker (2012) writes, "language, even used as a lingua franca, can never be culturally neutral" (64). While also acknowledging biological factors, there is no doubt that our mindsets and communication patterns are influenced by our surroundings or group memberships. This can be labelled "cultural impact". Since the sources of this impact are very complex and transnational, the approach to intercultural learning should reflect this. Consequently, the object of investigation is not only the impact of national belonging, but also the impact of group belonging in general.

For that reason, I define "intercultural competence" as "the ability to think and communicate appropriately with people who have different mindsets and/or communication patterns" (adapted from Dypedahl and Bøhn 2017, 14; see also Hammer, Bennett, and Wiseman 2003, 422). In addition to the act of communication, this definition includes the ability to think appropriately. This entails both the cognitive and metacognitive aspect of intercultural competence. Furthermore, the word "appropriate" refers both to getting any message across and the ability to maintain a good relationship, but I acknowledge that conceptualisations involving an evaluative expression such as "appropriate" are intrinsically problematic, as is the concept of "competence" (see Deardorff 2004, 25ff). On the other hand, definitions that seek to be more precise run the risk of becoming less comprehensible and less useful for pedagogical purposes.

The Components of Intercultural Competence

For course instructors, it is necessary to identify certain components of intercultural competence. Although there can be no definitive solution as to what these components should be, some work has been done on finding consensual aspects of intercultural competence. Deardorff (2004) used the interactive Delphi technique with a panel of 21 intercultural experts in three rounds to identify the most important components of intercultural competence. The top-rated components of intercultural competence were "Skills

to analyze, interpret, & relate", "Flexibility", "Cultural self-awareness and capacity for self-assessment", "Adaptability—adjustment to new cultural environment", "Tolerating and engaging ambiguity", "Deep knowledge and understanding of culture (one's own and others')", "Withholding judgment", "Skills to listen and observe", "Respect for other cultures" and "Cross-cultural empathy" (Deardorff 2004, 173). While scientific consensus within this field of study may not be an aim in itself, a certain degree of consensus building is very likely to make it easier for language educators and students to relate to intercultural learning.

Exploring a Model for Metacognitive Intercultural Competence

Although further work on consensual aspects of intercultural competence should be encouraged, several decades of scholarly work in the field have resulted in many models that can provide good ways of conceptualising this competence. According to some reviews, there are at least 30 comprehensive models and 300 similar constructs (see Leung, Ang, and Tan 2014, 491). However, as Van de Vijver and Leung (2009) point out, "[t]here is almost no empirical work in which the various models that have been proposed are compared and tested" (406). Although a diversity of models is not a problem as such, Spitzberg and Changnon (2009) argue that "there is a need to provide a parsimonious model that can successfully integrate such diversity" (45). In the meantime, course instructors will have to make some choices if models are to be included in the course.

In the context of language learning in Europe, Byram's (1997) model of intercultural communicative competence seems to have become somewhat of a gold standard. The model includes the categories *savoirs*, *savoir s'engager*, *savoir comprendre*, *savoir apprendre/faire* and *savoir être*. Byram (1997) describes "savoirs" as the knowledge of self, others and of social processes of interaction. "Savoir s'engager" refers to political education and critical cultural awareness, which is explained as the ability to evaluate perspectives, practices and products of one's own and others' cultures (101). "Savoir comprendre" refers to skills to interpret and relate, whereas "savoir apprendre/faire" refers to skills of discovery and interaction. In other words, skills are divided into two categories. Finally, "savoir être", or attitudes, is described as relativising self and valuing others' values, beliefs and behaviours (34ff, 101).

In the United States, Fantini's (2014) model also seems to be relatively well known. Fantini distinguishes four dimensions of intercultural communicative competence: knowledge, positive attitudes/affect, skills and awareness. For the purpose of discussing metacognitive reflection, particularly the last component is interesting. According to Fantini (2014), '[a]wareness differs from knowledge in that it is always about the "self" vis-a-vis everything else in the world (other things, other people, other thoughts, etc.), and ultimately help to clarify what is deepest and most relevant to one's identity'

(272). While both Fantini's and Byram's models can be used for metacognitive reflection as well, it can also be argued that they pay insufficient attention to metacognitive strategies (see Sercu 2004, 77). Further support for this point of view can be found in Lane (2009), who writes that:

> true intercultural competence requires (at least) a heightened sense of self-awareness, an ability to self-assess, enhanced perceptive abilities, and a proclivity to reflect on experience. In other words, intercultural development requires concomitant metacognitive growth.
>
> (130)

More arguments, and empirical evidence, for the importance of metacognition in intercultural learning can be found within the field of cross-cultural psychology (see Earley and Ang 2003; Earley, Ang, and Tan 2006; Klafehn, Banerjee, and Chiu 2008; Van Dyne, Ang, and Koh 2008). In this field, the concept of "cultural intelligence" is developed based on empirical research conducted to understand the success factors of international assignment (Shaffer and Miller 2008, 109). Factors that seem to have an impact include previous experience, self-efficacy, relational skills and cultural novelty. The concept of cultural intelligence can be subdivided into three loci: mental (both cognitive and metacognitive), motivational and behavioural. The category of "metacognitive intelligence" can be described as "an individual's cultural consciousness and awareness during interactions with those from different cultural backgrounds" (Van Dyne, Ang, and Koh 2008, 17).

In sum, there seem to be good reasons for developing models of intercultural competence that clearly identify metacognition as a central element. Figure 4.1 outlines such a model of intercultural competence inspired by Deardorff (2006, 2015). In this model, I label the metacognitive aspect of intercultural competence as "intercultural awareness" and define it as "the conscious monitoring and adjustment of one's own thinking and interaction with other people". This means that intercultural awareness in this context is defined as *one* component of intercultural competence and not as a synonym of intercultural competence, as often seems to be done.

Central Components of the Model for Metacognitive Intercultural Competence

In this case, a process model is chosen to underscore that intercultural learning is an eternal cycle of lifelong learning. Furthermore, as Sercu (2004) underlines, in the context of foreign language education, " 'intercultural competence' always implies 'communicative competence', and therefore always also has a linguistic, sociolinguistic and discourse component" (75). This is probably true for any context. Thus communicative competence and language competence is presented as a premise of intercultural competence along with certain attitudes and the willingness to get along with

Communicative competence
Language

Attitudes
Openness and willingness to
understand others
Respect
Tolerance

Premises

Knowledge and comprehension
Intercultural communication
The concept of "culture" and
cultural influence

Skills
Listen and observe
Analyse and relate
Empathy
Cultural empathy

External outcome
Appropriate communication

Internal metacognitive outcome
Language awareness

Intercultural awareness (self-
monitoring, decentring, cultural
metacognition, etc)

Figure 4.1 Framework for metacognitive intercultural learning, inspired by Deardorff
2006, 2015.

other people. Since the understanding of intercultural competence in this
chapter does not require communication in a foreign language, "language
competence" includes first languages. However, for foreign language educa-
tion, it will obviously also include proficiency in the foreign language

There is an arrow directly from the premises to the external outcome, or
appropriate communication. This is to indicate that people with commu-
nicative competence can succeed well in any context. Likewise, the arrow
from the box to the right to the box to the left indicates that it is possible to
bypass the internal metacognitive outcome. Obviously, it is possible to com-
municate appropriately without a high level of consciousness. However, this
would not represent a high degree of metacognitive intercultural learning.
This model is based on the belief that more intercultural competence will be
developed by going full circle.

In this framework, the traditional components of knowledge, skills and
attitudes are all included, but "attitudes" has been placed in the upper box
to indicate that attitudes can be premises of intercultural competence as well

as an outcome of the learning process. In the box to the right, "knowledge" includes knowledge about the concept of culture, cultural impact and intercultural communication (see section on the choice of content knowledge below). With regard to "skills", this can refer to cognitive activities, such as listening and observing, but also to other activities or abilities that can be both cognitive and metacognitive, such as analysing, relating, empathy and cultural empathy. As opposed to empathy, which is the ability to put oneself in someone's shoes, cultural empathy is not about particular individuals. It can be described as the ability to understand how growing up and living in other contexts may influence how people interpret the world.

   The lower box focuses on metacognition, namely "language awareness" and "intercultural awareness". Language awareness can be described as "the development in learners of an enhanced consciousness of and sensitivity to the forms and functions of language" (Carter 2003, 64). Intercultural awareness refers to the abilities of self-monitoring and decentring (analysing situations from perspectives other than one's own). Decentring requires both empahy and cultural empathy. Moreover, the metacognitive aspect of cultural empathy can be referred to as "cultural metacognition" and "metaknowledge of culture". According to researchers working with intercultural intelligence,

> cultural metacognition increases intercultural effectiveness by promoting (a) contextualized thinking (i.e., heightened sensitivity to the fact that individuals' motivations and behaviors are invariably shaped by the cultural contexts in which they are embedded) and (b) cognitive flexibility (i.e., discriminative use of mental schemas and behavioral scripts when interacting across cultures).
>
> (Chua, Morris, and Mor 2012, 2)

Cognitive flexibility refers to "the ability to deploy cultural knowledge flexibly so that an individual may meet shifting cultural demands and achieve his or her valued goal in the intercultural environment" (Klafehn, Banerjee, and Chiu 2008, 320). Such cultural metacognition can be enhanced by indepth studies of other contexts. By learning about history and society from the perspective of other people, we may learn to switch cultural frames by knowing more about their cultural references. This can also be described as meta-knowledge of cultural impact in that environment. In my interpretation, this means that we can benefit from learning what people in other countries have learnt about their history and society. This adaption of other people's cultural references can also be called secondary knowledge of culture (knowledge of the knowledge other people hold). According to Leung, Lee, and Chiu (2013), "[m]eta-knowledge of culture supports cross-cultural competence because it provides cognitive support to discriminative application of cultural expertise by correcting the biases ensued from overgeneralized primary knowledge of culture" (995). Meta-knowledge of culture can

in turn become metacognitive when it is based on or developed along with an awareness and monitoring of the shifting of frames, which is what I refer to as cultural empathy.

The Choice of Content Knowledge to Be Included in Courses

The aspect of knowledge in the model above can be an inspiration for course instructors in need of finding relevant literature to provide students with content knowledge about the development of intercultural competence. Although there will never be one definitive set of relevant topics for developing intercultural competence, it must be a fair assumption that teacher education students would benefit from including topics from the field of intercultural communication in the curriculum. "Intercultural communication" here refers to the interdisciplinary study that often regards scholars, such as the anthropologist and social scientist Gregory Bateson, the anthropologist Edward T. Hall, the linguist Benjamin Whorf and the anthropologist-linguist Edward Sapir, among their founding fathers (see Martin, Nakayama, and Carbough 2014, 18).

Intercultural communication can be difficult to describe as *one* field of study, as it draws on a number of other fields, such as social anthropology, cultural studies, sociology and cross-cultural psychology. However, rather than being a mere mix of these fields, intercultural communication is a separate field of study that tries to answer the question of how people understand one another when perceptions are distinct enough to alter the communication event (see Lustig and Koester 2006, 52; Samovar, Porter, and McDaniel 2010, 12). Intercultural communication typically incudes topics such as verbal communication, non-verbal communication, value dimensions, stereotypes, prejudice and time orientations (see Samovar et al. 2015, 2017). Course instructors could use such a "package" of topics, recognised as relevant by researchers in the field of intercultural communication, to provide language teacher education with a coherent basis for intercultural learning.

Bridging the Gap between the Field of Intercultural Communication and Language Educators

Researchers and educators who take the study of intercultural communication as a starting point are sometimes referred to as interculturalists. However, this approach to the development of intercultural competence still does not seem to be fully integrated in language education. Smith, Paige, and Steglitz (2003) write that they "'have long felt there was a need to bridge the gap between these two fields; interculturalists and language educators have paid insufficient attention to each other's work . . ." (89). Fortunately, there seems to be an increasing number of good examples of an integrated approach. The different traditions of interculturalists and language

educators are represented in the *SAGE Handbook of Intercultural Competence* (Deardorff 2009a) and *The Routledge Handbook of Language and Intercultural Communication* (Jackson 2014). With regard to course design, there are also examples of a full integration of the interculturalist perspective in a language education course, such as can be seen in the master's programme, English Foreign Language Education, at the Norwegian University of Science and Technology (see NTNU 2016).

Examples of Teaching Techniques for Metacognitive Reflection

Obviously, there are numerous ways for a course instructor to enhance metacognitive intercultural learning. As implied in this chapter, a holistic and coherent approach to course design and instruction can be a good starting point. Furthermore, there will be a need for exploring the use of certain teaching techniques that are particularly suitable for metacognitive reflection. In this section, the use of critical incidents and the study of target countries will be discussed.

Critical Incidents and Value Dimensions

Critical incidents have been suggested as an approach to both teaching and assessment in foreign language education (see Sercu 2004, 74), but it may not be very commonly used. In commercial intercultural training, however, it is a well-known technique. Traditional "critical incidents" are short descriptions incidents in which communication between two people, representing different nationalities, leads to some form of misunderstanding. This follows an introduction to theories of cultural dimensions and orientations, such as Hofstede's original four value dimensions, which were originally introduced in his book *Culture's Consequences: International Differences in Work-Related Values* (1980): "from high to low power distance", "from individualism to collectivism", "from high to low uncertainty avoidance" and "from masculinity to femininity". Other examples are the scales "from monochronic to polychronic time orientation" and "from direct to indirect communication", inspired by Hall's theories of time and context (Hall 1959, 1976), and the concept of "face" introduced by Brown and Levinson (1978) to describe the degree to which people need to save (their own and others') face in various situations. Renowned commercial intercultural training companies, such as Cultural Awareness International, use such dimensions or scales along with critical incidents as a training procedure. This is no proof of effective learning as such, but it indicates that the use of critical incidents is perceived as a very useful teaching and assessment technique.

However, there are both ontological and pedagogical reasons why this approach to culture can be problematic. Cultural dimensions are often associated with a functionalist or essentialist view of culture, which arguably

is not a paradigm shared by most scholars in intercultural communication or teacher education today. Correspondingly, cultural dimensions can be perceived as a static approach to communication because there is too much focus on cultural background (see Hofstede 1980) and not on what people actually can do to understand each other when they communicate. Similarly, these dimensions can be interpreted as claiming certainty about general beliefs and values held by people in a national culture (see Holliday 2011, 4). Moreover, scores for particular countries on cultural dimensions can be used in a deterministic way to make predictions about the mindsets and communication patterns of individuals. A constructivist approach to communication, on the other hand, would be more dynamic and focus on what people can achieve together, regardless of background.

As such, this does not mean that cultural dimensions or orientations cannot be used as a dynamic approach to intercultural communication. Hofstede, Pedersen, and Hofstede (2002) underscore that value dimensions are *synthetic* culture profiles, or extreme manifestations of both ends of the dimensions (91). As they write, "they do not exist in the real world, although the tendencies they demonstrate do exist" (91). For example, a critical realist point of view—combining a constructivist epistemology and a realist ontology—can be used for a metacognitive approach to these tendencies. There is a big difference between claiming certainty about national cultures and pointing to certain tendencies. By studying, comparing and reflecting on tendencies in any society, it should be possible to learn more about the general "mechanisms" (see Bhaskar 2011, 19) of intercultural communication and develop intercultural competence within a transnational paradigm.

Nevertheless, there are many good reasons for *not* using critical incidents in this traditional way. From the course instructor's perspective, there is no need to risk ontological controversies in teacher education, or inadvertently end up with incoherence between the understanding of "intercultural competence" and teaching methods. The most *critical* aspect of using such incidents, however, can be that there will always be the risk of some students creating or reinforcing stereotypes. In my experience, students often end up stating that "the Japanese are" like this or the "French are" like that. They may describe relevant tendencies, but without any acknowledgement of the complexity or cultural impact. The question is whether there would be a better and non-essentialist approach to critical incidents. Furthermore, even if the analysis of critical incidents between different nationalities could lead to metacognitive intercultural competence, does this type of critical incident actually represent a detour?

Introducing Culture-General Critical Incidents and Role Play

Contrary to common practice, there should in fact be no need to link exercises to specific nationalities or groups of people. In the case of critical incidents, role play or case studies, the characters should be assigned

different characteristics, such as direct or indirect communication patterns, regardless of their nationality or group identity. Since communication is always a matter of interaction between human beings, information about their cultural background can very well become a distraction. Alternatively, the people involved in role play or the like could be assigned the same cultural background. Compared to other tools, including the *Autobiography of Intercultural Encounters* (Council of Europe 2014), this culture-neutral approach to critical incidents or role play underscores the fact that the skills gained from such activities are generic and culture-general. It is not about how to relate to the Japanese or the French, or to people associated with ethnic groups other than one's own, but rather how to relate to any person with a more indirect or direct communication style than one's own. Instead of going through generalised or stereotypical culture-specific characteristics in the hope of developing culture-general skills, a culture-general approach is used to develop culture-general skills.

Introducing Individualised Relativisation Scales

If the training exercises are culture-general, it seems incoherent to use the original cultural dimensions and orientation—such as Hofstede's value dimensions—for analysis. Therefore, the concept of cultural dimensions scales can be adapted to what I will label more general *individual relativisation scales*.[1] As stated above, a lot of research has been done on various concepts and dimensions that seem to represent relevant aspects of mindsets and communication patterns, such as scales from high to low power distance and from direct to indirect communication (Hofstede 1980). These are very useful concepts that can be applied to any interaction, regardless of national cultural background. Instead of being dimensions and scales of national cultures, they can be transformed into scales of human interaction. This could be explored as a central cognitive tool for helping teacher students develop the skill of decentring and changing perspectives, almost literally along a scale. Relativisation or the ability to decentre is acknowledged as a key concept in intercultural learning (see Byram 1997, 34, 42). Decentring is not least related to the concept of adaptability (see Kim 2014, 231), which is a regarded as a central component of intercultural competence by intercultural experts (see Ibid., 231).

Working with dimensions or scales can be highly relevant in language teacher education for many reasons. A good place to start could be relativisation scales that are related to the use of language, or verbal communication, such as "from direct to indirect communication", "from high intensity to low intensity communication" and "from formal to informal communication". For example, on a scale from direct to indirect communication, the objective is to identify one's own communication style in relation to one's interlocutors. This is a very dynamic process of analysis, and even with the same people involved in interaction, it can vary across contexts and topics

whose style is more or less direct. The more direct person in a given situation will always run the risk of insulting the other person, whereas the more indirect person can risk never getting the message across to the interlocutor.

Equally importantly, individual relativisation scales can be explored as a tool for developing the metacognitive skills of monitoring and consciously regulating the cognitive process of adjusting both the way of thinking and communication behaviour. According to Deardorff (2004), "[c]onsciousness of communicators specifically includes objective self-awareness, self-consciousness, self-monitoring and interaction involvement" (34). Here too, the overall aim is an awareness of the complexity of communication and culture. As Latour (2005) writes, "[r]elating to one group or another is an ongoing process made up of uncertain, fragile, controversial, and ever-shifting ties" (28). Students should learn to accept plurality and multiperspectivity with regard to both each individual and society in general. Repeated use of relativisation scales in the analysis of case studies and observations can scaffold the decentring process and increase emotional distance if a critical incident or uncertainty should occur in real life; for example, when faced by puzzling behaviours or opinions.

Metacognitive Target-Culture Studies

It may seem paradoxical, but more culture-general teaching techniques and a transnational paradigm does not mean that a culture-specific approach to target-culture countries should be excluded from a language teacher course or programme. It is common to use literature for the purpose of intercultural learning, but the study of specific national cultures seems to be somewhat more controversial. According to Kelly, an "important issue that remains under discussion is how far the cultural dimension of language learning contributes to intercultural learning" (Kelly 2014, 413). For partly the same reason, there is also one aspect of Byram's model of intercultural communicative competence that seems to have become increasingly controversial, namely his "clear line between our culture and their culture" (Holliday 2011, 19). According to Holliday, this derives "from a strong association between learning a foreign language and a foreign culture" (Holliday 2011, 19; see also Baker 2012, 65). As Byram (1997) writes:

> the introduction to the national culture of a country where the language is spoken natively can serve as an example, but must be combined with developing in learners the methods to cope with other situations, based on this example. This supports the argument for a focus on methods, as well as content.
>
> (20)

Such a study of national cultures *can* be conceptually very problematic, but as illustrated in the discussion of "culture" above, the solution can be to sort

out different concepts and keep them apart. Thus, expressions such as "our culture" and "their culture" should be avoided because they can lead to both stereotyping and othering, which can be described as distancing other people from one's own group. This is partly what Billig (1995) refers to as "banal nationalism" (6). This does not mean, however, that the learning of a foreign language needs to be dissociated from learning about a specific foreign national culture.

I would, in fact, argue that it might be time for a metacognitive "revival" of this tradition of focusing on cultural groups and countries as a teaching technique and not least a way of inspiring students to learn a language. However, very superficial introductions to target countries may not lead to much intercultural learning. One way of avoiding stereotyping and other-ing can very well be to integrate in-depth studies of specific target coun-tries in teacher education language courses. This form of culture studies, or culture-specific approach, is known to many course instructors as, for example, *civilisation* (English, French) or *Landeskunde* (German). As Hol-liday (2011) also acknowledges, nations should be recognised as significant ideological forces (13). This can be a god starting point for studying cultural impact in general. However, students should be exposed to the difference between the concept of national culture and cultural impact at the indi-vidual level, as well as a meta-knowledge of culture and the general aim of cultural empathy (see Figure 4.1 and the discussion of the components of intercultural competence above).

Assessment of Intercultural Competence

The steps taken above—defining concepts and identifying learning aims—are premises for assessment (see Deardorff 2015, 131). Still, finding good assessment instruments is not an easy task (see Perry and Southwell 2011, 460; Sercu 2010, 17–31). Discussing learning outcomes in higher education, Deardorff (2009b) writes that "there is often much confusion and anxi-ety as to how to implement actual assessment of intercultural competence" (477). This does not mean that it cannot or should not be done. First of all, there is the "backwash effect", which means that assessment will encour-age learning (see Sercu 2010, 20). Second, assessment can give educators in teacher education feedback on the effectiveness of intercultural learning and help researchers refine and develop theories of intercultural competence (see Perry and Southwell 2011, 459). Most importantly, however, students should be assessed in order to foster further development. This may, for example, involve what Borghetti (2015) refers to as "dynamic assessment" in accordance with Vygotsky's Sociocultural Theory (3). External support from the instructor or others may be crucial for making students take fur-ther steps.

Also with regard to assessment, delimitations are necessary. As Deardorff (2009b) writes: "Since assessing the whole of intercultural competence is

a daunting task, it is recommended to prioritize specific aspects of competence, based on the overall mission and purpose of the course, program, or organization" (481). One example is an assessment sheet based on intercultural competence models developed by Deardorff (2015). Here, students are asked to rate themselves on a scale from one to five with regard to 15 essential components of intercultural competence, such as "openness", "flexibility (in using appropriate communication patterns and behaviours in intercultural situation)", "cultural self-awareness/understanding", "skills to analyse, evaluate, and relate" and communication skills (appropriate and effective communication in intercultural settings) (145). Second, the students are asked to:

> Reflect on situations requiring intercultural competence. What helped make you more appropriate and effective in your interactions? Now reflect on how you can continue to develop your intercultural competence, especially areas you rated lower.
>
> (145)

Such reflection focuses on metacognition, regarding both "(a) knowledge of cognition and (b) the processes involving the monitoring, control, and regulation of cognition" (Pintrich 2002, 219). Particularly the second aspect seems to be important for developing conscious strategies for adapting to novel situations in shifting contexts in the future. This can also be referred to as metacognitive strategies, defined as "general skills through which learners manage, direct, regulate, guide their learning, i.e. planning, monitoring and evaluating" (Wenden 1998, 519).

There are also numerous other instruments (see Fantini 2009, 466–77), including the Council of Europe's *Framework of Reference for Pluralistic Approaches to Languages and Cultures* (FREPA) (Council of Europe 2012). In this framework, the competence of decentring is intended to activate knowledge, skills and attitudes through reflection and action. Another tool that is increasingly used in teacher education (see Cushner and Mahon 2009, 310) is the *Intercultural Development Inventory* (IDI), developed by Hammer, Bennet, and Wiseman (2003). Based on Bennet's (1986) development model of intercultural sensitivity, the level of intercultural sensitivity is assessed along a scale from highly ethnocentric to highly ethnorelative.

Even better known might be the *Autobiography of Intercultural Encounters* (Council of Europe 2014), which is mentioned above, and the *INCA project: Intercultural Competence Assessment* (European Commission 2009). As Sercu (2010) points out, however, linking the development of intercultural competence to actual encounters is problematic (31). In educational settings, many students do not have much experience, and the focus on actual encounters may suggest that intercultural competence cannot be developed in educational settings as well. For that reason, the teaching techniques of culture-general incidents and individual relativisation scales

described above may also be explored further as assessment tools. Observing, discussing and analysing such incidents will not rely solely on experience. Metacognitive intercultural learning can be encouraged, for example, by letting students reflect on the communication of others in critical incidents or their own communication in recorded or filmed role plays. This means that they can be helped to consciously monitor and regulate their own thinking and behaviour, which make up an important part of their intercultural awareness.

Conclusion

There is little doubt that metacognitive skills can be taught (see Lane 2009, 130). The same is true for a metacognitive approach to the development of intercultural competence. However, it can be challenging to develop the metacognitive aspects, or any other aspects, of intercultural competence without conceptual coherence, clarity and explicitness. In my view, the measures for more focus on metacognition in intercultural learning outlined above can be a contribution to helping language teacher students develop their capacities as intercultural learners and teachers. One suggestion in this chapter is to classify intercultural awareness as one component of intercultural competence, and not as one of the synonyms of intercultural competence, in order to make the metacognitive aspect of intercultural competence more tangible. Furthermore, both the culture-general approach to cultural dimensions—individual relativisation scales—and in-depth meta-knowledge of target cultures may be new approaches to intercultural learning that could make it more metacognitive. Also, with regard to the assessment, there is good reason for course instructors and researchers to further explore the role of metacognition in intercultural learning in order to avoid endorsing "stereotypes and prejudice against the culturally different 'Other'" (Chao, Okazaki, and Hong 2011, 266). On the contrary, the aim is to ensure an endorsement of multiperspectivity, understanding and tolerance.

Note

1 The concept of adapting cultural dimensions to the individual level was developed in cooperation with Associate Professor Henrik Bøhn as a result of interesting conversations over many years and cooperation on numerous intercultural training sessions in Norway involving participants representing more than 100 different countries.

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5 Using Machine-Translated Texts to Generate L3 Learners' Metalinguistic Talk

Eva Thue Vold

Introduction

Metalinguistic awareness, or "the ability to focus attention on language as an object in and of itself, to reflect upon language, and to evaluate it" (Thomas 1988, 531), is a central component of metacognition in language learning (Jessner 2018, this volume; Haukås 2018, this volume). Furthermore, it has been described as a key factor in third language (L3) learning (Jessner 2008, 270, 275; Jessner 2018, this volume). Nevertheless, L3 teachers often complain that students' metalinguistic awareness is low and that they have insufficient knowledge about grammatical terms from language arts and L2 classes (see for example, Haukås 2016, 11). Hence, there seems to be a need for L3 activities that can enhance students' metalinguistic awareness and analytical skills.

The ability to critically examine and evaluate language and language use is especially important when working with digital tools such as free online machine translation (MT). Teachers at all levels often advise against using such tools, claiming that students do not learn anything from them and that the resulting student texts are poor in quality (see Clifford, Merschel, and Munné 2013). However, this may be the result of uncritical use of the tools (see Williams 2006). Research suggests that MT can be a resource for learning, provided that students are given the opportunity to develop sufficient knowledge about language and about the tools themselves (see Jolley and Maimone 2015; Niño 2009).

This study sets out to examine what characterises students' metalinguistic talk when they discuss the quality of machine-translated texts. In an attempt to answer this overarching research question, students from a French as a third language class in an upper secondary school in Norway were given a task during which they read two machine-translated versions of the same text. The students' task was to decide which translated version was best and then explain, in as much detail as possible, why it was better than the other. The task was aimed at developing both students' metalinguistic awareness and their competence in using MT tools critically. Both are highly relevant competences for a continuing language learning process. It is the

first aspect—the students' metalinguistic awareness—that will be addressed in this chapter.

Literature Review

Students' Metalinguistic Awareness

There is no clear-cut distinction between metalinguistic awareness or metalinguistic knowledge,[1] on the one hand, and linguistic knowledge, on the other. However, researchers generally agree that what characterises the metalinguistic dimension is that it is explicit, declarative and verbalisable (R. Ellis 2004; Roehr 2008; both cited in Gutiérrez 2013, 148; Roehr and Gánem-Gutiérrez 2013, 4–6). Metalinguistic awareness includes aspects of linguistic knowledge, such as explicit knowledge of grammar and pronunciation rules and of word meanings, as well as the ability to analyse and explain grammatical phenomena, compare linguistic structures across languages, make use of prior linguistic knowledge, use metalinguistic terms when talking about and describing language and reflect upon language use (see also discussions in Hasselgård 2018, this volume; Jessner 2018, this volume). The term metalinguistic awareness thus covers both aspects of explicit knowledge identified by R. Ellis (2004): analysed knowledge, i.e. awareness of grammatical rules and linguistic features; and metalanguage, i.e. the ability to verbalise analysed knowledge using technical terminology.

   Previous research on metalinguistic awareness and its role in language learning has shown that these two phenomena are strongly interrelated (Cenoz, Hufeisen, and Jessner 2001; Jessner 2008). However, it is not clear from the research whether metalinguistic awareness is a prerequisite for success in L3 learning in school settings or whether such learning in itself enhances students' metalinguistic awareness (Jessner 2008, 275). In addition, as Gutiérrez (2016) points out, findings may differ depending on what components of metalinguistic knowledge are measured, how they are measured and how the constructs are defined. One of the most frequently applied procedures in this field is the examination of learners' collaborative interaction while performing L2/L3 tasks (see Gutiérrez 2013, 149). Pair or group work is assumed to trigger interaction related to language aspects, and the assumption is that such interaction, which from a sociocultural perspective is often referred to as collaborative dialogue (Swain 2000; Swain, Kinnear, and Steinman 2015), can facilitate language learning insofar as it engages the participants in problem solving and potentially in linguistic knowledge construction (Lyle 2008; Swain 2000). Such collaborative talk involves metatalk, i.e. talk about language use (Swain 1998). Storch (2008) studied the metatalk of university students enrolled in a university ESL course as they engaged in a collaborative text reconstruction task. The concept of metatalk was operationalised in terms of language-related episodes (LRE), i.e. episodes in which the students talked about their

own or their peers' linguistic output (see also Swain and Lapkin 2001). An analysis of learners' performance at different stages revealed that the level of student engagement in the language-related discussion that arose had positive effects on learning and consolidation outcomes. The level of engagement was highest when grammar issues were discussed. Storch (2008, 111) concluded that opportunities to verbalise and deliberate about language are beneficial for learning, but that elaborate engagement is more effective than limited engagement. It seems reasonable to assume that, at least to some extent, high levels of engagement reflect high levels of metalinguistic awareness. Thus, there seems to be a mutual, positive reinforcement between metalinguistic awareness and language learning.

In line with the prevailing idea that metalinguistic awareness plays an important role in language learning, the current curriculum for foreign languages in Norway gives the topic of metalinguistic awareness a fairly prominent role. The curriculum is structured into three main subject areas, *Language Learning*, *Communication* and *Language, Culture and Society*, with competence aims formulated for each area. Competence aims related to metalinguistic awareness are subsumed under the subject area Language Learning and refer, e.g. to students' ability to make use of previous knowledge of languages when learning a new one as well as their ability to examine similarities and differences between languages as part of the language learning process (Norwegian Directorate of Education and Training 2006). Despite this focus on the role of metalinguistic awareness, few studies on Norwegian L3 learners have addressed such issues. One exception is the study by Hansejordet (2009), who studied lower secondary students' use of metalinguistic terminology in a Spanish L3 class. The findings revealed that students use very few grammatical terms when talking about language—they tend to stick to everyday terms. Sometimes this works well in the situation, whereas other times the students' lack of understanding of underlying grammatical structures leads to confusion and impedes communication within the group (Hansejordet 2009, 32–3, 83). Hansejordet's findings mirror Swain's (1998) view that metatalk does not necessarily involve the use of technical terms. A case in point is Gutiérrez' (2013) study of Spanish university students' metalinguistic knowledge, using an immediate recall technique in a collaborative text production task. Every time a covert metalinguistic activity was identified, meaning an episode in which the students commented on the language use (for instance, proposed a change in the text) without giving any explicit expression of metalinguistic thinking, the researcher prompted the student to give reasons for his or her suggestion. It was found that in almost 80% of the cases, metalinguistic knowledge turned out to be the motivation for the student's comment. Gutiérrez' (2013, 163) hypothesis is that students may not always verbalise their underlying metalinguistic knowledge representations because they either do not have the adequate resources or do not see the need to do so, as they assume that their fellow students share the same knowledge. In a later study, Gutiérrez (2016)

found that analysed knowledge (see above) was more strongly correlated with language learning than was metalanguage. He concludes that knowledge of technical terminology is not as important in the language learning process as the understanding of grammatical features. Nevertheless, studies have shown that more proficient users tend to use more metalanguage, and advanced learners tend to focus more than intermediate learners on metalinguistic aspects (Fortune 2013).

Research from European countries shows that multilingual teachers (i.e. teachers who master at least three languages) display higher metalinguistic awareness than bilingual teachers (E. Ellis 2004; Otwinowska 2014), but they may lack strategies for applying this awareness in the language-learning classroom (Otwinowska 2014). Research from the Norwegian context reveals similar tendencies: Many L3 teachers feel unsure about how to approach the main subject area of language learning in the curriculum, under which metalinguistic awareness and other types of metacognitive competence, such as self-assessment and critical use of digital tools, are subsumed. In a study of 145 language teachers in Norwegian upper secondary schools, L2 as well as L3 teachers reported that they rarely worked on enhancing learners' language learning awareness (Haukås 2012; see also Haukås 2018, this volume). Similarly, based on a survey of 85 Norwegian lower secondary L3 teachers combined with in-depth small-scale observational studies and interviews, Heimark (2013, 214) concludes that teachers seem to have few reflections related to a metaperspective on language learning compared with their reflections on other aspects of the curriculum, such as communicative skills and cultural content knowledge. Likewise, a quantitative survey of both newly qualified and experienced L3 teachers, in which the teachers were asked about their self-perceived competence for teaching different components of the subject, reveals that the teachers felt uncertain about the teaching of language learning awareness in general and of metalinguistic awareness in particular. The teachers felt most insecure about the subcomponent of metalinguistic awareness, on par only with the component of teaching self-assessment (Vold 2017). Many studies point to the absence of plurilingual training in teacher education to explain why even multilingual teachers often seem to ignore learners' language backgrounds and rarely use activities involving cross-linguistic comparisons in their teaching (De Angelis 2011; Otwinowska 2014). Cross-linguistic comparisons based on machine translation are one type of activity that teachers could be introduced to during their teacher training and could subsequently apply in their classrooms to enhance learners' awareness of the similarities and differences between languages.

Machine Translation as a Language Learning Tool

Most research on MT stems from the fields of computational linguistics and translation studies. Whereas the former focuses on technical aspects, the

latter often focuses on the role of MT in courses for trainee translators and addresses questions such as post-editing, pre-editing and quality assessment (see, for example, Gaspari, Almaghout, and Doherty 2015; Niño 2008). Although these types of questions can inform our understanding of the use of MT tools by language learners, research that specifically addresses the role of MT in language learning is scarce. For example, in Golonka et al.'s (2014) thorough review of the effectiveness of technologies in foreign language learning, MT is not included. This is understandable, as MT was not originally created for language learning purposes (Somers 2001, 28) and hence was not developed as a computer assisted language learning (CALL) tool. On the other hand, the lack of literature on the topic is somewhat surprising since a large amount of anecdotal evidence from language teachers and students indicates that language learners in school contexts make extensive use of free online machine translation (see Garcia and Pena 2011, 472; Williams 2006, 566). As these tools steadily improve, this trend is bound to increase (Garcia and Pena 2011, 472). Thus, according to Garcia and Pena (2011, 472) and Clifford, Merschel, and Munné (2013), the use of free online machine translation for language learning is a topic that can no longer be ignored by the research field.

The few research papers that address this issue reveal that the use of MT programmes for language learning is controversial. Steding (2009) adopts a critical stance, fearing that with the constant development of better software, students would "rely on [MT] more and more and not develop their own skill in the language" (Steding 2009, 178), consequently concluding that "our first goal must be to prevent the use of MT" (Steding 2009, 188). Somers (2001) also expresses reluctance, stating that since MT software is "generally not designed with language learners in mind, [. . .] one should be a little wary of using it for this purpose" (Somers 2001, 28). In addition, Somers, Gaspari, and Niño (2006, 42) assert that the MT techniques used for learning purposes "carry with them the danger that students, particularly beginners, cannot readily identify examples of bad usage, and have a not necessarily justified 'trust' in the accuracy of computer output". On the other hand, the few (quasi-)experimental studies that exist show some positive effects. Ninõ (2008) performed a comparative analysis of error frequency in the translations produced by two groups of advanced students of Spanish: One group did post-editing of machine-translated texts, whereas the other group translated the same texts on their own. She concludes that, for advanced students, MT post-editing was beneficial in several ways, and it was "especially good for [. . .] raising language awareness through error correction and detection" (Niño 2008, 44–5). Niño's students were adult advanced university students enrolled in a course on MT, and they were thus not comparable to a group of more or less motivated secondary school students learning an L3. In contrast, Garcia and Pena's (2011) study involved beginners. Using an experimental design, they compared student writings with and without the help of MT and found that MT helps beginners to

communicate more (as measured by the number of words produced) and better (as measured by blind marking). However, judging from screen recordings showing the number of pauses and the number of successful and unsuccessful editing interventions, they also conclude that beginners probably learn more from writing directly in the target language using their own words (Garcia and Pena 2011). If so, this finding echoes Steding's (2009) concern that although students can rely on this kind of tool for communication or school assignment purposes, it will not help them to develop language skills.

Since MT is undoubtedly here to stay, the research field as a whole and language teachers specifically need to focus on how it can be used for learning purposes and not solely for communication. In this vein, Williams (2006) advocates the use of MT for developing electronic literacy and language awareness. In his view, students' misuse of MT stems from the fact that they use such tools uncritically. They need to develop a critical literacy towards technology as well as the ability to evaluate digital tools (Williams 2006, 567). Although Williams's paper includes interesting reflections and good advice on how to use MT for learning purposes, it does not report from classrooms in which MT was actually used. Niño (2009) also gives an overview and evaluation of different ways of using MT for learning purposes, but her suggestions seem to have been applied only with university-level language learners or trainee translators. In sum, the literature on foreign language teaching and learning provides little evidence that the use of MT can be beneficial for language learners in a school context.

The Current Study

Aim

In order to address, with empirical evidence, the question of how and whether the use of MT can be beneficial for language learning, the present small-scale study implemented some of the suggestions from the literature for using MT for learning purposes in a school context. It set out to examine what characterises students' metalinguistic talk when they discuss the quality of machine-translated texts. The students worked in small groups based on their relative achievement levels in French. The discussions between the students were analysed with regard to the following research questions (RQ):

- RQ1: How do the students talk about the texts, and to what extent do they use grammatical terms?
- RQ2: What kinds of errors do they talk about?
- RQ3: What differences are there between the different achievement levels?

Participants

The research project was carried out in a French as a foreign language class in an upper secondary school in the urban surroundings of Oslo. The students, all around 17 years of age, were in their second year of a general studies course. They had studied French as an L3 for three years in lower secondary school and, by the time the project was undertaken, for 1.5 years in upper secondary school. At this stage, students have only half a year left of the obligatory L3 course, and thus they are among the most advanced L3 students in the Norwegian secondary school system. This level was chosen because the research literature and teacher experiences indicate that, to be able to evaluate target language MT texts, students need a certain level of linguistic competence in the target language as well as some translation skills (see Niño 2009). Although the participating students were in their last year of the obligatory L3 course, their L3 level was not advanced. Few teaching hours and a lack of L3 input make it difficult for Norwegian L3 students to reach beyond the B1 level of the CEFR. The true proficiency level of the participating students was not known, but, according to the class teacher, many students in this group were weaker than they should have been at this level. Their level of motivation varied; some were not motivated to learn an L3, while others liked the subject and wanted to learn.

The class consisted of 30 students, all of whom gave their written consent to participate in the project. On the day that the project was to be carried out, seven students were absent from the L3 class. The participant group thus consisted of 23 students: 13 girls and 10 boys.

The participating teacher was an experienced French instructor. Collaborative preparations were mostly done by email, but a preparatory meeting was also held immediately before the lesson in which the project was conducted.

Materials: The Source Text

A source text in Norwegian was chosen in collaboration with the teacher. The class was working with geography and was planning an excursion to Nice, so a text about Nice from the website *Reisdit.no* was chosen. The text was informative, factual and tourist-oriented, 320 words long and not particularly difficult compared with regular French language textbooks for this level. A few typing errors in the source text were corrected before the text was translated into French by Google Translate and Bing translator.

A pre-analysis of the machine-translated texts revealed that the translation programmes made several errors of different types that students at this level could be expected to detect. Among the most salient were morphological errors, lexical errors and syntactic errors. Below are some examples of the errors the programmes made in each category.

Morphological errors comprise different types of agreement errors (1–3), verb conjugation errors (3) and omissions of function words (3–4).[2]

1.   *Nice est une des villes les plus visités (GT)
2.   *Une petite pharmacies (BT)

In the first example, the noun (*villes*) is in the feminine plural, while the adjective (*visités*) is in the masculine plural. In the second example, the noun (*pharmacies*) is in the feminine plural whereas the adjective (*petite*) and the indefinite article (*une*) are in the feminine singular.

3.   *17éme Cathédrale de Ste-Réparate valent un visite (BT)

In this example, the verb (*valent*) is in the plural, while the noun (*cathédrale*) is in the singular. There is also an error in determiner—noun agreement: *un* is the masculine indefinite article, while *visite* is a feminine noun. In addition, there is an omission of the definite article in the first noun phrase.

4.   *Vous avez tout simplement pas été à Nice (BT)

Here it is the negation particle *ne* that has been omitted—in written French, this particle is obligatory and is placed before the finite verb.

Lexical errors include untranslated words as well as erroneous choices of lexical items, which in turn lead to wrong or nonsense semantic meanings.

The Norwegian words *hit* (English *here*) and *dump* (English *dump*) are left untranslated by Google, while *illusjonistiske* (English *illusionistic*) is not translated by Bing.

As for the choice of lexical items, this seems to be especially challenging when the programmes have to deal with polysemous words. For example, Bing translates *travel og livlig by* (busy and lively town) as *une ville occupée et animée*, where *occupée* would be understood as invaded or conquered rather than busy. Another example is when Bing translates *lett rødvin* (light red wine) as *vin rouge facile*. *Facile*, meaning "easy/uncomplicated", cannot be used in this context. Google, on the other hand, correctly chose the word *léger* (light / not heavy).

Another striking example of the erroneous choice of semantic meaning is when the name of the town, Nice, is not recognised as a proper noun and is thus translated by Google as *agréable* (English *nice/pleasant*) and by Bing as *belle* (English *nice/beautiful*). Both programmes obviously use English when they do not identify the word as Norwegian. Phrasal verbs are also hard to render; the Norwegian expression *dump ned* (sit down) becomes the barely comprehensible *décharge vers le bas* (literally *discharge downwards*) in the Bing version.

Syntactic errors refer to errors in word order and sentence structure. Both programmes have problems with this, and the longer and more complicated

the clause or phrase, the worse the result. Compound nouns in the source text often trigger inaccurate word orders in the translation. For example, Bing renders *eksklusive lunsjrestauranter* (*luxurious lunch restaurants*) as *déjeuner exclusive restaurants*, literally meaning "lunch luxurious (fem. sing.) restaurants" (masc. sing.). Bing also has serious problems dealing with the complex Norwegian compound noun phrase, *8 kilometer lange flotte rullesteinsstrender* (*lovely 8-kilometer-long pebble stone beaches*), putting the translated words into a seemingly random order: *8 km plages de galets long magnifique (8 km beaches of pebbles long lovely)*.

Likewise, Google turns the Norwegian noun phrase, *sjarmerende fargerike murhus* (*charming colourful brick houses*) into *charmantes maisons colorées de briques*, i.e. the adjective colorées is wrongly positioned between the noun *maisons* (*houses*) and the prepositional phrase *de briques* (*of bricks*), which in this case are tightly linked and should not be separated.

Longer clauses with heavily modified subjects and complex verb phrases yield incoherent and almost incomprehensible translations with both programmes.

Problems with word order and sentence structure are probably the most disturbing error type for a reader who is trying to grasp the text. They are also the hardest to describe, as it takes some knowledge of French syntax to be able to explain them. Therefore, I expected the students' comments to be more precise and concrete on the morphological errors than on the word order errors.

Procedures

Task Design and Data Collection

The task offered to the students consisted of reading two machine-translated versions of the same text and deciding, in groups, which translated version was best while explaining, in as much detail as possible, why one was better than the other. The task resembled traditional error correction, which has been used in foreign language learning for a long time and is often based on texts containing errors deliberately added by the teacher. When working with text produced by MT programmes, however, students work with errors and shortcomings that they encounter on a daily basis and need to be aware of. Moreover, in the present activity, students were asked to detect errors but not specifically to correct them (i.e. students were not asked to post-edit the machine-translated texts). Instead, machine-translated output was used to prompt students to talk about language.

The teacher had informed the students about the project and its purpose in a prior lesson. She had also instructed them to read the Norwegian source text to become more familiar with the content when it was presented with the two translated versions. In class, during the project work, the students were given about 25 minutes to read the two translated versions individually and

to jot down errors and shortcomings that they found while reading. Then, they were divided into seven groups of 2–4 students each and given another 20 minutes for group discussion and comparison of the individual findings. The students were informed that they could use Norwegian (L1) in their discussions. In order to facilitate the discussion and subsequent data analysis, the lines in the Google-translated text were numbered from 1 to 25, while the lines in the Bing-translated text were labelled A—Y. A sheet with task instructions and guiding questions that specified elements the students could look for (see Appendix) was distributed to all students before the individual reading, and they were prompted to use the sheet during group work. I was present the entire time and could answer any questions the students had about the task or the questions on the sheet. The teacher ensured that the participants were homogeneous within each group in terms of their competence level in French. The students did not know that they were divided into groups on the basis of achievement level. Table 5.1 provides an overview of the composition of the groups.

