7 Metacognitive Knowledge about Writing in a Foreign Language

A Case Study

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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.

<i>Metacognition in writing</i>			
<i>Metacognitive writing knowledge</i>		<i>Metacognitive regulation of writing</i>	
<i>Declarative writing knowledge</i>	<i>Procedural writing knowledge</i>	<i>Conditional writing knowledge</i>	<i>Monitoring writing</i>
<i>Controlling writing</i>			
<ul style="list-style-type: none">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 processesthe 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)	<ul style="list-style-type: none">Knowledge about how to apply general and specific writing strategies	<ul style="list-style-type: none">Knowledge about when, where and why to use declarative and procedural writing knowledge	<ul style="list-style-type: none">ReadingRe-reading (e.g. from the audience point of view)Reflecting (e.g. about how the written text fits the intended writing goal)Reviewing
			<ul style="list-style-type: none">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.

<i>Main theme</i>	<i>Contents</i>
Introduction	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • comparison of text types, activation of previous knowledge • focus on and intensive work with purpose, structure and linguistic markers of argumentative texts
Planning	<ul style="list-style-type: none"> • exploration of different types of planning texts: brainstorming, mind-map, outline • exercises • discussion about how the planning types worked for the students
Repetition	<ul style="list-style-type: none"> • repetition of previous lessons • exercises with focus on outlining argumentative texts
Formulation	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 consequences", 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.

References

- Bereiter, Carl, and Marline Scardamalia. 1987. *The Psychology of Written Composition*. New York: Routledge.
- Dimmitt, Carey, and Christine B. McCormick. 2012. “Metacognition in Education.” In *APA Educational Psychology Handbook*, edited by Karen R. Harris, Steven Graham, and Tim Urdan, 157–87. Washington, DC: American Psychological Association.
- Flavell, John H. 1979. “Metacognition and Cognitive Monitoring. A New Area of Cognitive-Developmental Inquiry.” *American Psychologist* 34 (10): 906–11. <https://doi.org/10.1037/0003-066X.34.10.906>
- Flower, Linda, and John R. Hayes. 1981. “A Cognitive Process Theory of Writing.” *Composition and Communication* 32 (4): 365–87.
- Forbes, Karen. 2018. “‘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.” In *Metacognition in Language Learning and Teaching*, edited by Åsta Haukås, Camilla Björke, and Magne Dypedahl. New York: Routledge.
- Gass, Susan M., and Larry Selinker. 2008. *Second Language Acquisition: An Introductory Course*. 5th ed. New York: Routledge.
- Graham, Steven. 2006. “Writing.” In *Handbook of Educational Psychology*, edited by Patricia A. Alexander and Philip H. Winne, 457–78. Mahwah: Lawrence Erlbaum.
- Graham, Steven, and Karen R. Harris. 2005. *Writing Better: Effective Strategies for Teaching Students with Learning Difficulties*. Baltimore: Brookes.

- Hacker, Douglas J. 1998. "Definitions and Empirical Foundations." In *Metacognition in Educational Theory and Practice*, edited by Douglas J. Hacker, John Dunlosky, and Arthur C. Graesser, 1–23. Mahwah: Lawrence Erlbaum.
- Hacker, Douglas J., Linda Bol, and Matt C. Keener. 2008. "Metacognition in the Classroom." In *Handbook of Metamemory and Memory*, edited by John Dunlosky and Robert A. Bjork, 429–55. New York: Psychology Press.
- Hacker, Douglas J., Matt C. Keener, and John C. Kircher. 2009. "Writing is Applied Metacognition." In *Handbook of Metacognition in Education*, edited by Douglas J. Hacker, John Dunlosky, and Arthur C. Graesser, 154–72. New York: Routledge.
- Harris, Karen R., Steven Graham, Mary Brindle, and Karin Sandmel. 2009. "Metacognition and Children's Writing." In *Handbook of Metacognition in Education*, edited by Douglas J. Hacker, John Dunlosky, and Arthur C. Graesser, 131–53. New York: Routledge.
- Hartman, Hope J. 2001. *Metacognition in Learning and Instruction*. Dordrecht: Kluwer.
- Haukås, Åsta. 2015. "A Comparison of L2 and L3 Learners' Strategy Use in School Settings." *Canadian Modern Language Review* 71 (4): 383–405. <https://doi.org/10.3138/cmlr.2701>
- . 2018. "Metacognition in Language Learning and Teaching: An Overview." In *Metacognition in Language Learning and Teaching*, edited by Åsta Haukås, Camilla Bjørke, and Magne Dypedahl. New York: Routledge.
- Hayes, John R. 1996. "A New Framework for Understanding Cognition and Affect in Writing." In *The Science of Writing*, edited by Michael C. Levy and Sarah Ransdell, 1–27. Mahwah: Lawrence Erlbaum.
- Hufeisen, Britta, and Nicole Marx. 2007. "How can DaFnE and EuroComGerm Contribute to the Concept of Receptive Multilingualism?" In *Receptive Multilingualism: Linguistic Analyses, Language Policies and Didactic Concepts*, edited by Jan D. ten Thijs and Ludger Zeveaert, 307–21. Amsterdam: John Benjamins.
- Jacobs, Janis E., and Scott G. Paris. 1987. "Children's Metacognition About Reading: Issues in Definition, Measurement, and Instruction." *Educational Psychologist* 22 (3–4): 255–78. <https://doi.org/10.1080/00461520.1987.9653052>
- Kellogg, Ronald. 1996. "A Model of Working Memory." In *The Science of Writing*, edited by Michael C. Levy and Sarah Ransdell, 57–72. Mahwah: Lawrence Erlbaum Associates.
- Knospe, Yvonne. 2017. "Writing in a Third Language. A Study of Upper Secondary Students' Texts, Writing Processes and Metacognition." PhD Diss., Umeå University, Umeå.
- Kuhn, Deanna. 2000. "Metacognitive Development." *Current Directions in Psychological Science* 9 (5): 178–81. <https://doi.org/10.1111/1467-8721.00088>
- Leijten, Mariëlle, and Luuk Van Waes. 2013. "Keystroke Logging in Writing Research: Using Inputlog to Analyze and Visualize Writing Processes." *Written Communication* 30 (3): 358–92. <https://doi.org/10.1177/0741088313491692>
- McCormick, Christine B. 2003. "Metacognition and Learning." In *Handbook of Psychology, Vol. 7, Educational Psychology*, edited by William M. Reynolds and Gloria E. Miller, 79–102. New Jersey: John Wiley & Sons.
- McCutchen, Deborah. 1996. "A Capacity Theory of Writing: Working Memory in Composition." *Educational Psychology Review* 8 (3): 299–325. <https://doi.org/10.1007/BF01464076>