The group conversations were recorded using mini-recorders placed on each group's table. The data thus consisted of seven recorded group conversations of approximately 20 minutes each.

The teacher was instructed to act normally, i.e. to intervene with the groups when relevant or necessary and ask them any questions she considered useful for their work with the task. Apart from this, the teacher did not receive any instructions on what to do or say, nor did we discuss in any detail how the students could be guided in that particular activity.

Data Analysis

Once the data had been collected, I listened to the material with the research questions in mind, and all instances of collaborative talk, operationalised in this study as language-related episodes (LREs) (see Swain and Lapkin 2001, 104) were transcribed. Whereas Swain and Lapkin's concept of LREs refers to episodes in which students talk about their own or their peers' linguistic output, I used it in this study to refer to any part of a conversation where the students talked about and reflected upon the MT linguistic

Table 5.1 Group composition.

Group	Achievement level in French	Number of students
A	High	2 (both girls)
B	Medium	3 (two girls, one boy)
C	Medium	4 (two girls, two boys)
D	Medium	3 (all girls)
E	Low	4 (all boys)
F	Low	3 (all girls)
G	Low	4 (one girl, three boys)

output. The underlying principle, however, was the same: LREs refer to episodes in which students discuss or comment on language use and linguistic choices; in this case, in regard to machine translations. Time stamps for the beginning and end of these episodes helped determine the time each group spent on collaborative talk.

In order to answer Research Question 1 (how students talk about language and the extent to which they use grammatical terms), I first read through the transcripts to obtain a general impression of how the groups talked about the texts. I then reread the transcripts while identifying and counting all instances of grammatical terms for each of the groups. Grammatical terms included references to parts of speech, grammatical gender, verb conjugation, concord and so on. All instances were counted, regardless of whether or not the terms were used correctly.

In order to answer Research Question 2 (what kinds of errors the students detected), the transcripts were coded in terms of whether they focused on morphological, lexical, syntactic or mechanical linguistic errors or shortcomings. These categories were largely pre-defined, based on the error types present in the text (see above) and on previous LRE taxonomies (Fortune 2013, 173; Gutiérrez 2013; Storch 2008). A few subcategories that were not identified in the pre-analysis of the texts emerged from the data, including comments about numerals (lexical), punctuation (mechanical) and unspecified comments. The latter category comprised episodes in which the students mentioned that something was wrong, but they were not specific enough about the error for their statements to be placed in a specific error-type category. One example of this is when a student stated that "this sentence is kind of strange". Episodes in which the students merely discussed the text without referring to (presumed) errors or shortcomings were counted as LREs, and hence as collaborative talk, but classified simply as discussion about text. Examples in this category primarily include instances where the students asked each other about the meanings of words; for example, when one student said, "I don't know what 'cadre' means", and another (wrongly) responded, "I think it is 'part'".

The findings for each group were compared in order to inform Research Question 3, which addressed differences between achievement levels. The number of grammar terms was compared across groups, and comments for each error type were also compared to identify which errors were discussed by most of the groups and which were only detected by specific groups.

Results

Table 5.2 gives a list of all instances of grammatical terminology used by each group. Table 5.3 illustrates the time spent on collaborative talk and the number of unique LREs identified for each group and provides an overview of the error types detected and commented on by each group.[3] Most of the time not spent on collaborative talk was devoted to discussing off-task

Table 5.2 Grammatical terminology used by each group.

Group	Terms used (number of occurrences in parentheses)
A (high)	adjective (4), amalgam (1), article (4), conjugate/conjugation (4), feminine ending (1), feminine noun (1), feminine plural (1), indefinite (1), noun (4), phrase / fixed expression (1), plural (2), preposition (3), present tense (1), subordinate clause (1), verb (5)
B (medium)	adjective (1), article (4), definite (1)
C (medium)	adjective (2), conjugate (5), number (1), person (1), subject (1), verb (2)
D (medium)	adjective (1), verb (1), verb conjugation (1)
E (low)	conjugation (1), verb (1)
F (low)	conjugation (1), feminine (1), masculine (1), plural (1), verb (1)
G (low)	–

matters (e.g. what to do during the weekend). The time spent on collaborative talk therefore represents the groups' time-on-task fairly well, with a low number of minutes (see Table 5.3) indicating that a group did not work for very long on the task. Notably, there were some episodes of silence, which might represent time spent on-task since the students may have been working individually: silently reading the text or simply thinking. Below I will present and discuss the observations made from the data and link them to each of the research questions.

Research Question 1: How Do the students Talk About the Texts, and to What Extent Do They Use Grammatical Terms?

The most salient finding was that, in most groups, students' comments about the text were very general. They often made claims without justifying them with concrete examples from the text. The following excerpt[4] from group C is illustrative in this respect:

S1: I feel that Google in a way has OK words compared with Bing
S2: Yes, Bing tries to write adult French
S3: Yes, like advanced French
[. . .]
S1: Bing varies the words more
S2: But Google has more appropriate words, kind of

<div align="right">Group C (medium)</div>

It is difficult to determine whether this lack of concrete examples was caused by the students not having paid close enough attention to the task instructions or by the fact that they were not able to find illustrative examples to support their impressions. One aspect points to the latter explanation,

Table 5.3 Time spent on collaborative talk and error types discussed for each student group.

Group (achievement level)	Time spent on collaborative talk	Main error types discussed	Detailed error types discussed	No. of LREs per (assumed) error type*	No. of other LREs**
A (high)	29 min 30 sec	Morphological	Agreement errors	4	20
			Omission (e.g., of articles)	4	
			Verb conjugation	1	
			Preposition use	1	
			Article use	1	
		Lexical	Lexical choice—proper names	2	
			Lexical choice—other	3	
			Untranslated words	3	
			English words	1	
			Use of numerals	2	
		Syntactic	Adjective placement	4	
			Word order in general	2	
		Mechanical	Punctuation	1	
B (medium)	14 min 30sec	Morphological	Omission (e.g. of articles)	2	6
		Lexical	Lexical choice—proper names	2	
			Lexical choice—other	5	
			Untranslated words	2	
			English words	1	
			Use of numerals	1	
		Syntactic	Adjective placement	1	
C (medium)	20 min 30 sec	Morphological	Verb conjugation	1	9
		Lexical	Lexical choice—proper names	3	
			Lexical choice—other	1	
			Untranslated words	1	
			English words	1	
			Use of numerals	2	
		Syntactic	Adjective placement	1	
		Mechanical	Punctuation	2	

(*Continued*)

Table 5.3 (Continued)

Group (achievement level)	Time spent on collaborative talk	Main error types discussed	Detailed error types discussed	No. of LREs per (assumed) error type*	No. of other LREs**
D (medium)	9 min 00 sec	Lexical	Lexical choice—proper names	3	7
			English words	1	
			Use of numerals	1	
		Syntactic	Adjective placement	1	
		Mechanical	Punctuation	1	
E (low)	9 min 30 sec	Lexical	Lexical choice—proper names	2	4
			Lexical choice—other	1	
			English words	1	
			Use of numerals	1	
		Syntactic	Adjective placement	1	
		Mechanical	Punctuation	1	
F (low)	19 min 30sec	Morphological	Agreement	3	7
			Preposition use	2	
		Lexical	Lexical choice—proper names	3	
			Lexical choice—other	1	
			Use of numerals	1	
			Untranslated words	1	
			English words	1	
G (low)	13 min 00 sec	Syntactic	Word order in general	1	5
		Lexical	Lexical choice—proper names	2	
			Lexical choice—other	1	
			Use of numerals	1	

* Repeated episodes (i.e. episodes where the participants came back to the same example as the one discussed before) were counted only once. Thus, when group A discussed agreement errors in four LREs, they discussed four different instances of agreement errors.

** Includes *unspecified comments* and *discussion about text* (see the data analysis section)

however: When the teacher occasionally asked the students to justify their claims by giving illustrative examples, the students were unable to do so:

T: Can you give some examples?
S: Ah . . . no . . .

Group F (low)

Grammatical terminology occurred infrequently and sporadically, except in the high-achieving group (see Table 5.2). This group used grammatical terms in a nearly systematic way. In their 30-minute talk, they used 15 different grammar terms to comment on and discuss phenomena such as noun–adjective concord, omission of articles and verbs, verb conjugation and the position of adjectives. The following excerpts illustrate their talk about noun—adjective concord and article omission, respectively:

S1: What I also noticed, was that—it is not so important—but when it says that one of the cities was most visited, it says <u>visités</u>
S2: But <u>ville</u>, isn't that a feminine noun?
S1: Yes, so it should have been feminine plural

S1: Yes, and there should have been an article before <u>aristocrates</u>
S2: Should have been <u>des</u>, then, if it is indefinite

Group A (high)

Even the high-achieving group was occasionally hesitant about terminology. For instance, one of the girls first correctly talked about "articles". The other girl objected, claiming that "it is more a preposition", and in the subsequent dialogue the term "articles" was erroneously replaced by "prepositions".

The other groups rarely made use of grammatical terminology. The number of occurrences ranged from zero in group G to 12 in group C. When they did use such terminology, it was often in a vague or even erroneous manner. For example, in one of the medium-achieving groups, one student said: "In French, *belle* and *petite* and *grand* and so on can occur in front of a verb, can't they?" The student is obviously referring to the rule whereby some French adjectives (including the ones mentioned) are placed in front of the noun. He did not use the term "adjectives" but rather mentioned some examples, and he confused the terms "noun" and "verb".

As previously observed by Hansejordet (2009), students' lack of linguistic terminology and grammatical understanding sometimes seemed to hamper their analysis of the translated text. For example, in the following excerpt, the students could see that there was something wrong with the verb *regarder* (English *look*, Norwegian *se, titte*), which occurs in the infinitive in Google's version. They related this to the verb form in the Norwegian

source text (lines 5–6), but they did not identify it as an imperative, which could have helped them in the analysis of the French text.[5]

1) S1: They don't conjugate all the verbs, either
2) S2: Where exactly?
3) S1: Line 18
4) S3: But here, in Bing, they have conjugated it and it should . . .
    [. . .]
5) S2: If you look at the original it is not conjugated
6) S3: Yes, it is, it says <u>titt</u>,[6] doesn't it. It isn't <u>å titte</u>,[7] kind of.
7) S2: I think that's correct, because it's not conjugated according to subject
8) S3: So the other is wrong?
9) S2: One of them has got to be wrong
10) S3: The inflections are completely different

<div align="right">Group C (medium)</div>

This example also illustrates another observation: When the students spoke about the translated texts, they often spoke as if one programme was necessarily right and the other wrong. Similarly, when they talked about rules, they did not seem to realise that there could be exceptions, or that there could be instances in which the rule did not apply. It is not clear why such misconceptions arise, but one possible explanation could be that students are largely exposed to simplified input constructed to illustrate rules and are rarely confronted with authentic language.

Research Question 2: What Kinds of Errors Do They Talk About?

Lexical errors received by far the most attention from the students. All the student groups commented, on their own initiative, on Google Translate's choice of heading, where Nice was translated to *agréable*. Nevertheless, four groups ignored the fact that Bing actually made the same kind of mistake, but in the body text, and by choosing *belle* instead of *agréable*. Three groups at different achievement levels (A, D and F) noticed this:

S1: And in the second paragraph in Bing, they have translated Nice to <u>belle</u>
S2: Where?
S1: Line E
S2: Yes!

<div align="right">Group D, medium-achieving</div>

In addition, the high-achieving group immediately captured the importance of context for choosing the correct translation. They stated that "There's nothing that could indicate that it's the name of a place" and that "there

is no context, in a way". They also stressed that Nice was not a Norwegian word and that the programme "didn't make that mistake in the rest of the text, because then they had the context". These students thus "excused" the translation programme for the erroneous title because it did not have the context needed to render the source text appropriately.

Five groups also commented on the translations of "rivieraen" (*the Riviera*). Google kept the word *Riviera*, while Bing used the correct French term *le Côte d'Azur*. The students were obviously familiar with this term, recognising that "that's what it's actually called" (group D, medium).

Another issue that all the groups commented on was the use of numerals by the two translation programmes, and more precisely how they express centuries. The students were surprisingly concerned with numerals, perhaps because they were concrete and easy to look for. They noticed that while Bing chose Roman numerals, Google used regular numbers, yet they disagreed on which solution was best. Some called Bing's use of Roman numerals "fancy", while others found it "silly".

Four groups commented on the untranslated terms, and six commented on the use of the English word *must*, which also occurred in the original Norwegian text. While some considered this erroneous, others suggested that the English word *must* might be used as a loan word in French just as it is in Norwegian.

Most comments on the lexical level addressed proper names or untranslated words. There were some exceptions, however. For example, the high-achieving group expressed some doubts about the word *occupée* (these doubts are justified; see above), and one of the medium-achieving groups expressed some doubts about the word *animée* (these doubts are not justified, as the machine's choice of word was appropriate). Overall, there were very few reflections on different word meanings. A common misconception about languages is that one word has only one meaning. In the following excerpt, this is clearly the conception guiding the students' talk about the word *même*. They are not only unfamiliar with the different meanings of *même*[8] they also do not seem to realise that this word may have several meanings.

S1: What's "même"?
S2: I guess that's like "as"
S1: Yes, (SCEPTICAL) because here they have used it as "even". <u>Even</u> a small pharmacy
S3: There is something called "plus même". That's "in addition".
S1: It's half way right in a way, if they lack "plus"

<div align="right">Group B (medium)</div>

The students here showed a lack of awareness that words can be polysemous: After having established the fact that *même* means *same/like*, they seemed to assume that it could not have other meanings, such as *even*.

The students rarely discussed nuances in lexical choices. One of the medium-achieving group's discussions on the adjectives *petites* and *minuscules* constitutes a notable exception:

S1: But here in Bing they have written "petites boutiques" and here they have written "minuscules boutiques"
S2: "Minuscules" is also possible
S1 & S3: Is it?
S2: "Minuscules", yes (PRONOUNCES IT IN ENGLISH) Yeah, that's possible! That's a word
S1: But it's supposed to be <u>tiny</u> shops
S2: Yes, "minuscule" means "tiny"
S1: Alright, then it's Google [which is right]
S2: [No, I think both to be honest]
S1: You can also say "petites"
S3 (*TO S2*): Do you actually know what you're talking about?
S1: I would have written "petites"
S3: I would also have written "petites". [But it may be because we have not yet learnt . . .]
S2: [That's because you don't have as broad a vocabulary as I have!]
S1: I suppose it's because we haven't come that far

Group B (medium)

In this excerpt, S1 at first seems to share the quite commonly held belief that there is a one-to-one correspondence between words in different languages. She claims that *minuscules* is probably wrong because it's supposed to be 'tiny' and the word she knows for 'tiny' is *petit*. S2 challenges this view by claiming that *minuscules* is also right, as he knows the meaning (he compares it with the English word *minuscule*, which he knows). S1 and S3 then conclude that both words may be right, and that *minuscules* is just unfamiliar to them because they have not yet learnt it.

We see sporadic examples of this kind of metalinguistic awareness among other students as well. The low-achieving group discussed the programmes' translations of "the old town in Nice"—"*la vieille ville de Nice*" and "*vieux Nice*", respectively—and concluded that both may be right because "there are several ways of saying things" (group G, low-achieving).

All groups except for group G also tried to comment on grammatical errors, but such instances were very limited in number (except for the high-achieving group), and most comments were general and not linked to concrete examples. Most of the concrete comments concerned verb conjugation and adjective placement. The students' observations were sometimes appropriate, while at other times they were vague and/or inaccurate. In the following example, the students seem to ignore the relevance of co-text, as they do not realise that the two programmes have chosen different nouns, and therefore the ending on the adjective *somptueux* also differs:

S1: And here in line 3, we have "somptueuse" and "somptueux", which one is correct?

S2: That's unclear

S3: It's feminine and masculine, isn't it?

S1: Right, because when you add the 'e' . . .

S2: Bing says feminine. That's wrong, we say!

And in the following excerpt, the students correctly assume that the adjective *français* should be placed after the noun, but they do not manage to explain the reason for this:

S1 (REFERRING TO THE ADJECTIVE *FRANÇAIS*): That "French" should come after, shouldn't it? It's an adjective

S2: Yes . . .

S1: But here it's the other way around. Here it's after and there it's before

S2: Where exactly?

S1: Line 13

S3: Where?

S1: Where that Chablis-thing is

S3: I feel that Google is correct. I believe it's right that 'French' should come after

S1: So do I

S3: I think Google is right in this case, because. . . . Chablis, I think you say Chablis in French and English and everything

Although there were, in most groups, a few examples of morphological error detection, this was clearly not the students' favourite topic. For instance, when a student in group D attempted to start a discussion on grammar points, the others refused:

S1: What about like verb inflection and that kind of stuff?

S2: I don't know. I don't know anything about that.

<div align="right">Group D (medium)</div>

Episodes like this, where some students tried to bring up linguistic points they had noticed but the others did not respond, occurred in several of the groups, demonstrating that the mentioning of morphological aspects tended to elicit only limited engagement.

There were some comments on word order and sentence structure, but these were often vague. Still, the students recognised that the jumbled word order was the main problem with the MT texts:

S1 (READING FROM THE SHEET): What errors and shortcomings are most detrimental for the understanding of the text?

S2: The word order!

<div align="right">Group F (low)</div>

They also realised that the longer the clause, the worse the translation:

S1: Both are better with single words. Entire texts just yield lots of mistakes
S2: Yeah, the longer the sentence, the worse it gets.

Group C (medium)

This shows that even though students have difficulties explaining the problems with word order, they demonstrate critical awareness when it comes to what the MT programme can or cannot do.

In sum, the majority of the groups spent considerable time discussing lexical errors, mostly obvious errors such as Google's heading and untranslated words. They also spent much time discussing numerals, and most also discussed the translation of Riviera. In addition, there were some sporadic comments from individual students about grammar issues. These comments were sometimes vague and/or erroneous and sometimes clear, but they were rarely picked up by the rest of the group.

Research Question 3: What Differences Are There between the Different Achievement Levels?

The most striking difference between the achievement levels was that the high-achieving group commented on grammar and used technical metalanguage, while the others in general did not. These two aspects (grammar comments and technical metalanguage) are linked: Gutiérrez (2013) found that students can easily talk about lexical aspects without resorting to technical terms, but that they need them while discussing morphological and syntactic aspects (Gutiérrez 2013, 163). Also, as the examples provided above have shown, the high-achieving group was far more concrete in their discussion of the texts, supporting their claims with examples from the texts. In all the other groups, general claims such as "Bing is better, because they have more coherence" dominated. The students did not make any attempts to support their claims with examples from the texts, even though the instructions for the task asked them to be as detailed as possible.

Another difference between the groups was the amount of time spent on collaborative talk, ranging from approximately nine minutes in groups D and E to nearly 30 minutes in the high-achieving group (see Table 5.3). The high-achieving group continued working even after all the other groups had stopped. Many of the other groups spent a great deal of time joking or discussing off-task topics. However, this difference does not necessarily have anything to do with achievement level. The low-achieving group G took the task seriously, and although they spent quite some time off-task, this time did not consist of joking but rather of silence, as the students felt lost and did not know what to say. In these cases, they eventually called on the teacher for help and thus moved back to time-on-task. It seems that factors other than achievement level influenced the time spent on the task. While

the high-achieving group probably could have benefited from more time, the other groups would definitely not have. Nonetheless, all the groups would have benefited from more guidance (see next section).

What is probably more linked to achievement level is how the students perceived their own competence. All the student groups expressed insecurity and lack of knowledge ("I don't know, but . . . this is hard for us to determine . . ."), which is quite normal in the situation, but the low-achieving group G displayed extremely low self-confidence when it came to French, and they had a very negative perception of their own competence. In this group, one student started the conversation by stating, "I don't know anything. I can't tell the difference between the two texts." And when they came to the question, "Which errors are most detrimental to the intelligibility of the text?" they said, "Ha ha, the fact that it's French!" Although the purpose of the task was given in the beginning of the class, this group did not understand why they had been given it: "I don't know any French, why do they ask us to correct French texts?"

Discussion and Conclusion

This study set out to examine how L3 students talk about language when such talk is triggered by machine-translated texts. The idea was to explore whether MT texts could engage students in metalinguistic talk and help them adopt an analytical and critical perspective on language use. The students' discussions, which took place in small achievement-based groups, were recorded and subsequently analysed with regard to the students' use of grammatical terms, comments about various error types and time spent in collaborative dialogue.

Some limitations of the study need to be mentioned. First, the study was conducted only once in a single class, so caution must be exercised when interpreting the results. Second, the task was presented and explained to the students, but it was not modelled. A modelling phase would have helped ensure that the students knew what to do and how to do it, and uncertainty about the reason why students provided few concrete examples (lack of linguistic knowledge or simply lack of attention to the task instructions) could have been reduced. Third, the teacher did not receive any training in how to manage this type of task prior to the observed lesson. The full potential of the task was therefore not realised. Yet another important issue is that this project focused on group work only. Individual notes were not kept, but such notes could have yielded valuable additional information regarding what individual students noticed compared to what aspects were discussed in groups.

The findings indicate that most student groups talk about the texts and the errors in them using general vocabulary and without referring to concrete examples. While the students are most concerned with lexical errors, their comments are mostly restricted to proper names and untranslated

words. They rarely discuss nuances in semantic meaning. Regarding the differences between achievement levels, the most salient findings are that the high achievers spend considerably more time in collaborative dialogue than those in the other groups, and they use notably more grammatical terminology. The high-achieving group clearly find the task useful since they want to continue working after the time elapses. This mirrors Storch's (2008) findings: The level of engagement is essential for a fruitful outcome, but of course the level of engagement is influenced by the students' achievement level. Considering the level of engagement and the time spent in successful collaborative dialogue, it is reasonable to assume that the high achievers learn more from the task than those in the other groups.

The analysis further reveals that many of the students have simplified ideas about language. They tend to believe that there is only one correct answer, ignore the relevance of co-text and believe there is a one-to-one relationship between words in different languages and between a word and its meaning. Such misconceptions are found in the groups with low and medium achievement levels but not in the high-achieving group. Nevertheless, in the data, we can see examples of learning or consolidating learners' previous knowledge in groups of all levels: In one of the low-achieving groups, the students acknowledge that several solutions can be correct ("there are several ways of expressing things"); in the high-achieving group, the relevance of context (*agréable*) is understood; and in one medium-achieving group, the conception of a one-to-one relationship between words across languages is challenged by other group members (*petit- minuscule*). This is a good example of the co-construction of knowledge that can occur in collaborative dialogue. The discussion of lexical meanings also led the group to acknowledge the value of having a broad vocabulary.

The task could potentially have triggered the learning of several other linguistic aspects had the students received more scaffolding and guidance. They could have, for instance, learned more about polysemy (e.g. *même*) and differences between Norwegian and French word order and sentence structuring.

Nevertheless, these observations suggest that machine-translated texts can potentially be used to both trigger and develop more nuanced and appropriate conceptions about language, also with beginners. In this respect, the findings of the present study are in line with those in Ninõ's (2008) study involving advanced learners, suggesting that working with MT texts has a beneficial effect for this group. In addition, the present study demonstrates how MT texts can be used to help learners learn more about the language and not just to communicate better (see Garcia and Pena 2011). However, the present study also shows that it is essential to reflect upon how machine-translated texts can best be introduced with this aim. Clearly, it is not sufficient to introduce the tool and assign students related tasks to be completed. There is a clear need for scaffolding techniques and teacher guidance, even

when students work in groups. To a certain extent, students can guide each other, but the data show that in cases where none of the students are really sure about the point they are discussing, group conversation tends to reinforce misconceptions about language, as we saw in the discussion about the meaning of "même" and in the high-achieving group's confusion between articles and prepositions. Moreover, elements posed by one student are not always picked up by the others—in fact, they are often ignored. This happens most often when a student makes a comment about morphological aspects. Unlike in Storch's (2008) study, the mentioning of morphological aspects thus tends to elicit only limited engagement. These contrasting findings can probably be explained by the ages and interests of the learners; while Storch's participants were university students who had chosen to study a foreign language, the participants in the present study were secondary school students for whom foreign language is a compulsory subject. The majority are probably not particularly interested in grammar.

Thus, the outcome of the collaborative dialogue is not always successful, and the role of the teacher therefore seems to be of utmost importance. However, given the general teacher reluctance towards the use of these tools, the novelty of bringing them into the classroom for learning purposes and the general insecurity teachers feel about teaching metalinguistic awareness (Vold 2017), it seems obvious that teachers would also need training in how to guide the students in this type of work. Tasks like the one presented in this chapter should therefore be used in the teacher training process. Such tasks have the potential to raise teacher trainees' awareness of the importance of metalanguage as well as cross-linguistic similarities. These types of activities are greatly needed in teacher training, as scholars such as Otwinowska (2014) and E. Ellis (2012) have pointed out. What seems equally clear is that once a teacher has been trained in how to organise these kinds of tasks, the approach must be systematic and repeated. The students may not learn as much from one first, single try-out, especially if this try-out is not followed up by a consolidation phase where students sum up and elaborate on points they have learned. Going back to our data, such points could be, in our case, (a) the relevance of context, (b) the importance of having a broad vocabulary, (c) the existence of multiple but equally appropriate solutions, (d) polysemy and (e) differences between French and Norwegian word order and sentence structuring.

In sum, it seems that the use of MT texts to develop students' metalinguistic awareness has considerable potential, but training, scaffolding techniques and guidance from the teacher are of paramount importance. Systematic repetition of the same type of task, followed each time by a consolidation phase, is also crucial. With such guidance, the discussion and evaluation of MT texts could foster metalinguistic awareness. To more precisely determine the value of this kind of task, further research focusing on long-lasting interventions that include modelling, scaffolding and a

consolidation phase is required. The need for such action-based research is considerable, as MT is definitely here to stay and students use and will undoubtedly continue to use it. In this respect, it is vital that not only students' metalinguistic awareness be addressed but also their critical awareness of technology.

Notes

1 These two terms are often used interchangeably. In this chapter, I use metalinguistic awareness in order to stress the idea that this type of knowledge is explicit, i.e. something the learner is conscious about and aware of.
2 The letters in parentheses behind each example indicate that the example is taken from either Google Translate (GT) or Bing Translator (BT).
3 Repeated LREs, in which the learners come back to an observation discussed before, were counted only once.
4 Underlining indicates word stress. [Brackets] indicate start and end points of overlapping speech. Capital letters annotate non-verbal activity. T = Teacher, S1 = Student 1, S2 = Student 2, etc. The excerpts are translated from Norwegian by the author.
5 In French, the imperative can be expressed by an imperative form of the verb (*regardez*, as chosen by Bing) or by the infinitive (*regarder*, as chosen by Google). In some contexts, they are interchangeable; in other contexts one of them would be the preferred or only choice. The students are correct in their observation that, in this case, Google's *regarder* does not work well (see Appendix).
6 Imperative form of *to peek/look*
7 Infinitive, *to peek/look*
8 The word *même* has several meanings in French, of which *same/like/as* and *even* are two of the most frequent.

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Appendix
Original Text, Machine-Translated Texts and Task Instructions

Original text from Reisdit.no

Nice

Nice er en av de mest besøkte byene på rivieraen syd i Provence i Frankrike, og framstår i dag som en travel og livlig by. Nice i Frankrike er ett av verdens mest populære reisemål. Årsakene til det er mange. Nice er en bade- og ferieby med 8 kilometer lange flotte rullesteinsstrender.

Nice er shoppingbyen i Sør-Frankrike, fremfor noen. Her er de store motehusene representert, og her finner du småbutikker og markeder. Nice er ingen billig by. Hit har Europas overklasse og aristokrater kommet, helt siden 1800-tallet. Den fem kilometer lange vakre Promenade des Anglais, omgitt av palmer, er Nices hovedpulsåre. Her ligger legendariske Hotel Negresco, her ligger byens casino, og her finner du en mengde andre storslagne luksushoteller, eksklusive butikker og gallerier. De aller fleste hotellene langs Promenade des Anglais har eksklusive lunsjrestauranter på stranden. Prisene er stive, men en lunsj her er verd pengene. Her kan du fråtse i ferske skalldyr- og fiskeretter, akkompagnert av tørre hvite franske Chablier eller Sancerres. Eller hva med å leske seg med en avkjølt lett rødvin i varmen?

Gamlebyen i Nice er et must. Du har simpelthen ikke vært i Nice, hvis du ikke har besøkt denne livlige, pittoreske delen av Nice—med trange smug, sjarmerende fargerike murhus, bitte små boutiques, en fortauskafé her og en liten intim bar der. Dump ned på en av uteserveringene ved Place de Cathédrale, titt på livet og føl atmosfæren. For en opplevelse! 1600-talls Cathédrale de Ste-Réparate er for øvrig verd et besøk—interiøret her er et godt eksempel på barokkens overdådige utsmykning. Litt nærmere klippen finner du Palais Lascaris, en 1600-tallsbygning som i dag er et museum. Her er flotte stukkarbeider, flamske billedvever, illusjonistiske himlinger og vakre og overdådige utsmykninger. Til og med et lite apotek fra 1700-tallet finner du her. Det fargesprakende blomstermarkedet La Cours Saleya, med de intense duftene er verd å få med seg, fra klokken 06.00 alle dager unntatt mandag.

Google's Translation

Agréable

Nice est une des villes les plus visités de la Riviera dans le sud de la Provence en France, et se présente aujourd'hui comme une ville animée et vivante. Nice en France est l'une des destinations les plus populaires du monde. Les raisons en sont nombreuses. Nice est une baignade et station balnéaire avec 8 km de long belles plages de galets.

La ville commerçante de Nice, dans le sud de la France, au-dessus de tous les autres. Voici les grandes maisons de mode représentés, et vous trouverez ici de petits magasins et marchés. Nice est pas une ville pas cher. Hit la classe supérieure de l'Europe et aristocrates viennent, depuis les années 1800. Les cinq kilomètres de long belle Promenade des Anglais, bordée de palmiers, est l'artère principale de Nice. Ici se trouve le légendaire Hôtel Negresco, voici le casino de la ville, et ici vous trouverez une pléthore d'autres magnifiques hôtels de luxe, boutiques et galeries exclusives. La plupart des hôtels le long de la Promenade des Anglais a des restaurants de repas exclusifs sur la plage. Les prix sont raides, mais un déjeuner ici vaut de l'argent. Ici, vous pourrez vous régaler de coquillages et de poissons plats frais, accompagnés de vin blanc sec Chabli ou Sancerre français. Ou comment doux avec un vin rouge léger refroidi dans la chaleur?

Vieux Nice est un must. Vous avez tout simplement pas été à Nice, si vous ne l'avez pas visité cette dynamique, le cadre pittoresque de Nice—avec ses ruelles étroites, de charmantes maisons colorées de briques, de minuscules boutiques, une terrasse de café et un petit bar intime il. Dump vers le bas sur l'un des jardins de la bière à la place de Cathédrale, regarder la vie et de sentir l'atmosphère. Quelle expérience! 1600 Cathédrale de Sainte-Réparate est aussi mérite une visite—l'intérieur ici est un bon exemple d'embellissement somptueux baroque. Un peu plus près de la falaise, vous trouverez Palais Lascaris, un bâtiment de 1.600 siècle qui est aujourd'hui un musée. Voici grandes moulures, tapisseries flamandes, plafond illusionniste et parures magnifiques et somptueux. Même une petite pharmacie à partir des années 1700 peut être trouvée ici. Le marché aux fleurs coloré de La Cours Saleya, aux arômes intenses sont appréciés avec le, à partir de 06h00 tous les jours sauf le lundi.

Bing's Translation

Nice

Nice est une des villes les plus visitées de la Côte d'Azur dans le Sud en Provence en France et actuellement une ville occupée et animée. Nice en France est une des destinations les plus populaires du monde. Les raisons

pour cela sont nombreuses. Nice est une ville balnéaire et vacances avec 8 km plages de galets long magnifique.

Belle ville commerçante dans le sud de la France, plutôt que de certains. Voici les grand couturiers représentés, et vous y trouverez des marchés et des petits commerces. Nice n'est pas bon marché de la ville. Voici les classes supérieures de l'Europe et aristocrates viennent, depuis le XIXe siècle. Le 5 km long belle Promenade des Anglais, entourée de palmiers, belles d'artère principale. Ici se trouve le légendaire hôtel Negresco, ici se trouve le casino de la ville, et vous y trouverez une pléthore d'autres magnifiques palaces, boutiques de luxe et de galeries. La grande majorité des hôtels le long de la Promenade des Anglais a déjeuner exclusive restaurants sur la plage. Les prix sont rigides, mais un déjeuner ici vaut l'argent. Ici vous pouvez revel dans les plats de fruits de mer et poissons frais, accompagnés de sec blanc Français Chablier ou Sancerrois. Ou que diriez-vous de doux avec un vin rouge facile fraîche dans la chaleur?

La vieille ville de Nice est un must. Vous avez tout simplement pas été à Nice, si vous n'avez pas visité cette partie animée et pittoresque de Nice-avec des ruelles étroites, charmante maison de briques colorées, petites boutiques, terrasse d'un café ici et une petite intime bar y. décharge vers le bas, dans un des jardins extérieurs à la Place de Cathédrale, regardez à la vie et l'ambiance. Ce qu'est une expérience! 17ème siècle Cathédrale de Ste-Réparate valent un visite-l'intérieur est ici un bon exemple de la somptueuse décoration Baroque. Un peu plus près de la falaise, vous trouverez le Palais Lascaris, un bâtiment qui aujourd'hui du 17ème siècle est un musée. Voici le stuc magnifiques travaux, des tapisseries flamandes, des plafonds illusjonistiske et des décorations magnifiques et somptueuses. Même une petite pharmacies du XVIIIe siècle peuvent être trouvées ici. Le marché aux fleurs colorées La Cours Saleya, parfums intenses valent pour obtenir avec lui, depuis le temps 06:00 tous les jours sauf le lundi.

Task Instructions (translated from Norwegian by the author)

Individual Work

1) Read the Norwegian text carefully
2) Examine the two translated French versions. Read through and jot down errors that you find and phrases or expressions you perceive as strange.

Group Work

3) Share your observations with the rest of the group. Did you mark the same problems? What type of errors and shortcomings did you find (grammar, choice of words, word order, sentence structure, text

structure. . .)? Which errors and shortcomings do you perceive as most detrimental to the understanding of the text? Why? Which errors and shortcomings do you perceive as less serious? Why?

Which of the two translated versions is the best one? Justify your choice in as much detail as possible.

6 Language Contrasts, Language Learners and Metacognition

Focus on Norwegian Advanced Learners of English

Hilde Hasselgård

Introduction

Anyone who learns a new language brings at least one other language into the learning process. Hence, any language learning situation, including the foreign language classroom, can be considered a multilingual setting. Theories and practices of second and foreign language teaching have differed in their views on the role of the learner's first language (L1) in the process of acquiring the new language, both as a medium of communication and as a basis for comparison. In brief, the use of the language learners' first language in second language teaching is a contentious issue; see Hall and Cook (2012) for an overview of the debate and Scheffler et al. (2017) for a recent survey of student attitudes. Particularly in the teaching of English as a foreign language (EFL) in English-speaking countries there has been a tradition of monolingual foreign language instruction (Hall and Cook 2012, 272). Beyond being a practical issue, the monolingual approach, i.e. the exclusion of the learner's L1 from the language classroom, is rooted in an assumption that immersion in the L2 is beneficial to learning, while frequent use of the L1 may cause negative transfer. In other words, attention to—or use of—the learner's first language is seen as a detour rather than a shortcut to L2 learning (Hall and Cook 2012, 275). By contrast, Cummins concludes that "when students' L1 is invoked as a cognitive and linguistic resource through bilingual instructional strategies, it can function as a stepping stone to scaffold more accomplished performance in the L2" (2007, 238). In language teaching contexts where most (or all) of the learners share a common language, it is likely that the instruction is to some extent bilingual, and that parallels are drawn between the language to be learnt and the language(s) already known by the learners. This common language need not be everyone's first language, but nevertheless one that is shared and used for general communication, such as Norwegian in Norwegian schools; see Hall and Cook (2012, 274), who prefer the term "own language" to, e.g. "first language" or "native language".

This chapter focuses on crosslinguistic contrasts in the light of L2 proficiency and language awareness among advanced learners of English in

Norway. The study has two main research questions: First, to what extent are contrasts between learners' L1 and the language being learnt (L2) visible in L2 learner writing? Second, how do advanced learners think about the relationship between their L1 and L2 in connection with language learning? Following a brief discussion of language comparison (contrastive analysis) and language learning, including a review of some relevant studies, I turn to evidence from corpora to (a) identify some areas of difference between English and Norwegian, and (b) investigate how these differences are handled by Norwegian advanced learners of English (see below for a description of the corpus material). The second research question is addressed in a separate section which presents reflections from a group of Norwegian university students of English: To what extent do these advanced learners of English possess crosslinguistic awareness, and how do they exploit this awareness in their language learning? Although my focus is on English and Norwegian, and on English as an L2 in a Norwegian context, the points raised should be transferable to other language pairs.

Literature Review: Language Comparison and Language Learning

The Norwegian school curriculum for English identifies "Language learning" as a main subject area, describing it as follows:

> The main subject area Language learning focuses on what is involved in learning a new language and seeing relationships between English, one's native language and other languages. It covers knowledge about the language, language usage and insight into one's own language learning.
> (The Norwegian Directorate for Education and Training 2013)

The rationale for this is that knowledge about, and reflection on, relationships between the languages (presumably similarities and differences) can feed into strategies for learning and using the English language. This is in line with the emphasis on plurilingualism found in the *Common European Framework of Reference for Languages* (CEFR 2001). Plurilingualism implies that somebody who has experience with several languages and cultures does not keep them "in strictly separated mental compartments, but rather builds up a communicative competence to which all knowledge and experience of language contributes and in which languages interrelate and interact" (CEFR 2001, 4).

In this context, it is important to distinguish between implicit and explicit linguistic knowledge, i.e. the learner's intuitive or conscious knowledge of linguistic norms (see, for example, R. Ellis 2008, 418; Jessner 2006, 54). Only intuitive knowledge is needed to use language, but in order to reflect on language, explicit knowledge is needed. N. Ellis (2005) argues that

implicit and explicit linguistic knowledge are distinct and dissociated; for example, explicit metalinguistic knowledge does not automatically lead to correct language production (implicit knowledge), or vice versa. However, the two types of knowledge can interact fruitfully: Metalinguistic information connects with implicit learning in a dynamic interface (N. Ellis 2005, 325). James makes a similar point when defining language awareness as "having or gaining explicit knowledge about and skill in reflecting on and talking about one's own language(s), over which one hitherto has had a degree of control and about which one has also a related set of intuitions" (1999, 102).

According to James (1996, 139) "one never knows a second language in isolation from one's first"; however it is only if one also has "knowledge of the *relationships* holding between one's two languages" that one can develop so-called crosslinguistic awareness. In the context of language learning (and teaching), crosslinguistic awareness is an important component of metacognition, i.e. "knowledge and beliefs about one's own cognitive processes" (Colman 2015); see Haukås (2018, this volume) for a more extensive discussion of the concept in a language learning context. Metacognitive reflection can only take place if knowledge is explicit and verbalisable, whether in terms of linguistic metalanguage or more ad hoc-based categorisations.

The idea that knowledge of language contrasts can benefit the learning and teaching of foreign languages is not new. Already in the 1940s, Fries (1945, 9) argued that "the most effective materials are those that are based upon a scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learner". Similarly, Lado (1957, 2) claims that "the teacher who has made a comparison of the foreign language with the native language of the students will know better what the real learning problems are and can better provide for teaching them" (see also Wardhaugh 1970). More recently, Neuner (2004) advocates explicit comparison of the L1 and the L2 (and/or the L3) in language teaching to raise students' awareness of similarities and differences between their first language and the language(s) to be learnt.

The optimistic belief, expressed by contrastivists in the 1940s and 1950s, in the direct connection between contrastive analysis and language teaching (and learning) soon turned out to be exaggerated. It became clear, for example, that "not all L2 errors could be predicted by identifying the differences between the learners' native language and the target language" (R. Ellis 2008, 360), nor could all learner errors be explained by recourse to a contrastive analysis. For example, errors may be intralingual, i.e. associated with the language to be learnt rather than with transfer from the L1 (James 1998, 138), or they may be caused by features of the learning situation and/or other compound or ambiguous factors (1998, 200). Furthermore, not all differences between a learner's L1 and the L2 cause learning difficulties or errors (Gilquin 2000/2001, 101). For example, it has been suggested that perceived language distance can act as a constraint on negative

transfer (R. Ellis 2008, 397). That is, if learners do not perceive or assume any degree of similarity between their L1 and the L2, transfer does not take place (Ringbom 2007, 26). Errors may of course still occur when "relevant L2-procedures are not available" (2007, 25).

Greenbaum (1988, 31) observes that "the foreign learners' first language is both a help and a hindrance to their learning of English: a help because they understand the nature of language and can draw analogies with the patterns and processes in their own languages; a hindrance because sometimes the analogies are false." False analogies result in negative transfer, a phenomenon that has been shown to be pervasive even at advanced stages of L2 proficiency (Laufer and Girsai 2008, 700; Paquot 2013). Correct analogies, by contrast, can result in positive transfer. A foreign learner's first language can be a stepping stone for learning a new language, but for this to happen, the two languages need to be connected, and the knowledge of the relationship needs to be conscious (R. Ellis 2012, 281).

Ringbom claims that linguistic similarity is much more important than difference in the process of learning a new language. "The L2-learner is constantly seeking to facilitate his task by making use of previous knowledge" (1987, 33). This is particularly useful for receptive skills (reading and listening), as pointed out by Ringbom (2007) and elaborated and operationalised by Hufeisen and Marx (2007). However, Ringbom (2007, 118) argues that the learners' reliance on their L1 is helpful only if the two languages are related: "across totally unrelated languages . . . there is little or no facilitation" (see also Ringbom and Jarvis 2009). Furthermore, in learning a third language related to the L2, both positive and negative transfer can take place between the L2 and the L3 if the two are related to each other (Jessner 2006 *passim*; Ringbom 2007, 78). As Otwinowska-Kasztelanic (2009, 133) points out, the condition for language learners to take advantage of similarities between their L1 (or an L2) and the language to be learnt is that they "recognize opportunities for transfer". Thus, in an active process of language learning, "learners need to be metacognitively aware of what they are doing" (Anderson 2005, 267). Simply put, they need to know what they know, and also what they do not know, in order to progress (Haukås 2018, this volume; James 1996, 141).

The Current Study

Much of this chapter is devoted to the interface between crosslinguistic comparison and learner language analysis. The corpus-based studies presented in the next section are carried out according to the Integrated Contrastive Model (Gilquin 2000/2001; Granger 1996), which combines contrastive analysis with the investigation of learner language. In this model, contrastive analysis is undertaken to predict and diagnose learner problems (or the lack thereof). The learner language analysis typically explores differences and similarities between learner data and native speaker data. The

juxtaposition of the two analyses can uncover potential and actual (positive and negative) L1 transfer. However, there is no assumption that language contrasts will translate directly into learning problems or that similarities will automatically lead to error-free performance in the L2. Furthermore, differences between L1 and L2 usage are not necessarily seen as a problem (Granger 2009). I believe, however, that the model is useful for identifying and explaining interlanguage behaviour at different levels of proficiency. The learners investigated in this study are rather advanced, which means that most non-nativelike features of their English are non-trivial: They are not a matter of simple vocabulary deficiencies or imperfectly mastered grammatical constructions, but rather a case of non-targetlike discourse construction. The integrated model of contrastive and interlanguage analysis can serve as a needs-analysis in which linguistic and discursive features that differ contrastively and cause learner problems can be identified and in turn become part of an increasingly proficient learner's cross-linguistic awareness.

The learner corpus cannot reveal the students' reflections on their linguistic choices and (meta-)linguistic knowledge; it only shows the final product. Therefore, I conducted a small-scale analysis of student responses to the question of whether language learners can benefit from knowledge of similarities and differences between their L1 and the language being learnt. The students' responses shed light on their crosslinguistic language awareness as well as on the relevance of conducting the type of study presented in the following section, which explores language contrasts in the light of language learning. Because the two investigations use completely different methods and examine different populations, the descriptions of materials and methods are given in separate sections below.

A Corpus Perspective on Language Comparison and Language Learning

This section presents explorations of three lexicogrammatical phenomena: the modals *shall/will* and their Norwegian cognates *skal/vil*; the collocation of modal verbs with the modal adverbs *kanskje, perhaps* and *maybe*; and finally, a type of expression labelled "topic identifier", such as *when it comes to*. These constructions are studied both crosslinguistically, using a parallel corpus of English and Norwegian, and in terms of L2 proficiency, comparing a corpus of advanced learner English produced by Norwegian students to one of English L1 student writing. The main research questions for all three studies are the same:

- What are the differences and similarities between Norwegian and English in the area investigated?
- To what extent do Norwegian advanced learners differ from native speakers of English in this area of language use?

- Does usage in L2 English reflect the predictions drawn from the contrastive study? In other words, is there evidence of (potential) transfer from the L1?

Corpus Material and Method

The corpus investigations are based on three sources: The *English-Norwegian Parallel Corpus* (ENPC) is used for comparing English and Norwegian (L1). The ENPC comprises 50 text extracts in Norwegian and 50 in English. Each extract consists of 10,000–15,000 words and is accompanied by a translation into the other language (Johansson 2007, 10ff.). The texts in each language are divided between fiction (30 texts) and non-fiction (20 texts).[2] The learner language analysis draws on the Norwegian component of the *International Corpus of Learner English* (ICLE-NO), which contains argumentative texts written in English by first-year university students of English whose first language is Norwegian. The corpus comprises 317 texts (about 211,000 words) by students from nine universities and colleges (Granger et al. 2009, 34–5). The same essay prompts, designed to produce argumentative texts, were used across the institutions. 74% of the writers were female (2009, 9), likely reflecting the gender distribution in the student population. Granger et al. (2009, 12) report that 12 of the texts in a random sample of 20 from this corpus have been rated according to the Common European Framework of Reference (CEFR 2001, 24) at C1 or C2 level, and the rest at B2 (or lower).[3] The third corpus, the *Louvain Corpus of Native English Essays* (LOCNESS), consists of (mostly) argumentative texts by British and American students. It contains approximately 324,000 words (322 texts).[4] It was compiled as a native speaker reference for use in conjunction with the ICLE corpora, not to serve as a target norm for learners, but rather as a representation of English L1 writing of the same type as the L2 texts in ICLE (Granger 2015, 18).

Corpus-linguistic methodology is both quantitative and qualitative (Granger 1996). It is common in corpus linguistics to view frequency of use as a feature of linguistic items. Thus, if two languages have similar words or grammatical structures, but use them with different frequencies, this is seen as a language contrast. If learners use a linguistic item significantly more or less often than comparable native speakers, this is regarded as non-targetlike behaviour (described in terms of over- and underrepresentation), even though the language produced may be formally correct (Granger 2015, 18). Particularly when studying learner corpora, however, quantitative results are often insufficient because they cannot indicate whether or not usage is felicitous (Hasselgård and Johansson 2011, 45 ff.). In both crosslinguistic and interlanguage studies, it is important to remember that "formal similarity is no guarantee that there is identity of use" (Johansson 2012, 47). Thus, qualitative analysis of concordance lines (i.e. the output of a corpus

search) is a vital part of learner corpus analysis, as will be illustrated in the studies presented below.

The Modal Auxiliaries will/vil and shall/skal

The first study concerns the cognate modal auxiliaries *will/vil* and *shall/skal* and the corresponding forms *would/ville* and *should/skulle*. Both English and Norwegian refer to future time using these modals plus infinitive, but English prefers *will* and Norwegian *skal* (Dypedahl and Hasselgård 2018, 156–7), as illustrated by example (1). The less common auxiliaries have special conditions of use. Outside questions with a first-person subject, *shall* is rare and denotes strong obligation or necessity (e.g. *He shall not get away with it*). The use of *vil* in Norwegian future expressions is fairly widespread, but tends to evoke the notion of willingness. Some uses of *would* are not matched by *ville*, e.g. "future in the past" and "habit in the past", as in (2); see Hasselgård (2015, 95).[5] *Should*, unlike *skulle*, cannot normally express future in the past, see example (3), and in its deontic sense of obligation differs from that of Norwegian *skulle* (Dypedahl and Hasselgård 2018, 157).

(1) . . . men i februar *skal* det *være* over. (KF1) [. . . but in February *shall* it *be* over.]
     . . . though by February it *will be* over.

(2) And the dog, most often, *would be lying* on top of his feet. (AT1)
     Og hunden *lå* som regel over føttene hans. [And the dog *lay* as a rule across his feet.]

(3) Hun tok varsomt i døra, som om hun var redd den *skulle gå* i stykker. (HW1) [. . . as if she was afraid it *should go* in pieces.]
     She opened the door gently, as if she were afraid it *would fall* apart.

Table 6.1 shows the frequencies of these modals in the fiction component of the ENPC (original texts only), ICLE-NO and LOCNESS. Because the corpora

Table 6.1 Frequencies per 100,000 words of "skal/shall", "skulle/should", "vil/will" and "ville/would" in the ENPC, ICLE-NO and LOCNESS.

	ENPC		ICLE-NO L2 English	LOCNESS L1 English
	Norwegian	English		
skal/shall	217	12	10	3
skulle/should	222	71	242	238
vil/will + 'll	138	190	414	353
ville/would	220	394	335	450

differ in size, the numbers represent normalised frequencies per 100,000 words to make them directly comparable. The crosslinguistic comparison of data from the ENPC brings out the expected differences between Norwegian and English: *skal* and *skulle* are much more frequent than *shall* and *should*, while *vil/ville* are less frequent than *will/would*. This cross-linguistic difference gives rise to the hypothesis that *shall/should* will be overrepresented and *will/would* underrepresented in the texts by Norwegian learners of English (ICLE-NO) compared to similar texts by native speakers (LOCNESS).

As expected, *shall* is more numerous in ICLE-NO than in the L1 reference LOCNESS, with 22 occurrences in ICLE-NO (10.4 per 100,000 words) and 11 (3.4 per 100,000 words) in LOCNESS. Although this frequency difference is significant (LL = 9.96, $p < 0.01$),[6] the number of writers who use *shall* is similar between the corpora, thus neutralising the apparent overrepresentation in ICLE-NO.[7] Furthermore, the degree of transfer is low, since *shall* is far less frequent in ICLE-NO than *skal* in the ENPC.

Almost all the instances of *shall* in the ENPC have first-person subjects, and most occur in questions. Two instances with a third-person subject seem biblical in style. Similarly, four of the sentences with *shall* in ICLE-NO quote a commandment (e.g. *You shall not kill*), and six have a first-person subject, which makes them (relatively) acceptable. The remaining 12, however, are unidiomatic, as illustrated by (4) and (5).

(4) One may ask: Why *shall* some people have more money than others? (ICLE)
(5) What the society wants is that all *shall* be equal. (ICLE)

Contrary to expectations, *should* is not overrepresented in ICLE-NO. Examining the concordance lines, I found that the learners tend to use *should* felicitously, and that the rare examples of unidiomatic usage occur in specialised contexts, such as that shown in (6). The example may appear correct, but its wider context shows that the student is not making a recommendation, but simply establishes the fact that "this did not pass into history as . . ." An alternative "future-in-the-past" expression would have been *was to*.

(6) A great man once said: "I have a dream!" This *should* not pass into history as a single sentence quoted by one single man many years ago. (ICLE)

In (7), the learner has combined two modals in English, likely on the pattern of Norwegian, where this is feasible (e.g. *kan måtte*). Though explainable by recourse to contrastive analysis, this error type was found only once in the material, and seems to represent a lower proficiency level than where most of the ICLE writers are: They realise that English modals do not combine with each other.

(7) The thing is that probably people are too busy and they're not aware that they *might should* give dreaming and imagination time. (ICLE)

The Norwegian learners' use of *shall* is closely associated with error. However, over 90% of the learners do not use *shall* at all, and thus seem aware of the difference between *skal* and *shall*. The general impression is that the choice among this set of modals is made correctly by most of the learners in spite of the crosslinguistic differences. Transfer errors, except regarding specialised uses of the modals, thus likely belong to more basic proficiency levels.

As expected, *would* is underrepresented in ICLE-NO compared to LOCNESS (LL = 42.55, *p* < 0.0001), while, surprisingly, *will* is overrepresented (LL = 15.86, *p* < 0.001). Further study is needed to find an explanation for this.

Modal Combinations

The second study concerns collocations involving the Norwegian modal adverb *kanskje* or the corresponding English adverbs *maybe* and *perhaps*. The term "modal combination" refers to a combination of a modal verb and a modal adverb, e.g. *may perhaps* and *should maybe* (Aijmer 2002; Løken 2007). The two elements in such a combination may carry similar or different modal meanings (for instance, both *may* and *perhaps* denote probability, while *should maybe* combines obligation and probability). Aijmer (2002, 68) found that Swedish learners use modal combinations more frequently than native speakers and linked this to the fact that such combinations are more common in Swedish than in English (Aijmer 2002, 69). According to Løken (2007, 275), "Norwegian modals expressing ability have a stronger tendency to occur in combinations than the English ones do". She makes a similar observation for combinations of modal verbs and adverbs expressing probability (Løken 2007, 290). From Aijmer's (2002) and Løken's (2007) findings, I hypothesised that Norwegian would contain more modal combinations than English, and that Norwegian learners would transfer this pattern to their written English. The transferred combinations are usually not ungrammatical, but may contribute to a general overemphasis on modal meaning, thus making the text seem pleonastic and too informal (Aijmer 2002, 72).

The concordancer AntConc (Anthony 2014) was used to identify recurrent clusters of two or three words containing a modal verb in addition to the adverbs *kanskje* or *maybe/perhaps*. As Figure 6.1 shows, modal combinations with *kanskje* are more frequent than those with *maybe/perhaps* in the ENPC, while the combinations are more common in fiction than in non-fiction in both languages. The number of modal combinations in ICLE-NO is closer to that of Norwegian fiction than of non-fiction in the ENPC, but does not differ significantly from either. This suggests that Norwegian learners copy patterns from their L1. No ICLE-text contained more than one modal combination with *perhaps/maybe*, so the usage is not idiosyncratic. The native-speaker students represented in LOCNESS, on the other hand, use modal combinations sparingly, matching the pattern of English non-fiction in the ENPC.
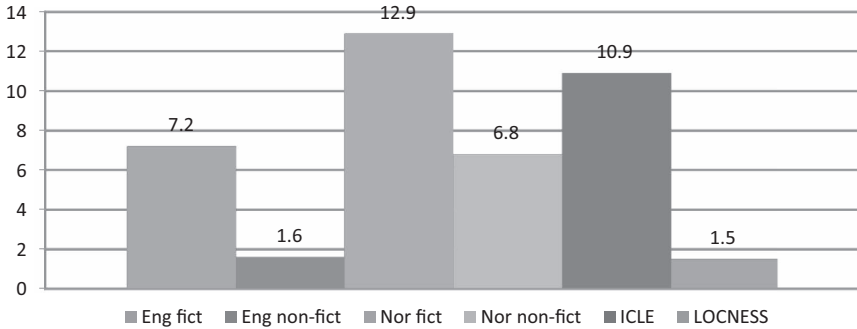
Figure 6.1 Modal combinations with "kanskje" and "perhaps/maybe" across cor-
pora. Frequencies per 100,000 words.

The modal verb that most frequently collocates with *kanskje* is *kunne*,
followed by *ville* and *kan*. English fiction contains examples of the com-
bination *maybe + could*, but the most frequent combination is *perhaps +
should*. Thus, the ENPC material indicates that "same-sense" combinations
are most frequent in Norwegian, while "different-sense" combinations are
more frequent in English. Examples are given in (8) and (9), respectively.
Note that *kan/kunne* carries the modal meaning of ability in some combina-
tions, in which case they represent different-sense combinations when col-
locating with *kanskje*, as in (10).

(8) Men det *kan kanskje* være verd å merke seg at det var den praktiske
    matematikk Leonardo var opptatt av. (ANR1) [But it can perhaps be
    worth to notice. . .]
    It *might* be worth noting that Leonardo was interested in applied
    mathematics.

(9) *Perhaps* I *should* join a group and get my consciousness raised. (MD1)
    Kanskje jeg *skulle* slutte meg til en gruppe og få hevet bevisstheten min.
    [Perhaps I should join a group . . .]

(10) Vi *kan kanskje* sammenligne med en kunstmaler. (JG1) [We can per-
     haps compare with a painter]
     We *can* make a comparison to painting.

The contrastive evidence suggests that Norwegian learners might favour
same-sense modal combinations with *can/could* (and possibly *may/might*).
However, the most common combination is *maybe + would* (nine instances
in nine different texts), possibly reflecting the frequent combination of
kanskje + ville mentioned above; see example (11). This collocation is

not ungrammatical, but it is absent from English L1 usage in the ENPC and LOCNESS. Like the other examples of this modal combination, (11) expresses a hypothetical situation.

(11) What would a book be like that was written without any sense of imagination or fantasy? (*Maybe* it *would* be about fish.) (ICLE)

While *would* combines only with *maybe* in ICLE-NO, the second-most frequent auxiliary in the modal combinations, *should*, combines with both *maybe* (five times) and *perhaps* (twice). This simply reflects the fact that *maybe* is, overall, over twice as frequent as *perhaps* in this corpus. In fact, all five occurrences of *maybe* + *should* have *we* as a subject and express suggestions, as in (12).

(12) *Maybe* we *should* open clinics for "Television-addicted"? (ICLE)

Four of the five instances of modal combination in LOCNESS have *should* + *maybe/perhaps*, a combination that also occurs in English fiction in the ENPC. The combination of *maybe/perhaps* and *can/could* occurs only once in LOCNESS, in (13), where *can* denotes ability and thus produces a different-sense combination. ICLE-NO, however, contains same-sense combinations where *can/could* express possibility, as in (14) and (15).

(13) If we can learn to be objective about suicide, then *maybe* we *can* understand why people do this. (LOCNESS)
(14) *Maybe* this *can* be an important issue to bring into the discussion about the quality and
(15) I feel that our education have problems and *could perhaps* have been different . . . (ICLE)

To check whether the tendencies noted above were particular to *maybe* and *perhaps*, I also examined modal combinations with *probably*. Even though these are more common in LOCNESS than combinations with *maybe/perhaps*, they are still less frequent than *probably*-combinations in ICLE-NO. It can thus be concluded that Norwegian learners rely more than native speakers on adverbs to express epistemic modality. While not constituting grammatical errors, the overrepresentation of modal combinations (and epistemic adverbs in general, see Paquot 2013) may seem pleonastic in the case of same-sense combinations and needlessly tentative in certain different-sense combinations (Aijmer 2002). Crosslinguistic awareness of how modal meanings are expressed and combined may thus save L2 writers from lending their text an unintended flavour.

Topic Identifiers

The last study concerns the form and use of topic identifiers. Hasselgård (forthcoming) shows that Norwegian learners of English greatly overuse the

expression *when it comes to*. This expression typically appears sentence-initially, announcing the sentence topic (hence the label "topic identifier"), as in (16), but can also occur in a non-initial position to restrict the validity of the proposition, as in (17).

(16) *When it comes to death penalty*, i do not think any countries should be allowed to use this kind of punishment. (ICLE)
(17) The societies' reactions have always been crucial *when it comes to preventing crime*. (ICLE)

When it comes to is not ungrammatical: The expression is rare in English L1 academic texts, but relatively common in speech and in journalistic texts. It is more widespread in American than British English, and seems to be on the increase (Hasselgård, forthcoming). A wider set of topic identifiers are presented in Table 6.2. The set was developed partly from thesauri and partly by studying translations in the ENPC of *when it comes to* and the closely corresponding *når det gjelder* ("when it concerns"). As these expressions are infrequent in fiction, only the non-fiction part of the ENPC appears in the table. The topic identifiers under study are listed in descending order of preference for each corpus, with the raw frequency given in brackets. Overstrikes show that an expression is absent from the corpus. The last row of the table shows combined frequencies per 100,000 words.

As Table 6.2 shows, the most frequent English topic identifier in the ENPC and LOCNESS is *concerning*. *When it comes to* does not occur in original non-fiction texts in the ENPC (though a small number appear in fiction). The expression *når det gjelder* accounts for 49% of the Norwegian topic identifiers in ENPC non-fiction. Other Norwegian expressions found

Table 6.2 Topic identifiers in descending order of preference across corpora. The raw frequencies of each item are given in brackets and the frequency per 100,000 words of all the expressions combined is given in the last row.

ENPC non-fiction English	ENPC non-fiction Norwegian	ICLE-NO (L2 English)	LOCNESS (L1 English)
concerning (35)	*når det gjelder* (38)	*when it comes to* (41)	*concerning* (38)
as regards (21)	*i forbindelse med* (34)	*concerning* (23)	*in terms of* (19)
with regard to (18)	*med hensyn til* (6)	*in terms of* (14)	*when it comes to* (16)
in terms of (16)		*in connection with* (8)	*as regards* (4)
with respect to (4)		*as regards* (5)	*with respect to* (3)
in connection with (1)		*with regard(s) to* (2)	~~*with regard to*~~
~~*when it comes to*~~		*with respect to* (1)	~~*in connection with*~~
37.7	35.4	42.2	24.7

in the ENPC are *med hensyn til* ("with regard to") and *i forbindelse med* ("in connection with").[8]

Surprisingly, the English and Norwegian ENPC texts contain similar numbers of topic identifiers; fewer than in ICLE and more than in LOCNESS. However, the quantitative comparison probably suffers from a mismatch of genres; in particular, the legal texts in the ENPC appear to contain numerous identifiers with specific discourse functions. Examining the translations in the ENPC, however, I found that topic identifiers are much more frequent in translations than in original texts in both languages (60 and 62 per 100,000 words in English and Norwegian, respectively). This may suggest that topic identifiers are susceptible to contexts of contact between an L1 and an L2—a topic which deserves further investigation in a separate study. In both directions of translation, a topic identifier may be the translation of a simple preposition, as shown in (18).

(18) And this is true not only *of* the microbes of two billion years ago. (CSA1)
Dette stemmer ikke bare *når det gjelder* mikrober som fantes for to milliarder år siden. [This fits not only when it concerns microbes that existed for two billion years ago.]

The overrepresentation of topic identifiers in ICLE-NO compared to LOCNESS is significant (LL = 10.92, *p* < 0.001). The greatest difference concerns *when it comes to*, which occurs 19.4 times per 100,000 words in ICLE-NO and 4.9 times in LOCNESS. Most ICLE-texts with topic identifiers have one or two, but one text has six instances of *when it comes to*.The frequency with which the Norwegian learners use topic identifiers suggests that the function of these expressions is considered useful. Judging from the contexts of the expressions, the learners seem particularly fond of announcing the topic in clause-initial position. This function is often taken by *when it comes to*. In contrast, the L1 students use *when it comes to* clause-finally more often than clause-initially. The most frequent topic identifier in LOCNESS, *concerning*, more typically occurs in a clause-final constituent, as in (19), a pattern also used by the Norwegian learners.

(19) Tradition has played an important role *concerning* distinct gender identities. (LOCNESS)

In English, sentence-initial position and subject status are in themselves signals of topic prominence. Halliday (1994, 39) notes that topics are sometimes "announced explicitly, by means of some expression like *as for . . . with regard to . . .*", but even without such a signal, an element in sentence-initial position "is the starting-point for the message; it is the ground from which the clause is taking off". It seems, however, that sentence-initial placement is associated with less prominence in Norwegian (Hasselgård 2005), which may explain why Norwegian learners use explicit identifiers of sentence

topics more often than their native-speaker peers. Example (20) might thus have been paraphrased as in (20a). In English L1 texts, the sentence subject more typically performs the function of topic identification on its own or with the aid of an emphatic adverbial after the subject, as in (21).

(20)   *When it comes to* imagination, my dictionary says that this is "the ability to create mental images or pictures." (ICLE)
(20a) Imagination is defined in my dictionary as . . .
(21)   *Genetic engineering however* throws up its own moral problems. (LOCNESS)

In a non-initial position, topic identifiers are often used by learners when a simple preposition would suffice. In (22), the writer may not have known the appropriate preposition. As in many other "unnecessary" instances of *when it comes to*, *about* would have been a good alternative. Although (23) is similar to the native-speaker example in (19), the simple preposition *for* would have been more elegant and concise. It should be remembered, however, that the use of topic identifiers for simple prepositions is also apparent in translations between English and Norwegian, as shown in (18) above.

(22)   What is she going to tell her child *when it comes to* the fatherhood? (ICLE)
(23)   People's support *concerning* The Royal Wedding were among other events broadcastet all over the world. (ICLE)

From a language learning perspective, topic identifiers have two main functions. First, they are used as "all-purpose" prepositions, as in (22) and (23). To improve their style, learners need awareness of idiomatic verb-preposition and noun-preposition collocations, and possibly a metalinguistic awareness of the distinction between prepositions and similar-functioning expressions. The other, more subtle, function of topic identifiers is their role in discourse organisation. As such, they can be valuable tools for making the information structure of sentences very explicit, both announcing topics in advance and delimiting topics in retrospect, as seen in (17), (19) and (22). Excessive use of sentence-initial topic identifiers, however, may appear either clumsy or overemphatic. To reduce this effect, Norwegian learners may, for instance, be made aware of the "thematic prominence" (Halliday 1994) of sentence-initial position in English, as well as the possibility of using an adverbial after the subject to give it more emphasis, as seen in (21).

A Student Perspective on Language Comparison and Language Learning

Since the analysis of corpus data does not give access to the writers' reflections, I conducted a small-scale investigation of students' perceptions of the usefulness of language comparison in language learning to complement the

corpus study. I put the following question to a group of second-year undergraduate students of English at the University of Oslo:

> Can you think of any examples from your own experience that knowledge of differences and similarities between English and your first language can be of help in learning or teaching English? Can it be a hindrance?

Participants and Method

The participants in this study were students in a course I taught called *Contrastive and Learner Language Analysis*.[9] The course is open to students in the English language and the teacher education programmes. Proficiency in Norwegian is a requirement for taking the course. Through their course activities, the students were familiar with the analysis of parallel and learner corpora. Note that they were not the same students as those studied in the previous section.

The question was given to the students in connection with a written course assignment, which may obviously have influenced what they wrote. They were told, however, that this particular question was optional and would be ignored in my overall evaluation of their papers. They were also informed that their answers would be used in the present study in anonymised form. Thus, by submitting a response to the question, they consented to my use of it. No metadata were collected apart from what emerged from the student registrations. I received responses from 12 out of 14 students (four male and eight female), writing on average 250 words each. A slight majority were in the teacher education programme. With one possible exception, the students were native speakers of Norwegian or another Scandinavian language. They all responded in English despite the option of using Norwegian. Because of the limitations of the material, the qualitative analysis of it is rather informal. It is based on a close reading of the texts and focuses mainly on points raised by several students.

Analysis and Discussion of Student Responses

Many of the students noted that the extensive similarities between Norwegian and English "increase the possibility of positive transfer of Norwegian constructions to English",[10] thus echoing the main argument of Ringbom (2007), namely that crosslinguistic similarity greatly facilitates the learning of a language which is related to the learner's L1. Some students explicitly draw on their theoretical or metalinguistic knowledge to compare the languages, e.g. "English and Norwegian are quite similar languages because both are Germanic. Many of the words are therefore fairly alike. The syntax is also closely related (SVO) with a few exceptions like the Norwegian V2 rule . . ." As the students point out, such similarities make life easier

for Norwegian learners of English—knowledge about these similarities can make them feel safe in their linguistic choices, particularly in the early stages of learning.

But particularly at more advanced levels of proficiency it is important to be aware of differences as well, to avoid the pitfalls of false friends and other "mistakes related to negative transfer". One student connects her metalinguistic knowledge to her teaching practice as well as to her own learning:

> The differences in sentence structure, lexis and pronunciation would be the focus of learning, for my own and the student's advancement. The similarities between the two languages are usually easier for us to learn, and therefore, they do not have to take up the same amount of our time when we learn English.

Other students, too, take the perspective of language teaching, observing, for instance, that explicit knowledge of "form and patterns of the language" help them in explaining "the *whys* and *hows*".

According to the students, a drawback of relying on their first language is, as Greenbaum (1988) points out, that it is easy to draw false analogies: The partly false friends *mean* and *mene* ("mean"/"think") are given as an example. One student writes that the "translation learning" s/he was exposed to at school encouraged a type of English that was as close to Norwegian as possible, which may have involved an over-emphasis on similarities. However, crosslinguistically aware teachers can "explicitly point out typical equation errors (false friends) that Norwegians pupils tend to make, as this will make the pupils more aware of instances where the languages differ." On a different note, one student suggests that "the knowledge of differences might lead to learners treading more carefully around constructions they know are often different from Norwegian, and therefore avoid using these constructions completely in order to minimize the risk of making an error".

Several students broach the subject of awareness, which may concern particular points of similarity or difference between English and Norwegian, such as progressive verb forms and differences in noun phrases, but may also be more general: "knowledge of differences and similarities has been very helpful in terms of increasing my own awareness of how I express myself in English". Such awareness is not always helpful, however, as revealed in the following quote:

> In general, knowing that most learners of my native language tend to make a particular mistake or overuse a particular construction makes me more aware of this in my own use of English. The downside of this awareness could of course be that I overcorrect and make mistakes I would not otherwise have made had I not been self-conscious about a particular aspect of English.

A similar concern is voiced by another student: "If I have to think of any hindrance this knowledge has given me, I would probably say that it makes me overanalyse my writing and speaking, which could make the language less natural."

One of the few students who mention languages other than English and Norwegian writes: "Taking an English [course] in France among French learners of English has also made me more aware of the advantages you have as a Norwegian learner of English." This quote is interesting because it provides evidence that general language awareness can be developed by exposure to more than one or two languages, cf. the notion of plurilingualism noted above (CEFR 2001, 4). Another student reverses the picture: "One very interesting aspect of the differences and similarities between English and Norwegian is actually that knowledge of English can help native Norwegians learn to speak their own language better" (see Forbes 2018, this volume). In other words, crosslinguistic awareness is seen as beneficial to the first language as well as to the second (Cook 2015; Cummins 2007, 234).

In general, the students seem to agree that knowledge of similarities and differences is useful in second-language learning and teaching as it provides a tool for distinguishing between areas involving little effort and those requiring more conscious learning or instruction. In other words, metacognitive knowledge helps learners and teachers benefit from positive transfer and identify features that are prone to negative transfer. They also seem to agree that awareness of linguistic similarities can provide a shortcut for learners at lower levels, but that more advanced learners need to be aware of differences too. The most frequently mentioned disadvantage of explicit knowledge of similarities between the L1 and L2 is that it can make the learner self-conscious and trigger avoidance strategies as a result.

Discussion

The three studies presented in the fourth section of this chapter are relevant at different levels of proficiency and sophistication in the L2 and demand different kinds of crosslinguistic awareness. The use of *vil/skal* vs. *will/shall* is mainly a matter of the *linguistic competence* (CEFR 2001, 13) of knowing how to fill a slot in a grammatical expression of future time—in other words, to be aware of the different functions and meanings of similar vocabulary items. Idiomatic use of modal combinations requires more advanced metacognitive awareness, particularly as the non-nativelike combinations are grammatically correct. The transfer of Norwegian patterns into English makes the style overly tentative or pleonastic in the case of same-sense combinations of epistemic modality (and overly emphatic in other cases, according to Aijmer 2002, e.g. *really must*). Thus, the required knowledge needs to be explicit in the sense that learners need to know about modal meanings, how they are expressed, and what effect they have in the L2 compared to the L1. Finally, the use of topic identifiers represents a mixture of crosslinguistic

differences in preposition use, and less trivially, in discourse organisation (i.e. a pragmatic competence according to CEFR 2001, 13). To produce effective texts in the L2, writers would benefit from conscious awareness of how sentence topics are marked differently in their two languages.

It should be acknowledged that the corpus analyses suffer from a mismatch of genres, between the ENPC and the student corpora. While the two student corpora are closely matched in terms of genre and the age/expertise of the writers, they consist of argumentative texts, a genre not represented in the ENPC. Furthermore, the ENPC represents professional writing. Hence, neither the fiction nor the non-fiction component of the parallel corpus is a perfect match for the student corpora. Thus, particularly the quantitative comparisons between the ENPC and ICLE-NO/LOCNESS need to be taken with a grain of salt.

The comparison of L2 learners to native speakers has been criticised as dubious or irrelevant. For example, Cook (2007, 245) claims that "L2 users have to be credited with being what they are—L2 users. They should be judged by how successful they are as L2 users, not by their failures compared to native speakers". Similarly, Larsen-Freeman (2014, 217) argues that if "identity with idealized native speaker production" is seen "as a definition of success, it is difficult to avoid seeing the learner's [interlanguage] as anything but deficient". However, as Granger (2015, 15) points out, the native speaker corpus need not (and in the case of an L1 student corpus, probably should not) be regarded as a learning target norm, but rather as a reference against which L2 performance can be described (see also Granger 2009 for a discussion of the so-called "comparative fallacy" in learner corpus research). It may be added to the debate that the advanced learners represented in the ICLE corpus are university students of English, who aim to work as English language professionals (de Haan and van der Hagen 2013). Even if this may not involve becoming "imitation native speakers" of English (Cook 2007), the aspiration should be competence at C2 level with "the degree of precision, appropriateness and ease with the language which typifies the speech of those who have been highly successful learners" (CEFR 2001, 36).

It is interesting that the students' views on conscious knowledge of similarities and differences between their first language and their target language are in agreement with much of the literature cited in the literature review. In particular, the awareness of linguistic similarity—which is highly relevant to the language pair English and Norwegian—is considered an advantage for learning. The possibility that awareness of differences can cause difficulty, or at least self-consciousness, has been voiced in criticisms of form-focused L2 instruction (see, for instance, the discussion in Spada 2011). However, the students acknowledge that metacognitive knowledge of differences is important in order to progress at advanced levels, and to avoid negative transfer. The student comments do not, of course, directly concern the corpus material studied in this chapter, but the fact that they have some

experience with this type of study from their course may have given them relevant insights in this area.

Concluding Remarks

"Knowledge of more than one language in the same mind" has been termed multi-competence (e.g. Cook 2015). Most of the students who participated in the study described above observed that it makes good sense to take advantage of this competence in learners, i.e. to draw on first-language competence when learning or teaching a second language. While a range of studies have shown how (negative) L1 transfer is pervasive in L2 performance even at advanced stages of proficiency, e.g. Paquot (2013), transfer can also be clearly beneficial to language learning (Neuner 2004; Otwinowska-Kasztelanic 2009; Ringbom and Jarvis 2009) and proximity between languages "affects positive transfer; learners find it easier to learn an L2 that is similar to their own language" (R. Ellis 2008, 397). Ringbom argues that language learners (unlike linguists) tend to look for similarities rather than differences between their L1 and the language to be learnt, since especially at the early stages of learning, "L1 is the main source for perceiving linguistic similarities" (2007, 1). Analogies between patterns in the L1 and the L2 are extremely helpful in the case of closely related languages such as English and Norwegian. According to the students, Norwegian learners of English can benefit greatly from such analogies, particularly at basic levels of proficiency, while attention to differences is increasingly important at higher levels.

Granger advocates contrastive and learner corpus analysis as a means to "identify the lexical, grammatical and discourse features that differentiate learners' production from the targeted norm" (2009, 19). However, she emphasises that not all differences between the learners' L1 and the L2 (or between learner and native speaker usage) should "lead to targeted action in the classroom" (2009, 22). The selection of features to teach will depend on for example "learner needs, teaching objectives and teachability" (ibid.). These variables will in turn depend on the targeted proficiency levels. As Greenbaum (1988, 30) argues, "many students will be satisfied with mutual intelligibility in restricted situations. Many others will be concerned to be correct". Students such as those investigated in this chapter, however, are already proficient learners (or users) of English, for whom the relevant goal for attainment should be the C2 level, including the ability to "express him/herself spontaneously, very fluently and precisely, differentiating finer shades of meaning even in more complex situations" (CEFR 2001, 24). This clearly extends far beyond mutual intelligibility. For learners aiming to be English language professionals (e.g. language teachers), it is vital to possess a crosslinguistic awareness that enables them to take advantage of the real similarities between languages, filter out misleading parallels, and develop strategies for noticing and verbalising differences in both structure and pragmatics/discourse between the languages so as to develop their linguistic as well as metacognitive skills.

The realisation that "learners will always draw upon their own language in order to learn a new language" (Hall and Cook 2012, 281) should not be seen as a hurdle to be overcome, but as a resource to be valued. This chapter has illustrated the technique of using evidence from corpora to discover differences between the learners' own language and the language to be learnt, as well as discrepancies between the learners' interlanguage and the target language. The technique can be used as a tool for "facilitating noticing" (R. Ellis 2012, 281) and enhancing crosslinguistic awareness and metacognition among advanced language students as well as language teachers, who can pass on this knowledge to their students (see Römer 2011). The student responses indicate that such a technique may indeed work. Learners do not need to become "imitation native speakers" (Cook 2007), but the metacognitive ability of learners to notice features of their own language, the foreign language and the relationship between them can be a shortcut to successful language learning, irrespective of the targeted level of proficiency.

Notes

1 Translated from Norwegian by the author
2 See www.hf.uio.no/ilos/english/services/omc/enpc/ for further information on the ENPC.
3 See https://uclouvain.be/en/research-institutes/ilc/cecl/icle.html.
4 For further details, see https://uclouvain.be/en/research-institutes/ilc/cecl/locness.html.
5 Examples from the ENPC have been given with the original text before the translation. Norwegian examples are accompanied by a word-for-word (unidiomatic) translation in square brackets. The bracketed identification tag reveals their origin, e.g. KF1 (example 1), which refers to a text by Knut Faldbakken. For a complete list of tags, see www.hf.uio.no/ilos/english/services/omc/enpc/. ICLE and LOCNESS examples are marked as such, and are rendered as they appear in the corpora, meaning that any errors have been left uncorrected.
6 The calculation was made using the online log-likelihood calculator at http://ucrel.lancs.ac.uk/llwizard.html.
7 One ICLE writer produced six instances of *shall*, while nobody else had more than one or two.
8 The expression *når det kommer til* ("when it comes to") is probably a recent translation loan from English. It does not occur in the ENPC texts, which are from the 1980s and early 1990s. *I forhold til* ("in relation to") was omitted because it tends to be used in its literal meaning—to compare things—rather than as a topic identifier in these texts (there is reason to believe usage has changed here too).
9 The course description is available at www.uio.no/studier/emner/hf/ilos/ENG 2162/.
10 The student opinions given as quotations are in the students' own words, but typos have been corrected.

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7 Metacognitive Knowledge about Writing in a Foreign Language
A Case Study

Yvonne Knospe

Introduction

The added value of metacognition has been reported for various areas of learning. Research shows, for example, that metacognitive knowledge positively influences the quality and effectiveness of learning (Hartman 2001; McCormick 2003; Paris and Winograd 1990; Schraw 1998; Wenden 1998), the use of learner strategies and self-regulated learning (Wenden 2002), the development of learner autonomy (Victori and Lockhart 1995) and academic success (Zimmerman and Bandura 1994). The role of metacognition has also been widely acknowledged with respect to writing (Dimmit and McCormick 2012; Hacker, Bol, and Keener 2008, Hacker, Keener, and Kircher 2009; Harris et al. 2009; McCormick 2003; Sitko 1998). In the present paper, I use the notion of metacognition, initially defined as "knowledge and cognition about cognitive phenomena" (Flavell 1979, 906) in order to investigate the potential role of reflection about learning processes in foreign language writing instruction (see also Forbes 2018, this volume, who explores the potential of the foreign language classroom for developing metacognitive writing strategies, and the extent to which these strategies are transferred between FL and L1 classroom contexts; and Zhang and Qin 2018, this volume, for a study on EFL learners' metacognitive awareness of writing strategies in multimedia environments).

Literature Review

Successful writing is often associated with metacognitive knowledge and metacognitive regulation behaviour (McCormick 2003). While a number of researchers give examples of metacognitive components in several sub-processes of writing, e.g. planning, organising, goal setting, translating, evaluating, monitoring and revising (Dimmit and McCormick 2012; McCormick 2003; Sitko 1998), others argue that writing as a whole is "applied metacognition", and therefore needs to be defined from a metacognitive perspective (Hacker, Keener, and Kircher 2009, 160).

To clarify the pedagogical role of metacognition in writing instruction, it is important to understand what metacognition actually involves and how it relates to writing. Although different terms have been used, metacognition is divided into two main sub-components: a knowledge component and an executive regulation component (Hacker 1998; Kuhn 2000; Paris and Winograd 1990; Schraw 1998; Tobias and Everson 2000; Wenden 1998). For the first component, metacognitive knowledge, Jacobs and Paris (1987) also introduce a further division into declarative, procedural and conditional knowledge, which will be adopted in the study reported in this paper.

Declarative knowledge, in general terms, refers to factual knowledge about oneself and one's own cognition, as well as to skills, tasks, strategies and affective factors. In relation to writing, this knowledge component comprises a number of aspects. Harris et al. (2009) list, for example, learners' knowledge about themselves as writers, their successful and less successful experiences in writing, less preferred elements of the writing process, relevant environmental aspects of writing, task knowledge, general or particular writing strategies for different kinds of texts, and finally affective factors influencing writing, such as self-efficacy and motivation.

In the present study, the additional factor of foreign language in writing is highlighted, and for this reason the notion of declarative metacognitive knowledge needs to be extended. A learner may have declarative metacognitive knowledge about a particular language and his or her process of learning this language. These issues have not been studied extensively in the framework of metacognition, but in foreign language learning and teaching research they are well-known concepts, called language (learning) awareness and metalinguistic awareness (see Haukås 2018, this volume, for a discussion). Metalinguistic awareness refers to "one's ability to consider language not just as a means of expressing ideas or communicating with others, but also as an object of inquiry" (Gass and Selinker 2008, 359). This means that students who have metalinguistic knowledge are able to think about languages as abstract and rule-based systems on a higher level. Language awareness refers to "explicit knowledge about language, and conscious perception and sensitivity in language learning, language teaching and language use" (Svalberg 2012, 376). Accordingly, explicit knowledge about foreign languages and the learning processes involved are part of declarative metacognitive knowledge as well.

Procedural knowledge refers to knowledge about how to use declarative knowledge (Harris et al. 2009). In writing, this category refers to knowledge about how to apply different kinds of writing strategies. Conditional knowledge refers to knowing when, where and why to make use of declarative and procedural knowledge. This is especially important when it comes to the effective selection of strategies and allocation of resources (for a more detailed description of these knowledge types, see for example Schraw 1998 or McCormick 2003). In the writing process, conditional knowledge enables the learner to make particular decisions about how to approach

a given task—for example, what writing environment needs to be created when carrying out particular parts of the writing process—or which strategies to choose.

The second sub-component of metacognition, executive regulation, has been referred to as "self-management" (Paris and Winograd 1990), "strategies" (Wenden 1998), "monitoring and control" (Tobias and Everson 2000) or "monitor and regulation" (Hacker 1998). In relation to writing, this component refers to the conscious regulation of the writing process through managing cognitive loads and applying metacognitive writing strategies (Harris et al. 2009). Particularly, the planning, monitoring and evaluation processes in writing have been identified as the major regulation components and represent the link to the writing sub-processes in the cognitive models of writing (Bereiter and Scardamalia 1987; Flower and Hayes 1981; Hayes 1996; Kellogg 1996).

An interesting contribution to the understanding of the executive component of metacognition in writing is Hacker, Keener, and Kircher (2009). As already mentioned above, they suggest that writing is applied metacognition. They base their assumptions on a model proposed by Nelson and Narens (1990), which involves monitoring and controlling as the main processes in the interdependency between cognition and metacognition. Hacker, Keener, and Kircher (2009) consider writing as synonymous with thinking, with the only difference being that written thoughts have undergone a metacognitive selection process. Therefore, writing can be described as a permanent selection process of thoughts. This selection of thoughts in writing is carried out by the two executive activities monitoring and control, which also regulate cognition and metacognition.

Metacognitive monitoring denotes an awareness of one's current thoughts and involves strategies like reading, re-reading, reflecting and reviewing. Metacognitive control is the modification of one's current thoughts. It involves strategies like editing, drafting, idea generation, word production, translation and revision (for more concrete examples of monitoring and control activities during writing, see, for example, Dimmit and McCormick 2012, Harris et al. 2009, Sitko 1998 or the summary in Table 7.1). According to Hacker, Keener, and Kircher (2009), writing is a process which involves an orchestration of these two processes. As the text evolves, the writer's own defined goals and the task environment might change, which in turn requires the writer to monitor his or her writing and exert control. The overview in Table 7.1 summarises the role of metacognition in writing.

Irrespective of whether some aspects of writing or writing as a whole are considered metacognitive, its value for the development of the writing ability is generally agreed upon (Dimmit and McCormick 2012; Hacker, Keener, and Kircher 2009; Harris et al. 2009; McCormick 2003; Sitko 1998). However, this inherent metacognitive characteristic of writing does not imply that each and every student is equally successful as a writer. Even if students have developed a fair amount of writing knowledge and strategies

Table 7.1 The role of metacognition in writing, based on descriptions in Hacker, Keener and Kircher (2009), Harris et al. (2009), and Sitko (1998); modified and summarised by the author.

Metacognition in writing

Metacognitive writing knowledge			*Metacognitive regulation of writing*	
Declarative writing knowledge	*Procedural writing knowledge*	*Conditional writing knowledge*	*Monitoring writing*	*Controlling writing*
e.g. knowledge about • oneself as a (foreign language) learner and writer (e.g. own strengths and weaknesses, previous experiences in learning and writing), • learning/writing processes • the writing environment (e.g. time limits, writing technology, information resources) • the language in which to write (e.g. metalinguistic knowledge), • task requirements (e.g. knowledge about the text type, topic, readership) • affective factors (e.g. anxiety, motivation or self-efficacy)	• Knowledge about how to apply general and specific writing strategies	• Knowledge about when, where and why to use declarative and procedural writing knowledge	• Reading • Re-reading (e.g. from the audience point of view) • Reflecting (e.g. about how the written text fits the intended writing goal) • Reviewing	• Planning (e.g. determining purpose and audience, activating background knowledge, organising ideas, considering time, writing environment, text type and rhetorical requirements) • Drafting (e.g. selecting relevant text content, fitting gathered ideas into chosen text type format) • Translating (e.g. text production according to plan, strategic handling of limited linguistic resources) • Revising (e.g. adding, deleting or substituting text)

for writing in their native and first foreign language, it does not necessarily mean that they are able to make use of them when writing in other foreign languages. Hufeisen and Marx (2007, 315), Haukås (2015) and Forbes (2018, this volume), for example, point out that the potential transfer possibilities of techniques and strategies need to be made aware by the teacher. Schoonen et al. (2003, 2009) argue similarly that metacognitive knowledge might not become utilised due to cognitive constraints. For foreign language learners, the effortful process of lexical retrieval tends to take up a large part of their cognitive capacity (McCutchen 1996) at a given point in time. This constraint might make it harder or even impossible for a number of writers to deal simultaneously with higher-order processes, such as, for example, the activation of metacognitive knowledge.

The Current Study

Aim

The aim of the present study is to investigate one student's retrospective recalls about his own writing processes in relation to the following research questions:

1) How is metacognitive knowledge displayed in the learner's retrospective reflections about writing?
2) What kinds of metacognitive knowledge can be identified?
3) What development over time can be observed in response to instruction?

The empirical data of the study originates from a writing intervention, which took its point of departure from the assumption that an awareness-raising teaching approach and metacognitive reflections are required in order for students to make full use of knowledge and regulation processes in writing (Graham 2006; Graham and Harris 2005; Schoonen and De Glopper 1996; Victori 1999).

Participants

The present paper adopts a case study approach and focuses on one student, Henry (see Forbes 2018, this volume, for another case study on writing). The name is a pseudonym. Apart from Henry, six other students from a German class wrote corresponding texts in individual sessions. All students participated voluntarily after their regular lessons. Henry was randomly chosen for the present case study. While the study took place, Henry was 16 years old and went to an upper secondary school in Sweden. His first language was Swedish and he had started learning his second language, English, from grade one. Further, he had been learning German, his third language, for the

past four years and was part of a German class, which participated in the writing intervention mentioned above.

Procedure

The first step was to identify how the learner's metacognitive knowledge was displayed in his reflections; the second step was to investigate what metacognitive reflections the student had; and the third step was to develop how these reflections might develop by means of specific instruction. The students were given intensive instruction by the researcher in writing argumentative texts in their regular German lessons. The intervention was spread over three months and focused particularly on making the students aware of metacognitively oriented aspects of the writing process. Taking departure from the students' experiences and previous knowledge, the class activities were concentrated on making them familiar with and giving them the opportunity to practise writing strategies when composing argumentative texts in German.

During the intervention, Henry wrote five argumentative texts, four in German (Text A, B, C, E) and one in English (Text D).[1] Writing in English offered Henry the opportunity to directly compare his writing experiences in different foreign languages. Furthermore, the English text served as a baseline in order to evaluate the development of the writing processes and products in German, which, however, is not the focus of the present paper (but see Knospe 2017 for a comprehensive description of writing processes and products throughout the intervention). Table 7.2 summarises the main intervention activities, when the texts were written during the intervention period, and the respective length of Henry's texts.

Henry wrote the five texts on a computer. He was told that he had approximately one hour to write, but he was free to decide when to finish. Each writing session was recorded by the keystroke-logging software Inputlog and the screen-recording software Camtasia (see Leijten and Van Waes 2013 for more information about Inputlog). Immediately after finishing each text, Henry was interviewed about his writing experience in the respective session. The stimulus for each interview was the generated screen-recording file. Both Swedish and English were used in the interviews. The researcher and Henry watched the recorded file and Henry was invited to talk about anything that came to his mind regarding the writing session. When the recording showed that Henry had paused during writing, he was asked, for example, "Do you remember what you thought about here?" The five resulting retrospective reports were recorded and transcribed. They represent the data material of the paper and give an insight into Henry's metacognition about writing in foreign languages.

The analysis will focus on how Henry reflected on his own writings in German and in English. Each of the five interviews lasted between 23 and 37 minutes and altogether made up 11,456 words of transcribed data. For the

Table 7.2 Intervention procedure, writing occasions and text length.

Main theme	Contents
Introduction	• organisation, content and goals of the intervention • reflections about experiences in foreign language writing • discussion about writing as a (demanding) process which consists of different (sub-) activities • getting to know writing strategies
Text A (German) 158 words	
Text type & genre	• comparison of text types, activation of previous knowledge • focus on and intensive work with purpose, structure and linguistic markers of argumentative texts
Planning	• exploration of different types of planning texts: brainstorming, mind-map, outline • exercises • discussion about how the planning types worked for the students
Repetition	• repetition of previous lessons • exercises with focus on outlining argumentative texts
Formulation	• discussion about the formulation phase in writing (fluency and interruptions) • introduction of and discussion about different compensation strategies: "move-on", simplifying, online language resources (including a discussion about their reliability), exercises
Text B (German) 263 words	
Revision	• discussion about the importance of the revision phase in writing • revision of writers' own texts and texts by classmates • the importance of knowing one's own "language problem areas"
Repetition	• summary and repetition of the intervention contents • focus on linguistic markers of argumentative texts, writing an outline and simplifying sentences
Text C (German) 195 words, Text D (English) 639 words	
Seven months later: Text E (German) 325 words	

analysis, Henry's statements or short interactions with the interviewer were given session numbers and within-session numbers. The data were then scanned in a first round regarding all potential metacognition-related reflections. In the next step, a deductive approach was chosen and the distinction between declarative, procedural and conditional metacognitive knowledge was used to code these numbered statements. Some cases were assigned to more than one category, e.g. both declarative and procedural knowledge as statements contained both types, while others were left out if it was not clear enough that they were metacognitive reflections. After this step, it became apparent that the majority of entries belonged to declarative knowledge, while no instances of procedural and conditional knowledge, which could be clearly defined as knowledge and not as an overlap with executive regulations, were identified. Due to this, only declarative metacognitive knowledge

will play a role in the results of this analysis. Thereafter, all entries for manifestations of declarative metacognitive knowledge were scanned once more and four main categories were developed which cover the range of statements: (1) knowledge about oneself as a learner, (2) knowledge about the task, (3) knowledge about languages and (4) knowledge about strategies. In the last step, Henry's statements were grouped into these four sub-categories to determine potential tendencies or developments across writing sessions.