- Nelson, Thomas O., and Louis Narens. 1990. "Metamemory: A Theoretical Framework and New Findings." *The Psychology of Learning and Motivation* 26: 125–73. [https://doi.org/10.1016/S0079-7421\(08\)60053-5](https://doi.org/10.1016/S0079-7421(08)60053-5)
- Paris, Scott G., and Peter Winograd. 1990. "How Metacognition Can Promote Academic Learning and Instruction." In *Dimensions of Thinking and Cognitive Instruction*, edited by Beau F. Jones and Lorna Idol, 15–51. Hillsdale: Erlbaum.
- Schoonen, Rob, and Kees De Gloppe. 1996. "Writing Performance and Knowledge About Writing." In *Theories, Models and Methodology in Writing Research*, edited by Gert Rijlaarsdam, Huub van den Bergh, and Michael Couzijn, 89–107. Amsterdam: Amsterdam University Press.
- Schoonen, Rob, Amos van Gelderen, Kees De Gloppe, Jan Hulstijn, Annegien Simis, Patrick Snellings, and Marie Stevenson. 2003. "First Language and Second Language Writing: The Role of Linguistic Knowledge, Speed of Processing, and Metacognitive Knowledge." *Language Learning* 53 (1): 165–202. <https://doi.org/10.1111/1467-9922.00213>
- Schoonen, Rob, Patrick Snellings, Marie Stevenson, and Amos Van Gelderen. 2009. "Towards a Blueprint of the Foreign Language Writer: The Linguistic and Cognitive Demands of Foreign Language Writing." In *Writing in Foreign Language Contexts: Learning, Teaching, and Research*, edited by Rosa M. Manchón, 77–101. Bristol: Multilingual Matters.
- Schraw, Gregory. 1998. "Promoting General Metacognitive Awareness." *Instructional Science* 26: 113–25. <https://doi.org/10.1023/A:1003044231033>
- Sitko, Barbara M. 1998. "Knowing How to Write: Metacognition and Writing Instruction." In *Metacognition in Educational Theory and Practice*, edited by Douglas J. Hacker, John Dunlosky, and Arthur C. Graesser, 93–115. Mahwah: Lawrence Erlbaum Associates.
- Svalberg, Agneta M. 2012. "Language Awareness in Language Learning and Teaching: A Research Agenda." *Language Teaching* 45 (3): 376–88. <https://doi.org/10.1017/S0261444812000079>
- Tobias, Sigmund, and Howard T. Everson. 2000. "Assessing Metacognitive Knowledge Monitoring." *Issues in the Measurement of Metacognition* 5: 147–222.
- Victori, Mia. 1999. "An Analysis of Writing Knowledge in EFL Composing: A Case Study of Two Effective and Two Less Effective Learners." *System* 27 (4): 537–55. [https://doi.org/10.1016/S0346-251X\(99\)00049-4](https://doi.org/10.1016/S0346-251X(99)00049-4)
- Victori, Mia, and Walter Lockhart. 1995. "Enhancing Metacognition in Self-Directed Language Learning." *System* 23 (2): 223–34. [https://doi.org/10.1016/0346-251X\(95\)00010-H](https://doi.org/10.1016/0346-251X(95)00010-H)
- Wenden, Anita L. 1998. "Metacognitive Knowledge and Language Learning." *Applied Linguistics* 19 (4): 515–37. [https://doi.org/10.1016/0346-251X\(95\)00010-H](https://doi.org/10.1016/0346-251X(95)00010-H)
- . 2002. "Learner Development in Language Learning." *Applied Linguistics* 23 (1): 32–55. <https://doi.org/10.1093/applin/23.1.32>
- Zhang, Lawrence Jun, and Tony Limin Qin. 2018. "Validating a Questionnaire on EFL Writers' Metacognitive Awareness of Writing Strategies in Multimedia Environments." In *Metacognition in Language Learning and Teaching*, edited by Åsta Haukås, Camilla Bjørke, and Magne Dypedahl. New York: Routledge.
- Zimmerman, Barry J., and Albert Bandura. 1994. "Impact of Self-Regulatory Influences on Writing Course Attainment." *American Educational Research Journal* 31 (4): 845–62. <https://doi.org/10.3102/00028312031004845>