Results

In the five interviews, in which Henry was asked about his writing experiences, parts of his metacognitive writing knowledge were revealed. In his descriptions about how he managed to write argumentative texts, he explicitly or implicitly referred to knowledge which motivated his decisions and behaviours. One example is when Henry was asked why he paused at a particular moment; he explained it as a lack of knowledge of a specific grammatical rule in German, which he knew he did not remember correctly. In such an instance, metacognitive knowledge about a specific language was displayed. In other cases, he referred to metacognitive knowledge in a more explicit way. Regarding the importance of topic knowledge for writing, Henry mentioned that he believed that the writing was much easier for him when he had substantial knowledge about the topic of the text. This knowledge is not in every case explicitly labelled as such by the learner, but rather needs to be inferred with the help of existing categorisations. When Henry, for example, explained that he paused because he was trying to find an alternative expression for a specific content word he did not know, it can be inferred that he had metacognitive strategy knowledge.

As mentioned above, the type of knowledge that could be identified was mainly declarative and categorised into learner, task, language and strategy knowledge. In the following, these categories will be described in detail. A development of metacognitive knowledge could not be observed consistently, but in those cases in which it became obvious that an increase or change had taken place, this will be indicated.

Knowledge about Himself as a Writer

Regarding metacognitive knowledge about himself as a writer, it was remarkable how negatively Henry referred to himself. He repeatedly made remarks about his own poor writing ability in German, especially after the first two writing sessions. At several points he commented on his own perceived weaknesses, what he was not able to express in German, or where he usually performs poorly or writes "sloppy" texts. In sessions one and two, he repeatedly mentioned what German writing rules he had not yet learned; for example, the use of commas or, as in the following excerpt (H1), the choice of subjunctions:

(H1) I don't really know in which context one should use *wenn*, *wann* and *ob*, I think. So, I don't really know that very well.[2]

Henry frequently reflected on his shortcomings in German and admitted that it was his own fault that he could not apply the grammatical rules that had been dealt with in class, because he had not put enough effort into learning them. In session one he said:

(H2) Yes, it's my own responsibility, because we have gone through this in the German lessons several times and then I went through it and understood it, then it was not difficult, but then I forgot it as time went by and then I have to repeat it several times because it is not like it is very complicated, it is just that I forget and cannot remember how it was and therefore I cannot really correct this.

In relation to the writing topics, Henry also mentioned in several sessions how much or how little topic knowledge he had and reflected about what topic knowledge meant for his writing. Regarding the topic in text C, "Gyms, diets, plastic surgery, tattoos, etc.—In today's society body and good looks are more important than personality and intelligence", for example, he did not have much to write about, while in text E, "Social networks (like Facebook, Twitter, Instagram, Tumblr, etc.) are dangerous for teenagers", he had the feeling that he had much to say because he felt so involved:

(H3) I felt it worked because I am a teenager and this text is about how it affects teenagers.

In the last session, after having talked about the role of topic knowledge a few times in earlier sessions, Henry elaborated even more on the influence of such knowledge and related it to the planning process, one of the executive processes in writing.

(H4) I think it depends on what you're supposed to write because, for example, if it's about a subject you're not really used to or you don't know a lot about, you have to like process the information you have in your mind before and kinda write it down, so you know, yeah, this is what I can write. But if you, if you, you're for example very educated in something, then, then you don't really need a lot of planning to write structured and detailed because you already have it like structured in your mind for example. So that is why I sometimes make this, you know, detailed, less detailed plannings.

This statement indicates that Henry's metacognitive knowledge about himself as a writer has developed and that he has understood what it means

in relation to organising the writing process. Apart from this increase in declarative knowledge, it also becomes clear that Henry has gained conditional metacognitive knowledge because he has understood that he should definitely plan a text when he does not have sufficient topic knowledge at hand.

Knowledge about the Writing Task

In addition, Henry showed declarative knowledge about the writing tasks, i.e. the text type. Even though this appears unsurprising, as the intervention dealt with how to write argumentative texts in German, it is interesting to note how his reflections developed throughout this time period. On several occasions in all writing sessions, he described how he tried to come up with arguments and counter-arguments, both successfully and unsuccessfully. At two points he also mentioned the writing goal regarding the audience and the need to make himself understood and discuss the controversial topic of the text. In the first session, his representation of the task became clear when he described it in comparison to ordinary German lessons:

> (H5) I formulate so it becomes easy because when I write, then I do not manage to think as much as, for example, when we do an exercise in a German lesson. [. . .] Then we can think longer, how to put the words, [. . .] the right order, such things, I do not do that here [. . .] and then it is because of this I get it wrong sometimes, even quite often I get it wrong when I write a text, and then it is when I do not manage to think a little how that was again, which rules apply, in grammar I mean.

This example suggests that declarative knowledge of the task environment affected Henry's process of planning as he deliberately decided to choose simple constructions due to time and task constraints.

In the fourth writing session, i.e. after the entire intervention had taken place, Henry again connected his task knowledge and planning processes in an interesting comparison between argumentations and descriptions:

> (H6) Well, writing an argumentation, you really need to have, you know, a good structure before writing. And, and I don't think that is nearly as necessary while writing a description because the only thing you need to do is just, you know, it's, write as careful as possible so if a person needs to read it, he or she will understand, you know, what you're talking about. It's not really, you know, meant to like: here I will describe how, how, what colour her hair is and here I will tell him about the pants she's wearing. It's not, you know, this is more complicated to write [. . .].

Even though Henry seemed to have quite deep knowledge about argumentation as a text type right from the beginning, his reflections indicate that a development of knowledge about how to approach this writing task under the given constraints had taken place.

Knowledge about Languages

Closely related to both knowledge about himself as a learner and writer and to knowledge about the task are Henry's metalinguistic reflections. As mentioned earlier, in the first two sessions, Henry often indicated his lack of linguistic competence. Interestingly, he did not remark about the language or grammar in general, but he could directly refer to grammatical aspects using metalinguistic language; for example, the use of certain subjunctions, the case system in German and prepositions. This fact in itself actually indicates his high degree of reflectiveness about the foreign language and about his own competence. In the second session, for example, he commented on his lack of knowledge about the future tense in German and compared it to a Swedish construction:

> (H7) I wanted to write that "otherwise [. . .] we have to face the conse-
> quences", but of course you cannot, one cannot use *kommer* [N.B.:
> be going to] like *ich komme* [N.B.: I'm coming], in Swedish for
> example I can, we can say, then I can say "I am coming now", like
> "I'm coming to you now", but, and one can also say "I'm going to
> face the consequences". [. . .] Yes. But, but I did not know if that
> works in German, if you can write *sonst kommen wir behöver möta
> konsekvenserna* [N.B.: otherwise we come to face the consequences
> (literally translated)].

The fourth session, in which Henry wrote his text in English, gave him a good opportunity to think about the differences between German and English, and consequently led to a number of statements showing his metalinguistic awareness. Throughout this session, Henry stated that he found his English very good, that he could express almost everything in this language without any major problems, and that he usually felt satisfied with his English texts. In comparison, he complained that he could not write everything he wanted in German, so that he usually had to express his thoughts less elaborately:

> (H8) [. . .] after I have written the text in English, I feel that I, I got
> to write about everything that I wanted and that, that my opinions
> were expressed clearly, so that other people will understand it but
> sometimes after writing in German, I feel like, you know, this is not
> really good. They won't understand what I'm trying to say or this is
> not really what I mean when I write this.

Since these differences were so clear for Henry, he also indicated that it affected the planning of his texts. While he plans his English texts in English, he usually plans his German texts in Swedish:

> (H9) Because if I planned this in, let's say it was German today, if I planned it in German, I would have to think how to write it in German and that would just slow down the process too much. And I want the planning to be at least you know, I want it to be quick but I need a time to, to process all my thoughts, but I still wanted, you know, not take too much time.

Here it becomes clear that Henry had developed a strategy for how to deal with writing in different languages. This shows his ability to adapt to the task environment, including time constraints and his beliefs about his own language proficiency. He thinks that planning should take little time and mainly serve to generate and organise ideas. According to this, he made conscious language choices.

Knowledge about Strategies

Henry also showed his knowledge about strategic behaviour in other instances than the one previously described. While he relied on his ability to reformulate in English, he would rather have relied on online dictionaries in German because it seemed to be too time-consuming to engage in a rephrasing strategy in German:

(H10) HENRY: Yeah, that's because I, you know, in, in this is very different, for example, as in German, because I can easily find another way to write a sentence in English than in German. So if I don't know a word, I just, I will just write it in another way.
INTERVIEWER: Okay.
HENRY: Yeah, so in, in, the only time I checked here was when I needed to check spelling and nothing else.
INTERVIEWER: So you were able to rephrase things in English easily?
HENRY: Yeah.
INTERVIEWER: And you cannot do that in German?
HENRY: Well, I, I can do it in German, but sometimes, but it's a lot harder.
INTERVIEWER: Hm and if you, if you come up, if you come across problems in German, then you, what do you do then?
HENRY: Go to Pau/- Pauker [N.B. online dictionary]. First, but I don't really, you know, give much time into trying to find another way, maybe I'll just spend two or three minutes thinking of how I should re-write the sentence but then I'll go to Pauker or Google Translate or whatever.

Knowledge about the use of online dictionaries as a strategy was an obvious aspect in Henry's reflections. Even though he used them frequently, he

reported it challenging to choose from the translations offered by such an online tool. He admitted that he usually just decided to choose the first translation in the list, although he showed awareness of the risks of such a strategy and had learnt that these translations may be wrong; moreover, even what may seem to be a correct translation cannot always be used in the context in question. The following statement indicates that this awareness resulted in a development in the use of this tool. In session three, Henry made the following comparison with the first session:

> (H11) I tried to avoid it, but sometimes I couldn't like find another way and it happened a lot of times today because there were a lot of words that I didn't know or found complicated so I had to check it out, but I'm pretty sure that I used it more the first, you know when I wrote the first text, because then I didn't even think when I, you know, when I, you know, got to a dead end, and I didn't know what to do, I just went to Pauker without thinking really. But now at least I try to find another solution before writing, before going to Pauker.

While the use of online dictionaries seemed to be the predominant behaviour when Henry faced his own lack of own linguistic resources or when he wanted to create more variation in his text, he also reported that he tried out several strategies, which indicates a development of his metacognitive strategy knowledge. In text A, for example, he decided to come back to a certain expression later; in text B, he translated literally from Swedish into German; in text C, he rephrased and wrote something else; and in text E, he tried to avoid certain expressions since there is more than one way of formulating something. He stated:

> (H12) And then, the next word I am writing now, that was a bit sloppy, it was like, directly translated from Swedish, like *alkoholinköp* (N.B. alcohol shopping), there I thought *inköp* and then *alcohol*, and put these two words together, and that can surely go totally wrong.

As in many of his other evaluations about his own learning and writing processes, Henry again judges his compensatory behaviours in a rather negative way. On the one hand, he seems to be aware of the risks of compensatory strategies, such as literal translation, but on the other hand, he does not seem to fully realise that even if compensatory behaviours result in errors, they still represent a communicative competence in learners.

Discussion

The purpose of the present study was to examine one learner's reflections on writing texts in a foreign language. During a period of classroom intervention, five argumentative texts were written. The writing sessions were

recorded and used as stimuli in retrospective recall interviews. The interviews revealed a number of findings regarding the learner's metacognitive knowledge about writing in a foreign language.

Regarding the first research question, the results suggest that if learners are encouraged to report about how they proceed and deal with challenges when solving language tasks, their metacognitive knowledge is (at least partly) displayed in their reflections.

In relation to the second research question, four main categories of reflections could be identified in the data. Henry showed metacognitive knowledge about himself as a learner, about the task at hand, about languages and about strategies. It became obvious that the majority of his reflections about himself as a learner of German were negative. Especially during the first sessions, he frequently commented on his insufficient learning capacity and language competence. This rather contradicted what he showed in the rest of his metacognitive reflections. He could make it clear that he had knowledge about the task of argumentative writing, including its goal and text structure, and he displayed metalinguistic knowledge in German, even though it was mainly related to expressing his mistakes. Further, Henry was able to reflect on the differences he experienced in learning and writing English as opposed to German and how he compensated for that, for example, by planning a German text in his mother tongue prior to writing. In relation to metacognitive knowledge about strategies, it was shown that Henry reflected on a number of compensatory behaviours in moments in which he did not have the necessary linguistic resources at hand. However, it was again revealed that he considered these strategies only as reflections of his lack of language competence.

With regard to the third research question, a development in a number of types of metacognitive knowledge could be identified. First, an increased knowledge about the impact of topic knowledge and language knowledge on his writing were visible in his statements. The less topic knowledge he had, the more he thought he needed to plan the text; and the fewer linguistic resources he had (or perceived himself to have) for a particular topic, the more simply he formulated his thoughts. This is also an indication that Henry had developed procedural and conditional metacognitive knowledge, i.e. how, when and why to use his declarative knowledge. Apart from that, Henry's reflections showed traces of increased knowledge about what the complexity of an argumentative writing task requires him to consider when writing, about strategic language choices in writing—for example, in the planning phase—and about the chances and challenges of the use of online sources in writing.

Although this is just a small-scale study, the findings suggest that when students are invited to reflect on their language learning, be it writing or other activities, they are able to verbalise how they think and feel, what motivates them, how they conceptualise different activities, and how this influences what they actually do. Henry touched on most of the categories

within declarative metacognitive knowledge in his recall interviews. The categories, identified in earlier studies, are useful for analysing and summarising learners' reflections. However, when trying to apply them, the limits of these constructs become clear, as authentic reflections usually involve a number of facets which are necessarily interwoven, interdependent and most likely far more complex than what can be shown in a deductive analysis. Procedural and conditional metacognitive knowledge, for example, can hardly be displayed in learners' reflections without referring to declarative knowledge. Consequently, metacognitive knowledge and metacognitive regulation processes, which were not the focus in this study, can only be kept apart from each other for theoretical and analytical purposes, while they are in fact closely connected in actual learning.

Conclusion

Despite methodological challenges, the results of the present case study indicate the relevance of learners' reflections for learning in the foreign language classroom. The most important finding of this study in terms of pedagogical implications is the decisive role of affective factors in language learning and their influence on learners' beliefs and decisions. Henry had strong feelings of insecurity and continuously underestimated his own abilities, which, for example, led to an increased reliance on online dictionaries,[3] to the simplification of thoughts, and to avoidance of the use of German in planning. Therefore, it seems advisable for teachers to give learners space and time to reflect on multiple aspects of learning and to pay closer attention to learners' metacognitive knowledge, especially regarding their image of themselves as learners and their learning capacities (see also Forbes 2018, this volume; Haukås 2018, this volume). Only in this way would it be possible to modify false assumptions and resulting learner behaviours, which in the worst case constrain progress. This conclusion may be even more relevant for learning third languages, as learners tend to feel frustration and resignation when they compare their proficiency in their second to their third language(s).

Moreover, Henry's reflections showed that he had not realised that a number of his compensatory behaviours were not necessarily counterproductive, but rather strategic activities employed to communicate meaning. Even though they might result from a lack of linguistic resources, they are evidence of the ability to deal with problematic situations in foreign language learning. Henry's comments showed that language learner strategies like literal translation and descriptions and their actual value in realistic settings still need to be made more explicit in class.

Finally, the opportunity to reflect on his learning of German against the background of learning English made Henry think more deeply about the specific aspects that constrain him in German and what he usually does in order to overcome these obstacles. This is in line with Forbes' case study

(2018, this volume), in which she concludes that "the explicit development of metacognitive writing strategies within the FL classroom [does] not only benefit [. . .] FL writing tasks, but also positively affected [. . .] writing in the L1". Involving previous language learning experiences in class might be an opportunity to raise students' awareness about some aspects of learning that are different for each language, but also other aspects that are similar. In this way, knowledge from previous language learning could be transferred to new situations and make the learning of third and further foreign languages more successful and efficient.

Notes

1 The themes of the texts were: (1) "At the age of 16, teenagers are old enough to buy alcoholic beverages". (2) "Meat is unhealthy. Schools and kindergartens should only serve vegetarian dishes". (3) "Gyms, diets, plastic surgery, tattoos, etc.—In today's society, body and good looks are more important than personality and intelligence". (4) "The internet—The best thing since the invention of the TV". (5) "Social networks (like Facebook, Twitter, Instagram, Tumblr, etc.) are dangerous for teenagers".
2 In the retrospective interviews, Henry spoke either Swedish or English. Quotes originally in Swedish (H1, H2, H5, H7) have been translated by the author.
3 This issue will be dealt with in a forthcoming book chapter: Knospe, Yvonne, Kirk P. H. Sullivan, Anita Malmqvist, and Ingela Valfridsson. Forthcoming. "Observing Writing and Website Browsing: Swedish Students Write L3 German." In *Observing Writing: Logging Handwriting and Computer Keystrokes*, edited by Eva Lindgren and Kirk P. H. Sullivan.

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8 "In German I Have to Think about It More than I Do in English"

The Foreign Language Classroom as a Key Context for Developing Transferable Metacognitive Writing Strategies

Karen Forbes

Introduction

Writing is a skill which is actively developed by both first language (L1) and foreign language (FL) teachers, and indeed one which permeates the entire school curriculum, yet surprisingly few cross-curricular links are made, particularly within secondary school education in England. L1 teachers, who can often assume a certain level of proficiency among learners, are more likely to take a subconscious, synthetic, top-down approach, while FL teachers tend to take a more conscious, analytics, bottom-up approach (Kecskes and Papp 2000). It would seem logical, therefore, that FL teachers, who are able to focus more explicitly and consciously on the development of transferable metacognitive strategies, are in a unique position to contribute to the overall improvement in writing standards more generally. This chapter reports on data from a study examining how an explicit focus on metacognitive strategy use within a secondary school FL (German) classroom in England impacted students' strategy development and writing in the FL, and whether any such effects transferred to the L1 (English). This is explored here primarily through an in-depth case study of one student's trajectory through the process of developing and transferring metacognitive strategies between FL and L1 writing.

Literature Review

Developing Metacognitive Writing Strategies

This study is situated within the broader theoretical framework of language learning strategies, which aim to "enhance comprehension, learning, or retention of new information" (O'Malley and Chamot 1990, 1). For Cohen (1998, 4) it is "the element of consciousness" and the learners' ability to identify it which distinguishes a learning strategy from a more automatic or

subconscious process. These definitions arise from a series of assumptions about the way in which human beings process information, and therefore reflect the origins of language learning strategies in the field of cognitive psychology. Another key characteristic of learning strategies as emphasised by Wenden (1987), Oxford (1990), Cohen (2011) and Grenfell and Harris (1999), is their close link with increasing learner autonomy, which has become a significant concern in modern classrooms. Over the years, numerous efforts have been made to classify such strategies according to a range of factors, such as by function (e.g. cognitive, metacognitive or social) or skill area (e.g. listening, speaking, reading or writing) (Cohen 2011; Oxford 2017). This study, however, focuses particularly on strategies with a metacognitive function related to the skill of writing (see Knospe 2018, this volume, for another empirical study on metacognition and the development of writing skills in a FL, and Zhang and Qin 2018, this volume, for a study on EFL learners' metacognitive awareness of writing strategies in multimedia environments).

The theoretical rationale behind the categorisation of metacognitive strategies was undoubtedly influenced by the work of Brown (1987) and Flavell (1979), who distinguished between normal cognitive processes and the overarching, reflective functions that control and monitor these processes (Desautel 2009). Within the framework of language learning strategies, metacognitive strategies are defined as those which "involve thinking about the learning process, planning for learning, monitoring of comprehension or production while it is taking place, and self-evaluation after the learning activity has been completed" (O'Malley and Chamot 1990, 8). However, it is important to acknowledge that the distinction between cognitive and metacognitive strategies is often blurred and the same strategy may function at different levels of abstraction (Cohen 1998). This can also be linked to the distinction made by Anderson (1985) between declarative knowledge, what we know *about*, which is often learned in an explicit manner and can be acquired quite quickly, and procedural knowledge, what we know *how to do*, which is unanalysed, automatic knowledge, often requiring extensive practice. O'Malley and Chamot (1990) further develop this by suggesting that strategies which begin as declarative knowledge can become proceduralised with practice. It is important to note therefore, that strategies in themselves are not inherently metacognitive; rather it is the approach learners take to a strategy and their awareness of engaging in that strategy which makes it metacognitive.

The decision to focus primarily on the metacognitive aspect of strategy use in the current study was influenced by three main factors. Firstly, it is important to note that O'Malley and Chamot (1990) established a positive relationship between learners' success and metacognitive strategy use, stating that "students without metacognitive approaches are essentially learners without direction and ability to review their progress, accomplishments, and future learning directions" (6), a link which has also been acknowledged by Cohen (2011), Griffiths (2013) and Oxford (2017). Secondly, metacognitive strategies have been identified as a vital component of any

form of strategy use; it is the metacognitive element which helps learners to use and combine strategies effectively, and to transfer them to new tasks (O'Malley and Chamot 1990; Grenfell and Macaro 2007). Thirdly, Macaro (2001) makes an interesting distinction between 'natural' and 'taught' strategies, the implication being that metacognitive strategies, which are more conscious and easier to articulate than purely cognitive strategies, therefore lend themselves more easily to classroom-based strategy instruction. This also has important practical implications for conducting empirical research with young learners.

The decision to focus particularly on the skill area of writing was similarly influenced by several factors. Within the context of secondary school language classrooms, developing competence in writing represents a particular challenge for many learners, especially in a FL, but often also in their native language. Unlike speaking, which can be acquired naturally provided that there is a sufficient level of input and exposure, writing is a cognitively demanding skill which has to be learned and consciously developed. As such, the luxury of time to consciously monitor language production while writing is particularly conducive to the investigation and development of important metacognitive skills.

Research into writing strategies has been ongoing since the 1980s, yet has been primarily concerned with the identification, description and comparison of strategies of and between L1 and FL writers, and in particular the difference in strategies used by 'good' and 'poor' learners (e.g. Jones and Tetroe 1987; Raimes 1987; Zamel 1983). More recently, focus has shifted to the active development of strategies through programmes of strategy-based instruction (SBI). As a result, there have been several intervention studies which have provided evidence to suggest that the explicit teaching of metacognitive learning strategies in L1 and FL classrooms has the potential to positively impact the development of writing strategies in their respective contexts (for L1 intervention studies see De La Paz and Graham 2002; Graham and Harris 2003; for FL intervention studies see De Silva and Graham 2015; Macaro 2001; Sasaki 2000, 2002).

Strategy Transfer

It is important to note that the vast majority of the research outlined above has taken place within a single context of either L1 or FL education and has had a tendency to neglect any potential interactions between the two. In addition, it is almost taken for granted within the literature that any reference to transfer between these two language contexts implies the mono-directional transfer of existing skills and strategies *from* the L1 *to* the FL. Yet L1 strategies may not necessarily be effective and learners may not automatically transfer them from one context to another (Rubin et al. 2007). L1 strategies may also have become proceduralised to the point where students may not be consciously aware of them. The focus of this study, therefore, emerged from a hypothesis that, if the use of metacognitive writing

strategies is explicitly developed within the FL classroom, then it seems logical that this knowledge not only could benefit FL writing tasks, but also may positively affect L1 writing.

While studies into such reverse transfer are limited, some evidence of FL-L1 transfer in writing has been detected by Berman (1994), Kecskes and Papp (2000) and Kobayashi and Rinnert (2007) in relation to essay organisation skills, use of syntactic structures and transfer of rhetorical features respectively. Although not situated within the framework of strategy research, the findings from these studies suggest that FL teachers, who are able to focus more explicitly on the development of language learning strategies, are in a unique position to contribute to the overall improvement in writing standards. As stated by Pomphrey (2000):

> The very act of consciously learning a language in the classroom implies a distancing of the self from the usual unconscious habits of everyday communication. This means that explicit knowledge about language as a system is likely to be more easily extracted from the foreign language learning experience than from learning which takes place in the L1.
>
> (278)

It was in light of the above considerations that the following research question was identified:

> To what extent is the foreign language classroom conducive to the development of metacognitive writing strategies which can be transferred between both first language and foreign language contexts?

The Current Study

The study described in this chapter is drawn from data collected as part of a larger quasi-experimental study, which more broadly examined how an explicit focus on metacognitive strategy use within secondary school FL lessons impacts students' strategy development, proficiency in, and conceptualisations of writing in a foreign language, and whether any such effects transfer to another FL context and/or to the L1. The study was conducted with a mixed ability Year 9 class (students aged 13–14) in a secondary school in England. The majority of the students were native English speakers and were in their third year of learning German and fourth or fifth year of learning French at school. Over the course of an academic year, an intervention of strategy-based instruction focused on metacognition was implemented firstly in the German FL classroom, and later also in the English classroom, as explained further below. The German classroom was selected as the FL context for the SBI due to practical considerations (such as the willingness of the teacher to participate in the project and the possibility of integrating appropriate activities into the scheme of work); however, as stated above,

the students were also studying French. Data were also collected from this context as part of the larger study in order to explore the transfer of strategies between the two foreign languages. Due to limitations of space, this chapter concentrates primarily on the data relating to the FL-L1 transfer of writing strategies, however, a full exploration of transfer between the two FL contexts can be found in Forbes (2016).

While the wider study considered trends at a whole-class level and compared the outcomes of the experimental group with a control group using a mixed methods approach, the focus of this chapter is on the qualitative findings from a smaller group of students (see also Forbes 2018). Initially, six students were selected from the experimental group as embedded cases, and were chosen to represent a range of gender, academic performance level, attitude towards the subjects and first language background. As stated by Denscombe (2014):

> Case studies focus on one (or just a few) instances of a particular phenomenon with a view to providing an in-depth account of events, relationships, experiences or processes occurring in that particular instance. The aim is to illuminate the general by looking at the particular.
>
> (54)

While some reference will be made to data collected from this group as a whole in relation to their general conceptualisations of writing, this chapter will focus predominantly on the experience of one boy. Chris, a native English-speaking student in the experimental group, was selected as a critical case as he was an average performing student in both English and German, yet displayed a willingness to experiment with and try out new strategies in order to improve his performance. The year the study was conducted was his third year of learning German at school. Further details about Chris in relation to his experiences of learning English and German are presented below.

Research Design

The focus of this chapter is on the qualitative data drawn from the writing tasks and the stimulated recall interviews. At the beginning of the school year (Point 1), the students completed a narrative style writing task in both German and English in order to explore their existing writing strategies in each language. The first task in English was a piece of travel writing, while the first German task was an introductory email to an exchange partner. Each of the task topics were chosen to fit with the existing scheme of work in each subject so that the instruction could be fully integrated into the course and so as not to disrupt students' learning. These were completed on a specially designed writing task sheet and were followed by stimulated recall interviews conducted with each of the case study students (see below). This information was then used to develop an intervention of

explicit strategy-based instruction, which was integrated into lessons by the German teacher over the course of four months (Phase A). This included tasks and activities to encourage students to engage more metacognitively with their work and to help them to develop their planning, monitoring and evaluation strategies. For example, a structured planning sheet was created to encourage students to set goals for the task, to consider the main content ideas and language features they would include and to think about the overall structure. To help students to evaluate and improve their work, a series of self-assessment and peer-assessment activities were introduced.

Then, the students completed another set of writing tasks (Point 2) in order to investigate whether this explicit focus on metacognitive strategy use in the German lessons affected their strategy use and proficiency in German writing, but also to explore whether they transferred these strategies to their L1 writing tasks without being explicitly told to do so. The second German task was a piece of writing about hobbies, while the second English task was an imaginary diary entry based on a literary character. Following this, for the next four months the strategy-based instruction continued in the German classroom, but this time was also reinforced by the English teacher, who used similar tasks and resources to encourage the students to transfer their strategies between the two language contexts (Phase B). A third and final set of writing tasks were then set towards the end of the academic year (Point 3). The final German task was an article on using computers, while for English it was a piece of creative writing.

Data Collection Methods and Analysis

The writing strategy task sheets were based on a method used by Macaro (2001) in the Oxford writing strategies study. Space was provided for students to engage in pre-task planning, a margin was included for students to make notes about their strategy use as they went along (such as the use of resources, asking for help, problems they encountered and how these were resolved), and the final section of the task sheet included a series of questions about the evaluation process, such as whether they checked over their work, what they checked for and how they felt about the task. These were then used as a stimulus for follow-up interviews with the case study students, which allowed them to further explain how and why they used particular writing strategies in both English and German. In addition to focusing on the particular task itself, the interviews also allowed for a more general exploration of how the students felt about writing in the L1 and FL contexts, what they felt was important, and if or how they felt their approach had changed over time. Given the students' limited proficiency in German, the interviews were conducted in English and lasted approximately 20 minutes. It must be acknowledged that the data obtained can be considered only as the students' *perceptions* of their strategy use, as they may also be using strategies that have become proceduralised and that they are not consciously aware of.

Following the data collection process, the strategies used in each writing task were coded using qualitative data analysis software (NVivo) to facilitate the coding and comparison of a range of strategy use and themes between different languages and tasks. An individual summary of the strategies coded in each of the tasks was then produced for each student in order to gain an overview of their patterns of strategy use in each language over time. Instances of errors and error correction were also identified and coded. Corresponding thematic codes were then applied to the interview transcripts in order to further explore the students' level of metacognitive engagement with the task, and to provide a more in-depth rationale for how they used particular strategies and the extent to which they were able to transfer them between the FL and L1 contexts. The interviews were also analysed in terms of how the students conceptualised FL and L1 writing more generally.

Results

Conceptualisations of Writing: The FL Classroom as a 'Thinking' Environment

Before focusing in more depth on the case of Chris, it is worth making some reference to the students' conceptualisations of writing in their L1 and a FL more generally, by drawing on some of the comments made by the wider group of case study students during the initial interviews. An interesting distinction made by the students between writing in L1 and a FL at the beginning of the study was the requirement to *think* more when writing in a foreign language. Table 8.1 provides an overview of some of the students' comments in relation to both language contexts.

To some extent, these comments can be explained by what could be referred to as the 'native-speaker' factor; the general impression given by the students interviewed was that, regardless of the language, the nature of writing in your native language, or most proficient language, is different from writing in a FL. Such differing views seem to be inherently linked to how they defined themselves as either an L1 or a FL writer. Interestingly, one native English speaking student stated in the first interview that he felt that writing in different languages would be the same: "if you can speak the language, if I could speak say, Chinese and English, they would be both the same, the writing tasks and the speaking tasks would both be the same . . . [but now] it's not the same, it's because we're not as advanced as I am in English". The use of the "if" clause here suggests that he did not yet identify himself as being a 'speaker' (or indeed 'writer') of the FL and therefore for him, such tasks consequently remained distinct from English.

However, it is important to recognise that even though these students *perceived* themselves as thinking less when writing in English, this was not necessarily the case. It is likely that, due to their experience and level of proficiency in English, their thought processes had become proceduralised to the extent to which they were no longer consciously aware that they

were taking place. Such lack of awareness of their L1 strategies may therefore make it difficult for the learners to consciously transfer them to a FL context. The above comments therefore provide some evidence to support the hypothesis that the FL classroom, where students undoubtedly are more aware of being consciously and actively engaged in thinking, is perhaps more conducive to the development of language-related metacognitive strategies than the L1 classroom. This will be explored in more depth by examining the trajectory of strategy development and transfer of one of the students, Chris, as he negotiated the strategy intervention (see Knospe 2018, this volume, for another case study on writing).

Case Study: Chris

As introduced above, Chris was one of the case study students in a mixed ability Year 9 class. Throughout his first two years at secondary school he consistently scored around the average or just below average in class tests and exams in German and English. His English teacher said that he "will ask for help where he needs it, but often that will be more to do with things like spellings and so on rather than help with structuring and style". His German teacher commented that he was quite confident and had potential, but was often distracted, tended to rush his work and to "get in a muddle very quickly".

Chris himself said that he quite enjoyed writing in English and felt reasonably confident with this because "you already know [the language], so English is fine to write in". However, he preferred tasks which involved writing "from your own point of view" and did not enjoy writing essays based on a text "cause you have to go back and look for quotations and stuff like that". On the other hand, he perceived German as "quite hard to write in" and said he often struggled to write longer texts. He expressed frustration that "you're always doing, like, write ups of yourself and you're not, you haven't got the ability to do, to write up your own experiences cause you don't know how to say everything". The different task types and his limited proficiency in German led him to conceptualise L1 and FL writing very differently at the beginning of the study and as a result, he approached them in different ways. In terms of his performance in the three sets of writing tasks, Chris showed the most improvement in scores in German between Point 1 and Point 2, and he also improved consistently over time in English. The reasons behind such improvements will be explored further below.

Planning Strategies

Over the course of the year, Chris experimented with and developed his use of planning strategies in both language contexts. The first task in English was a piece of travel writing, while the first German task was an introductory email to an exchange partner, and these were completed before any

form of strategy instruction took place. For the first English task he engaged in some planning, which consisted of "just a few bullet points" related to the content of his writing. Yet he did not consider this to be particularly important or useful, and explained that: "I didn't think there was much planning to do". This was also evidenced by the fact that only half of his planned points were actually integrated into the final text. However, even though his planning in English was limited, it is important to note that he did not transfer his pre-existing L1 strategies at all to the first German task, where he did not engage in any written planning whatsoever. His belief was that "planning's not really that useful for German". It is also worth noting that his goals for both tasks were concerned purely with content rather than language, as he aimed to include details about his "pets" in the German class and "the journey" in English.

However, by the second set of tasks following the first phase of the intervention in the FL classroom, Chris had started to experiment with a range of different planning strategies introduced during the SBI; this was particularly evident in German, where the task involved writing about hobbies. This time, Chris engaged in planning which included a range of content items, language features and drafting of sentences in the target language. His goals shifted beyond the content itself as he commented that he also aimed to include some particular grammatical structures they had recently covered in class. Interestingly, he described the overall structure for his text as "kind of what I do in English . . . if I mention the points in the introduction I usually do a paragraph on each one", which suggests he was starting to more actively make comparisons between writing in the different subjects and to transfer certain elements from one to another. Such evidence of an increasing level of metacognitive engagement with his approach to writing may have been partly a result of the intervention in the German classroom. It is also worth noting that Chris's planning for this task was mostly written in German, which he deliberately chose to do "cause then it's already there in German and I didn't have to think what it was".

In the second English task, an imaginary diary entry based on a literary character, Chris commented that he did "much more planning" this time, and his plan was certainly more developed than in the first task. He included consideration of a wider range of features and this time all of the aspects he planned were integrated into the final text. Interestingly, he also specified that his English text should be written in the "past tense". This is an aspect that students would perhaps be less likely to consciously plan in their native language. Given that the strategy instruction at this point was only taking place in the German class, this may therefore represent some transfer from the FL context. In addition to engaging in more planning, Chris was also beginning to view this process as more important in both language contexts. He felt that planning this time made it "easier to write the actual piece, cause with no plan you haven't really got anything to go back and look at what your initial ideas were", and commented that "planning helps to get

a better mark at the end". However, this comment also suggests that at this stage Chris seemed to evaluate the success of his strategy use according to the marks he received and, by extension, seemed to rely on the teacher to evaluate this for him, rather than engaging in self-evaluation.

For the third set of tasks, an article on using computers in German and a piece of creative writing in English, Chris showed evidence of using more similar planning strategies in both languages, such as making a checklist of content items and also language features. In German he chose this time to draft his ideas using English. After having tried various approaches it seems as though he decided that this was what worked best for him: "I think I found it easier cause I'd written it all in English before, it was easier to translate rather than thinking of it all in German without planning". This provides evidence that he was starting to engage in more independent reflection of his strategy use and was adapting this accordingly. Chris also made a more concerted effort to include particular language features "like 'because' sentences" and wanted to include a range of past tense sentences "because Miss said that I needed to improve". This shows that he was starting to use feedback from previous tasks in order to set himself goals for improving in future tasks. Similarly, for the final English task, Chris opted to make "a checklist of bullet points" which he said "helped a lot" and once again all of his planning was integrated into the final text. He was also more concerned with the overall structure and style of the text. At this point, he had received the SBI in both the German and English classrooms which seemed to help to further facilitate the development and transfer of planning strategies between the two languages.

Monitoring Strategies

In relation to monitoring strategies, Chris demonstrated increasing levels of engagement with his writing over time. In the first set of tasks when Chris encountered a problem, his first reaction was to ask the teacher for help. This happened particularly with translations of vocabulary in German and the spelling of words in English. However, if the teacher was not available, he would refer to a dictionary or his notes for help. In the first German task he also commented that he aimed to make his work "as simple as I can" in order to avoid possible problems. Yet by the final tasks Chris was much more likely to try a range of strategies to solve a problem himself, and would only ask the teacher as a last resort. In German, for example, he explained that he had to look up the word 'expensive' in the dictionary, because he did not know it "and couldn't think of anything else to substitute it for". It seems, therefore, that he was utilising a range of strategies to try to solve the problem independently, rather than just asking the teacher immediately.

He also increasingly engaged in monitoring the content of his writing throughout by looking back at his planning while writing, something which he admitted on several occasions to finding "really helpful". In addition,

in the final tasks he was making much more of a conscious effort to vary his language and vocabulary use. For example, he was going to include the phrase *'Netflix ist interessant'* (Netflix is interesting) in his German task, but decided to change this to *'Netflix ist sehr nützliche'* (sic) (Netflix is very useful) as he realised that he had already used the word *'interessant'*. Chris also became increasingly effective at monitoring the accuracy of his work and in noticing and self-correcting errors. This is evidenced by the decreasing number of errors made in each task, as shown in Table 8.2.

In German, the biggest improvement took place between Tasks 1 and 2, which corresponds to the explicit SBI in the FL classroom, and of particular note was his improvement in spelling. However, there was also a small improvement in the accuracy of his English writing following the first phase of the intervention, which may suggest some transfer of monitoring strategies from the FL. Yet the biggest change for Chris took place in English following Phase B, which highlights the importance of explicit instruction and scaffolding for Chris in the development of his strategy use.

Table 8.1 Comments about "thinking" in the FL and L1 classroom.

Student	Foreign Languages	English
A	"You normally have to keep thinking what you need to write and how to spell it and things"	"I can just write more naturally"
B	"I think like, when you're doing [. . .] German you're thinking more about the, like, the words"	"you don't have to think about it as much, cause like, you already know it"
C	"in German I concentrate and I make sure that it makes sense"	"in English I don't really have to think about it cause I've been doing it for like, 10 years"
D	"in German like, I don't know the whole language so I have to like . . . think about it more than I do in English"	–
E	–	"I don't need to think about it as long as I do with German"
F	"I use more adjectives [. . .] than I do in English . . . because I'm thinking more about it"	"that's your born language so you know all the words"

Table 8.2 Average number of uncorrected errors (per 100 words).

	Point 1	Point 2	Point 3
German	17	10	7
English	7.5	5	3

Evaluation Strategies

Checking over his work was something that Chris said that he engaged in from the beginning in all subjects, yet he placed much more importance on this in English. This was in line with general class trends:

> In English I check much more . . . I think it's cause it's our main language so, and English they say is quite an important subject for you to have, so I see that as more important than checking over in German, although I do, I would check it over, I just wouldn't check it over as much as I would in English.
>
> (Interview 1)

However, his approach to checking over his work evolved over the course of the year. In the first set of tasks in all subjects he waited until the end to check, but for the second and third German tasks he checked as he went along. It was not until the final task, however, that he changed his approach in English, and instead of waiting until the end as he did for the first two, he checked both as he went along and again at the end.

The focus of his checking also evolved over the year. In the first tasks his prevailing concern in both languages was with surface level accuracy and correcting "silly mistakes" and in English also with the factual correctness of his writing. Yet over time this became much more focused and he began to increasingly check back to his plan to ensure he had included all the main points and taken on board feedback from previous tasks. In German, for example, he specifically checked his 'because' sentences, as he said that in his previous task he had "lost marks from not doing a sentence structure right", while in English he looked for "the sort of words that I'd spelt wrong before".

For German from Task 2 onwards and in English at Task 3 these changes in approach corresponded to a reduction in the errors being made, suggesting that his approach to checking his work was indeed becoming more effective over time. However, this highlights once again that, for Chris, the explicit phases of the SBI were instrumental in encouraging him to experiment with his strategy use. Similarly, he also attached increasing importance to the checking process and following the second German task he commented that "once I've checked it over then usually I get a better mark than when I haven't checked it over". For Chris, therefore, the correlation between strategy use and achievement was very explicit.

Cross-Linguistic Transfer of Strategies

Given the difference in Chris' approaches to writing in English and the FL at the beginning of the study, it seems as though he was not necessarily transferring his pre-existing L1 writing strategies automatically to German.

Yet it seems fair to say that the intervention of SBI not only helped him to develop his metacognitive writing strategies over time, but also to transfer them between the FL and L1. For Chris, the most notable changes in his strategy development took place in German after Phase A of the intervention and in English following Phase B. In comparison to some of the more 'strategic' writers in the class, he seemed therefore to rely more heavily on the explicit instruction and scaffolding provided by the teacher, especially towards the beginning of the year.

However, even though the majority of changes in each subject took place following the explicit SBI, there was also some evidence that he was beginning to transfer some strategies from German to English following the first phase of the intervention, without being deliberately encouraged to do so, particularly in relation to the quality of his planning and evaluation strategies. In the interview following the second set of tasks, Chris hinted at this implicit transfer by stating:

> Well, I didn't use to do much planning but I do some now, and I didn't use to check it over in French and German but now I've started checking it over and it's started to work a lot more cause I'm getting better marks, so if I've done something and my marks have improved then I'd start to do that more. [. . .] Then I was trying some of the things out in English as well, sort of reading through afterwards to check, make sure my spellings are OK and stuff like that.
>
> (Interview 2)

This comment is particularly striking given his much higher level of linguistic proficiency in English; it seems that his experience of engaging in metacognitive strategy use in a beginner level foreign language class did, in fact, have some sort of positive effect on his English writing strategies.

While at the beginning of the year Chris seemed to conceptualise the nature of L1 and FL writing, and likewise his approaches to L1 and FL writing, as being very distinct, by the end of the year he perceived them as being much more similar and was beginning to view some aspects of writing as cross-linguistic, rather than as specific to L1 or FL contexts:

> I think they've got much closer now, doing these types of things, because you're planning more, you're using the same sort of sheets so it kind of shows you that they do relate to each other, so you can use the same things, so like reading through afterwards, checking for spelling and structures, they're all the same, they're all in French, German and in English.
>
> (Interview 3)

It is also important to consider that such converging conceptualisations of writing in the FL and L1, particularly in terms of an increasing level of

importance being attributed to metacognitive strategies related to planning and revising, may in turn have facilitated transfer between the different contexts.

Discussion

As a result of the pedagogic intervention of SBI, there is evidence that Chris developed both the quantity and quality, or effectiveness, of his strategy use. His overall development of writing strategies as a result of explicit SBI is in line with findings from other studies (see De La Paz and Graham 2002; De Silva and Graham 2015; Knospe 2018, this volume; Macaro 2001). For Chris, this was particularly evident in terms of an increased engagement in planning (in line with Knospe 2018, this volume; Nguyen and Gu 2013), an improvement in accuracy (Macaro 2001) and improved achievement (De Silva 2015; Macaro 2001). For him, the link between strategy use and achievement was very explicit; he viewed strategy use as a means to an end, with the 'end' being a higher mark. As such, he initially had a tendency to evaluate the success of the strategies he used according to the marks he received from the teacher; yet towards the end of the year Chris was beginning to show signs of developing his skills of self-evaluation more independently. In light of this, I would agree with Myhill (2006) that "we may well develop better writers not by doing more writing but by generating more thinking about writing" (6).

Following from this, it is important to remember that strategies in themselves are not inherently good or bad, but can be applied successfully or unsuccessfully (Cohen 2011; Grenfell and Harris 1999) and I would argue that the findings from the current study highlight the importance of the learners' ability to engage metacognitively with the writing task in determining the success of their development of strategies. Such a relationship between metacognition and effective strategy development has been underlined in a number of other studies (e.g. Anderson 2005; Grenfell and Macaro 2007; O'Malley and Chamot 1990) and was also evident here as Chris began to reflect on and adapt his strategy use more independently as the year progressed. Similarly, Zhang and Zhang (2013) have stated that "metacognition should be treated as dynamic systems, and it should be construed as something embedded in language learners, which is intertwined with many modifiable variables, both cognitive and sociocultural" (114). Such dynamism is effectively captured in the case of Chris; although not a particularly high achieving or strategic writer at the beginning, Chris actively developed an increasing awareness of his strategy use over time. Engaging in such metacognitive reflection was key to enabling him to develop his strategy use and become a more strategic and proficient writer over time.

Just as enabling learners to engage metacognitively with their writing is a key factor in the development of successful strategy use, it is similarly fundamental to facilitating the *transfer* of such strategies from one language

context to another. As shown above, Chris did not automatically transfer his pre-existing English strategies to his German writing at the beginning. From a transfer of learning perspective (Perkins and Salomon 1988), it may be that his initial perception of the two language contexts as being superficially distinct may have hindered him from engaging in the explicit connection making required to facilitate such transfer.

Yet while there was little evidence of L1-FL transfer at the beginning, there was some evidence of reverse FL-L1 transfer by the end, particularly in relation to the quality of planning and increase in accuracy. Such examples of FL-L1 transfer have also been detected by Berman (1994) and Kecskes and Papp (2000) in relation to essay organisation skills and use of syntactic structures respectively. As such transfer did not necessarily take place automatically, it seems that the metacognitive strategies introduced as part of the intervention played a key role in encouraging it; there was evidence in the current study that the strategy instruction in the German classroom during Phase A helped to develop both Chris' metacognitive awareness and use of writing strategies in both the FL and L1 contexts. This was facilitated further during Phase B of the study when the links between strategy use in the two language contexts were made explicit.

Conclusion

The aim of this chapter was to explore the foreign language classroom as a key context for developing metacognitive writing strategies, and the extent to which these strategies are transferred between FL and L1 classroom contexts. Through examining the strategy development and experience of one student, Chris, as he negotiated the classroom intervention, it emerged that the explicit development of metacognitive writing strategies within the FL classroom did not only benefit his FL writing tasks, but also positively affected his writing in the L1. The FL context, where the students were more explicitly aware of and engaged in their thinking when compared to the L1 classroom, provided an environment which was highly conducive to the development of such metacognitive skills. This transfer was facilitated further when the links between strategy use in the FL and L1 classrooms were made explicit. It is also important, however, to acknowledge the limitations of focusing primarily on data from just one student. Due to the case study approach adopted here, the findings presented can only be seen as reflective of this particular student in this particular context and therefore cannot be generalised. It is also important to recognise that due to the mentalistic nature of metacognition and strategic thought processes it was necessary to rely heavily on self-report data; as such, data collected can only be considered as students' own *perceptions* of their strategy use. However, it is hoped that the in-depth analysis conducted here will shed some light on the potential of the FL classroom for developing important transferable skills related to language more generally.

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9 Validating a Questionnaire on EFL Writers' Metacognitive Awareness of Writing Strategies in Multimedia Environments

Lawrence Jun Zhang and Tony Limin Qin

Introduction

With technological advances and infrastructure developments in this era, multimedia, including Internet technology, has been widely used in language teaching and learning. In the field of second/foreign language education, despite "the seemingly formidable task of academic writing" (Wei, Chen, and Adawu 2014, 60), recent years have witnessed the impact of computers as well as other digital devices on second/foreign language learners' writing development. On the one hand, multimedia tools bring great convenience to language learners in many aspects, and this means that learners can do automatic spelling and grammar checks, edit and revise their texts and search for online resources, among many other tasks. On the other hand, the increasing complexity of the multimedia contexts to which learners have access also leads to increasingly heavy cognitive load in their efforts to deal with multitudes of interactions in order to learn effectively. Such situations require that learners in this era be fully ready for meeting these challenges.

Azevedo (2009) posited that learners in contemporary learning environments may face added challenges arising from the use of multimedia tools. Successful learning, therefore, needs to involve "the use of numerous self-regulatory processes such as planning, knowledge activation, metacognitive monitoring and regulation, and reflection" (87). While the most available research in the field of second/foreign language education has investigated the beneficial effects of multimedia tools or increases in students' metacognitive awareness on their writing production independently, relatively few studies have focused on the relationships between students' metacognitive awareness of their EFL writing processes and their multimedia use; nor has any substantial study reported on the effects of students' metacognitive awareness and multimedia use on their EFL writing. Given the significant role of digital media in the learning of writing for language learners, there is an urgent need to investigate this intersection, especially in relation to Chinese EFL learners in universities (Wei, Chen, and Adawu 2014).

Understandably, recent years have seen an upsurge in the number of students with access to laptops and other digital devices for practising EFL

writing in Chinese universities. Teachers have also shown their enthusiasm for incorporating multimedia elements into their instructional practices in the classroom and beyond. However, despite the fact that digital media have been widely adopted as a tool for language teaching and learning, research has documented students' unfavourable perceptions of and attitudes towards multimedia-mediated contexts for learning EFL writing. Mind wandering (Xiao 2011), intensely cognitive overloading and a lack of technological skills (Xiong 2011) are just some aspects which might result in students developing poor EFL writing proficiency (Qin 2009; Yang 2016). It is believed that much of the ineffectiveness may lie in learners' lack of metacognition about EFL writing processes, a key aspect of which is their metacognitive knowledge about writing strategies. In the field of general psychology as well as educational psychology, metacognition has been well recognised as a crucial factor in affecting learner success (see, for example, Azevedo 2009; Elzarka et al. 2015; Flavell 1976, 1979). Its importance has also been widely supported by research in the field of second/foreign language education (see, for example, Ong 2014; Wenden 2002; Zhang 2010, 2016a; Zhang and Zhang 2013). Given the sheer size of China as well as the fact that the country is claimed to have the largest number of EFL learners (Zhang 2016b), it is imperative that Chinese EFL learners' metacognitive knowledge about writing strategies in multimedia-mediated environments be understood. To this end, we attempt to conceptualise, develop and validate a new questionnaire framed within metacognitive theory to evaluate Chinese EFL student writers' perceived use of metacognitive writing strategies.

Literature Review

The Role of Learner Metacognition in L2 Writing Strategy Research

A review of research in the field of educational psychology shows that the construct of metacognition has its origin in research on human cognitive development. So far, the literature has offered a myriad of definitions of the term, but as Zhang (2010) has noted, the core elements of metacognition still basically pertain to those of the American psychologist, John Flavell, who conceptualised the term with two dimensions through publications appearing in the late 1960s and early 1970s. In his well-refined framework, Flavell (1979) expounded that metacognition encompasses not only learners' knowledge about cognitive states and processes but also their control or execution. In relation to L2/EFL learning, Zhang (2010, 2013, 2016a) has resorted to scholars in the field of educational psychology (Azevedo 2009; Flavell 1979) and concurred with them that the control or executive aspects of metacognition are concerned with learners' metacognitive strategies or regulation in learning a second/foreign language, which

involve their conscious monitoring of their cognitive processes to achieve specific goals. Learners' metacognitive awareness of strategy use enables them to participate actively in planning for learning tasks, monitoring their own learning processes and evaluating the utility and effectiveness of their strategies. This process manifests the dynamism of learners' metacognitive knowledge systems (Zhang 2010). Most often in metacognitive strategy research pertinent to L2 language learning development, Wenden's (1987, 1998, 1999) contribution has been widely recognised. Working within Flavell's (1979) model, Wenden developed a tripartite model of metacognition to assist in the understanding of students' metacognitive processing during L2 learning. Her model includes planning learning activities with one or more learning objectives in mind prior to learning, monitoring the learning process during learning, and evaluating the learning process after learning activities, highlighting the significant central role that learners' metacognition plays in L2 language development. Researchers have since adopted this classification and studied the three major variables in a more refined way towards obtaining a better understanding of learners' metacognitive processes in various language skill development, such as listening (Goh and Hu 2014), reading (Zhang 2010) and writing (Ruan 2014; Teng and Zhang 2016).

Since the time when writing began to be viewed as a process rather than merely a product, close attention has been given to the role of writing strategies in improving L2/EFL writing abilities in the field of second language education (Byrnes and Manchón 2014; Cohen 2011; Cumming 2001; Grabe and Kaplan 1996; Hinkel 2011; Hyland 2015). Because of the absence of an agreed-upon definition of what a language learning strategy is (Cohen and Griffiths 2015; Manchón, De Larios and Murphy 2007; Oxford 2017), metacognition, as a crucial factor in relation to self-regulated learning when planning and executing learner development programmes, has emerged as an important area of academic and pedagogical inquiry in L2/EFL writing (Zhang 2016a; Zhang and Zhang 2018). This scientific inquiry has produced ample research evidence on the critical role of metacognition in L2/EFL writing (De Silva and Graham 2015; Ruan 2014; Teng and Zhang 2016; Victori 1999; Wenden 1998). For example, Victori (1999) investigated the metacognitive processes of two effective and two less effective learners learning EFL writing. The findings show that there were substantial differences between the two effective and two less effective learners. Typically, these differences played out in their use of metacognitive strategies for planning, organising, evaluating and resourcing. De Silva and Graham's (2015) research produced evidence that supported their argument for effective metacognitive strategy-based intervention to guide language learners to make more effective use of metacognitive strategies across language proficiency levels in order to achieve their writing goals. Furthermore, within L2/EFL writing strategy research, more broadly considered, many studies have been undertaken to emphasise the importance of L2/EFL writers' metacognitive control over

successful orchestration of strategy deployment in computer-based learning environments (see, for example, An and Cao 2014; Graham and Perin 2007; Wei, Chen, and Adawu 2014). For example, evidence from Wei, Chen, and Adawu's (2014) study suggested that explicit metacognitive strategy-based instruction supported by multimedia technology during the administration of an L2 writing course helped beginning-level ESL students become better strategy users and more efficient L2 writers.

Increasingly, computer technology has become an essential component in education. Recent research evidence also suggests the significant influence of learners' metacognitive processes on their learning outcomes in computer-assisted learning environments (see Azevedo and Aleven 2013). As Azevedo and Aleven (2013) posited, "a deep understanding of the relations between self-regulation, metacognition, the design of the learning environment, and learning outcomes is therefore highly desirable from both a scientific and a practical perspective" (4). This is because learners' metacognition impacts their academic success in many ways, most of which have also been manifested in multimedia-mediated learning environments. For the purpose of our study, we used Wenden's tripartite model of metacognition as our theoretical framework in developing a questionnaire to investigate EFL learners' knowledge or awareness of the processes involved in L2 writing in multimedia environments. In doing so, we intended to establish a theory—practice nexus, drawing on empirical data, in the hope that L2 writing pedagogy could be better designed to cater to learner needs in an EFL context.

The Multimedia Context in EFL Learning in China

Although "China has the world's largest educational system with the largest number of learners of English" (Jin and Cortazzi 2006, 5; see also Zhang 2016b), learning EFL presents unique contextual challenges. Given its lack of authentic and meaningful practice opportunities outside of the foreign language classroom, English teaching and learning have always been one of the weakest links in the Chinese educational system, despite English being listed as a major subject from primary school onwards. In universities, the teaching of English to non-English majors is facilitated through College English (CE), a compulsory two-year course offered to hundreds of millions of university students. As of 2015, there were about 60,000 Chinese English teachers teaching CE to an estimated 26,000,000 undergraduates in 2,560 regular higher education institutions (Department of Higher Education of the Chinese Ministry of Education 2016). Due to the sheer number of university students required to take this course, English teaching and learning have always been the target of scrutiny in many academic as well as public forums. As a result, some critics have posited that "despite the great time and effort from both teachers and students, the average Chinese learners are still far from being skilled in English reading, speaking, listening or writing" (Hao and Yin 2015, 78).

In 2007, educational policy-makers in China initiated an intensive top-down reform. With the rapid development of computers and technological network applications in teaching and learning, the reform has a mandate for integrating multimedia technology into the English-teaching curriculum in classrooms. Pedagogical improvements through the use of technologies are expected to enhance the effective teaching and learning of English in Chinese universities. Following the new trend towards extensive applications of multimedia technologies, Chinese scholars have also shown a growing interest in Chinese EFL students' language learning strategies used in multimedia environments (see, for example, Chen 2016). Our review of the literature provides evidence of the beneficial effects of the role of multimedia technology support and the use of metacognitive strategies on EFL writing score gains. For example, Qiu (2014) reported that a new Internet-based read-write teaching method he had implemented had a more positive effect on the syntactic complexity of students' EFL writing than the traditional classroom training approach. He suggested that there was a need to utilise such technological tools to enrich students' learning experiences and facilitate their language learning strategies in order to produce positive language learning outcomes.

However, with specific reference to the metacognitive strategies that language learners use in multimedia-assisted EFL writing, with very few exceptions (see, for example, Chen 2016; Ma 2010), little research has been undertaken to investigate systematically how Chinese EFL learners orchestrate their metacognitive awareness about writing in multimedia environments and how such awareness would enhance their writing performance. Although a small body of literature directly indicates the important role of metacognition in helping solve the writing problems that Chinese EFL learners encounter when they write in multimedia environments, these reports are either successive assertions/iterations that lack empirical support (see, for example, Shang 2013) or investigations into the functions of different types of new technologies (such as emails, microblogs, Facebook, automated-writing-evaluation platforms) in facilitating EFL writing development. Such research studies offer extremely limited constructive and integrative insights into EFL learners' complex learning processes. Apparently, the amount of research on EFL writing learners in China is insufficient, which is disproportionate given that China boasts the largest number of EFL learners.

Fortunately, recent research interests have moved beyond the examination of mental processes to consider technologies used by second/foreign learners while they are writing. A closer examination of previous studies has revealed that the interaction between writers and external writing support is significant; yet these intricate relationships have not been fully explored, especially from a metacognitive perspective. Barr (2008) argued that even though "students [who are growing up in today's modern technological society] may be very computer literate, they do not necessarily know how to use computers for language learning" (108). This may cause the inefficient

use of multimedia tools, such as endlessly searching web sources. Therefore, there is a need to better understand the complex nature of EFL writers' metacognitive processes during writing in multimedia environments for improving their writing performance.

Theoretical Framework for the Study

As writing increasingly occurs through the medium of computers in modern Chinese universities, it is worth identifying the distinctive ways in which students shape/reshape their writing strategies in multimedia environments. As an attempt to categorise and advance the plethora of established L2 writing models, we decided to investigate Chinese EFL learners' reported writing strategies in accordance with Wenden's (1998) metacognitive framework in the field of second language acquisition (SLA), which was briefly described at the beginning of this chapter. Specifically, we focus on metacognitive strategies, which are a significant component of her theoretical framework. The reasons for this focus are two-fold: First, a student with strong metacognitive awareness consciously undergoes planning and monitoring processes. He or she also reflects on the writing process, following a general chronological sequence when performing a writing task, whether it is in a traditional pen-and-paper writing context or in a computer-assisted writing environment. Such metacognitive awareness necessarily includes "the complex interaction of mediating cognitive, metacognitive, and social processes involved in students' learning of complex topics and domains" (Azevedo 2010, 193); second, such a metacognitive strategy framework is necessary when we need to consider not only variables of metacognitive language learning strategies (LLS), but also variables of the classroom learning environment and the interaction between writers and multimedia tools.

More specifically, there are three writing stages in which the EFL learner-writer writes in the multimedia environment. First, before writing, a writer with strong metacognitive awareness may make some necessary preparations in advance, such as planning the structure of the writing task, setting meaningful goals, or allocating appropriate writing time (Ong and Zhang 2013). Second, during writing, the writer may monitor the writing process, assess particular strategies to ensure that the writing goals will be achieved, or make some adjustments. Third, after writing, the writer may perform self-evaluation about the written product, evaluate his or her writing strategies, or rethink other aspects of the writing context that may impact the quality of his/her product. Built upon Wenden's (1998) metacognitive strategy framework in the field of SLA and Azevedo's (2010) emphasis on the importance of metacognition in multimedia learning environments, our study aimed to develop a questionnaire for tapping into Chinese EFL learners' metacognitive awareness of writing strategies when they are supported by multimedia technology.

The Current Study

Participants

A total of 400 year-two Chinese EFL students from an Eastern Chinese university were invited to respond to the Questionnaire on Language Learners' Metacognitive Writing Strategies in Multimedia Environments (LLM-WSIME), which will be described in some detail in the next section. Because year-two students had been invited by their English teachers to participate in an experimental teaching reform, in which they were required to write English compositions in multimedia environments, all the participants had some experience in multimedia-mediated English writing. The questionnaire was also administered with the deliberate purpose of maintaining a rough balance of arts and science student numbers. Our data cleaning resulted in 378 valid questionnaires for statistical analysis. Altogether, there were 156 male (41.27%) and 222 female (58.73%) participants. Their ages ranged from 19 to 22, with an average age of 20.53 (M = 20.53, SD = 1.86). Table 9.1 illustrates the participants' background information.

Table 9.1 Background information of the participants.

Majors	N	Percent (%)
Physics	69	18.25
Maths	39	10.32
Fine Arts	20	5.29
Education	66	17.46
Economics	26	6.88
Civil Engineering	95	25.13
Electric Engineering	63	16.67

Development and Validation of the LLMWSIME

Questionnaire Development

Given that there were no existing questionnaires that directly assessed EFL learners' metacognitive awareness about strategy use in writing in multimedia environments, we developed a 23-item writing strategies survey, the Questionnaire on Language Learners' Metacognitive Writing Strategies in Multimedia Environments (LLMWSIME), as mentioned above. The LLMWSIME included two parts: participants' demographic information, and their beliefs and views on L2 writing strategies in multimedia environments (Appendix A). The LLMWSIME drew upon a variety of sources (Amani 2014; Flavell 1979; Tsai 2009; Wenden 1998). Informed by Flavell's (1979) theoretical taxonomies, Wenden (1998) proposed three essential metacognitive regulation strategies: planning, monitoring and evaluating as the basic

forms of metacognitive strategies in L2 writing. Given that Wenden's tri-partite metacognitive strategy framework has been one of the most cited frameworks with respect to second/foreign language acquisition, our study also focused on these three dimensions to examine the challenges that Chinese EFL learners encounter when learning EFL writing in multimedia environments.

In creating the questionnaire items, we also consulted a few existing questionnaires aimed at investigating either language learners' general strategy use (see, for example, Amani 2014; Tsai 2009) or listening (Vandergrift et al. 2006; Zhang and Goh 2006). Among them, Amani's (2014) 20-item Metacognitive Strategy Questionnaire (MSQ) was the most relevant to our research. Taking into account teaching and situational suitability, 16 questions were substantively adopted for use in our study. Considering the contextual differences, some questions were rephrased to cater to multimedia environments. For example, statement No. 10 was "when I was writing, I tried to think about whether I was spelling some words correctly". Considering that writing occurs through the medium of computers in our study and that the auto-correcting of spelling errors is a feature commonly included in word processors, the question was adapted into a new question which represented our research focus: "when I was writing, I tried to focus my attention on choosing appropriate words and phrases" (Question 8).

In addition, drawing on the questionnaire devised by Tsai (2009) on metacognitive strategy use in the e-learning environment, we also considered some of his questions for inclusion in our questionnaire (Questions 4, 6, 7, 10 and 19). The final 23-item, 6-point Likert scale writing strategy questionnaire, the LLMWSIME, was generated.

All 23 questions are statements concerning EFL learners' writing processes when they are undertaking writing tasks; that is, before, during and after their actual writing activities. It needs to be pointed out, however, that a number of these writing strategies are not restricted to EFL writing in multimedia environments. They are both useful to EFL students writing with any digital device and EFL students writing on paper. The first seven questions relate specifically to planning strategies, with the next 12 questions related to monitoring strategies, and the next four questions related to evaluating strategies. Under each statement, there are six options on a Likert scale (1, 2, 3, 4, 5 and 6): 1 indicates strong disagreement, 2 indicates disagreement, 3 indicates slight disagreement, 4 indicates partial agreement, 5 indicates agreement and 6 indicates strong agreement. Given that participants from Asian cultures, such as Chinese, Korean and Japanese, tend to select the midpoint of a Likert scale more frequently than participants from Western cultures (Brown 2004), we designed the LLMWSIME on such a 6-point Likert scale to prevent participants from selecting the midpoint (neither disagree nor agree). In addition, given that all the participants were L1 Chinese speakers, we adopted the Chinese version of the questionnaire to ensure that each item could be easily and fully understood.

An internal reliability test of the LLMWSIME items showed that the Cronbach's alpha values for the strategy survey of each subscale were all above the .80 threshold value based on the sample size (Planning: α = .91; Monitoring: α = .94; Evaluating: α = .88), which is in agreement with the internal consistency reliability statistic recommended by Cronbach (1951). This ensured that the LLMWSIME was a reliable instrument.

Data Analysis

The data collected through the LLMWSIME were subjected to confirmatory factor analyses (CFAs) through structural equation modelling (SEM) in order to examine the structure, function and essence of metacognitive strategies. CFA is a standard statistical technique for testing a theoretical model (Kline 2015). In this study, the maximum likelihood (ML) estimation method was used to evaluate three hypothesised models. The results from CFAs provided empirical evidence for the validity of the one-factor, second-order metacognitive strategy awareness inventory, as reported next.

Given the sensitivity of CFAs to missing values and outliners, the data were scrutinised to ensure that there were no such values among the 378 valid respondents. Following Kline (2015), we subjected our data to several essential omnibus fit statistical analyses to evaluate the model fit, including the Chi-square test (χ^2/df ratio), the root mean square error of approximation (RMSEA), the goodness of fit index (GFI), the comparative fit index (CFI) and the standardised root mean square residual (SRMR). Table 9.2 shows the benchmarks of each fit index to indicate an acceptable model fit.

The LLMWSIME Results

Descriptive Statistics

Descriptive statistical analyses showed that the mean scores of the 23 items ranged from 3.23 to 4.27 with standard deviations ranging from 1.072 to 1.318. The values for skewness were between –.291 and .183, while the values for kurtosis were between –.718 and –.157. These were far less than the cut-off values of |3| and |8| for skewness and kurtosis, respectively. This is one of the most important prerequisites for factor analysis. The initial data computation also revealed that the data demonstrated homogeneity of variance and satisfied the assumption of linearity. All of these computations

Table 9.2 Critical values of goodness-of-fit indices.

χ^2/df	RMSEA	SRMR	GFI	CFI
< 3.0	< .06	< .08	> .90	> .90

ensured that the requirement of normality for CFA was satisfied. Appendix B provides the detailed descriptive statistics of the multimedia-mediated EFL writers' metacognitive strategy scale.

Evaluating a Three-Factor Correlated Model of EFL Writers' Strategies for Metacognition

Regarding the empirical results from a series of CFAs, comparisons of plausible models are often highly recommended (Kline 2015). In our study, three model comparisons were evaluated by resorting to the values mentioned above. The first was a three-factor uncorrelated model (*Model 1*); the second was a three-factor, second-order correlated model (*Model 2*); and the third was a 1-higher-order factor with 3-second-order subcategories correlated model (*Model 3*). The results of the first round CFA (χ^2 = 1098.47; df = 370; p < .001; χ^2/df = 2.968; RMSEA = .10; SRMR = .096; GFI = .887; CFI = .844) suggested that these model fit indices were not satisfactory (*Model 1*). We then attempted to add additional paths to improve the overall model fit, suggesting some correlations among the three subcategories. However, the second-round results (χ^2 = 398.07; df = 211; p < .001; χ^2/df = 1.887; RMSEA = .058; SRMR = .087; GFI = .877; CFI = .891) were still not completely satisfactory (*Model 2*).

Given the cross-loadings of the three subcategories, the CFA was rerun on a further hypothesised model (*Model 3*). The results indicated a single common factor, metacognitive strategies, as a higher order, which was able to account for the three subcategories. The results of the fit indices for this modified model showed improved fit, and all indices reached the appropriate cut-off levels (χ^2 = 323.630; df = 157; p < .001; χ^2/df = 2.061; RMSEA = .054; SRMR = .049; GFI = .996; CFI = .953). Therefore, this one-factor, second-order model was retained as the final model (see Figure 9.1).

Discussion

The primary purpose of this study was to develop and validate a questionnaire for measuring EFL writers' metacognitive awareness of writing strategies when they were writing in multimedia environments. To this end, we developed and validated the LLMWSIME. The CFAs on the 23-item questionnaire produced a three-factor solution in terms of planning, monitoring and evaluating. The model was then constructed and illustrated by the three core domains of metacognitive awareness of writing strategies. As revealed in the results, students' metacognitive awareness was orchestrated through a repertoire of general and specific writing strategies that they knew for tackling EFL writing tasks with the assistance of multimedia tools. Those strategies were further divided into three types—namely, metacognitive planning, metacognitive monitoring and metacognitive evaluating. All three subcategories clustered under a single common latent factor, which was sufficient enough to account for the three subcategories. In reference
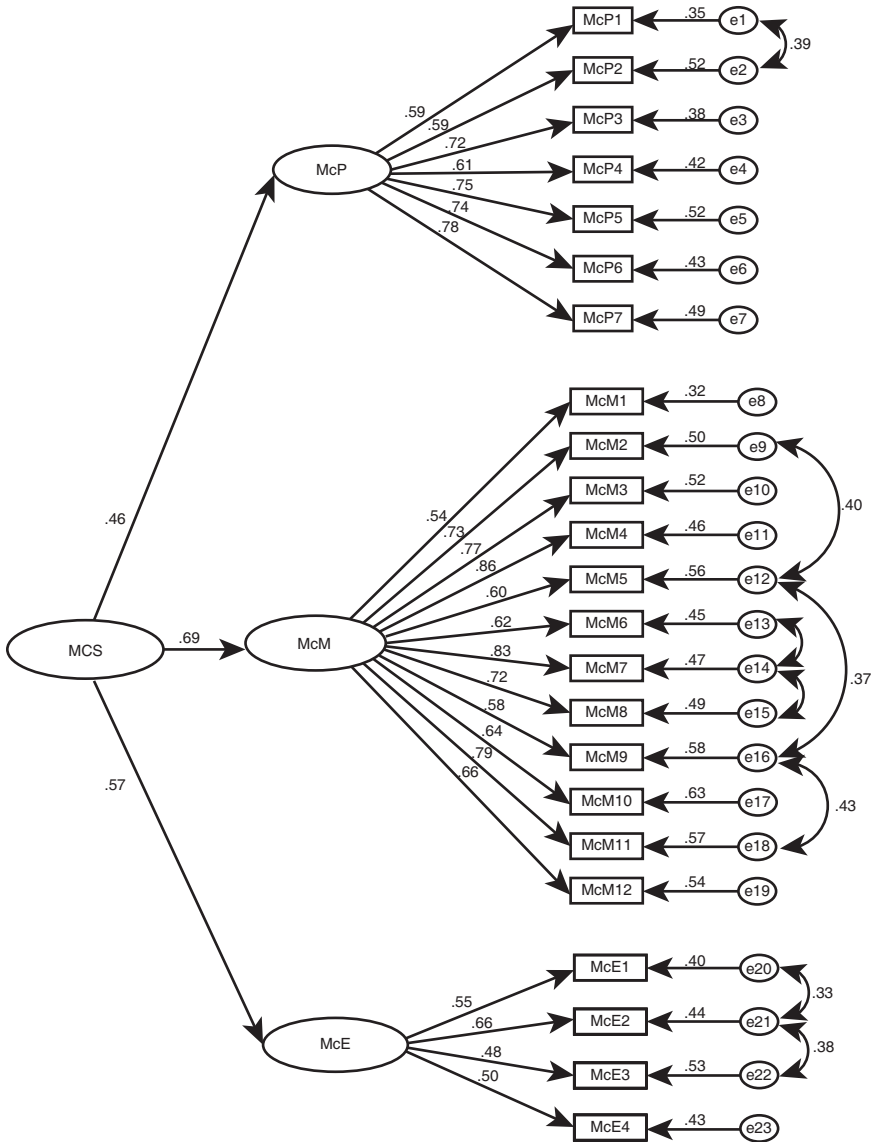
Figure 9.1 One-factor, second-order model of EFL multimedia-mediated writing strategies (*N* = 378).

Note. MCS = Metacognitive Strategies; McP = Metacognitive Planning; McM = Metacognitive Monitoring; McE = Metacognitive Evaluating.

to the metacognitive theoretical framework presented in this chapter, we think that this factor fell nicely into the category of metacognitive strategies. Given the additional paths to the SEM (*Model 3*), which indicated the close correlations among different specific writing strategies, the detailed components can be summarised as follows:

The first factor (planning) was composed of six writing strategies: global discourse planning (Item 1 and 2), local lexical planning (Item 3), goal setting (Item 4), time management (Item 5), reading preparation (Item 6) and online planning (Item 7). In examining these six strategies, we found that Chinese EFL learners tended to plan ahead and organise their thoughts and materials to ensure a good foundation for producing an effective piece of writing. Understandably, this is particularly important in learning EFL writing in multimedia environments. In complex multimedia learning environments, learners tend to enjoy a high-level of autonomy in accessing online learning materials. Those who are well-prepared would normally be the ones with strong metacognitive awareness about their writing and clear goals to complete their writing tasks. The use of these strategies in this study corroborates these observations. Additionally, our results as shown by the participants above also lend support to findings from previous studies, which focused on the functions of guided planning regardless of differences in writing contexts or environments (e.g. paper-and-pen writing or computer-aided writing; L1 writing or L2 writing) (Adams et al. 2014; Amani 2014; Ellis and Yuan 2004; Ong and Zhang 2013).

The second factor (monitoring) included seven writing strategies, such as selective attention to lexis (Item 8), textual-level processing (Items 9, 12, 16 and 18), lexical-level processing (Items 13, 14 and 15), marking and alerting (Item 10), time adjustment (Item 11), dictionary use (Item 17) and self-regulation from distraction (Item 19). Such a pattern of reported use of strategies indicates that Chinese university EFL learners tended to use multiple strategies to metacognitively manage their writing processes in completing writing tasks by resorting to multimedia tools. This echoes findings of prior research on the role of monitoring in sustaining or increasing L2 writing efforts (see, for example, Tsai 2009), suggesting that there are a set of complex and efficient interactions between L2 writing processes and multimedia-supported learning environments.

The third factor (evaluating) contained two writing strategies: (1) self-assessment of language use related to writing quality (Item 20), organisation (Item 21) and content (Item 22), and (2) self-reflection on writing for future development (Item 23). Previous research (see, for example, Travers, Morisano, and Locke 2015) has addressed the ability of self-reflection as a core motivation to improve learning outcomes. However, such an ability was often absent among many EFL learners at Chinese universities. Chinese scholars such as Cai (2011) pointed out that Chinese university EFL learners' awareness of assessment was heavily dependent upon their teachers' feedback and that they themselves needed to be self-reflective of their learning, which is an important component of learner metacognition. With the

increasing use of multimedia tools in EFL classrooms in China, our study found that the use of evaluating strategies was a significant feature shared by these participants, who used multimedia tools in writing. These strategies clustered around the third factor, and students' reported use of this cluster of strategies might help them boost their willingness to be self-reflective in their learning of EFL writing. We can speculate that as they become more consciously aware of how to reflect on the work they have just done, they will probably use these processes more flexibly to efficiently improve the quality of their writing as well as language proficiency; and consequently, they will become more independent writers. The existence of such a factor may offer further insights into the role of students' metacognitive awareness of helpful strategies, such as self-evaluation and self-reflection in expediting students' learning of EFL writing in university settings, which are well-equipped with modern technology for facilitating language learning and teaching.

Conclusion

The study was designed to investigate Chinese EFL learners' metacognitive awareness of writing strategies in multimedia environments through the development of a new survey instrument, the LLMWSIME. In line with the theoretical understanding of L2 writing processes, the data collected through the LLMWSIME resulted in a three-factor metacognitive structure, which included advanced planning before writing, elaborate monitoring during writing and prompt evaluating after writing. The LLMWSIME developed based on this three-factor model was also proven to be robust, with good construct validity and reliability.

Given that the LLMWSIME appears to be a reliable diagnostic instrument, methodologically, we believe there is potential for its use by other researchers in similar contexts around the world who are interested in investigating EFL writers' awareness, or reported use, of writing strategies in multimedia-supported learning environments. Our findings also have pedagogical implications for multimedia-supported language teaching and learning, especially EFL writing in similar contexts. Given the complexity of multimedia teaching and learning by virtue of abundant online resources, how EFL teachers and learners handle their own teaching and learning in interaction with multimedia tools to facilitate writing improvement has always been an important issue. The existence of the three factors as discussed above suggests that Chinese EFL students have developed an extensive metacognitive knowledge of writing strategies and have understood how to deploy them in their writing process more flexibly in multimedia environments. From the perspectives of teaching and learning, it might be more enlightening for teachers to implement a metacognitively oriented pedagogy to promote EFL learners' strategy use. As a first step, teachers may need to raise EFL learners' metacognitive awareness through modelling specific metacognitive strategies that involve EFL students in planning, monitoring and evaluating their own writing, which will in turn strengthen their competence to achieve

advanced-level writing abilities in the long run (Elzarka et al. 2015; Hinkel 2011; Zhang 2016a).

The questionnaire-based study is not exempt from limitations. First, for a questionnaire-based study, our sample size was rather small. This prevents the generalizability of our findings to other populations, such as younger students or students who are reluctant to use computers for EFL writing. A future study with a large sample size is therefore recommended. Second, the measurement of students' awareness of metacognitive strategies was based on self-reported data. Using the LLMWSIME as the sole source of data may fail to provide multi-faceted information. A future study with multiple methods for data collection (e.g. interviews, think-aloud, student reflection journals, among others) would compensate for this shortcoming (see Forbes 2018, this volume; Knospe 2018, this volume, for examples of other methodological approaches to investigating learners' metacognition about writing). Also, some issues related to individual differences (e.g. gender, different English proficiency levels, different electronic literacies, or different social-cultural contexts) were not taken into consideration. Further studies into the role of these factors would be worthwhile.

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Appendix A

Part One: Questionnaire about Yourself

1. Are you a □ male or □ female?
2. How old are you? _____
3. What is your major? _____
4. Where are you from? (Please select)

   □ East China   □ Central China □ Northeast China □ North China
   □ Northwest China □ South China   □ Southwest China

**Part Two: The Questionnaire on Language Learners'
Metacognitive Writing Strategies in Multimedia
Environments (*LLMWSIME*)**

Directions

*Listed below are statements about what you may or may not do when you
are engaged in multimedia-mediated writing in English. After reading each
statement, think about your own experience and then please show how much
you agree or disagree with these statements in your own writing task by tick-
ing the number that matches your answer. The numbers mean the following:*

1= strongly disagree
2= disagree
3= slightly disagree
4= partly agree
5= agree
6= strongly agree

Before I started writing in the multimedia environment,

No.	To what extent do you agree with the following statements?	Please tick (√)
1	I had a plan in my mind for how I was going to structure each paragraph in my essay.	1 2 3 4 5 6

No.	*To what extent do you agree with the following statements?*	*Please tick (√)*
2	I made an outline, including a list of the key points of views that I want to include in my essay.	1 2 3 4 5 6
3	I planned what language features I was going to use in my essay with reference to the writing topic.	1 2 3 4 5 6
4	I thought about the goal I wanted to achieve in my writing (e.g. to use a new word or a new sentence structure I have learned, to avoid a mistake I had made before, or to get a high score, etc.).	1 2 3 4 5 6
5	I thought about how much time I should spend on each part of the essay.	1 2 3 4 5 6
6	I collected relevant materials based on the writing topic, doing some reading preparation.	1 2 3 4 5 6
7	I planned the use of online materials, aiming at the efficient use of network resources.	1 2 3 4 5 6

When I was writing in the multimedia environment,

No.	*To what extent do you agree with the following statements?*	*Please tick (√)*
8	I tried to focus my attention on choosing appropriate words and phrases.	1 2 3 4 5 6
9	I tried to think about whether the arguments followed the instruction of the essay.	1 2 3 4 5 6
10	I tried to mark the places in the composition with different colours on the computer screen that I thought required revision. I wouldn't revise them until I had completed my writing because I wouldn't like to break into my thoughts.	1 2 3 4 5 6
11	I tried to think about how much time I had remaining, adjusting my time arrangements to ensure completion of the writing task.	1 2 3 4 5 6
12	I tried to think about how to connect different parts of my essay (e.g. using transitional words).	1 2 3 4 5 6
13	I tried to think about whether I was using the correct grammar (e.g. tenses, prepositions, etc.).	1 2 3 4 5 6
14	I tried to think about whether I was using appropriate punctuation as well as the letter case.	1 2 3 4 5 6
15	I tried to modify the mistakes, following the prompts on the computer screen.	1 2 3 4 5 6
16	I tried to think about how many arguments I should have in the essay.	1 2 3 4 5 6
17	I tried to seek help from an online dictionary if I did not know how to express my own opinions.	1 2 3 4 5 6
18	I tried to think about what parts my essay should have.	1 2 3 4 5 6
19	I tried to monitor my writing actively, focusing my attention on the current writing task to avoid being distracted by other irrelevant information.	1 2 3 4 5 6

After I finished writing in the multimedia environment,

No.	*To what extent do you agree with the following statements?*	*Please tick (√)*
20	I reread my essay and made sure that the language of my essay was clear.	1 2 3 4 5 6
21	I reread my essay and made sure that the organisation was easy to follow.	1 2 3 4 5 6
22	I reread my essay and made sure that I had covered the content fully before I submitted to my teacher.	1 2 3 4 5 6
23	I thought back to how I write, and about what I might do differently to improve my English writing next time.	1 2 3 4 5 6

Appendix B

Descriptive Analysis of the EFL Writer Metacognitive Strategy Scale (23 items)

Metacognitive Strategies	Items	Mean	SD	Skewness	Kurtosis
Planning	Q1: Planning the paragraph structure	4.25	1.318	−.183	−.585
	Q2: Planning to make an outline	4.05	1.315	−.107	−.611
	Q3: Planning language features	3.91	1.202	−.163	−.538
	Q4: Setting up goals	3.99	1.207	−.246	−.292
	Q5: Planning time allocation	3.92	1.205	−.215	−.255
	Q6: Planning to do reading preparation	3.23	1.072	−.129	−.646
	Q7: Planning efficient use of online resources	3.88	1.209	.168	−.591
Monitoring	Q8: Self-monitoring on choosing words and phrases carefully	4.03	1.188	−.249	−.157
	Q9: Self-monitoring on writing topic development	3.81	1.207	−.203	−.666
	Q10: Self-monitoring on making revising decisions	3.28	1.177	−.201	−.521
	Q11: Self-monitoring on time arrangement	3.99	1.270	−.201	−.226
	Q12: Self-monitoring on coherence	4.05	1.167	−.248	−.255
	Q13: Self-monitoring on grammar	3.96	1.186	−.291	−.238
	Q14: Self-monitoring on cosmetic language problems	3.28	1.212	.183	−.534
	Q15: Self-monitoring on revision	3.95	1.239	−.249	−.444
	Q16: Self-monitoring on contents	4.22	1.167	−.218	−.284
	Q17: Self-monitoring on seeking help	3.98	1.208	−.281	−.462
	Q18: Self-monitoring on organisation	3.41	1.299	.124	−.684
	Q19: Self-monitoring on avoiding distractions	3.87	1.265	−.069	−.718

Metacognitive Strategies	Items	Mean	SD	Skewness	Kurtosis
Evaluating	Q20: Self-evaluating the language	4.27	1.286	–.289	–.200
	Q21: Self-evaluating the organisation	4.18	1.288	–.242	–.292
	Q22: Self-evaluating the content	3.79	1.281	–.081	–.589
	Q23: Self-evaluating future improvement	3.87	1.191	–.159	–.603

10 Exploring Communication Strategy Use and Metacognitive Awareness in the EFL Classroom

Henrik Bøhn and Gro-Anita Myklevold

Introduction

The term "communication strategies" (CSs) may be defined in a number of different ways, but typically it refers to strategies language learners adopt in order to solve communication problems (Bialystok 1990; Lam 2010; Zhang and Goh 2006). Examples of such strategies are circumlocution, code-switching (i.e. using L1 or L3 words) and appealing for help. In addition to the inclusion of problem solving as a defining feature of CSs, most conceptualisations also include a consciousness component (Dörnyei and Scott 1997). Thus, CSs may be said to be related to the concept of metacognition in the sense that language learners employing CSs may be more or less aware of their language behaviour (DeKeyser 2009). Metacognition in the context of this study refers to "an awareness of and reflections about one's knowledge, experiences, emotions and learning" (Haukås 2018, this volume).

In the CS research literature there have been conflicting views regarding the efficacy of CS teaching. Some researchers have found CS instruction to be of little value (Bialystok 1990; Ellis and Barkhuizen 2005; Kellerman 1991), but the majority of the studies carried out in this area have shown positive effects of such instruction on L2 learners' communicative effectiveness (e.g. Dörnyei 1995; Kongsom 2009; Lam 2010; Maleki 2007; Nakatani 2005). There are indications, however, that strategic language behaviour is highly complex, involving a number of factors which influence such behaviour (Dörnyei and Scott 1997). Examples of such factors are task effect, proficiency level, learning styles, attitude, anxiety, motivation and self-efficacy (Nakatani and Goh 2007). As research in this area is scarce, and many of the above-mentioned factors have not been examined, more studies are needed to better understand the relationship between these factors and strategy behaviour, as well as how CS teaching may be employed to improve strategy use (Nakatani and Goh 2007).

The present study explores the potential effects of CS instruction on the use of strategies in a group of English as a Foreign Language (EFL) students at the lower secondary school level in Norway. It also investigates

the question of how students' metacognitive awareness may impact on the quality and quantity of the strategies used. In addition, the influence of the students' proficiency level and motivation will be examined.

Literature Review

The term "communication strategies" (CSs) was introduced in the early 1970s to describe identifiable approaches adopted by foreign/second language learners in order to communicate in the L2 (Selinker 1972). Since then, a number of different definitions and typologies of CSs have been developed. These can be crudely associated with two major approaches to the study of CSs, i.e. the psycholinguistic view and the interactional view (Rahmani Doqaruni 2015). The former has mainly been concerned with studying how language learners handle communication problems when their linguistic resources are inadequate, by, for example, using lexical-compensatory and other cognitive processes (Bialystok 1983; Kellerman and Bialystok 1997; Poulisse 1990). The latter has chiefly been preoccupied with how interlocutors interact and negotiate meaning. This entails not only a focus on problem-solving mechanisms, but also on how learners use CSs as pragmatic discourse devices to get their message across (Corder 1983; Tarone 1980; Williams, Inscoe, and Tasker 1997).

In this chapter, we adopt the psycholinguistic view and define CS use as "strategies adopted by L2 learners in order to manage communication problems" (cf. Dörnyei and Scott 1997; Nakatani and Goh 2007). On this view, CSs can be divided into reduction strategies and achievement strategies (Færch and Kasper 1983; Rossiter 2003). The former refer to approaches speakers use to adapt their original message to their communicative resources by changing, reducing or abandoning the original content. One such strategy is "topic avoidance". The latter refer to strategies used to try to retain the intended content, despite lack of linguistic resources, by manipulating the available language system. Examples of achievement strategies are "approximation", "circumlocution" and "semantic word coinage" (e.g. using the word *mini-lobster* for "crawfish"). Obviously, achievement strategies are generally preferable to reduction strategies in helping to convey messages, but some achievement strategies, such as "code-switching", may have a detrimental effect on communication.

As mentioned previously, there is widespread consensus that communication strategies include a consciousness component, reflected in the notion that a "strategy" is something that L2 speakers employ consciously with the intent to achieve one or more communicative goals. Although consciousness may be seen as a vague concept, there is some consensus that it pertains to the attention paid by language users to one or more strategies being employed (Dörnyei 2009; cited in Cohen 2011, 11). In this respect, consciousness can be regarded as relating to the concept of metalinguistic awareness, involving "metacognitive knowledge about one's linguistic behaviour" (DeKeyser

2009, 123). Moreover, it can be said to involve metacognitive strategies, defined as "preassessment and preplanning, online planning and monitoring, and postevaluation of language learning activities and of language use events" (Cohen 2011, 19). Research on the relationship between CS use and metacognition is scarce, however (Zhang and Goh 2006). In the following, we will use the terms "metacognitive strategies" and "metacognitive awareness" to refer to learners' metacognition in CS use.

Studies of CS instruction have mainly investigated the effects of strategy instruction on learners' qualitative and quantitative uses of CSs (Nakatani and Goh 2007), as well as on the proficiency levels and/or task performance of the research participants. In addition, some studies have examined the impact of instruction on students' attitudes towards the usefulness of CSs and CS instruction (e.g. Dörnyei 1995; Nakatani 2005; Zhang and Goh 2006). In the following review, we will report on studies which are of direct relevance to our investigation, i.e. studies investigating the effect of instruction on learners' proficiency levels and/or use of strategies, as well as studies examining the connection between metacognition and strategy use.

One study, Dörnyei (1995), investigated the effects of a six-week communication strategy training programme on 53 Hungarian EFL learners, aged 15–18, using a pre- and post-test design. The study examined the use of the strategies "topic avoidance and replacement", "circumlocution" and "using hesitations and filling devices". The students underwent the six-week training programme as part of their official secondary school English course, in which they received explicit training in three lessons each week. The instruction included the presentation of linguistic devices to verbalise CSs, the provision of models of good CS use, awareness-raising of the communicative potential of CSs and examples of cross-cultural differences in CS behaviour. In addition, the students were encouraged to take risks using CSs, and they were given the opportunity to practice using the strategies. A control group comprising 56 students received no training. The instrument for eliciting spoken performance was a monologue task, and the students in the experiment group were also asked about their attitudes towards this type of training at the end of the instruction phase. The results indicated that students in the treatment group performed significantly better on the post-test than the students in the control group with regard to the quality of circumlocutions and the frequency of fillers and circumlocutions. The students were also generally favourable towards the training. On the basis of the results, it was concluded that CS instruction may improve the frequency and quality of strategy use.

In another investigation, Scullen and Jourdain (2000) also used pre- and post-tests to study the effects of CS instruction on foreign language learners. The treatment group comprised 17 US undergraduate students studying French as a foreign language. The control group consisted of a similar cohort of eight students. The intervention entailed the explicit teaching of various kinds of circumlocution techniques ("analogy", "function" and

"description strategies") in three separate sessions. The findings showed that the students in both the treatment and the control groups made significant gains in their quantitative and qualitative use of CSs over time. Hence, the study could not support the assumption that CS training is preferable to "regular" instruction when it comes to improving students' use of CSs.

Rossiter (2003) investigated the effects of CS instruction on strategy use and L2 performance (communicative success, speech rate, message abandonment). A group of 30 adult immigrant ESL students in Canada were divided into a communication strategy group (n = 15) and a comparison group (n = 15). The communication strategy group was given strategy training in 12 separate lessons involving the use of "approximation", "superordination", "analogy", "all-purpose words" and "circumlocution". In addition to explicit instruction in the use of these strategies, the classes also involved explicit awareness-raising training. Performance was elicited by means of a picture description task and an object description task, and the students were also asked to report on the usefulness of the CS training. The results showed that the quantity of the strategies was higher for the experiment group than for the control group after treatment, but the study could not document improved L2 performance. There were also clear indications that the students found the training beneficial. Rossiter concluded that more empirical evidence must be gathered before advice on when, how and which strategies to teach should be distributed to language instructors.

In an intervention study involving 62 Japanese EFL students at a private college in Japan (age 18–19), Nakatani (2005) investigated the effects of CS instruction on speaking proficiency and students' discourse. The CSs taught to the experimental group (n = 28) were "help-seeking", "modified interaction", "modified output", "time-gaining", "maintenance" and "self-solving" strategies. The intervention took place in the course of a 12-week instructional programme involving 90-minute sessions each week. Explicit awareness training was provided in addition to a focus on the five different CS devices. The results showed that the treatment group improved their oral proficiency significantly more than the control group. There were also clear indications that they improved their discourse (e.g. length of utterances, ability to maintain conversation flow) significantly more than the students who received no training. In addition, there was evidence that the students in the experimental group became more conscious of how to use CSs, as well as how to recognise the usefulness of applying such strategies.

Kongsom (2009) examined the effects of CS teaching on 62 EFL university students in Thailand. The students were given 12 weeks of CS instruction (12 lessons) focusing on nine strategies: "pause fillers and hesitation devices", "approximation", "self-repair", "circumlocution", "confirmation check", "topic avoidance", "appeal for help", "clarification request" and "comprehension check". Specific emphasis was placed on enhancing the students' awareness of CSs. 12 students were singled out as research participants. Pre- and post-tests in the form of monologue and discussion tasks were conducted in order to measure the students' use of strategies (qualitatively

and quantitatively). Moreover, questionnaires and retrospective protocols were carried out in order to analyse the learners' use of strategies as well as their attitudes towards the use of CSs. The results indicated that the students were to some extent able to successfully use the nine strategies taught at the end of the programme, particularly pause fillers and hesitation devices. The results also showed that they found the CSs, and especially pause fillers and hesitation devices, to be useful. Finally, there was evidence that they became more aware of the use of CSs after instruction and that they found this type of instruction to be valuable.

Finally, Lam (2010) studied the impact of CS teaching on 20 adolescent ESL students (aged 13–14) in Hong Kong with regard to the students' task performance and self-reported strategy use (qualitative and quantitative). 20 students in a corresponding cohort made up the control group. The strategies training class received specific instruction with regard to eight CSs: "resourcing", "paraphrasing", "use of fillers", "self-repetition", "use of self-correction", "asking for repetition", "asking for clarification" and "asking for confirmation". Additionally, the students were specifically instructed to reflect on and evaluate individual performance. The experiment class was given eight instructional sessions over a period of five months (one semester). The potential effects of the intervention were measured by means of external raters' assessments of group discussions and verbal protocol methodology. The analyses were further refined to study the performances of high- and low-proficiency students in both the experiment and the treatment group. The results showed that only the low-proficiency students in the treatment group showed sustained increases in their use of strategies. They also indicated that the low-proficiency students in the experimental class had higher gains in their proficiency scores than the other students. In addition, there were indications that they were able to reflect more than the students in the control group on their own performances in the tasks.

In summary, the majority of the studies included in this review indicate that CS training may have positive effects on students' qualitative and quantitative use of strategies. Some studies also found positive effects on general speaking performance. However, a number of limitations in these studies must be recognised: (1) They examined only a restricted number of strategies, (2) they generally did not examine the same strategies, (3) the student groups involved were considerably heterogeneous, and (4), as was mentioned in the introduction, a number of other variables may have affected speaking performance. Hence, more studies are needed (Nakatani and Goh 2007).

The Current Study

Aim

The following study explores the extent to which instruction targeting the use of approximation, circumlocution, superordination and use of fillers / stalling strategies may positively affect the quality and quantity of

Norwegian intermediate EFL learners' use of such strategies. Moreover, the study considers the degree to which the use of these strategies is linked to the students' metacognitive awareness of them, as well as to what extent the proficiency and motivation levels of the students play a role. The following research questions (RQs) are addressed:

1. To what extent does the teaching of approximation, circumlocution, superordination, and use of fillers / stalling strategies affect the quantity and quality of Norwegian students' use of such strategies?
2. To what extent do students' metacognitive strategies have an impact on the quality and quantity of their use of CSs?
3. To what extent do the students' proficiency levels affect the use of CSs?
4. To what extent does motivation have an impact on the use of CSs?

The Context of the Study

Although English is neither a first nor an official language in Norway, it has a strong position in Norwegian society. It is taught as a compulsory school subject from the first school year (age six), and people are widely exposed to English both inside and outside of school. Studies have shown that the general proficiency level of the population is high (Education First 2015), and people use English for a number of different purposes across a range of different contexts, both nationally and internationally.

The latest version of the Norwegian national curriculum was introduced in 2006 and is largely based on the Common European Framework of Reference (CEFR) (Council of Europe 2001). The English subject curriculum includes several metacognitive competence aims, such as the ability to "use different situations, working methods and learning strategies to develop one's English-language skills" and to "comment on own work in learning English" (Norwegian Ministry of Education and Research 2006/2013). In research on 21st-century skills in Norway, metacognition is regarded as one of the four most prominent skills that should be developed in future class-rooms (NOU 2015: 8 2015).

In lower secondary school in Norway, students aged 14–16 have, on average, reached an intermediate proficiency level in English (CEFR, level B1). End-of-instruction assessment is primarily given in the form of overall achievement marks, awarded by each individual subject teacher on the basis of various forms of classroom assessment. Grades range from 1 ("fail") to 6 ("excellent").

Participants

The students were non-randomly recruited through a collaborative project between the institution of one of the researchers and the students' school. They were in their final year of lower secondary school (age 15–16). A class

of 22 students comprised the strategies instruction group, who received explicit CS teaching; another class of 13 students, who received only regular instruction, made up the control group. The classes were unevenly distributed, as the larger class consisted of two separate groups which had recently been merged. All the students in both groups were given a questionnaire which asked about their grades, their motivation for learning and speaking English and their metacognitive awareness related to their use of CSs when speaking English (see also Zhang and Qin 2018, this volume, for a questionnaire study on writing strategies in multimedia settings). In addition, five students in the strategies instruction group and five in the control group were purposefully selected (Creswell 2013) for a post-intervention test and post-test introspective interviews. These instruments were intended to elicit information about the students' qualitative and quantitative use of CSs, as well as their degree of metacognitive awareness related to CS use. We deliberately chose students at different proficiency levels for the test and the interviews, making sure that there were students at the lower levels (grades 2–3), intermediate level (grade 4) and higher level (grades 5–6) in both groups (cf. Tables 10.1 and 10.2).

Instruments

The choice of CSs to be taught was made on the basis of a brief analysis of the students' communicative needs, as reported by their teachers, as well as research on what EFL instructors emphasise in their assessment of oral L2 English performance (Bøhn 2016). As the teachers mentioned

Table 10.1 Overview of the use of CSs by students in the treatment group (*n* = 5).

	Cand. 6	Cand. 7	Cand. 8	Cand. 9	Cand. 10	TOTAL
Students' grade level	5	3	2	4	4	
Good quality CS	27	23	8	30	13	101
Medium quality CS	21	48	36	52	32	189
Poor quality CS	6	23	19	18	9	75
Total	54	94	63	100	54	365

Table 10.2 Overview of the use of CSs by students in the comparison group (*n* = 5).

	Cand. 1	Cand. 2	Cand. 3	Cand. 4	Cand. 5	TOTAL
Students' grade level	3	4	4	5	3	
Good quality CSs	4	19	8	7	17	55
Medium quality CSs	22	34	10	21	27	114
Poor quality CSs	27	9	6	6	9	57
Total	53	62	24	34	53	226

limited vocabulary as a potential disadvantage for a number of students, it was deemed relevant to focus on strategies which could compensate for this deficiency. Moreover, as teacher raters are reported to value performance aspects such as range of linguistic resources and ability to provide extensive responses in the assessment of student performance (Bøhn 2015; Borger 2014), we found it appropriate to include achievement strategies which could help the students recount, describe and explain subject content. Hence, we chose the following CSs, using Dörnyei and Scott's (1997) and Rossiter's (2003) taxonomies:

i   Circumlocution: Describing, illustrating or exemplifying the characteristics of the target item or action, e.g. *you use it to stay dry in the rain* for "umbrella".
ii   Approximation: Using a related term which shares semantic properties with the target word, e.g. *moose* for "deer".
iii   Superordination: Using a generic term (hypernym) which semantically subsumes the target word or phrase, e.g. *bird* for "ostrich".
iv   Use of fillers / stalling strategies: The employment of "filling words" or gambits in order to fill pauses and to gain time to think, e.g. *well*, *let me see*, *it seems that*.

The post-intervention test used to elicit the students' use of CSs consisted of an object description task and a picture description task. The object description task included six items which the students, according to their teacher, would probably not know the English words for, such as *pruning shears, (forestry) harvester* and *sloth* (animal). The picture description task contained a drawing of a couple making food in a kitchen, including a number of foodstuffs and kitchen utensils. The students were asked to describe the kitchen situation in as much detail as possible.

    In order to investigate the students' metacognitive awareness, we used introspective interviews (Sasaki 2014). The interviews comprised questions related to the students' perceived difficulty of the object description and picture description tasks, as well as questions concerning whether they had used CSs when answering the tasks. The students were also asked about whether they used CSs when speaking English generally, and whether they were conscious of doing so. All the interviews were conducted in Norwegian.

    The questionnaires were also provided in Norwegian and contained questions related to background variables (gender, first language), grades, motivation for learning and using English, as well as items concerning the students' use of CSs and their metacognitive awareness related to such use. The different items included operationalisations of the four CSs mentioned above. For example, for superordination, one item read: "Whenever I have to explain something in English, but cannot find the word, I try to find a more general word than the one I am looking for; for example, *animal* for "guinea pig'". The answers were given on a five-point Likert scale ranging

from "To a small degree" to "To a large degree". A reliability analysis of the items measuring metacognitive awareness yielded a Cronbach's alpha of α = .75, which is acceptable.

Procedure

The intervention was introduced to the experiment group at the beginning of the semester by one of the researchers, who explained the project and introduced the students to the use of CSs through a two-hour teaching session. In addition to presenting the four concrete CSs of the project, and their relevance for developing good communication skills, the researcher also specifically informed the students of the significance of metacognitive strategies. This entailed a focus on the value of attending consciously to the challenge of the communicative task and one's own communicative resources, as well as awareness of the CSs and how they could potentially be used to manage the communication problems that were identified. Hands-on CS tasks were provided to help familiarise the students with the strategies and with the metacognitive awareness-raising. For example, for circumlocution, the students were given a number of pictures of objects they had to explain to a peer without using the words representing them. Model phrases were provided, such as "It is an object / a living thing", "It is big/small/medium-sized", "It is made of metal/wood/fabric/plastic". After the introductory session, the students attended three additional two-hour sessions throughout the semester provided by their regular English teacher; these sessions involved presentations of the strategies, model uses and relevant tasks to be carried out by the students.

At the end of the semester, the post-intervention CS test was given to the five students in the experiment and the five students in the comparison group, as explained under 'Participants' above. Immediately after the tasks were completed, they were interviewed about their use of CSs in the tasks, and their use of English generally, in order to examine their metacognitive awareness with respect to the use of CSs. Both the task responses and the introspective interviews were recorded on an Olympus DM-450 digital voice recorder and subsequently transcribed.

Data Analyses

The recorded transcripts from the post-tests and verbal retrospective reports were transcribed by the researchers. The transcripts were analysed by means of the computer programme QSR NVivo10. In order to answer RQ1, we analysed the transcripts from the post-tests by means of protocol coding (Miles, Huberman, and Saldaña 2014), using Dörnyei and Scott's (1997) and Rossiter's (2003) classifications of the strategies circumlocution, approximation, superordination and use of fillers / stalling strategies.

First, the transcripts were divided into ideas units. An ideas unit can be defined as "a single or several utterances with a single aspect of the event

as the focus", i.e. a unit "concerned with a distinct aspect of performance" (Brown, Iwashita, and McNamara 2005, 13). The following excerpt, divided into 15 units (each separated by "/") provides an illustration:

> *[In picture 3 there is]/an animal (1)/who . . . is up in a tree (2)/It has a lot of fur (3)/and it has long (4)/nails (5)/It is a bit ugly in the face (6)/ but also a little cute (7)/The fur is brown . . . (8)/and . . . the nails (9)/in kind of way is white (10) / . . . er (11)/It lives in a zoo (12)/I think (13)/ and maybe in Australia (14)/I don't know (15).*

These ideas units were then assigned to the CS categories listed in Dörnyei and Scott's (1997) and Rossiter's (2003) classifications. For example, in the above, unit (1), *an animal*, was coded as "superordination". Units (2)—(4), (6)—(8), (10), (12) and (14) were coded as "circumlocution". Units (5) and (9) were classified as "approximation", units (11) and (13) were coded as "use of fillers / stalling strategies", and (15) was characterised as "verbal strategy marker".

In order to determine the quality of the strategies used, we recruited a lower secondary school English teacher to help us categorise the CSs and the corresponding student statements as either "good quality", "medium quality" or "poor quality". These categorisations were based on evaluations of how successfully the statements actually described the items and situations presented in the two tasks. Three major deliberations in this evaluation process are worth mentioning. First, we concluded that two of the strategies taught in the intervention, i.e. superordination and use of fillers / stalling strategies, clearly belonged in the "good quality" category. Second, we decided that approximation could also be considered a "good quality" strategy, even though some of the student statements did not provide very good task descriptions. For example, when Candidate 6 was trying to describe a wheelbarrow, she used the word *sticks* for "handles". Still, most of the approximations used, such as *garden scissors* for 'pruning shears', were deemed qualitatively good. Third, it became clear that a number of the circumlocutions employed by the students did not explain the different objects very well. For example, when trying to describe the word *trailer*, one student said "you can drive the things you want easier". This was then classified as a poor-quality circumlocution. Conversely, the statement "it is a kind of box you can attach to the back of your car . . . with wheels on" was classified as a good quality circumlocution.

Beyond the use of the four intervention strategies specifically targeted here, the students also employed a number of other CSs, such as all-purpose words, code-switching and message abandonment, and we correspondingly categorised all these strategies as either high, medium or low. The overall classification of the quality of the CSs can be accessed from www.fag.hiof. no/~heb/CS-Findings.pdf.

To answer RQ2 we analysed the post-test interviews with a view to identifying the students' metacognitive strategies when using CSs. The interview transcripts were divided into ideas units in a way similar to the test transcripts described above. Provisional coding (Miles, Huberman, and Saldaña 2014) was used to analyse the student statements. This was accomplished by establishing a list of categories related to metacognitive awareness, as defined in the introduction (cf. above). This list comprised the categories "preassessment, "preplanning", "online planning/monitoring" and "postevaluation" (Cohen 2011), as well as "attention" (Dörnyei 2009). We defined "attention" as "attention to communication challenges, own communicative resources, and communicative strategies available". In order to identify cases where the students explicitly denied using CSs when directly asked about it, we also created a category labelled "No conscious use of CSs" (cf. Table 10.3 below). Beyond the provisional coding, we also employed descriptive coding (Saldaña 2013) to allow for the analysis of possible explanations for the use or non-use of metacognitive strategies, as well as to explore other relevant aspects of the students' use of these strategies.

RQ3 and RQ4 were answered using data from the questionnaire. In the questionnaire the students were asked to report on their latest end-of-semester grade in English, on their motivation for learning English, on the extent to which they used the CSs which had been taught to the intervention group, and on the degree to which they were thinking consciously about these strategies. More specifically, the motivation construct was operationalised using three items, two of which were based on Cohen's (2011) definition of motivation, i.e. "how much [students] like learning the particular language" and "how important it is for them to learn [the] language" (42). The third item was formulated as: "To what extent do you think speaking English is fun?".

Since the measures of CS use obtained by the questionnaire may be regarded as somewhat undependable, insofar as they were based on self-reports, we compared the ten test takers' use of CSs in the two tasks with their questionnaire responses in order to examine the degree of correspondence between self-reported and actual use of the strategies. This analysis showed that there was fairly good agreement between self-reported and actual use in the intervention group, whereas there was some more discrepancy in the non-intervention group. However, as we only wanted to investigate the impact of grades and motivation on CS use in the intervention group, we considered the answers given by the intervention students to be sufficiently reliable to warrant dependable answers. Still, we regard the self-reported measures as a weakness in this study.

The relationships between grade level and reported use of CSs, and between motivation and reported use of CSs, were explored using Somer's *d*. This is a nonparametric measure which is suitable when investigating the strength and direction of association between two ordinal variables (Lærd Statistics n.d.). First, we therefore ran the Somers' *d* test to analyse the association

between the grade level item and the four items representing the strategies approximation, circumlocution, superordination and use of fillers / stalling strategies. Second, we ran the test to determine the relationship between each of the three items operationalising the motivation construct and the same four strategies.

Findings

Results for RQ1

The analysis of the data for RQ1 showed that the students in the treatment group used a considerably higher number of communication strategies ($n = 365$) than the students in the comparison group ($n = 226$). Table 10.1 and Table 10.2 give an overview of the quantitative and qualitative uses of CSs by the different students (Complete versions of the tables can be found in Appendix).

As can be seen from Table 10.1 and Table 10.2, the students in the treatment group used 101 good quality CSs, while the comparison group used 55. In other words, the students in the treatment group used nearly twice as many of the strategies they had been taught compared to the non-treatment group. In addition, it is interesting to observe that four of the five students in the intervention group used all the CSs they had been taught. The fifth student (Cand. 9) used three of the four strategies. Conversely, only one student in the non-treatment group employed all four CSs. The others used three (two students) or two (two students) strategies.

As for the use of the four strategies included in the intervention, circumlocution was by far the most frequently used category by both groups (40% in the intervention group; 61% in the comparison group). Conversely, approximation was the least frequently used category by the intervention group (12%), whereas use of fillers / stalling strategies was the least frequently used category by the non-treatment group (4%) (cf. Table 10A.1 and Table 10A.2, Appendix).

However, it is also worth noting that the treatment group employed a significantly higher number of CSs which they had *not* been taught, i.e. the medium and poor quality CSs. As can be seen from the two tables above, the treatment group used 189 instances of medium quality strategies and 75 instances of poor quality strategies, as against the comparison group's 114 and 55. We will return to a closer analysis of these findings in our discussion below.

Results for RQ2

RQ2, which examined the relationship between metacognitive strategies and the use of CSs, was answered with data from the post-test interviews. The results showed that all of the students reported being conscious of their use of

at least one achievement strategy (such as circumlocution, superordination or appealing for help). Tables 10.3 and 10.4 give an overview of the responses. The categories in the light grey cells indicate instances where the students reported being conscious of using the different CS strategies listed; the categories in the dark grey cells indicate instances where the students denied being conscious of strategies, when they were asked specifically about them.

A summary of the responses in Tables 10.3 and 10.4 demonstrates that the students in the intervention group on average reported being aware of 2.8 metacognitive strategies, whereas the students in the comparison group were aware of 1.6 strategies. The following exchange between one of the researchers and Candidate 1, who had not received any instruction, serves as an illustration:

RESEARCHER: If you encounter a situation where you don't know the meaning of a word, such as in this test, what do you do?
INTERVIEWEE: I do try to think about what to say, right . . . But if it's completely impossible, I usually ask the teacher what it is.

As can be seen from this response, the student is aware of the possibility of appealing for help as a last resort. However, as the tasks used in this investigation were monologue tasks, it is difficult to know whether this candidate

Table 10.3 Degree of metacognitive awareness of CS use: intervention group (*n* = 5).

	Cand. 6	Cand. 7	Cand. 8	Cand. 9	Cand. 10
Grade	5	3	2	4	4
Conscious use of . . .					
Approximation	√				
Circumlocution	√	√	√	√	√
Use of fillers / stalling strategies		√			
Superordination	√			√	
All-purpose words			√		
Appealing for help			√		
Asking for clarification					
Avoiding code-switching	√			√	
Mime	√				
Self-repair					
Verbal strategy marker				√	
No conscious use of . . .					
Approximation		√	√	√	
Circumlocution					
Use of fillers / stalling strategies	√		√	√	√
Superordination		√	√		√
Appealing for help					
Asking for clarification					
Mime		√		√	√

Table 10.4 Degree of metacognitive awareness of CS use: comparison group (*n* = 5).

	Cand. 1	Cand. 2	Cand. 3	Cand. 4	Cand. 5
Grade	3	4	4	5	3
Conscious use of . . .					
Approximation					
Circumlocution			√	√	
Use of fillers / stalling strategies					
Superordination					
All-purpose words					
Appealing for help	√				
Asking for clarification		√			
Avoiding code-switching			√	√	√
Mime					
Self-repair				√	
No conscious use of . . .					
Approximation	√		√	√	√
Circumlocution	√	√			√
Use of fillers / stalling strategies	√	√	√	√	√
Superordination	√	√	√	√	√
Appealing for help	√				
Asking for clarification					
Mime		√			√
Transferring CSs from L1		√			
Use of anticipation-retrieval		√			
Use of CSs in pre-planned task		√			√

would actually use appealing for help when experiencing communication difficulties. Hence, our analysis of the effect of metacognition on the use of CSs is based on a comparison between reported metacognitive awareness (cf. Tables 10.3 and 10.4) and the types of CSs used in the post-intervention test (cf. Tables 10.1 and 10.2). When comparing these results, we found that the students in the intervention group actually used those strategies that they had paid attention to more frequently than the strategies they had not paid attention to. For example, Candidate 6 reported being aware of approximation, circumlocution and superordination (cf. Table 10.3), and she de facto used these strategies more frequently than stalling strategies (cf. Table 10.1). Admittedly, these differences were not substantial in all cases. As can be seen, Candidate 6 used five instances of approximation, six instances of superordination (which she claimed to be aware of) and four instances of use of fillers / stalling strategies (which she did not mention). Yet, the tendency for conscious use of strategies is interesting and is supported by the findings in the comparison group, in which the two candidates (4 and 5) who claimed to be aware of one strategy each, namely circumlocution, used it more than the other strategies (cf. Tables 10.2 and 10.4).

Beyond these findings, it is worth mentioning that none of the students in the intervention group actually reported being consciously aware of using all the four strategies that they had been taught. Moreover, three of them (7, 8 and 9) exhibited a somewhat ambiguous orientation towards metacognitive awareness in general. Even though they confirmed being conscious of the use of circumlocution, they sometimes contradicted themselves when responding to questions about other strategies or CS in general. The following exchange between the researcher and Candidate 9 is a case in point:

RESEARCHER: When you encounter a word that you don't know . . . for example *forestry harvester* . . . do you then think about using a more general expression?
INTERVIEWEE: That's what I did now. I said that it was a machine, but I said it was something one uses to make it more efficient to . . . cut down trees.

Here the student confirms being aware of superordination as a strategy. However, when he later mentioned a real-life situation where he had to speak English, and the researcher asked about his conscious use of CSs, the student was less clear about his metacognitive awareness:

RESEARCHER: So you acted as an interpreter [for your father]? That's good! But in such cases, do you then think that 'Now I have to use body language' or 'Now I have to use some other strategy'? Or do you just speak?
INTERVIEWEE: *No, I just speak*.

Hence, with the exception of circumlocution, it appears that the metacognitive aspects of the strategy instruction had not induced these three students to systematically plan, monitor and evaluate their CS to any considerable degree.

Results for RQ3

Regarding RQ3, i.e. the association between grade level and use of CSs, the results from the Somers' *d* test showed that there was no statistically significant relationship between these two variables in the intervention group ($n = 22$). When considering individual responses to the items, it became clear that, for example, four grade 4 students, three grade 5 students and three grade 6 students reported using circumlocution to a fairly high extent (point 4 on the Likert scale). However, one grade 2 student reported using circumlocution to a very large extent (point 5 on the Likert scale). Conversely, one grade 4 student indicated very little use of this strategy (point 1 on the Likert scale) and one grade 5 student also testified to employing circumlocution to a limited degree (point 2 on the Likert scale). When comparing these results

with the intervention test group's actual use of strategies (cf. Table 10.1), it can be seen that the strongest student (Cand. 6) used the least number of strategies ($n = 53$), whereas the least proficient student (Cand. 8) used more strategies than both Candidate 6 and Candidate 10. Moreover, the second least proficient student (Cand. 7) used as many as 94 strategies. Hence, it is difficult to discern a pattern to explain the relationship between grade level and use of CSs in this data.

Results for RQ4

RQ4, i.e. the degree to which there was a correspondence between motivation and use of CSs, was also answered with data from the questionnaire. The results from the Somers' d test yielded only one statistically significant measure. We found a moderate, positive correlation between the item 'I think the English subject is fun' and the reported use of circumlocution ($d = .399$, $p = .003$). In other words, the more 'fun' the students found the English subject, the more they used the CSs. However, as there were three items measuring motivation and four items measuring CSs (i.e. a total of 12 correlations investigated), there is not much evidence to support the claim that motivation played any important role in these students' use of CSs. A more specific analysis of the students' responses to the different items showed, for example, that highly motivated students reported using few strategies, whereas less motivated students claimed that they used strategies to a high degree. One example is the association between the item 'I want to improve my speaking skills' and self-reported use of approximation. In Figure 10.1, the results from this analysis have been visualised in a clustered bar chart.

As can be seen in Figure 10.1, three students who reported being highly motivated also reported using strategies to a low or fairly low degree (cf. the white and black bars to the far right in the chart). Conversely, three students who testified to being moderately motivated claimed to use strategies to a high or fairly high degree (cf. the light and dark grey bars in the middle of the chart). Thus, it was difficult to identify a consistent pattern in the association between these variables.

Discussion

The analysis of the effect of CS instruction on students' use of strategies (RQ1) showed that the students who were given explicit teaching used nearly twice as many of the strategies taught compared to the students who received no instruction. This result corroborates the findings by Dörnyei (1995), Lam (2010) and Kongsom (2009). The teaching of such strategies, most of which were classified as "high quality CSs" in this study, is therefore something that may be efficacious in foreign language teaching at the intermediate proficiency level. However, the fact that the students in the
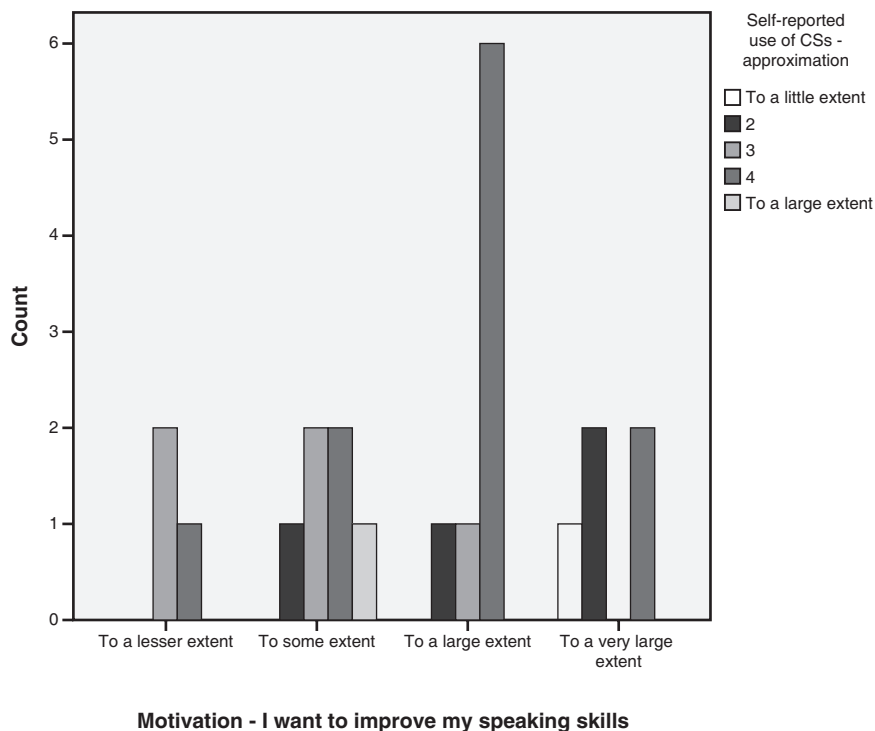
Figure 10.1 Correlation between self-reported motivation and use of approxima-
tion (*n* = 22).

intervention group also employed a higher number of poor quality CSs (75
instances as against the comparison group's 57) is something which may
contradict the usefulness of CS instruction. However, we believe this result
may be attributed to the fact that the students in the intervention group,
on average, gave more elaborate descriptions of the items in the tasks. The
average number of words used by the treatment group students was 450; the
corresponding number for the control group was 386. Hence, had the stu-
dents in the comparison group produced equally extensive responses, they
may also have used a larger number of poor quality strategies.

Beyond this, there seems to be a relationship between the students' lin-
guistic resources and their ability to produce good quality circumlocutions.
For example, a comparison of Candidate 6 (grade level 5) with Candidate
8 (grade level 2) shows that the former produced 27 good quality CSs
compared to eight by the latter. In other words, the better their proficiency,
the more high-quality circumlocutions they are likely to make. That being
said, it was also interesting to note that the strongest students in both

groups produced less extensive responses than the average response range for their respective groups. For instance, Candidate 6 in the intervention group used 348 words (group level mean = 450), while Candidate 4 in the comparison group, who was also a grade level 5 student, used 281 words (group level mean = 386). This finding is supported by other studies showing that high proficiency level students use fewer CSs (Chen 1990; Prebianca 2009).

Regarding the use of metacognitive strategies (RQ2), the findings in the present study suggest that conscious attention to a CS may lead to more frequent use of that strategy. As for the strategies taught in this study, the students in both groups more frequently used those CSs that they were consciously aware of. A conspicuous finding in this regard was the use of circumlocution, which all of the intervention group students and two of the comparison group students attended to. This was also the strategy most frequently employed. However, as some of the differences between the consciously applied CSs and those used without conscious attention were quite small, one must interpret the positive results from this analysis with caution. In addition, the contradictory statements regarding metacognitive strategies provided by some of the students make it difficult to draw firm conclusions on the effects of consciousness on the use of CSs. Overall, however, the modest positive association between these two variables, which were found in the present study, adds to the body of research literature which has shown a positive correlation between metacognition and learner strategies (Cohen 2011; Kongsom 2009; Nakatani 2005). Beyond this, we believe that there would have been an even stronger association between awareness and CS use if the metacognitive component had been more extensively and systematically treated in the intervention. The framing of the current teaching scheme prioritised the CS component, leaving only limited time for the modelling and practising of metacognitive CS use.

Regarding RQ3, we found no statistically significant relationship between grade level and CS use. However, the limited sample sizes (n = 22 and n = 13) may have been a restraining factor in this respect. Other studies have indicated that higher proficiency level students may be prone to using fewer strategies (Chen 1990; Prebianca 2009), as also evidenced in this study. Apart from this finding, the analyses yielded mixed and contradictory results.

Finally, in terms of RQ4, the questionnaire analyses provided little evidence of a positive correlation between motivation and CS use. Only one statistically significant, positive relationship was found between these variables. This association turned out to be moderate (d = .399, p = .003). Consequently, it is difficult to draw firm conclusions concerning this association. However, there is qualitative evidence that CS teaching in itself may enhance students' positive feelings towards the use of strategies, which may in turn improve their performance (Kongsom 2009). A comment from Candidate 6 in this study, which was written on the questionnaire response sheet,

supports Kongsom (2009): "Knowledge of these methods is a good thing because they make me more aware of how I can tackle difficult words at the exam".

Beyond these findings, there were some other comments made by the students in the interviews which provide interesting perspectives on CS use as well as the generalisability of the findings in this type of research. First, one needs to be aware of the contextual nature of communication in general, and of CS use in particular. For instance, in response to a question about what she would do if the communication task became really difficult, Candidate 2 answered: "It depends on the situation [. . .], for example, on whether it is just a regular task that you have to do in school . . . or if it's . . . let's say a [high-stakes] test . . . because that is much more serious". Second, and relatedly, there is the issue of anxiety, which may negatively affect communication. For instance, Candidate 10 mentioned "fear of saying something wrong" as a reason why she might be hesitant to speak English in real-life situations. Hence, one may infer that anxiety could have been involved in the production of strategies in this study.

Conclusion and Implications

The present study explored the impact of communication strategy instruction on communication strategy use among Norwegian EFL learners at the lower secondary school level. An important issue in this regard was the influence of metacognitive awareness on the students' employment of communication strategies. In addition, relationships between proficiency level and CS use, and between motivation and CS use, were studied. The results showed that the students who received training used a substantially higher number of strategies after instruction than the students who received no training. There were also indications that the students in the experiment group were metacognitively more aware of the communication strategies that they used more frequently. No correlation between proficiency level and strategy use was found, while the association between motivation and CS use was positive, but modest.

Three weaknesses in the study must be kept in mind. First of all, the student samples were small and purposefully selected. Hence, it is problematic to generalise beyond the research context. Second, no pre-test was distributed to the participants. This makes it difficult to firmly establish the impact of the strategy instruction on the students' use of these strategies. Third, the association between proficiency level and CS use on the one hand, and motivation and CS use on the other, was mainly based on the self-reported use of strategies. Although comparisons were made between the smaller test cohorts' use of strategies and those reported by the students in the larger questionnaire respondent samples, a strong relationship between these two measures could not be established. Still, the study provides some evidence of the usefulness of CS instruction and related factors that may contribute to

the successful use of such strategies. Many of the findings are also supported by other studies examining the same phenomena.

As for the practical implementation of strategy use in EFL classrooms at this particular level, it seems that the use of achievement approaches such as the ones introduced here may be relevant in order to help students improve their language performance. There were also indications that the integration of explicit metacognitive strategy instruction into CS teaching schemes may be promising. However, we believe that even more time should be set aside for such teaching in order for the scheme to yield positive effects. In addition, we believe that the metacognitive component should be given more space, and that the whole instructional intervention should be carried out in an even more systematic manner than what was done in this study.

In terms of avenues for further research, we suggest that future studies recruit larger student samples when looking into the effects of metacognition on strategy use. In order to examine the students' metacognitive awareness, other research instruments, such as verbal protocol analysis, may provide relevant insights into students' conscious thinking when employing CSs (see Forbes 2018, this volume; Knospe 2018, this volume; Vold 2018, this volume, for examples of other methodological approaches to exploring learners' metacognition). Furthermore, other factors, such as contextual aspects, anxiety and self-efficacy beliefs, and their influence on CS use, should be examined. In addition, pre- and post-tests should include standardised tests (such as IELTS or TOEFL) in order to produce results that could be more easily compared across contexts.

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Appendix

Table 10A.1 Intervention group (*n* = 5). Extensive overview of CSs used.

	Cand. 6 (No. 6)	Cand. 7 (No. 10)	Cand. 8 (No. 12)	Cand. 9 (No. 13)	Cand. 10 (No. 14)	TOTAL
Gender	Female	Male	Male	Male	Female	
Grade	5	3	2	4	4	
Number of words used	348	596	276	724	307	
GOOD QUALITY CS						
Approximation	5	4	2		2	12
Circumlocution—Good	12	5	3	15	5	40
Superordination	6	4	2	8	2	22
Stalling strategies (fillers)	4	10	1	7	4	26
SUM	27	23	8	30	13	101
MEDIUM QUALITY CS						
All-purpose words	1	11	1	6	4	23
Circumlocution—Neutral	4	7	3	12	10	36
Message reduction		3	2			5
Restructuring	1	9	5	8	2	25
Retrieval		2			2	4
Self-repetition	1	2	1	8	2	14
Self-rephrasing				4		4
Use of fillers	14	11	23	9	11	68
Verbal strategy markers		3	1	5	1	10
SUM	21	48	36	52	32	189
POOR QUALITY CS						
Circumlocution—Poor	4	10	5	6	4	29
Code-switching		1	4		3	8
Foreignising			4	1		5
Literal translation				1		1
Message abandonment	2	8	2	7	2	21
Mumbling		4	4	3		11
SUM	6	23	19	18	9	75
TOTAL USE OF CSs	53	94	63	100	54	365

Table 10A.2 Comparison group (*n* = 5).

	Cand. 1	Cand. 2	Cand. 3	Cand. 4	Cand. 5	TOTAL
Gender	Male	Female	Female	Female	Male	
Grade	3	4	4	5	3	
Number of words used	496	473	265	281	399	
GOOD QUALITY CSs						
Approximation				2	5	7
Circumlocution—Good	3	15	5	3	8	34
Superordination	1	2	3	2	3	11
Stalling strategies (fillers)		2			1	3
SUM	4	19	8	7	17	55
MEDIUM QUALITY CSs						
All-purpose words		7	4	1	5	17
Circumlocution—Neutral	7	12	5	5	11	40
Message reduction				2		2
Restructuring	2	4			4	10
Retrieval			1			1
Self-repetition	4			3	8	7
Self-rephrasing	4	1		2		7
Use of fillers	2	4		6	6	18
Verbal strategy markers	3			2		3
SUM	22	34	10	21	27	114
POOR QUALITY CSs						
Circumlocution—Poor	7	2	1	3	2	15
Code-switching	6	1			2	9
Foreignising	4		1			5
Literal translation						
Message abandonment	8	6	3	2	4	23
Mumbling	2		1	1	1	5
SUM	27	9	6	6	9	57
TOTAL USE OF CSs	53	62	24	34	53	226

11 Reflecting on Educational Experiences

An Analysis of Two Migrant Students' Stories

Ragnar Arntzen and Odd Eriksen

Introduction

Whereas young people in stable societies can regard their educational careers as relatively plannable and predictable, many migrant students face changes and obstacles which can result in both educational and linguistic setbacks. In addition to the potential long-lasting effects of growing up in conflict areas and pulling up their roots, students with migration backgrounds struggle with studying, learning languages and integrating into society, among numerous other issues. Clearly, teachers have difficulty anticipating the challenges of this group of students. One way of identifying such challenges, however, is to encourage students to tell their stories. In bio-ecological theory, Bronfenbrenner (2005, 5) claims that the "scientifically relevant features of any environment for human development include not only its objective properties, but also the way in which these properties are subjectively experienced by the person living in that environment". Accordingly, Clandinin, and Connelly (2000) emphasise the need to study participants' experiences in educational research. In conversations with students, stories "emerge through the interaction or dialogue of the teacher (or researcher) and the participant" (Creswell 2013, 71). The activity of storytelling increases students' awareness of the consequences of the choices they have made in different learning situations as they reflect on their interactions with their learning environment in various periods of their lives.

This chapter reports on data from a study exploring migrant students' experiences with education across cultures. Through semi-structured interviews with two teacher students, we aimed to contribute to the students' construction of their educational histories in order to obtain multicultural perspectives on the Norwegian educational system. We focused on the environment in which the students were socialised, their descriptions of the development of their lives, and the choices they have made while in the school system. We believe that asking the students to tell their stories allowed them to become aware of and learn about their choices and paths through the educational system. Students' feelings of self-efficacy might also be increased by reflecting on their experiences. To capture the significance

of the students' educational experiences, we adopted a narrative inquiry approach. In addition, teachers can benefit from developing increased awareness and interest in students' stories and from reflecting on new possibilities for improving learning and building knowledge in their classrooms.

Literature Review

Studies on Migrant Students' Educational Experiences

Much of the literature on minority students' access and retention in higher education has focused on structural barriers rather than on how students reflect on and negotiate these barriers (Oropeza, Varghese, and Kanno 2010, 217). Here we will present some qualitative studies wherein migrant students reported their own thoughts and reflections. Martin (2010) studied the intersection of higher education, language and identity in four migrant graduates' stories in the UK. In these stories, he found "clear evidence of racism, exclusion and cultural entanglement" (Martin 2010, 17). However, the stories also contained evidence of pride and empowerment in cases where students were given space to talk about their multicultural and multilingual lives. All too often, however, education, especially higher education, seems to ignore the rich cultural and linguistic resources of the increasingly diverse student communities, according to Martin (2010).

Oropeza, Varghese, and Kanno (2010) interviewed four migrant students in higher education in the US, focusing on how the students made use of the community's cultural wealth and different forms of capital to access college and to what extent the students felt their cultural capital was relevant in this new educational environment. The students expressed the importance of aspirational capital in pursuing higher education and connected it to their familial capital. They also developed social capital through their family or by negotiating the labels and categorisations they were given in the schools and at the college (Oropeza, Varghese, and Kanno 2010, 228). On the other hand, the students did not perceive their multilingualism as carrying much value within the university; rather, it was their lack of linguistic capital—being linguistic minorities—that was accentuated in their pathway to and through college (227). The students also reported lack of familiarity with US culture and English as constituting barriers to their access to educational opportunities (227).

Berge (2012) interviewed eight university students with migrant backgrounds. The informants' dominant language in early childhood was a first language (L1) other than Norwegian, but Norwegian became their dominant language later in life. The students felt that their multicultural and multilingual resources were neglected throughout their education. For example, most students reported that they had either forgotten much of their mother tongue or had become less proficient in it. The informants spoke Norwegian, their second language (L2), even with friends who shared the same L1

because they felt more confident in Norwegian and could express more of its nuances (Berge 2012, 40). Other studies have confirmed this tendency. Berggreen and Latomaa (1994) found that children and youth more commonly use the majority language (L2) when they communicate than adults do, and that siblings use the majority language with each other at home (Berggreen and Latomaa 1994; Kulbrandstad 1997). These different language use patterns of younger and elder generations are also confirmed in international literature (Pauwels 2016). The change in the dominant language by Berge's (2012) informants complicated their contact with their families, even informants whose family language in childhood was Norwegian. Furthermore, informants' conversations with their parents were limited to everyday topics, impeding mutual involvement in their lives (Berge 2012, 35). For a broad discussion of this topic, see Fillmore (2000).

For Berge's (2012), Oropeza, Varghese, and Kanno's (2010) and Martin's (2010) informants, their mother tongue (L1) played a marginal role in their schools and education. As adults, Berge's (2012) informants were far more motivated to learn Western European languages than to develop their skills in their mother tongue. Several students looked at instruction in their mother tongue as a burden and a negative experience, one which "deprived [them] of playtime" (Berge 2012, 32). One of Martin's (2010) informants experienced mother-tongue teaching as punishment and kept it a secret from friends.

Migrant students sometimes experience problems identifying with their host countries. Among Berge's (2012, 33) informants, the university students born and raised in Norway did not identify completely with other Norwegians: "We do not feel at home any place; we are not completely Norwegian, and we do not feel at home in our parents' homeland either. I do not completely belong to any culture". This theme was also strongly emphasised by Martin (2010), as reflected in the article title, "They Have Lost Their Identity, but not Gained a British One", which quotes an essay by his informant.

Bourdieu (1996, 61) describes how cultural and linguistic coordination in a society establishes legitimate culture and language, which renders all other cultures and languages as less worthy or marginalised. The educational system privileges some students by taking their knowledge as the norm. When cultural capital is instituted in this way, stressing the need for all to possess one kind of linguistic and cultural competence, and open access to the means to satisfy these demands is not provided, only some become part of the legitimate cultural and linguistic circles that constitute symbolic power in society. Yosso (2005) has, in the lens of critical race theory, questioned how Bourdieu's theory has been used to evaluate some communities as culturally poor and assessed coloured students as "deficient" as the theory focuses on how they fall short of the white, middle-class standard. Yosso asks whether there are forms of cultural capital "that marginalised groups bring to the table that traditional capital theory does not recognise

or value" (Yosso 2005, 77). Her alternative approach is to focus on "community cultural wealth" (69), valuable resources possessed by communities of colour, as aspirational, navigational, familial and linguistic capital. But these valuable resources pertain not only to race and colour, but all types of minority communities and groups. As a foundation for creating functional identities in host countries, migrant students need to be respected for their personal histories and backgrounds and supported in their efforts to acquire new cultural codes. Several studies from previous decades have shown that culturally diverse universities create varied educational experiences that can help students learn and prepare for participation in complex and diverse societies (Denson and Bowman 2013, 557).

Some Cognitive and Linguistic Effects of Being Multilingual

Since Peal and Lambert (1962), a considerable body of data has been collected suggesting that bilingualism and multilingualism have a number of positive cognitive effects, such as increased metalinguistic and metacognitive awareness, stronger problem-solving skills and greater attentional control (Jessner 2018, this volume; Adesope et al. 2010). A meta-analysis of 63 studies involving approximately 6,000 participants shows several positive cognitive effects in favour of bilingualism, where attentional control produced the largest effect (Adesope et al. 2010, 228f). Also, Bialystok and Poarch (2014, 437) claim that attentional control is the most beneficial cognitive effect of bilingualism, which means that bi- and multilingual speakers are more readily able to control their attention while engaged in linguistic and nonverbal tasks compared to monolingual learners. Bialystok has worked in this field since the 1980s; in a 1988 study, she found that children who differ in their level of bilingualism possess different advantages in solving metalinguistic problems compared with monolingual children (Bialystok 1988, 566).

The linguistic consequences of bilingualism seem surprisingly disadvantageous compared to monolingualism (Bialystok and Poarch 2014, 435f). These disadvantages concern both vocabulary quality and size and access to specific lexical entries (436). However, when comparing the vocabulary size of mono- and bilinguals, one has to keep in mind the overlapping conceptual vocabulary of bilingual children; bilinguals often know words for concepts in one language, but not the other. Vocabulary scores in one language therefore do not reflect bilingual children's complete linguistic knowledge (Bialystok and Poarch 2014, 436). On the other hand, it is obvious that constraints in bilinguals' vocabulary in the language of instruction will make reading comprehension of demanding textbooks and other language learning and performance tasks more challenging. Rydland, Aukrust, and Fulland (2012) found a positive and significant correlation between vocabulary depth and prior topic knowledge among fifth-grade students. This correlation suggests that students with limited vocabulary depth in their L2 are less

able to use their prior knowledge when reading and comprehending texts (Rydland, Aukrust, and Fulland 2012).

Cummins (2000) argues that knowledge and cognitive skills belong to a common underlying proficiency that is easily transferred from one language to another; therefore, the language in which students have the strongest skills should be used in subject instruction and teaching. Briefly stated, Cummins (2000) believes that, in the course of learning one language, a child acquires a set of skills and implicit metalinguistic knowledge that can be drawn upon when working in another language. This common underlying proficiency (CUP) provides the basis for the development of skills in both the L1 and L2. It follows that any expansion of the CUP that takes place in one language will have a beneficial effect on any other language (Cummins 2000).

It is important to note that researchers who find cognitive benefits have focused mostly on balanced bilinguals functioning at high levels (Adesope et al. 2010; Baker 2006; Bialystok and Poarch 2014). By the *threshold hypothesis*, Cummins (1976) states that learners must develop both languages at an age-appropriate level (*high level*) to have cognitive advantages over monolinguals. The threshold hypothesis contains two more thresholds: a *middle level*, at which a student, such as a partly bilingual child, has age-appropriate skills in only one language, which brings no cognitive effects; and the *bottom level*, at which the learner has inadequate competence (incomplete acquisition) in both the L1 and L2, which can have negative cognitive effects (Baker 2006). Carlisle et al. (1999), for instance, found that those in the early stages of bilingualism do not reap benefits until they have developed sufficient vocabulary in both languages.

It is reasonable to assume that the cognitive and metacognitive benefits of bi- and multilinguals might be useful to migrant students within classrooms. Nevertheless, teachers (and researchers) in diverse classrooms often focus on the many challenges for migrant students instead of their advantages. In a study of students' strategic competence in bilingual and monolingual schools in France and Switzerland, Moore (2006, 136) found that multilingualism is not "an asset per se, when children are not encouraged in the school situation to rely on their different languages and language knowledge as positive resources". Along the same line, Baker (2006) stresses that good bilingual development to a large degree relies on supplying contexts for bilingualism, both in families and the broader society (see Haukås 2015, 2016 for similar viewpoints).

Different countries provide rather different contexts for bilingualism (Adesope et al. 2010, 229). In some countries, the school authorities encourage immigrants to maintain their native language while acquiring the instructional language, while other countries have a more unilingual policy. In Norwegian compulsory schools, pupils speak more than 180 languages (Statistics Norway 2013b), but we have little knowledge of

the extent to which children and youth use their linguistic resources at school (Pran and Holst 2015). We also lack empirical knowledge about the effects of different linguistic pedagogical programmes for minority-speaking students (Bakken 2007). However, a recent nationwide survey (Pran and Holst 2015) among pupils and teachers in primary and lower secondary schools in Norway found that multilingualism is neglected in classrooms even though governmental documents emphasise multilingualism as a resource. A majority of teachers did not thematise multilingualism in their teaching despite pupils' linguistic diversity. Additionally, several students experienced language-related teasing by fellow students (Pran and Holst 2015).

Another factor that might influence the cognitive effects of bilingualism is the age of onset of L2 (Montrul 2008). The meta-analysis of Adesope et al. (2010) suggests that the early onset of L2 is more likely to be associated with greater metalinguistic and metacognitive awareness (229). Adesope et al. (2010, 231) call for investigations on correlates of bilingualism within educational contexts and how students and their teachers may capitalise on these advantages.

The Current Study

Aims and Research Questions

The literature review above provides a contextual background for the present study. It was centred around previous studies on migration students' educational experiences and the potential cognitive and metacognitive benefits and challenges of being bi- or multilingual. The review showed that there are abundant data suggesting that multilingualism might have a number of positive cognitive and metacognitive effects *if* multilingual skills are balanced and supported by families and the educational and societal context. Most research on migrant students in higher education is, however, problem-oriented, and has focused on structural barriers rather than on how students reflect on these barriers. Especially in a Norwegian context, there is a lack of studies focusing on successful migrant educational stories, particularly studies where students can tell such stories themselves. In this study, we wanted to capture migrant students' own stories about how they have succeeded in their path from lower to higher education. To do so, we adopted the narrative inquiry approach, which "sheds light on the identities of individuals and how they see themselves" (Creswell 2013, 71). The purpose of narrative inquiry is to understand the experiences of both the researcher and the participant (Clandinin and Connelly 2000). The deeper understanding of oneself that can arise from the narrative process can well be described as a foundation for students' metacognition, defined by Haukås (2018, this volume) as awareness of and reflections on one's knowledge, abilities and

learning. This insight into individual students' stories about their experiences can also be an important tool in the development of good teaching skills. Clandinin and Connelly (2000, 2) viewed narrative inquiry as crucial to thinking about education: "as we think about a child's learning, a school, a particular policy, there is always a history, it is always changing, and it is always going somewhere". From this perspective, teachers in general could benefit from developing increased awareness and interest in students' stories and from reflecting on new possibilities for improving learning and building knowledge.

In our narrative project, we aimed to motivate our students to construct coherent social and cultural stories. This process makes students' stories available for systematic analysis and permits retrieving unique experiences, possible patterns, and their relation to the challenges in the overall field of education (Creswell 2009). Breckner (2005, as cited by Lutz 2011) argues that migration is distinguished from other life events, as it is *transversal*. Migration can occur at any time in life and consequently does not have a socially defined place in an ordinary life story or biography. In identity construction, migration is not linked to initiation procedures; it has no celebrations or anniversaries. It simply has no social script. Consequently, migrants have to work individually to integrate their migrant experiences into their life stories (Lutz 2011). Biographical interviews such as those presented here can be a relevant pedagogical tool to assist migrant students in this demanding identity-construction process.

These narratives can allow students to perceive how transversal events have led to their choices, whose consequences explain their present-day situations. Creswell (2009, 4) describes this kind of qualitative research as "a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem". According to Stølen (2013, 233), the aim of students' life stories is to articulate 'knowledge on substantial information about things that matters for the teachers and students in the classroom. In a life story perspective, the researcher can contribute to the process of making knowledge based on people's life experiences visible' (translated by the authors).

Based on this, our research questions for the present study were formulated as follows:

To what extent has the Norwegian educational system facilitated the transmission of migration students' previously acquired knowledge, linguistic and cultural resources?

How did migration students experience changes and challenges during primary and secondary school, and how did they reflect on this after entering higher education?

How can migration students' narratives influence and broaden teachers' and teacher educators' perspectives on education in a multicultural society?

The Context of the Study

There are no statistics on the exact number of Norwegian elementary-school students with migration backgrounds, but we know that approximately 17% of the Norwegian population has "migration backgrounds", i.e. they are first or second-generation migrants (Statistics Norway 2017). This percentage is rapidly increasing due to massive migrations of refugees and other people into Europe and, specifically, Norway.

The variation in migrants' educational experience is considerable and partly related to the country of origin. Immigrants aged 30–44 years from the Philippines, Poland, Russia, India, China and Iran, for instance, have a higher average level of education than the general public in Norway (among the same age group). However, one-third of all Thai, Turk and Pakistani migrants living in Norway have completed only primary school (Statistics Norway 2013a). Furthermore, many non-Western women are not included within the educational system. Women from Western countries have a higher average level of education than men. The opposite trend is present among immigrant groups from some non-Western countries, such as Somalia and Afghanistan.

These figures create a complex picture and indicate both great opportunities and major challenges concerning immigrant students and the extent to which immigrant groups can succeed in the Norwegian educational system.

Participants

The two participants in this study are part of a larger study consisting of eight students (two male, six female) from a university college in Norway. The students were recruited based on our knowledge of potential candidates and on contact with programme coordinators. The inclusion criteria were migration to Norway at some point in one's life and qualification for higher education. The students were informed by email about the aims and purposes of the project, and further details were given at the beginning of the interviews. The students' age at arrival in Norway varied from five to 28 years. Their countries or regions of origin were Albania (1), Kurdistan (3), Afghanistan (2), Ukraine (1) and Greece (1). One student completed all his schooling in Norway, while others entered the Norwegian educational system in late primary or secondary school. Some had studied at universities in their homeland before entering our university college.

In this study, we highlight the stories of two students, each representing one of two contrastive perspectives. The two students focused on quite similar challenges, but selected different coping strategies. One student arrived in Norway at age ten, and the other at age 16; both were in their mid-20s at the time of the interview. Further information about the two students will be presented in their stories.

Procedure

The interviews were audio-recorded, transcribed and sent to the participants to comment on. In the transcriptions, we used standard Norwegian orthography, and did not mark pauses, hesitations and reformulations. The purpose was to enhance the content, not to focus on the participants' L2 performance. The participants granted permission to use the anonymised materials in teaching and research.

The semi-structured interviews each lasted about one hour. We used an interview guide which created a framework for constructing the participants' life-stories from an educational perspective. We asked participants questions about their childhood, early schooling, language learning/use, migration and reflections on crucial changes in their educational and social development. We sought to create an open, friendly atmosphere so that the participants felt free to tell their stories. We used our experiences as educators to facilitate the students' process of reflecting while looking back at their lives. We conducted the interviews in Norwegian, and no participant felt this to be a disadvantage, as they all had developed advanced conversational skills in Norwegian. Overall, the participants seemed motivated to share their stories and discuss the challenges they encountered. It should be noted that the two participating students in this study have both read and approved the manuscript.

Results

Babet's Story

Babet is a Kurdish girl from northern Iraq. She attended a Kurdish school for four and a half years before moving to Norway with her mother and younger brother. Babet lived in a big city in Kurdistan, and the family settled in a small village in rural Norway, where Kurdish peers befriended them and facilitated their transition emotionally and socially. During the interview, Babet discovered a strategic pattern for her behaviour when she moves to new places and starts new schools. She prefers contact with peers with the same cultural and linguistic backgrounds: "I feel more comfortable when I am together with the Kurdish students, so when I have them, I don't need the Norwegians". She also recognises, while telling her story: "I have someone else to lean on, but that may not be so smart in the long run". As she has become more fluent in Norwegian, Babet has had some contact with Norwegians, but only at school. In leisure activities, she has never mingled with Norwegians.

Babet started learning in Norwegian schools in the fifth grade and felt like she had to start over from scratch: "I had no benefit from earlier schooling at all when I started in fifth grade in Norway. It had nothing to do with each other. It was a different world: the system itself is completely different".

Babet and her Kurdish-speaking friends received mother-tongue support, but Babet did not have any positive experiences with this support:

> Sometimes, a man came and took us Kurds out of the class. He told us about the background of Kurds and Kurdistan, but this was actually of no help for us. He only spoke Kurdish, and it was just fussy. I didn't get anything out of it, in fact. We spoke Kurdish, played on computers, had fun and so on, but this was not teaching.

Although Babet preferred Kurdish-speaking friends, she did not seem interested in preserving and developing her knowledge of Kurdish culture and language. Her family took a pragmatic attitude toward education and culture: "My parents wanted me to focus on the Norwegian language. They didn't think Kurdish was important for me because they knew I would complete my education in Norway". However, some of Babet's school problems seemed to be related to her way of handling bilingual contexts. In the lower secondary school, she understood everything at school, but struggled with writing: "I probably wrote how I thought inside my head in Kurdish, and then I translated it into Norwegian, and then the sentences become wrong". These problems continued. In the upper secondary school, she also separated from her Kurdish-speaking friends who chose other programme subjects: "I lost my friends. I lost faith, too!" However, she completed upper secondary school and advanced into higher education.

   Babet started studying preschool-teacher education based on the advice of friends, who told her it was an easy study programme. However, she experienced difficulties and found that she did not like the work ("to be outdoors in the winter"). She found it hard to contact her teachers as they seemed so stressed. She also had no contact with ethnic Norwegian students and felt that they tried to avoid being in work groups with migrant students. Several course requirements were meant to be fulfilled in groups, and as a result, some migrant students like Babet had difficulties doing the tasks. At the time of the interview, Babet had not done all the requirements from the previous year and did not have a plan to fulfil them and pass the examinations.

Yasmin's Story

Yasmin was born and raised in Kabul during the Soviet-Afghan war. She and her family moved back and forth between Kabul and the Soviet border during the years of intensive bombing. From age six until ten, Yasmin was educated mostly by her parents, uncles and aunts at home or in refugee camps at the border. When Yasmin was ten years old, she and her family moved to Moscow, where they lived until they immigrated to Norway when she was 16. After a one-week course in the Norwegian language, she started ninth grade in a regular classroom. When encouraged

to recall her first memories as an immigrant in Norway, the 26-year-old Yasmin stated:

> I was 16 years old and came from Moscow, where I had lots of friends all the time. Not to brag, but I was one of the popular students at school. I always had friends around me, and then I came to a small village, a small class, a completely different language. I could not express myself. It was absolutely terrible. I often say about that year that it was my worst year ever, and I experienced quite a lot in childhood.
>
> When I think back on it, I'm almost a little embarrassed of myself. I'm a person who likes to participate, has always been very active in the classroom, been a good girl: "Raise your hand in class"! And then I found myself in the tenth grade, lying with my head on the desk like a slacker. It was embarrassing! I had a completely different role than I was used to.

Yasmin did not make any Norwegian-speaking friends that first year and had the impression that her fellow students wanted to keep to themselves. She told us that she practiced talking in front of a mirror: "I remember the first three words I learned: 'Hei', 'Vær', 'Fint'. I stood in front of the mirror in the bathroom every morning and practiced saying these words out loud: 'Hei, fint vær!' [Hi, nice weather!]. I didn't want to be a loser". After a while, she felt that the teachers saw her talent and wanted to help her realise her potential:

> I felt that they saw me. Like, "Here is a student who actually knows something", and they were thinking, "How can we get this knowledge out"? I really tried to show them that I wanted to succeed. It is not easy to cope; it's a struggle. But the teacher needs to know this as well—and express this to the student.

Yasmin felt that the mother-tongue support was of great help and found that it was much easier to understand information in Norwegian when the mother-tongue teacher reviewed the lessons first. Consequently, she found her schoolwork more interesting and motivating. In upper secondary school, Yasmin found that the educational system was more similar to the Russian system to which she was accustomed. She felt that she benefitted more from her previous knowledge and skills, especially in history and math: "I got good grades in history as I had learned world history in Russia. I studied the textbooks and did well orally, but it was more difficult to write. It helped a lot to have the oral tests instead of written". In upper secondary school, Yasmin also started to make Norwegian-speaking friends.

Yasmin recalled a smooth transition from upper secondary school to the university college and teacher education, but she was unhappy with her student group. The Norwegian-speaking students dominated, and she felt

marginalised in the group. Yasmin remembered them as constantly complaining and focusing on irrelevant details and matters: "After the lectures, I tried to recall and repeat: What have I learned today? And the only thing I managed to remember was their complaints". She did not pass the first-year examination and held her student group responsible, but also realised that it was her responsibility to do something about it: "Ok, now you are going to learn something; that's what it's all about. I thought about this when I was reading yesterday evening. Oh, I can remember yesterday's lecture very well. So things have changed—for the better".

Today, Yasmin teaches youth from Afghanistan and Iran who are about the same age she was when she arrived in Norway:

> I understand their situation and have deep empathy. Several of them set high goals at once; they are ambitious and impatient and want to become engineers, doctors. Of course, they are allowed to have dreams, and in Norway, it is easier to realise one's dreams. But it's hard. One has to face reality, how things are. You are here, and there is the way. Believe me; it's hard. I have been through it.

The migrant process has shaped Yasmin's thinking and plans for her future and family: "I indeed want my children to speak Norwegian, of course, and Dari and Russian, my three main languages". For many years, Yasmin regarded Russian as her mother tongue. When her younger brother recently had a baby girl, Yasmin preferred to speak Dari with her and wanted her to learn Dari. Yasmin highlighted how the Internet and new social-media technologies have revived her fluency in Dari.

Discussion

Both Babet and Yasmin experienced migration as a radical break in their "educational run". Babet said that she did not benefit at all from earlier schooling in her homeland. Even though she received mother-tongue teaching and performed intensive exercises in Norwegian as a L2 during the transition period, this language support did not seem to bridge the gap between her previously acquired knowledge and her continuing education. One might claim that these experiences challenge the cognitive approach's basic ideas about how knowledge is acquired.

Bruner (1969) argues that new knowledge is developed based on already-acquired knowledge and that the transfer of both training and principles is the foundation of education. According to cognitive psychology (Bransford, Brown, and Cocking 2000, as cited in Haukås 2014), the human brain, whether consciously or unconsciously, continuously associates, compares, systematises, conceptualises and interprets new input based on earlier experiences. One can question the extent to which these processes transfer smoothly between the different languages in the mind of multilinguals. As

mentioned above, it can be claimed that cognitive processes are influenced by students' threshold level of proficiency in the instructional language (Cummins 1976), especially in vocabulary (Rydland, Aukrust, and Fulland 2012; Lipka and Siegel 2012).

Babet said that she understood all the instructions and lessons in the lower secondary school, but had difficulties writing and translating between her L1 and L2. This problem might be connected to her language use and social life: Babet had no contact with ethnic Norwegians in her leisure time and preferred to be with friends with the same linguistic background, even at school. Furthermore, she had few opportunities to use the Norwegian language in formal academic activities, such as group work. Thus, her exposure to the Norwegian language might have been too limited to promote good L2 development. Developing rich, nuanced, precise vocabulary requires encountering and using new words in many different contexts and, of course, extensive exposure to both oral and written language.

Yasmin experienced her arrival in Norway as a more radical break from the past than Babet, who quickly met Kurdish-speaking peers, thus giving her a degree of social continuity. In contrast, Yasmin felt more alone and experienced—what we might call *cultural shock*. How she recalled her first period of time in Norway is revealing. She used a kind of double perspective, both visualising and reflecting, so the researchers could see how the teenage girl reacted to the situation and listen to how she interpreted and reflected on the experience in the present day. Yasmin clearly described how she, as a 16-year-old girl, responded to the humiliating school situation with her whole body. She observed herself through the eyes of other students and the teacher. She linked this experience to her language loss and changed student role. Whereas she perceived herself as an active, outgoing, popular girl before moving to Norway, she became passive and silent after moving. She vividly portrayed not only a (transitional) loss of language, but also the loss of a positive identity as a consequence of migration.

Yasmin not only reacted to the situation; she also reflected on what was going on and explored strategies to overcome the challenges. For instance, Yasmin used to practise language skills in front of a mirror. This exercise was not only language training, but also training for a new classroom role. Yasmin appeared to have been a very reflective girl, conscious of her role as a student, her own learning, and the dialogic relations between students and between teachers and students. Unlike Babet, Yasmin gradually found that knowledge acquired earlier in another language helped her, for instance, when learning world history in Norwegian. Building relations between earlier and new knowledge across languages is not only a linguistic act, but also demands activating acquired knowledge and reflecting on how to transfer this knowledge to new contexts (Haukås 2014). According to Anderson (2002), teachers should help students learn to think about what happens during the (language) learning process, rather than focus their attention

solely on learning the new language. Doing this will lead to the development of stronger learning skills.

Both Babet and Yasmin had mother-tongue teaching, which is expected to assist students in transferring their previously acquired knowledge. Yasmin gradually experienced that preparatory work in some subjects and topics with the mother-tongue teacher helped her understand the lessons in the general classroom. Consequently, she became more motivated to do school-work. After a year or two, she also noticed that topics she had learned in Russian schools, such as world history, had relevance and could be used in the Norwegian lessons. Babet seems to have used her L1, on a daily basis, to a much larger extent than Yasmin after migration, but never perceived her L1 resources as relevant in Norwegian schooling and learning. More so, she found her mother-tongue instruction to be irrelevant to her learning in the regular classroom. In our view, these different experiences seem to indicate that mother-tongue support is more beneficial if the teaching is closely connected to what happens in the regular classroom, particularly in regard to subjects, issues, teaching methods and learning strategies.

Group work is an important instructional method throughout the Norwegian educational system. In university college studies, it is mandatory to participate in permanent, small student groups, which also must fulfil some course assignments together. Research on multicultural group work in education tends to show both positive and more challenging effects on student learning and social interaction (Popov et al. 2012). Group work can play a major role in metacognitive development as "interactions with others can provide the stimulus needed for the individual to become more aware of their cognitive processing" (Wertsch 1978, as cited in Larkin 2006, 8). Cooperative interaction is beneficial, inter alia, as students exchange views and argue, discuss and negotiate meaning, which promotes and develops metacognition (Zhang 2011). In a literary review, Popov et al. (2012) find that multicultural groups both lead to a less ethnocentric approach and prepare for working effectively in culturally heterogeneous groups. Learning an L2 in a migrant context is partly related to socialisation into new understandings and perspectives: "bilinguals may therefore have access to different conceptual representations, experience different imagery and index more varied discourses" (Baker 2006, 163). It is reasonable to believe that this multicultural competence can enrich conversations in discussion groups. On the other hand, research also points to challenges concerning conflicts and misunderstandings in multicultural groups; as a source for ineffective learning situations and decreased integration. Popov et al. (2012, 312) find several challenges connected to multilingual group work, such as free-riding, insufficient skills in the language of instruction and students not communicating properly.

Both Babet and Yasmin reported discouraging experiences with group work, regarding marginalisation, and that they were not seen as resources.

Babet and Yasmin seemed to have experienced the learning environment as ethnocentric. Several other participants in the main study sample had similar experiences with working in groups. One participant in the project was in groups with only ethnic Norwegian students: "By working in groups, I became a bit invisible, and the other students told the teacher that I didn't want to speak with them." The participant had to change student groups four times. This problem was later "solved" by establishing a separate group with "foreigners", as she called it. These experiences correspond to Bourdieu's (1996) analysis of how the majority culture in a society establishes the legitimate culture and language, and thus marginalises all other cultures and languages.

Other studies on minority-language-speaking students have reported the same pattern. Martin's (2010) informants experienced exclusion in several episodes and situations and stated that many majority university students were reluctant to work with minority-language-speaking students in study groups. The informants in the previously mentioned Norwegian study (Berge 2012, 44) also described social exclusion—not explicit racism, but the feeling of being different and the absence of "someone to identify with". According to our participants, such social exclusion happened in the classroom and groups in both lower and higher education.

It is tempting to moralise about the attitudes and behaviours of the majority students. Instead, we point to teachers' and educators' responsibility to plan various working methods and processes. They need to handle assignments so as to encourage students to welcome and appreciate diverse perspectives and cross-cultural experiences. However, group work can be perceived as a demanding pedagogical method for students with little or no previous experience with this kind of study work. Steinsvik and Hilditch (2014) explain that students with educational backgrounds in some parts of the world often lack experiences with democratic studying methods that involve group discussions and cooperation. Teachers should be aware of this culturally determined factor when selecting their pedagogical approaches. It is also important that teachers define group work as training for teamwork in future professional careers. There is great empirical support for the positive influence cultural diversity in universities has on educational experiences that help students prepare for participation in an increasingly diverse world (Astin 1993; Bowen and Bok 1998 in Denson and Bowman 2013, 557). To make sure that these kinds of culturally heterogeneous groups can be a foundation for learning and social integration, both students and teachers need to be aware of the factors that impact group dynamics and thus deal constructively with challenges arising from diversity (Popov et al. 2012).

Conclusion

In this chapter, we have presented two migrant students' stories of their education in order to obtain multicultural perspectives on the Norwegian

educational system and determine how these students experienced the transition from one system to another during their educational career. The students highlighted the transversal events that have shaped their lives. They experienced migration as a radical break in their educational careers. For both, this was the first time they had reflected on this aspect of their lives. The impression is that the Norwegian educational system did not seem well prepared to meet the pedagogical and social needs of migrant students. Both participants had language support in their mother tongue along with L2 learning, but these activities were not well coordinated with regular teaching and learning activities. The participants encountered social exclusion by majority-speaking students in social learning activities and a lack of recognition of their prior knowledge from either fellow students or teachers.

In life stories, the two students focused on quite similar challenges, but selected different coping strategies. The students' reflections indicate that their choice of strategies, as much as the events per se, influenced their development. Babet had constant access to friends with the same cultural background. Looking back, she found that this eased the pain of transition, but was not a useful strategy for coping with future challenges and integration. Yasmin had no friends on whom to lean and experienced the first period of time in Norway as painful. Her abilities to analyse and reflect upon challenges and explore different metacognitive strategies became valuable resource in her academic career.

This type of narrative inquiry is, in a way, an approach to understanding and learning from students' experiences of learning and metacognition. This information can also inform teachers and teacher educators about how to better include multilingual students both socially and in learning outcomes. Teachers at all levels could benefit from greater awareness of the need to support students' struggle for educational continuity. It is essential for migrant students to learn and be trained in how to connect prior language and subject-matter knowledge with the content presented in their new learning environment. This issue is related to teachers' attitudes towards minority-language-speaking students' use of multilingual resources in the classroom. Minority-language-speaking students with a common L1 should be encouraged to use it, to a certain extent, in conversations and group work in the general classroom. Students can also read textbooks in their L1, write notes and reflections in their L1, or present texts or issues in their L1 for their fellow students with a common L1. Developing and activating metacognitive competence in a multilingual classroom also implies activating multilingual resources. Teachers should awaken multilingual students' awareness of the benefits of prior knowledge and teach them strategies to access it. The starting point of these processes is for teachers to encourage students to share their experiences and tell their stories.

These two students' stories do not present the whole picture or the foundation for drawing conclusions about education and migration. Self-reporting and memory loss over time are linked to challenges regarding inquiry

research. The school and the educational system change, and it is a relevant question how these stories reflect challenges in the present time.

It was therefore important to address this issue by comparing our data with other studies. Our prejudices and biases might have influenced the way we handled the interviews and analysed the transcriptions. To minimise this, we openly discussed our own personal and political background before and after the data collection (Creswell 2013, 76) with the students. Furthermore, we sent the transcriptions and this chapter to the participants for member validation (Silverman 2010, 276) and encouraged them to comment.

Despite the above-mentioned limitations, we still believe these individual voices do offer interesting perspectives that can increase our understanding of contemporary education in an increasingly multicultural und multilingual society.

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12 "Emotion Recollected in Tranquillity"

Blogging for Metacognition in Language Teacher Education

Linda Fisher

Introduction

Made familiar in relation to poetic endeavour by the great romantic poet William Wordsworth, the phrase "emotion recollected in tranquillity" refers to re-examining and making meaning from a phase of emotional engagement that has now passed. From recollecting in quieter times the tumult of feeling experienced in the past, the poet can step back from the emotion, and use such passion to create his art. Wordsworth develops his ideas in an appendix to his collected poems:

> For our continued influxes of feeling are modified and directed by our thoughts, which are indeed the representatives of all our past feelings; and, as by contemplating the relation of these general representatives to each other, we discover what is really important to men, so, by the repetition and continuance of this act, our feelings will be connected with important subjects.
>
> (1839, 498)

For Wordsworth thoughts are representations of past feelings, and by allowing them to surface and so revisiting them, we get to the crux of what is important for us. As Haukås (2018, this volume) points out, there are many and varied definitions of metacognition, including Flavell's (1976) "knowledge concerning one's own cognitive processes and products or anything related to them" (232), which I draw on here. In this sense Wordsworth, while coming to the issue from a completely different paradigm, is referring to a form of metacognition, where emotion recollected can give rise to cognitions about the emotion. This is relevant for this chapter on teachers' metacognition in two ways: first, the link between emotion and thought (and the ways in which these connect to the conscious self) is increasingly understood (Damasio 2006); and second, it is recognised that becoming a teacher entails emotional engagement (see Johnson and Worden 2014; Nias 1996; Sutton and Wheatley 2003; Zembylas 2003).

In this chapter, I discuss how pre-service language teachers' metacognition, and potential benefits to their professional practice and wellbeing, may be developed through the use of a professional blog, which was introduced to the UK language teacher preparation programme under discussion. The blog was intended to operate as a thinking device that allowed the teachers to select experiences from their training programme and write freely about them in the form of an online journal, read only by me, the teacher educator. In the case studies reported here, participants blogged over a period of ten months, generally freely, but with some supporting open questions at the beginning, middle and end of the training. The premise for the activity arose from a Wordsworthian idea that encouraging pre-service teachers to allow salient moments or 'hot spots' to enter their thinking ("what is really important to men"), to examine and, potentially, derive meaning from those moments when no longer as emotionally engaged with them, might benefit professional action, and improve resilience and wellbeing in the future. This explicit examination of emotion in subsequent relative tranquillity might thus add to a teacher's cognitive consonance.

Literature Review

Learning to Be a Teacher and the Role of Emotion

Learning to be a languages teacher is a very complex and challenging process, associated with the need to develop:

- deep content knowledge (knowledge of the target language (TL), TL competence, analytic knowledge);
- pedagogical content knowledge (how to translate such content knowledge—including aspects of the TL that might be problematic—in ways that are accessible to students, understanding of progression);
- knowledge of child and adolescent development;
- knowledge of psychology (motivation, student self-efficacy etc.);
- general pedagogic knowledge (assessment and monitoring, use of aids, resources, technology, behaviour management);
- curricular knowledge (language syllabus, examinations);
- contextual knowledge (accountability systems, language learner histories, the school environment, local and national context);
- process knowledge (knowledge and skills in how to collaborate with peers and parents, organisational skills, self-awareness and self-reflection skills).

(Darling-Hammond 1998; Shulman 1987; Roberts 2016)

Perhaps most importantly, teachers need to know how to bring together this wide range of knowledge, skills and dispositions in ways that a) make sense

to them, that is, are coherent and congruent with their belief schemata (see Borg 2015) b) allow them to honestly and robustly analyse their current strengths and weaknesses, make adjustments and move forward to make their teaching better c) as a corollary, enhance their own wellbeing and resilience as teachers.

Engaging in a teacher education programme will, therefore, bring numerous challenges that are likely to be transformative of the self. Such transformative learning, a term commonly referenced in relation to Jack Mezirow's framework for adult learning (Mezirow 2000; 2003), involves identifying a disorienting dilemma and then applying critical self-reflection to transform problematic frames of reference such as fixed beliefs and assumptions. For Mezirow, some frames of reference are better than others because they are more likely to generate perspectives that, given the evidence available, are more accurate and can be used to guide action. This is not necessarily easy, as Mezirow points out: "Transformative learning . . . is often an intensely threatening experience in which we have to become aware of both the assumptions undergirding our ideas and our emotional responses to the need for change" (Mezirow 2000, 6–7).

Essentially, therefore, in order to learn successfully to become a teacher, one must develop aspects of metacognition, so that one can become aware, for example, of tacitly held beliefs and assumptions about the teaching and learning process, about roles, and about oneself in relation to the former and more generally. The premise, therefore, of the project described here is that by developing skills and practice in metacognition as developed through blogging, teachers' wellbeing is improved, as is their resilience in the face of the challenges they face as trainees,[1] and are likely to confront over the span of their careers.

Indeed, developing better teacher resilience, that is, the ability to recognise and face challenges and find ways to cope (Day and Gu 2014), might be important in order to tackle attrition from the teaching profession, especially in the early years of teaching. This is a recognised policy issue for many countries. Though the figures are often disputed, a reasonable estimate suggests that in the United States at least one in five teachers has dropped out of the profession within four years of starting (Gray and Taie 2015). In Australia, some figures have suggested it is as high as 50% in the first few years, with similar statistics in England and Canada (Clandinin et al. 2015). It is noted, too, that it is often the "brightest and best" who leave (Le Maistre and Paré 2010), unable to meet their own high expectations of themselves. Much of the literature on beginning teacher attrition concludes that the problems are mainly situated within the individual and can be grouped around four themes: burnout, resilience, demographic features, and family characteristics (Clandinin et al. 2015). Several of the four themes identified by Clandinin et al., such as demographics or family issues, sit beyond the scope of teacher education, but attention can be paid to the

issues of burnout and resilience by acknowledging explicitly that teaching and learning to teach are emotional endeavours.

The Role of Emotion in Learning to Be a Teacher

Teacher education programmes naturally encourage aspects of metacognition along the lines of Flavell's (1976) *strategic knowledge* (general strategies for learning that can go across all disciplines, e.g. memorisation strategies, problem solving), *knowledge about cognitive tasks* (how and when to use strategic knowledge, specific to a subject or context), and, to a degree, pay attention to *self-knowledge* (strengths and weaknesses, beliefs about self) in relation to these first two. In fact, "reflection", where people recall, consider and evaluate their experience, deepen their understanding of that experience and potentially improve their practice (Zeichner and Liston 1996), forms the backbone of many teacher education courses, in line with Mezirow's (2000) transformative learning framework. However, the emotional aspect of such learning is often disregarded (Johnson and Golombek 2013), which is surprising given that developing self-knowledge in relation to teaching is likely to bring with it particular challenges to one's identity (see Day and Leitch 2001; Johnson and Worden 2014; Nias 1996). In order, therefore, to help manage the turbulence that developing self-knowledge might bring, teacher education courses need to help beginning teachers to develop understanding of their own emotional temperature, for example, to recognise emotional triggers, how and when they get frustrated, how tensions might be resolved if they arise, and how to help them make evaluations of their progress that are non-threatening to their sense of self. This might be all the more important for languages teachers; languages learning has been shown to be "an emotional enterprise" and a "deeply social event" (Dörnyei 2001, 46). Williams and Burden (1997) add: "Language after all belongs to a person's whole social being: it is part of one's identity, and is used to convey this identity to other people" (115), and they point out how learning a language can be threatening to one's sense of self. If language classrooms are therefore places where learners experience a number of identity threats in the struggle for participation in another culture through another language (Norton 2013; Pavlenko and Lantolf 2000), then languages teachers may well be confronted with more learner emotions in their classrooms, making it even more difficult for teachers to manage their own.

Further justification for giving prominence to emotion in teacher education more generally is supported by recent shifts in cognitive science. The link between cognition and affect is not new; indeed, Piaget in his seminal work in the 1950s claimed that there was a structural correspondence between affect and intellect, and that "all objects are simultaneously cognitive and affective" (Piaget 1954, 32). However, only in the last two decades has renewed attention been paid to the relationship between the two in

the cognitive sciences. Researchers in the field of neuroscience, in particular Antonio Damasio (see for example 2006), who has written extensively about emotion, are increasingly interested in the interplay between emotion, cognition and education. Indeed, Immordino-Yang and Damasio (2007) draw attention to the centrality of emotion in almost all forms of thought, and claim that emotion underlies all aspects of the education process:

> Furthermore, the aspects of cognition that are recruited most heavily in education, including learning, attention, memory, decision making, motivation and social functioning, are both profoundly affected by emotion and in fact subsumed within the processes of emotion . . . These changes in the mind, involving focusing of attention, calling up of relevant memories and learning the associations between events and their outcomes, among other things, are the processes with which education is most concerned. Yes, rational thought and logical reasoning do exist, although hardly ever truly devoid of emotion, but they cannot be recruited appropriately and usefully in the real world without emotion.
>
> (7–8)

The assumption that emotion is inherent in all learning and that, as Damasio has argued elsewhere, emotion regulation leads to adaptive functioning (2006), suggests that attention needs to be paid to affect. In short, we cannot avoid emotional engagement, even when we think we are being logical, and so, asking teachers to engage metacognitively, will entail an emotional component. The field of second language learning is only now starting to catch up (Pavlenko 2013; Swain 2013). Language teacher education courses, too, must consider how this might be allowed for in course structures and whether trainees can be helped to understand connections between emotions, thoughts and actions. Work by Golombek and Doran (2014) and Johnson and Golombek (2013) has shown that emotion is present in much novice teacher writing, whether teaching journals or practicum blogs, and that direct teacher educator mediation can help novices navigate some cognitive and emotional dissonance involved in becoming a teacher. Johnson and Worden (2014) identify, however, the challenge facing teacher education courses in understanding teachers' emotions and responding to them in ways that support further professional learning.

Current Study

Aims

Brought to prominence largely by Jerome Bruner (see 1991) in social psychology, the field of applied linguistics has recently been drawn towards narrative-based research activity (see Barkhuizen 2013; Benson 2014; Pavlenko 2007). In teacher education, keeping narrative journals has proved

fruitful for teacher development (Golombek and Johnson 2004), as has narrativising experiences in dialogic engagement with key tutors, or other professionals (Johnson and Worden 2014). In this study blogging served alongside the many other opportunities for writing and speaking offered on the course to see whether this opportunity for the narrativisation of experience provided a channel for emotional expression that did not find an easy outlet in other activities.

The research questions under investigation were:

> In which ways does emotion appear in pre-service teachers' blogs and which are the 'hot spots' (Wordsworth's "what is really important to men") that act as catalysts for their expression?
> How do beginning teachers derive meaning from reflecting on these moments when no longer as emotionally engaged with them, and how might this benefit professional action, resilience and cognitive consonance?

Context and Participants

The context for the cases reported below is a ten-month-long teacher training course in a university/school-based partnership for the training of postgraduate linguists. Approximately one third of the course is spent in the university and two thirds in two different secondary schools. As on many such courses, the trainee teachers have various opportunities for 'writing for learning'. These include around 18,000 words of formal writing, involving assignments reflecting on key issues in second language learning, such as grammar teaching, and a report about classroom based empirical research. In addition, there is written reflection on some videoed teaching, production of a 'learning journey' about personal targets and how these have been met, lesson planning and close self-evaluation of learning and teaching. Though in all this writing reflection on strengths and weaknesses and on personal learning is encouraged, in terms of Flavell's (1976), taxonomy, most of the writing pertains to reflection on *strategic knowledge* or *knowledge about cognitive tasks* in respect of becoming a languages teacher. Though, as discussed earlier, emotion is implicated in all reflection, none of the writing *explicitly* addresses the emotional aspects of learning to be a teacher. Perhaps because of the pass/fail nature of the assessment procedures and the cultural expectations that this is a university qualification, trainees' writing often tends to negate or dampen down any emotion and to keep the tone resolutely academic or scholarly.

One could argue, of course, that trainee teachers do not need to *write* in order to address emotional aspects of their learning; there are many opportunities for collaborative working within the cohort and in various other communities of practice, where trainees are able to discuss and explore challenging issues face-to-face. Weekly contact with a school based mentor and

bi-termly meetings with the university tutor support further reflection on progress. Indeed, Johnson and Worden (2014) found that they could do some strategic mediation in face-to-face meetings, something that depended on the skill of the teacher educator in recognising any crises or cognitive/emotional dissonance that training might be throwing up. It seemed important here, however, to offer another possible outlet through writing for those trainees whose disquiet might not be picked up otherwise, or who might not have felt able to do this sort of face-to-face talk comfortably.

Procedures

Having experimented with journal writing, which was less successfully completed with previous cohorts, perhaps as it seemed too similar to the format of the other sorts of writing they were required to do, I decided to design a blogging activity. The idea was that this would provide a way of free writing, where attention could settle on whatever trainees chose it to. According to Wordsworth this would be on issues that were important psychologically, necessarily emotionally laden and needing to be resolved.

The course is largely made up of young postgraduates, who regularly read blogs or blog themselves, and so this more immediate way of writing seemed to appeal, as it was an evolving, quickly completed, easily stored and re-readable narrativisation of their thoughts. Direction as to content and prescription as to amount of writing was minimal; writing was compulsory at three points in the year only (the beginning, middle and end of the course), otherwise it was merely encouraged. The trainee teachers were free to write about anything they wished, but were asked to begin with a reflection on their language learning experiences and their expectations of teaching, and complete a mid-year and an end-of-year review, drawing on these earlier reflections.

Much of the blogging research in teacher education has been carried out on open platforms (Chu, Chan and Tiwari 2012; Deng and Yuen 2011). Here I decided to keep the blog private between trainee teacher and teacher educator. The blog was designed not as a sociocultural/social constructivist tool, but rather, based in a constructivist theory of learning, the blog functioned as the device that allowed the trainees to engage in "an iterative process of using current experiences to update one's previous understanding" (Selwyn 2011, 73). Unlike in Johnson and Golombek's (2013) study of novice teachers' practicum blogs, where the teacher educator effectively mediated their experiences, here tutor contribution to the reflection was minimal. The intention was that the blog itself should mediate the pre-service teachers' intramental development, by letting them focus on things that they wanted to write about, or 'hot spots' in their professional lives. I intervened only occasionally, therefore, particularly when I felt they were discouraged, to offer 'positive regard' no matter what was being discussed, and sometimes wrote a comment as a reminder that someone was reading. This is a key way the blog differed from diary-keeping or other

autobiographical writing, where, although the blog was primarily for private use, there was a reader, and the text was therefore more explicitly dialogic (Bakhtin 1986).

However, it brought with it a number of potential ethical concerns, for example, the trainee might feel uncomfortable disclosing too much about himself or herself to the tutor, and for this reason, the activity had to be optional and not some form of assessed task (Golombek and Doran 2014). Equally there was no wish that this should be a therapeutic relationship; if trainees disclosed anything either in the blog or in person that gave cause for concern as regards their health, mental or otherwise, I had a duty of care to pass this on to other professionals.

Selection of Cases

Below I describe two critical cases (Flyvbjerg and Sampson 2014), Nikhil and Daniela (pseudonyms), selected from a cohort of 19 pre-service teachers on the basis of the potential to learn from their cases. Data derived from the blog posts were analysed inductively, using qualitative data analysis software, employing stages of coding similar to open coding and axial coding. The themes arising most frequently were, in descending order: affect (e.g. despair; self-efficacy); managing work life balance; reflection on specific teaching activity (lesson planning; grammar; culture; assessment); behaviour management; reflection on the abilities of and potential for learning from other professionals; identity as a teacher (see Fisher and Kim 2013). Here I focus on the extracts from the blog posts that are emotionally laden, coding for emotion in the texts in the form of explicit emotion words (e.g. happy, enjoy, stress, worry, anger) or in the punctuation (e.g. exclamation marks) and emoticons. These emotions sit within what Wetherell (2012) has termed "affective practice", where affect is understood as "embodied meaning-making" (4). Therefore, the contexts in which the emotions arise are taken into account and, staying as close as possible to the teachers' own words in the blog posts, I offer explanation and contextualisation, though this is necessarily my own interpretation.

Results

Case 1: Nikhil

Nikhil was an intelligent, confident and popular member of the group, and at 23 years old had just graduated with a very good degree in French and Spanish from a UK university. Speaking five languages fluently, and with experience of teaching in different contexts, he fitted the description "the brightest and the best" of graduates who enter teaching, as judged by any metrics. Having kept his own blog in the past, he was one of the most prolific bloggers in the group, posting 30 times and writing nearly 14,000 words.

Self-Doubt and Confusion

Especially early on, and perhaps not surprisingly given the challenges of beginning teaching, Nikhil's blog has numerous instances of self-doubt, where he expresses his worries that he cannot get things right:

> I indeed had a bit of a meltdown about two weeks ago when it dawned upon me that I couldn't get perfect observation notes every single time and, being a perfectionist myself, it was a hard fact to swallow. Receiving negative lesson feedback is one thing; having to plan for lessons for the next day under such a vulnerable mental state is extremely stressful and emotionally draining because you start second-guessing everything that you thought you had understood.

Nikhil refers to the way in which he was troubled by feedback on his lessons from experienced languages teachers, where improvements and suggestions were offered. He recognises that his discomfort is arising from his own perfectionist qualities, and appears to be struggling to reconcile a previous identity as an excellent languages student, who was very successful in all he did, with that of a new teacher, who is developing his understanding about how to plan and teach good lessons and, naturally, is being directed by others towards ways in which he can improve. Building this into his frame of reference is challenging, as the range of new knowledge, skills and attributes he has to demonstrate in the classroom means he will inevitably be less successful than he was as a language student. He uses strong terms such as "extremely stressful" and "emotionally draining" to communicate how unsettling this is to him.

His own identity as a successful, organised and hard-working student extends to a lack of understanding as to how the children he has to teach can be so different from the schoolboy he once was. Sometimes in his posts this is manifested as expressions of anger and frustration at the pupils and their parents, such as when he fumes about children coming to school without equipment: "What annoys me the most is how so many students come into school with 3 iPhones and NO PEN?!?!?! How can so many parents let their kids leave home without such basic equipment? Do they not care?"

At times his identity as a good student challenges his very understanding of the nature of teaching and the nature of learners. He seems genuinely perplexed that students in his classes are so different to how he was, and it unsettles him so far as to lead him to question his commitment to teaching as a profession:

> I think I just didn't understand the sheer immensity of what teaching entails when I signed up for this. Having been in top sets myself throughout my education and having always been a model student,

> I couldn't understand why one might possibly not do their homework,
> or why one would want to behave badly.

In order to move forward he has to consider *why* he is feeling so confused.
It is possible that, with or without blogging about it, Nikhil might have
reflected on this issue and explicitly compared these learners' behaviour
with his own when he was a schoolboy. However, the fact that for their first
blog post at the beginning of the year trainees were asked to write about
their own experiences of language learning, may have led Nikhil to make
more explicit comparisons at this point. And although this initially leads to
frustration, in the end it helps him to consider difference and diversity more
overtly, and so to move on, without continuously bemoaning the fact that
not all learners are as he once was.

Throughout the blog posts Nikhil is honest in expressing his self-doubts,
especially in regard to the difficulties of enacting a teacher identity. Having
to choose on the spot what to say to promote better behaviour, he notes
that he gets tongue-tied and self-conscious: "I don't know what to say (i.e.
the exact words) when telling off a student. Silly I know. But sometimes
I'd rather avoid telling off a student rather than risk embarrassing myself
because I fear I'll say something stupid". Interestingly, Nikhil's are gener-
alised concerns about becoming a teacher, rather than about becoming a
languages teacher per se. It may be that because the trainees were addressing
language-specific planning and teaching issues in much of their other writ-
ing that it did not emerge strongly in the blogs. Or that there was strong self-
efficacy as regards subject content knowledge, but not where an overarching
teacher identity was concerned.

At times in the blog Nikhil expresses frustration at the amount of time
and effort he is putting in, as this is not reflected in his success in the class-
room, where the learners seem unappreciative of his efforts:

> I doubt most students are aware of what goes into planning a lesson,
> how much thought and time and internal debate and self-doubt on the
> part of the (trainee) teacher. Students just turn up and expect everything
> to be ready and waiting for them. "Sir, are we going to do something
> fun today?" they ask. Do you realise how long it took me to come up
> with that game on the present subjunctive in Spanish using bells and
> squeeze toys that we played last week?

He goes so far as to express some fundamental doubts about his choice of
teaching as a career: "But I can't for the life of me understand why I'm put-
ting myself through all of this . . . I definitely entertain the idea of quitting
at times. This is not what I want for the rest of my life, because I'm not
happy." More generally, Nikhil is not afraid to use emotive language in the
blog. His concerns generally involve identity, and, as can be seen in this last

quotation, worries that his future self, where he envisages himself as a successful language teacher, may not come to pass.

A Focus on the Positive

However, Nikhil also uses the blog as a way of chivvying himself along. Especially as the year progresses, after some writing where he describes his disappointment, frustration or anger, he shifts to something more positive, and expressly reminds himself that all is not so bleak. He says things like:

> Onto more positive things, have been getting really good feedback from other teachers including Tutor X who came and saw me this week! It happened to be a CLIL [Content and Language Integrated Learning] lesson and continued the unit of work I've been doing, merging Spanish with Food Technology. The lesson that she observed involved the imperative in Spanish (receptive skills only) so they followed a recipe for making guacamole. All the students really enjoyed themselves and I'm sure it will prove to be a very memorable lesson for them.

Here we can see how he pauses and resets the tone, deliberately drawing on positive evidence to balance out the negative. This metacognitive strategy, letting go of often negative emotion and following it with more balanced appraisal, seems effective for Nikhil, as can be seen in this example:

> I also need to remind myself that there are SO many things about teaching that I do enjoy. I love it when I'm marking homework and see that a kid's clearly absorbed everything I taught them in class, as I can see the same language (structures, vocabulary and ideas that I came up with whilst planning the lesson) showing up in their written work. I made that difference. Had another teacher taught them the same unit, their written work would've been quite different. This reminds me of the main reason why I came into teaching in the first place: to make a difference. I don't want to leave this planet knowing that my existence had no impact on anyone else's life, as if it needn't have happened in the first place. Clearly I have made an impact to these kids' lives, and for the right reasons.

Nikhil's emphasis in this post on a positive image of himself as an effective, professional teacher, an image that was fully justified by all the supporting evidence, suggests he has re-established a degree of emotional consonance. In contrast to some earlier posts, where he was questioning his very decision to enter teaching, and not managing to find supporting evidence of his efficacy, here he has situated a setback within an overarching identity framework, where he is a successful teacher whose everyday decisions have an impact on children's lives. Cognitive dissonance has been renegotiated

and he finds contentment, as he has much more confidence that his imagined future self is no longer jeopardised.

Similarly, this positive view of himself as a professional, who can make a difference to children's lives, leads him to record other times when his interventions have had an impact on learning, or on children's learning situation. For example, Nikhil writes at some length about a boy in one of his classes, who was behaving badly, was unresponsive to questions and reluctant to work. In recognising that the boy was finding the work too easy and as a result was listless and bored, Nikhil effected a change of group for him. This helped the boy settle and learn better and bolstered Nikhil's view of himself as a "real teacher" and someone who can enact decisions that make a difference: "I actually had a direct—albeit minute—impact on a student's life! :)". This desire to help children achieve their best encourages him to start organising a lunchtime language club for the students and, when he gets good feedback, this encourages him to continue:

> So I held my first club session last week, and although only 3 students came, it went really well I thought. I focussed on extending their sentences using opinions, reasons, intensifiers and connectives. . . . They all commented that they found it useful. :D Hopefully more students will come next Wednesday . . . (we'll be focussing on present, past and future tenses).

As he starts to inhabit the role of teacher, Nikhil becomes more at ease with what is happening in school. However, it should be noted that his blog does not record straightforward linear progress from self-doubt and worry to happiness and confidence. Certainly as the year progresses, Nikhil is more likely to re-couch setbacks more positively and to try to balance accounts of negative experiences and uncertainty with more positive counterexamples or positive thinking. At times however, there is some tentativeness or uncertainty in his writing. When Nikhil says things like "I hope I've gotten over this now . . . I feel like I have definitely become more resilient . . . so while I am still stressed at points, I'm certainly happier," it might sound almost as if he is trying to convince himself. Arguably, the fact that he recognises and accepts the realities of a life in teaching, namely that ups and downs are inevitable, has bolstered his resilience. Explicitly reflecting upon what lies behind the positive and negative emotions engendered by the 'hot spots' written up in the blog helped him to find equilibrium.

Case 2: Daniela

Intelligent, hardworking and genial, Daniela was another highly talented and promising pre-service teacher. A non-native English speaker, her undergraduate degree was awarded in her native Spain and her Masters in the UK. In terms of quantity, she could be described as an "average blogger",

producing around 6,000 words over the course of the year, but she posted often, 26 times in total.

Self-Doubt and Worry

Daniela's blogging early on also displays a propensity to worry and anxiety. While Nikhil's self-doubt is generated by overt critical feedback on lessons, which makes him question his identity as an effective professional teacher and occurs a few weeks into the course, Daniela's worries are present from the very beginning. Before having done any teaching or essay writing, Daniela is concerned that she will not cope with the course and, in particular, with the workload, calling the first few days "overwhelming". Two weeks later, having met with her university tutor and school-based mentor and received reassurances, she is still expressing her fears about not being successful, writing in the blog that: "I am still nervous and worried about the amount of information that we have been given in the last few days, and I also feel insecure about the observations and the work for the faculty and the readings."

Daniela also raises the issue of her non-native English speaker status, something that did not appear anywhere in Nikhil's blog. Despite having fluent, highly accurate English, Daniela worries about the fact that, as a Spanish national, her learning background was different. She describes how her anxiety is alleviated to some extent by talking to other non-native English speaking teachers in her placement school during the first few weeks of the course: "I have been able to speak to them about my concerns and they have tried to reassure me and calm me down. Observing their lessons has also reduced my anxiety a bit".

Note the use of "a bit," however. As did Nikhil, Daniela tries to deal with negative emotions by explicitly focusing on how things might improve, though not always convincingly. Daniela wants to look forward with confidence, but the number of qualifiers such as "probably", "hopefully" or "a bit" that appear in the blog suggests she may be struggling to achieve consonance: "Despite my doubts and insecurity, I feel confident that it is probably a matter of time to get used to the new routines, and once this happens I will have a more positive perspective." Her head tells her all should be manageable and she should be able to cope because of the levels of support, yet the anxiety is visible in her writing.

Unlike Nikhil, Daniela rarely refers back to her own experience of being taught languages. The only time she draws on her prior experiences and uses her native speaker status to some advantage is when trying to plan a practitioner research project:

> I remember that I used to love the accents when I attended private tuition lessons with native speakers and I felt fascinated by their pronunciation and the way they used to speak. That is how I realised that

> I wanted to focus on the speaking skills of my pupils for the . . . project and that the TL was going to be the main theme.

The fact that she tends not to reflect on her own teachers and experience of being taught might suggest she has a less well-defined sense of the ideal teacher she would like to be. While for Nikhil having a distinct ideal teacher self brought difficulties when he felt he might not achieve it, for Daniela worries are more nebulous and she is more concerned with daily threats to survival as a teacher than with reflection on what it means to be a teacher.

Ups and Downs to the End, but Forward Momentum

Where Nikhil's trajectory, though not always smooth, showed a generally positive trend as the course progressed, in Daniela's case new worries tend to replace old ones. She uses the word "stress" (or stressed/stressful) 16 times, and "anxious," "worried" or "unsure" a further 15, and this continues almost right to the end. Though this shows some development insofar as she can leave some worries behind, for example, her early concerns about being a non-native English speaker, the point at which positive emotions start to outweigh negative ones comes much later. As did Nikhil, she tries throughout to find evidence that might counterbalance her negative emotions and this seems to be a helpful strategy: "I'm trying to focus on the positives to carry on. I am really enjoying the team teaching of my year 8 Spanish group. I've just started a research project with the class teacher and we are only using Spanish in class". She is likely, however, to follow up an instance when things went well, with a comment on how she still feels stressed in the round. Often this comes back to an underlying lack of self-belief as to whether she can even get through the course:

> I am gradually getting more and more involved in the life of the school and I feel a lot more positive and on track with the pace. However, I don't think that I am really aware of the levels of stress that I am going through at the moment. I have so many things to do that writing lists does no longer work for me.

While Daniela's blogging tends to a description of her emotional turmoil, sometimes she intersperses this with a more dispassionate reflection about her views relating to language teaching and learning issues, a strategy that Nikhil employs less often. For example, she writes about the use of iPads in the classroom and about grammar teaching, where she discusses the mainly inductive approach to grammar teaching that she witnessed in her placement school:

> I think that combining both teaching approaches [deductive and inductive] could be useful and overall more practical, as long as we ensure

that the inductive approach is exploited whenever it is possible. This is because, according to the experience of the lessons that I have observed, it is an engaging approach to grammar teaching and promotes independent thinking in the learner.

Although she is writing about this elsewhere in assignments and on observation notes, Daniela brings it up again here, perhaps because her confidence in her own content and pedagogical content knowledge provides ballast for the areas in which she feels more unsure and so more emotional.

Only later in the course does Daniela write overtly about being identified as a teacher, when she remarks that she understands the need for patience in allowing the learners time to accept her as their teacher and not a trainee. Another extract describes her feeling of elation when being identified as a good teacher: "One of my pupils from year 7 emailed my mentor to tell her that she was really enjoying my lessons and that I was a great teacher . . . I was almost in tears when I found out. She has made my week!" As she nears the end of the course, she allows herself to believe that she will make it as a teacher, and her writing reflects her relative calm in the expectation of a positive outcome: "I feel a lot more confident now and going through the week has given me a feeling of security. I also have a feeling of great progress in my teaching and roles that I am really proud of. It seems like I am getting there".

With only a few weeks of the course left to go, Daniela can finally reflect that she is a "real teacher", though note in the quotation below how she is still hedging on this point, something which is consistent with her narrativisation of her language teacher learning journey: "I am proud that I have managed all the work load and still survived it. I think that I can say that I am a real teacher now (or at least I have the feeling of being closer to it)".

Discussion

Writers in fields as diverse as poetry and neuroscience direct us to the connection between emotion and cognition and, as seen in these two cases, metacognition can help people process and find meaning in emotion. Particularly as both language learning and teaching have been shown to be emotional enterprises, it would seem important to address explicitly how trainee teachers find opportunities to engage with the affective dimension of becoming a teacher and the inherent identity threats that might be involved.

As we have seen, emotions are useful not only in helping us to understand our thinking, but also in directing our thinking to what is important. The similarities are striking between Immordino-Yang and Damasio's (2007) statement that "Emotions help to direct our reasoning into the sector of knowledge that is relevant to the current situation or problem" (7–8) and Wordsworth's (1839) claim that "as by contemplating the relation of these

general representatives to each other, we discover what is really important to men" (498). Both insist on the central role of emotion in making meaning. While in the context described here, the pre-service teachers had opportunities to relate face-to-face with their peers, with university tutors and school-based mentors and many others in their communities of practice, blogging provided a further outlet for reflecting in tranquillity, and intramentally, on any "really important" experiences that came to mind, and, as one might expect, this was often something that was emotionally charged.

In Nikhil's case, there is a strong affective dimension to the experiences recounted, in particular when: a.) it was challenging to his sense of identity b.) it would not fit into a current cognitive framework, e.g. his beliefs as to what is right for a teacher or a student to do or think c.) the future self he imagined for himself was not being realised (e.g. self-efficacy issues) d.) the future self he imagined *was* being realised (positivity). In Daniela's case, too, emotion permeates her blog and anxiety emerges as a main theme throughout. She attempts, as did Nikhil, to write about positive events to counterbalance the stress she is feeling, and in addition focuses on areas where she feels more secure, in particular on what Flavell (1976) might class as *knowledge of cognitive tasks* (for example grammar teaching techniques), as a strategy for managing her emotion. Daniela's writing focuses explicitly on her teacher identity only towards the end of the course, perhaps betraying her worries about ever becoming a teacher, never mind what sort. In general, Daniela uses the blog as an outlet for her fears, which she might not want to or feel able to share in a face-to-face dialogue with tutors, mentors or peers; there is some evidence to suggest that releasing her emotion in this way, helps her process it and move forward.

Here I do not argue that blogging is the only way of generating such writing. However, whether it was the immediacy of the technology, where all past blogs were accessible in one place, or the dialogic nature of the writing, where the reader was a known tutor, who displayed positive regard no matter what was written, the blog was properly reflective and a channel for metacognitive engagement, particularly with regard to aspects of self-knowledge. Though Nikhil and Daniela had discretion over the nature of their posts (and indeed whether to post or not), they used the blog as an outlet for emotions such as anxiety, joy and anger. Where emotions were negative, they sought evidence that things were not as bad as they seemed by directing their writing towards positive experiences and personal achievements. Indeed, whether blogging might have been more effective had the teacher educator had a greater mediational role in their writing, as in the works of Johnson and Golombek (2013) and Golombek and Doran (2014), is an interesting question. Certainly these pre-service teachers employed their own metacognitive strategies for engaging with the emotional content that the open-ended blogging yielded. Arguably, in doing so, they developed their resilience when likely to be confronted by similar emotions as novice teachers.

Conclusion

While there were ups and downs over the course of the year, Daniela and Nikhil used the blog as a mediational tool to construct an overarching narrative of progress in both teaching and in the development of professional identity. Research suggests that it is often the best teachers, who are leaving the profession in the early years of their careers (Le Maistre and Paré 2010), perhaps because these teachers find it the most difficult to develop resilience and to make sense of experiences that might be construed as threats to their identities. In addition, it could be that all beginning teachers are less competent and are likely therefore to experience more negative emotions as regards their own expertise (Sutton and Wheatley 2003). Blogging might have a role to play, therefore, for both pre-service and early years teachers, as here the focus on emotional 'hot spots' seemed to induce teachers to make meaning from them by bringing to mind evidence that might support an alternative framing. Thus, new meanings could be assimilated into belief schemata and so be properly transformative (Mezirow 2000). As with all case study of teachers, context is hugely important; trainee and more experienced teachers' experiences of blogging in a similar fashion in a wide range of cultural and institutional settings would, therefore, make for interesting comparative research.

Note

1 Both 'trainee' and 'pre-service teachers' are used for reasons of style, but in the understanding that this is a programme of teacher *education* rather than training.

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13 Teaching Metacognitively
Adaptive Inside-Out Thinking in the Language Classroom

Phil Hiver and George E. K. Whitehead

Introduction

Even the most effective instructional method or technique will not work in all situations, nor, perhaps, should it be expected to. Taking a multidimensional and nuanced view of teaching emphasizes the degree to which classroom instruction relates to "doing the right thing in the right way and at the right time in response to problems posed by particular people in particular places on particular occasions" (Duffy et al. 2009, 245). Success in language teaching, too, requires this kind of flexibility and is characterized by critical moment to moment decision-making in gauging what works well, for whom, and under which circumstances. Metacognitive teachers deliberately and actively monitor what they are doing, reflect on the rationale for doing so, and adapt their instructional repertoire as required by various situational demands (McCormick, Dimmitt, and Sullivan 2013). Teacher metacognition, among other things, can be used by teachers to efficiently reboot unsuccessful lessons or classroom activities, to improve their own professional learning and hone their practice more broadly, and to foster metacognition in learners. For these reasons, metacognition is a key ingredient in language teachers' ability to make a difference in their students' development as well as their own.

Despite the recognition that conscious and intentional thought and action are hallmarks of exemplary teaching, and that metacognition is an important contributing factor to instructional effectiveness, conceptual and empirical work in teacher metacognition is by some accounts, still in its infancy. Missing, so far, is a programmatic agenda for this body of work that connects language teacher metacognition to success in L2 teaching and in student learning, and provides evidence for other stakeholders (e.g. teacher educators, policy makers) to create the conditions and avenues in which current and future teachers can develop and engage in adaptive metacognition. The evidence that exists does suggest that effective teachers regulate and control their classroom thought and action, but also offers too few definitive answers with regard to whether teachers can be broadly construed as metacognitive professionals, whether teacher metacognition is associated with

improved student outcomes (e.g. engagement, overall development), or how teachers can develop this capacity if they do not already engage in meta-cognitive thought and action. The study we report in this chapter is part of a larger project designed precisely to explore these notions with language teachers.

We begin this chapter by reviewing the scholarship on teacher metacognition in order to situate our study within the larger discourse and understanding of teachers as metacognitive professionals. We then relate this to what we see as the role of language teachers in the complex social ecology of language classrooms. We investigate the extent to which language teachers can be said to engage in metacognitive thought and action, and examine salient developmental mechanisms that shape this capacity for language teacher metacognition. Throughout, we take a situated and dynamic perspective of teacher metacognition in line with recent calls from both general and language education for a more developmental orientation of studies of the work and lives of teachers (Dörnyei and Kubanyiova 2014; Richardson, Karabenick, and Watt 2014). It is our position that exploring the tensions between language teachers' metacognition and their classroom practice can help address the links between language teachers' inner lives, their teaching, and their students' L2 learning, thus contributing new insights for our field.

Conceptualizing Teacher Metacognition

As will be clear from many of the other contributions in this edited volume (but see both Fisher 2018 and Haukås 2018, this volume, for exceptions), a great deal of conceptual and empirical work in this domain to date has focused on language learner metacognition; The research that does examine teacher metacognition in depth has been conducted primarily with mathematics and science teachers (e.g. Hartman 2001a; Jiang, Ma and Gao 2016; Sherin, Jacobs, and Philipp 2011; Zohar and Barzilai 2013). The consensus in this modest body of work, however, is that individuals' awareness of their thoughts and actions as teachers—i.e. teacher metacognition—is a critical layer of professional expertise (Fairbanks et al. 2010). This is because the greater teachers' awareness of themselves and the better their ability to evaluate and adapt their practices, the more effectively these practitioners can enhance their students' own development (Hattie 2012). Thus, metacognition, broadly defined as "cognition about cognition" or "thinking about thinking", has untapped potential to contribute to understanding how teachers can enhance both their instruction and students' learning processes in a variety of settings (Anderson 2002; Borg 2015; Graham and Phelps 2003).

When considering how practitioners develop, draw on and maintain the capacity to think about their thinking, various terms are included under the rubric of teacher metacognition, including "metacognitive actions" (Duffy et al. 2009), "metacognitive awareness" (McCormick, Dimmitt,

and Sullivan 2013), and "reflection" (Risko, Roskos, and Vukelich 2015). Others such as "self-regulation" or "executive function" are used synonymously (Corcoran and O'Flaherty 2017). As a consequence, synthesizing the literature on teachers as metacognitive professionals poses challenges partly because a range of terms are used to describe "the thoughtful and intentional mental activity in which teachers presumably engage" (Duffy et al. 2009, 242–3). Additionally, the particular aspects included in thinking about thinking add complex layers to this capacity, as these interconnected components complement each other and contribute to the kind of teaching that in turn enhances the learning process (Kiss 2012). Among the components thought to make up teacher metacognition are metacognitive knowledge, metacognitive skills (i.e. metacognitive regulation, metacognitive strategies) and metacognitive experiences.

Metacognitive *knowledge* consists primarily of one's conceptions and beliefs of task structures, and the interaction of one's cognitive goals and abilities (Flavell 1979; Schraw 1998; Schraw and Moshman 1995). It is thought to play a key role in teacher metacognition, for instance, by helping teachers think critically about instructional "methods that might be used to achieve the same academic objectives and evaluate the advantages and disadvantages of each" (Hartman 2001b, 162). Others have explored metacognitive knowledge through the lens of knowing what a given skillset is, knowing how to use it, and knowing when and why to do so—declarative, procedural, and conditional knowledge, respectively (Pintrich 2002). Metacognitive *skills*, on the other hand, are processes used to guide, monitor, control and regulate cognition (Veenman 2016). As Efklides (2009) explains, "the deliberate character of MS (metacognitive skills) entails that the person consciously and purposively applies strategies, which ensure that his/her thinking will be in the desired direction and will bring about the outcome defined by the goal set" (79). Metacognitive skills implicate teachers' awareness of their performance, the selection of appropriate strategies that can positively impact their teaching, and their appraisal of classroom outcomes and reevaluation of strategies that were used (Veenman et al. 2006). Finally, metacognitive *experiences* are any conscious cognitive or affective experiences which relate to an ongoing cognitive endeavor, such as teaching. Metacognitive experiences consist of feelings, estimates, or judgments related to the features of a task, the cognitive processing which takes place during the task, and the outcome of the task (Efklides 2009). For instance, teachers may experience satisfaction or dissatisfaction with how a classroom activity is progressing, estimate that they are prepared or unprepared to teach a class in the time required for the lesson, and judge certain instructional materials to be beneficial or otherwise for the lesson. Metacognitive experiences are an important aspect of teacher metacognition because they involve an active awareness on the part of a teacher who is performing a task, thus informing them in real time of their progress toward desired outcomes (Paris 2002).

The dominant representation of metacognition in this tradition, exemplified through the constructs reviewed above, has been one most compatible with a cognitive paradigm; this construes metacognition as a cognitive enterprise more or less independent of social and contextual elements. As Veenman et al. (2006) outline, most conceptualizations of metacognition interpret it as higher order cognition about cognition or as a higher order agent looking over and controlling the cognitive system and its functioning. To the extent that it is readily interpreted as a monolithic, latent construct rather than something that is emergent, dynamically adaptive, and socially situated in nature, these sorts of perspectives have essentialized teacher metacognition (Zhang and Zhang 2013). Despite its clearly social objectives, language teaching too has tended to be regarded primarily as a cognitive activity (Kubanyiova and Crookes 2016), yet scholarship also indicates that teachers' decisions and practices are regulated by contextual conditions, rather than solely individual thought (e.g. Whitehead 2016). For example, teachers who find themselves in professional settings heavily controlled by external stakeholders or external directives may default to classroom practices that have become routinized and habitual, utilizing metacognition in far fewer instances (Maloch et al. 2003; Valli and Buese 2007). Conversely, teachers who are in less constrained, non-routinized situations must make more decisions and therefore may require a higher degree of metacognition. This suggests that teacher metacognition varies with context and with individuals (Duffy et al. 2009), and because of this variability teachers must "shift their vision of teaching from a solo endeavor to an interactional event" (Tekkumru-Kisa and Stein 2015, 108).

Few would dispute the notion that teachers play a central mediating role in the dynamics of classroom ecology and influence learners' ongoing thoughts and actions within L2 instructed settings (Scarino 2014). By most accounts, successful language teachers are those who are thoughtfully adaptive in response to the complex and unanticipated problems that arise (see e.g. Hiver 2016; Hiver 2018; Hiver and Dörnyei 2017), and indeed some scholars have proposed that metacognition be treated as a more dynamic and situated system (Zhang and Zhang 2013) whose makeup and functioning are intertwined as a socio-cognitive conglomerate. In particular, the challenge of dealing with multiple contextual factors simultaneously requires teachers to "monitor and regulate their cognitive activity (. . .) identifying appropriate strategies, making moment-to-moment decisions to ensure students' learning and adjusting for individual differences" (Ghonsooly, Khajavy, and Mahjoobi 2014, 592). From this situated perspective, "successful teachers must recognize that virtually every situation is different, must see multiple perspectives and imagine multiple possibilities, and must apply professional knowledge differentially" (Fairbanks et al. 2010, 162). A teacher, therefore, develops and draws on "adaptive metacognition" by adapting one's self and one's environment in response to the complexities of teaching (Lin, Schwartz, and Hatano 2005).

The Current Study

As Haukås (2018, this volume) has noted, there exist a number of studies demonstrating the benefits of metacognition to enhance language learning, and the language teacher's role in encouraging students to develop it; however, still little is known with respect to the metacognition of language teachers themselves and its particulars. One fundamental issue concerns the extent to which language teachers can in fact be thought of as metacognitive. As Duffy et al. (2009) point out, "while researchers and educators claim frequently that teachers are metacognitive, detailed characterizations based on empirical qualitative or quantitative evidence are scarce" (240). Related to this are concerns regarding what language teachers need to know and to be able to do in order to apply metacognition successfully in the classroom, whether language teachers at large possess this capacity, and the sort of processes that might help language teachers develop it if they do not. By extension, exploring whether and how metacognition contributes to successful language teaching would provide evidence for claims that more metacognitive teachers are more effective classroom practitioners. As mentioned earlier, there is also increasing acceptance that the perspectives which inform the study of teacher metacognition will need to be expanded from the currently dominant cognitive perspective. Doing so by bringing in insights from social and ecological perspectives is likely to contribute to a more unified understanding of metacognition. Additional empirical evidence regarding what teacher metacognition entails, how it develops and can be maintained, and how it impacts teachers' classroom practice is crucial to take the field forward. Given this need, the present study aims to further current understanding of the topic within the context of the work and lives of language teachers by addressing the following research questions:

> RQ1: To what extent do L2 teachers engage in metacognitive thought and action?
> RQ2: What salient developmental mechanisms shape this capacity for L2 teacher metacognition?

Participants

Using critical case sampling, a process which entailed selecting a small number of important cases likely to yield impactful knowledge, we collected data from 40 public sector Korean English-language secondary school teachers at various stages of their career (from 5 to 27 years of experience) and teaching in varying public school settings. All teachers were Korean L1 speakers with a Superior level of English proficiency on the ACTFL descriptors. The context for recruiting these participants was from within a larger cohort of public secondary school L2 teachers all enrolled in a voluntary six-month-long program of professional development at the largest provincial teacher

education institute in Korea, and in this study, we report on selected parts of the extended dataset collected from this project. Participants in this study were free to withdraw at any time and were not compensated for participating; however, none chose to opt out at any time during or after the data elicitation took place.

Data Collection

Following IRB[1] approval, data were collected over roughly 12 months beginning at the start of their professional development program and continuing into the first semester those teachers returned to their school assignments. Three primary sources of data were collected. First, we solicited reflective journal entries from each language teacher at multiple time points over the duration. The domain-specific (i.e. related specifically to L2 teaching rather than general classroom practice) prompts our participants responded to for these journal entries (100–500 words in length) were designed to encourage self-reflection as L2 practitioners (e.g. "Please tell us about yourself as a language teacher. What things do people need to know about you to understand who you are as a language teacher?"). Secondly, we collected observational data by video recording two full-length regular lessons at different time points in the year for each teacher. Rather than having an evaluative purpose, these observations were designed as a descriptive point of comparison for how teachers' classroom processes and decisions could enable a greater understanding of the possibilities and limitations within their instructional repertoire; we were interested particularly in teachers' deliberate intentionality and adaptive awareness in their classroom practice (aspects related explicitly to metacognition). Our final source of data were in-depth interviews with the participants in which we elicited individual verbal commentaries on their observed classes and journals. These interviews were informal in nature, yet followed a rough interview schedule designed to guide participants to debrief on the other sources of data. Each session lasted 20–30 minutes and took place in a low-key setting to reduce any power distance between researcher and participant. All data were collected with the signed consent of the teachers, who indicated a preference for using English as the medium of communication.

Data Analysis

We began data analysis by collaboratively reviewing observational data from each teachers' two taught lessons repeatedly and a scheme of descriptive codes was used to categorize surface level aspects such as the type of environment the teacher created (e.g. *an inviting atmosphere*; *a low-anxiety environment*), characteristics of their delivery (e.g. *spontaneity in teacher talk*) and overt focus (e.g. *mathematical-like explanation of grammar usage*) at different points in each lesson, as well as more subtle practices or

characteristics that were still noticeable to the experienced eye (e.g. *teacher's sense of fun was contagious for students*). These descriptive first-pass analyses were used as stimuli for the interviews. Using NVivo 11, we then began initial thematic coding of the reflective journal data (e.g. *self as conformist*; *self as an investment*). "Theming the data" (Saldaña 2015) in this way privileged accounts of commonalities across cases and uniqueness within each case, and was further intended to shed light on relationships existing between themes. Following this, we juxtaposed these themes with the third data source—the in-depth interviews—using elaborative coding (Auerbach and Silverstein 2003), a technique used primarily to refine codes and themes that support or modify the observations made from the earlier data sources. Our final level of data analysis used hypothesis coding, a type of exploratory theory-driven code, to synthesize all data sources in a cross-case comparative analysis. Hypothesis coding uses researcher-generated codes to assess a researcher-generated hypothesis (i.e. tied to the research questions) about the qualitative dataset, and as such is suited to analytic induction of causes and explanations in the data (Bernard 2011).

A challenge we faced in reporting this study, one regularly encountered in qualitative case-based research, was that of providing a coherent and compelling research narrative to the reader based only on selective excerpts from our fairly extensive dataset. To counteract the concern that data might be used opportunistically to fit a range of conclusions, we endeavor to address our research questions thematically while still being representative of the respective participants' whole data-sets. In the interests of principled extract selection, we have included extended stretches of discourse from select participants that best typified salient conceptual links in the data. While it may not be possible to avoid issues of subjectivity or researcher bias entirely in reporting data of this sort, transparency is essential. In the following section, data are reported verbatim and participant chosen pseudonyms are used.

Results

This study was designed to explore the extent to which L2 teachers engage in metacognitive thought and action in their professional practice, and the process of how they do so. Here we report on findings from our dataset thematically (i.e. by integrating observational data, teachers' journal entries, and the verbal commentary interviews), emphasizing the contextual and instrumental features of language teacher metacognition that are closely associated with L2 teachers' classroom practice.

Sense of Self: Initial Conditions for Language Teacher Metacognition

Through our analyses of the dataset, we were intrigued first and foremost that the conditions that initiated language teacher metacognition appear to

originate in teachers' self-referential images and self-guides. This is because, based on how teachers represented themselves and who they viewed themselves as in their teaching role (e.g. self as conformist, self as mirror of another, self as an investment), they appear to have developed a propensity for acting or adjusting classroom actions in certain ways. In order to think and react to situations metacognitively, of course, individuals first need to determine that some course of action is necessary. Our dataset indicates that on a primary level such a determination stemmed more from abstractions in self-evaluation (i.e. self-appraisals) and their self-guides (i.e. the possible identities that L2 teachers might assume) than it did from analytical reflection on their varied L2 instructional processes (see Table 13.1).

Table 13.1 Original stimulus for L2 teachers' metacognition.

	Self-appraisals		*Self-referential imagery*	
	with heightened emotionality	with real-time awareness	with high congruence	with low congruence
N	11	15	4	10

N = 40 for this study

Thus, facets of language teacher metacognition were rooted in what we term 'inside-out thinking' that involved self-appraisals and self-referential images, which functioned as the initial conditions for metacognition to manifest.

On the one hand, self-appraisals for these teachers were typically automatic evaluative processes: they were direct, immediate, and intuitive. These appraisals can be characterized as equilibrating manifestations of teachers' sense of self that had phenomenological validity on the time scale in which L2 teachers' instructional thought processes and decisions unfold—i.e. real-time. In this sense, language teacher metacognition can be thought of as a self-developmental dimension that implicated, before all else, the self-evaluative thoughts of these L2 teachers. These facets of self-appraisal are apparent in the following verbal commentary given by a teacher who reported using mental imagery to slow time down and visualize herself as a heuristic for adapting or continuing a course of action in class.

> With my sometimes unfriendly and uncooperative students I need to improve my enthusiastic attitude or look confident and charismatic in leading class. And, I noticed that almost every class I have the same way I think about myself. When the focus is off me and students are working, I look at the clock and in my mind I slow time down to slow motion. Then I zoom in onto myself and see how things are going with me, and ask myself what more I need to do. When I zoom out again time speeds up, so then I continue or change based on what I see or think during that time. I zoom in to myself and then zoom out back to

the class every time an activity changes. (. . .) I cannot say I am poor at managing class, but because of who I am I have to always make an effort to stay with things in the classroom. So, depending on how well I think my performance as a teacher is going, I will apply more effort or relax somewhat. I think this is the main way I am able to lead students to interact with one another and have a successful class.

<div align="right">(Dami)</div>

Because they functioned continuously in real-time, these appraisals allowed the teachers (*n* = 26) who drew on them to slow things down and hone in on their "with-it-ness" (Kounin 1970) signifying an immediate awareness of and attention to the unfolding of classroom events and interactions. These appraisals also elicited emotions that triggered action tendencies and modified actions indirectly (see Table 13.1). These did so by changing the L2 teachers' intuitive self-estimates of their relative success in an ongoing manner through the subsequent use of course corrections to their classroom presence and instructional interactions with their L2 learners.

For other teachers (*n* = 14), thinking about the self included metacognitions about their abilities and professional potential. This self-relevant thinking concerning the phenomenological aspects of their L2 classroom persona (e.g. who I *am*; who I *can*, *should*, *would* or *would not like to be*) was used by teachers to sort through the ambiguity and complexity associated with being metacognitive while teaching, and this sense of self provided structure and guidelines that allowed the teachers to interpret and build meaning from their L2 classroom experiences and to maintain a coherent picture of self in relation to their professional setting. This is illustrated well by one teacher's verbal commentary on her observed classes in which she evaluates who she would like to be as an L2 teacher, when compared to how she and others see herself now, against aspects of her classroom practice.

For twelve years I have been teaching all kinds of students and I think I'm naturally good at structuring information and delivering it, like you can see in these classes, because I give students time to think what's next on their own. Things are calm in my class, but I happened to know from others too that I sometimes make my teaching quite predictable to lower tension on the pacing or momentum of the class. This could be something I use to deal with teaching 30 students in one class, but there's nothing really exciting. (. . .) What I really wanted to do was make learning [English] exciting, and for that I need to take a risk more. I need to push myself out of the comfort zone. You know, once my class was stabilized and I got confidence in my teaching, I did not take a high risk when it comes to trying different things. I should not be happy with what I am now, and I need to push myself forward. (. . .) I know very well that learning often happens spontaneously, so I want to respond

> better to unexpected situations in the classroom. I need my classroom
> to be like a real situation, not a scripted drama.
>
> (Songhee)

Additionally, the greater the incongruence reported by L2 teachers between
their self-guides and their experience of unfolding classroom events, the
more prominent their metacognitive response was. Put differently, our
data suggests that an insufficient degree of consistency between teachers'
self-specific imagery and actual L2 instructional circumstances was associ-
ated with more intense analytical reasoning and sense-making, whereas L2
teachers who reported higher levels of congruence were less likely to engage
in such metacognitive reasoning and adaptive behavior (see Table 13.1).
However, what is also apparent from the dataset is that the self-referential
thought engendered by self-guides provided context for the self-appraisals
that occurred on more finely grained timescales of seconds and minutes, and
had an equal impact on thought and behavior in real time.

Indicators of Language Teacher Metacognition in Action

All 40 of the L2 teachers we observed exhibited characteristics of what might
broadly be termed effective practice; that is, individuals were all relatively
successful in communicating their lesson objectives, defining tasks while
planning, employing instructional tools and engaging students in their L2
classrooms. However, our results indicate that, as a matter of routine, only
some of them (i.e. just over half) thought carefully about what they were
doing in their L2 classroom practice and the reasons for which they were
doing so. From the analysis of our dataset, what signified language teacher
metacognition was an additional layer of teacher thought and action which
became available for public scrutiny because it had either been verbalized,
consciously reported, or was accessible through other means—such as an
overt display in professional practice. Individuals who exhibited this were
better able to monitor, interpret, evaluate, and explain L2 classroom events.
One excerpt in particular exemplifies this view of the indicators of language
teacher metacognition associated with a practitioner who is both conscious
of what they are doing and mindful of why:

> In my experience, successful [language] teachers seem to be those who
> know that teaching is about trial and error. Personally, I always try dif-
> ferent things until I find something that suits my learners and takes effect.
> I constantly check my teaching habits and philosophy before starting
> something in the class to find out why I am doing something or why
> I ask the students to do something. I also try hard as a teacher to take
> different measures to think about what is going on as I teach and pay
> attention to any difficulties I face in the process. This is how I can apply
> knowledge about myself and my teaching and also what I have picked

up about my students to revise my way if I find it necessary. So, this kind of flexibility and openness is the key to success I think. (. . .) In a way, this helps me gain trust and respect from students, but it also makes me aware that any behaviors I do affects students directly. So, I myself should have confidence and belief that my class is meaningful. And to do this, I always double check as class is running if my materials and instructions are worth it for students to devote their time and efforts.

(Jiwon)

Thus, the salient behavioral indices of language teacher metacognition which emerged from our extensive lesson observations included L2 teachers' awareness of the relative success of instruction, attention to various forms of self-specific feedback from others (i.e. students and colleagues), concern for students' understanding and responsiveness to their need for other forms of instructional support, appreciation for the procedural direction of lessons as they unfolded, and recognition of their ongoing role as mediator of students' L2 learning processes in the classroom setting.

Importantly, metacognition appeared to play a functional and instrumental role in L2 teacher thought and action. Because it was manifested as an explicit form of monitoring of self and of the conditions and contexts in which teachers' work unfolded, metacognition afforded teachers an awareness and control over their teaching-specific thought and action. Through simultaneous comparison of our various data sources, it was only L2 teachers who showed evidence of accurately knowing and monitoring what they were doing in their practice (n = 22) who possessed the more advanced metacognitive abilities such as evaluating ongoing practices, adapting practices appropriately, and planning future interventions as a consequence of this, a position illustrated in the following data excerpt.

In almost every area of [language] teaching, people are attracted to what they consider the easiest and best way of doing things. And, that includes me too. What I've found is that I need knowledge and experience in order to teach well, but there's something else too that has to do with managing myself as a professional. (. . .) Anyway, the role of experience cannot be ignored, but this kind of checking up on yourself and supervising yourself is one back-up that not many teachers have, even if they have years of experience. It's a way of giving yourself support or disapproval so you know if you are on the right track or if you choose to go on or turn around. (. . .) You know that in most public schools here, the class size, students' expectations and goals are all the same, and the conditions at the institution too. So, unless teachers pay careful attention and monitor themselves, they can fall into this category of looking for the most comfortable way in the classroom for all teaching situations.

(Hyejin)

Our data suggests that, while language teacher metacognition develops parallel to and through the acquisition of teaching expertise, without the ability to effectively monitor, teachers were unlikely to have the capacity to make high quality adaptations during L2 instruction or provide a rationale for adaptations they did execute. Thus more broadly, this aspect of actively monitoring oneself was closely associated with L2 teachers' ability to view teaching as a purposeful but complex and dynamic social activity.

Language Teacher Metacognition as a Situated Adaptivity

The reality in many of the classroom periods we observed was that L2 instruction frequently (i.e. in 90% of observations) produced unpredictable situations which required more than routine procedures on the part of teachers for successful resolution. Teachers' real-time decisions and adaptations were regulated more by contextual conditions or local conditions in the L2 classroom environment. Consequently, how much metacognitive thought and control teachers exerted depended on what the teachers were required to do, how frequently the teachers had to do it, and students' developmental needs and interests in the context of the teachers' L2 instructional goals. The following excerpt exemplifies what was a commonality in much of the dataset: that teaching metacognitively involves a particular adaptation of L2 teacher thought and behavior to the immediate environment, and was reserved for non-routine situations and occurrences.

> You see here? Ok, so, the class was going fine until this point, and I spent some time giving this student explanation and examples that other students didn't need. But he still didn't understand, or at least that's what he said. Maybe he just didn't want to cooperate with his group members. So, anyway, I had the choice to ignore him or do something about it—maybe directly or indirectly. Everyone else is busy working, and I had maybe 5 or 10 seconds to think about a solution and a response to his difficulty. Not even that long, really. (. . .) So, 90 or 95% of the time I don't have to think too much and I just go through the steps of teaching as I've planned before the class. But then things like this happen and I am out of a predictable situation, and so I have to think deeply and process what I am going to think or do about it.
>
> (Lina)

Language teacher metacognition, like in the verbal commentary Lina provides above, was not a hard-assembled mechanism that existed off-line in some form of context-independent performance. Instead, our data suggest that language teacher metacognition is only realized within the immediate context of L2 teaching situations, decisions, and tasks—a soft-assembled, temporary occurrence involving only the tools and structures available and necessary for dealing with unanticipated problems and unique situations.

Thus, the situated and dynamic nature of teacher metacognition implies that when L2 teachers are adaptively aware of the particular people and problems encountered in their classroom practice, this ongoing thinking about thinking will lead to better ideas, decisions, actions, and performance.

In addition to being activated in context, language teacher metacognition appears to also be shaped by it. Our data analyses showed that language teacher metacognition was consistently associated with the type of instruction and tasks our participants implemented in their L2 classes. This resulted in levels of metacognitive thought and control in the classroom that teachers deliberately dialed up or dialed down depending on the type of instruction they had chosen. For instance, when L2 teachers implemented personalized classroom tasks or those that encouraged the use of higher order thinking and open-ended responses, they exhibited more awareness and adapted their instruction in more thoughtful ways than when they implemented more closed tasks that involved less meaningful use of language. Here is one example of a teacher's verbal commentary on their use of the former type of activity.

> In every class, I try to stop to think about the character of the tasks I prepare and ask students to spend their time on. They are important for students and for me. I confess as a teacher, before I hardly thought while teaching about questions like 'what are my students learning as they do a task?' 'why are they learning that and not something else?' 'how do I know my students have been successful?' I used to love getting students to just answer a lot of questions, listen and complete the blanks, finish all the handouts. I mean, I did make my planning decisions on the specific objectives of my lesson and then organized the activities presented to students. But, I didn't need or want to spend time thinking about what was happening because it's so boring. Then I realized that I didn't know what students were learning, or if different students were developing in different ways from each other. I didn't know myself how to really say their learning was successful. And of course that's the point of teaching. So, if I was unaware of that then I need to prepare better tasks than the ones just in the textbook. And for these things like authentic stories or real-life role plays, it's non-stop thinking and managing while I'm in the class. There is so much thought that I have to put while in the actual class.
>
> (Jihyun)

Our data suggests that teachers who emphasized the types of L2 learning activities likely to promote active engagement and develop learners' self-regulation also unintentionally increased their own use of those salient behavioral indices of metacognition highlighted earlier. Viewed from the other direction, in L2 teaching settings where teachers reported having inadequate instructional support from colleagues, using fewer meditational tools

of instructional materials and technology, receiving less direction or monitoring from superiors and mentors, and teaching largely independently, much more limited teacher metacognition was found in these L2 teachers' classroom work. The consequence of this is that language teacher metacognition appears to be motivated by the affordances of L2 instructional settings, norms, assumptions, and practices. Let us turn now to what we see as the implications of our findings and relate these back to our central research questions.

Discussion

With regards to our first research question, our findings indicate that while all the language teachers who were part of our sample could be characterized as successful teachers who adopted high-leverage practices in their L2 classroom instruction, some (*n* = 22) stood apart from others. These L2 teachers were individuals who had developed the capacity for careful intentional thought about their classroom practices and the underlying rationale for such instructional behavior. Although, initially, we suspected that L2 practitioners who reported being more reflective were also more metacognitive, this conclusion was not supported by our dataset. Instead, our data suggest that language teacher metacognition is more of a superordinate adaptive capacity whereas reflection can be thought of as one potential mechanism by which teachers may develop metacognition by schematizing experiences and by considering and reconsidering beliefs and practices in the context of the evidence these expanding schema provide (Marcos and Tillema 2006). However, there may be instances when reflection that involves self-critical or obsessive thinking is not productive if the L2 teacher becomes lost in thought, pondering mental states, abilities, and choices of actions. This nonpurposive manifestation of reflection may result in delayed responding or avoidance of problems. When accompanied by uncertainty, indecision, and confusion about attributions for performance (i.e. relative success or failure), reflection may inhibit action altogether (Paris 2002).

It would be much more accurate to frame language teacher metacognition as the situative adaptation of teacher thought and behavior to the demands of their L2 teaching environment. This adaptivity of thought and action is perhaps what is implied by the more generic definitions of teachers thinking about their own thinking regarding their teaching (Hartman 2001b; Jiang, Ma, and Gao 2016), and our findings emphasize that this capacity to monitor, interpret, evaluate, and intervene on L2 classroom events occurred prior to, during, and subsequent to episodes of teaching these teachers engage in. Interestingly, many teachers appeared to be occupied with general classroom instructional issues and less so with the specificities of being a language teacher (e.g. use of L1 or L2 in teacher talk) that we expected. Language teacher metacognition should be seen, therefore, as instrumental and purposeful in the sense that it involves thought and action related to teachers'

instructional goals, their students' characteristics and needs, the level and sequencing of instructional content, teaching strategies and materials used, as well as issues related to the broader curriculum and assessment, all with a view to maximizing L2 instructional effectiveness. Consequently, although we note that no dimension of our dataset provides evidence of improved student L2 learning, teaching effectiveness can be thought of in association with teacher metacognition (Sherin, Jacobs, and Philipp 2011). Metacognitive L2 teachers are better able to reflect on how their actions will encourage or mediate their students' development as metacognitive learners, through deliberate support in planning, reflective questioning, modeling, scaffolding, and explicit strategy explanation. These L2 teachers also approach their own learning and development metacognitively, which can aid in both the ways they approach their own teaching of content and the ways in which they support L2 learners' metacognitive development. In other words, there may be substance to the claim that metacognitive L2 teachers (i.e. those who teach with metacognition) are those best situated to foster L2 learner metacognition (i.e. to teach for metacognition) (Duffy et al. 2009)—this may also apply to other domains such as self-regulation and autonomy.

An additional aim of this study (i.e. RQ 2) was to shed light on the developmental mechanisms or processes that might shape L2 teachers' capacity for metacognition. Considering the participants in our sample who engaged in metacognition and the factors that stimulated their metacognition, our findings underscore the ways in which language teacher metacognition can develop either when it is self-stimulated, in the case of teachers considering their representation of self to others or examining their own thoughts and actions during classroom events, or stimulated by contextual conditions of uncertainty or unpredictability in the L2 classroom environment and various accompanying constraints (e.g. curricular objectives). In the case of self-referential thinking, L2 teachers' self-appraisals functioned as a real time equilibrium-finding mechanism through deliberate consideration of such things as what students might be thinking about the teacher and their teaching ability, or estimating how successfully the lesson is running and whether expectations for the lesson are being met. Additionally, benchmarking salient and desired self-guides enabled teachers to determine whether a course of action was necessary in the L2 classroom and how any prominent incongruences between teachers' experience of unfolding classroom events and their self-guides could be reduced. Thus, as we have signaled earlier, our data suggests that language teacher metacognition can be thought of as a self-developmental dimension that implicates, before all else, the self-evaluative thoughts of L2 teachers. An additional finding was that, because non-routine episodes and situations required more metacognition on the part of teachers for successful resolution, this uncertainty or unpredictability could be seen as having a positive influence on the development of language teacher metacognition. Instances in which students failed to understand, were unsuccessful in their L2 learning, or became disengaged

in class caused teachers to re-examine their own thinking and make explicit the rationale behind their instructional practices. By pondering what they are doing in class to contribute to this effect and how they might resolve the issue, situations such as these can stimulate the development of metacognition as teachers revise how they are thinking or what they are doing in order to achieve desired outcomes. Thus, considering the conditions under which language teacher metacognition develops is fruitful as it allows us to examine teachers' reasons for being metacognitive and makes it possible to examine the consequences of language teacher metacognition to determine if these thoughts and actions are functional, useful, and adaptive for the individuals (i.e. teachers and learners) and purposes (i.e. L2 teaching and learning) under examination (Paris 2002).

Conclusion

As indicated by the findings of our study, language teacher metacognition may originate in teacher self-referential thought associated with personal values or it may be triggered adaptively by critical monitoring of L2 teaching-specific episodes, but it may also be linked to teachers' broader reflection on external factors such as sociocultural practices of the local teaching and learning community. Some of the limitations of our study also offer connections from our findings to further avenues for research. First, we would encourage future work in this area to adopt a strong orientation towards research designs that make the links between language teacher metacognition, classroom practice, and L2 student development more explicit empirically. This is also perhaps the most effective way to apply research about language teacher metacognition to the broader endeavor of second language teacher education (SLTE). One way this might be accomplished is to demonstrate whether and to what extent language teacher metacognition links to such things as enhanced teacher learning and L2 classroom practice, students' own metacognition, and student achievement. Although our study has a time-series element to it, future work in language teacher metacognition would also benefit greatly from longitudinal case-based designs which elicit intensive dynamic data from multiple timescales that can tap into real-time variations in teacher metacognition (e.g. using an idiodynamic method) and tap into teachers' own representations of their metacognition in the moment (e.g. through think-aloud protocols). Since it is developmental, accurate treatment of any applied implications requires consideration of the conditions and contexts that initiate or encourage the self-organized (i.e. bottom-up and emergent) development of language teacher metacognition, and this can only be done through a greater reliance on dynamic methods of investigation.

Limitations aside, we see the findings on language teacher metacognition brought to light in this study as having the potential to spark new questions for exploration and new implications for SLTE. Let us wrap up this chapter by

considering these practical applications. One powerful way L2 teachers might come to develop greater metacognitive thought and action in their practice is through productive mentoring partnerships (Moir et al. 2009) designed to provide a non-evaluative, support network for teachers to critically reflect on their positioning towards teaching and learning, increase congruence with their possible identities, and soft-assemble the situated adaptivity needed to teach metacognitively. This mentorship could take place within the scope of SLTE programs or be embedded in the teaching locale itself, and would draw less on the social aspect of learning to teach language per se, and more specifically on L2 teachers' learning to gain critical awareness and exercise control over selves, thoughts, and behaviors in their daily practice. Teachers would, in a sense, be "socialized into" metacognitive teaching through monitoring and evaluating their personal goals and visions, and strategic classroom behavior on multiple timescales and for various purposes (see also Veenman 2016). For mentorship relationships to impact the development of language teacher metacognition they must be sensitive to change and context as teachers from both ends of the spectrum (i.e. more metacognitive and less metacognitive teachers) find common ground in their professional knowledge and share common reference points from their experience. Consequently, mentorship that empowers language teachers to exercise more metacognitive control over their practice may be the key to achieving optimal growth and performance as language teaching professionals.

Note

1 Institutional review boards are independent ethics committees that review, approve and monitor human subject research.

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Notes: Non-English letters are arranged like their nearest basic equivalent letters in the English alphabet.
Page numbers in bold indicate tables. Page numbers in italic indicate figures.