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**THE EFFECTS OF PEER INTERACTION, FORM-FOCUSED  
INSTRUCTION, AND PEER CORRECTIVE FEEDBACK ON THE  
ACQUISITION OF GRAMMAR AND VOCABULARY IN L2 GERMAN**

A Dissertation in

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by

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## ABSTRACT

The grammar and the lexicon are fundamental elements of any language. In the context of a second language (L2), mastery of grammar and lexicon are critical for the purpose of comprehensibility (e.g., Saito, Trofimovich, & Isaacs, 2015), yet they are highly complex systems and therefore typically present difficulty to L2 learners at all stages of proficiency. In communicative and content-based L2 classrooms, teachers can address this issue by providing learners with form-focused instruction and corrective feedback on grammatical structures and vocabulary during interactions that are otherwise primarily focused on meaning. In the context of peer interaction within communicative and content-based classrooms, however, learners typically focus almost exclusively on meaning and rarely shift their attention to linguistic forms (e.g., Adams, Nuevo, & Egi, 2011). Consequently, peer interaction is a useful pedagogical intervention for the purpose of fluency development, but not necessarily for the purpose of linguistic accuracy (Sato and Lyster, 2012).

The goal of this dissertation is to explore the effectiveness of form-focused instruction and peer corrective feedback to improve linguistic accuracy and thereby maximize learning opportunities during peer interactions that focus primarily on meaning. The study used a mixed-methods design to collect both quantitative data that provided information on the effectiveness of the intervention and qualitative data to gain insights into learners' beliefs about the intervention. Two experiments were conducted: The first one was designed to promote the acquisition of grammatical structures and the second to promote the acquisition of vocabulary.

In experiment 1, 87 third-semester learners of German were assigned to a PI group (peer interaction only), PI FFI group (peer interaction and form-focused instruction), or PI FFI CF group (peer interaction, form-focused instruction, and peer corrective feedback). During an

instructional treatment over three consecutive class periods, participants in all three groups engaged in the same peer interaction activities that revolved around the city of Munich. However, only the PI FFI group and the PI FFI CF group received form-focused instruction on the grammatical target structure, the German present perfect tense, which includes auxiliary verb selection and past participle formation. Critically, only the PI FFI CF group was trained to provide corrective feedback to peers. A pretest and two posttests measured the effectiveness of the intervention, all of which included an oral production task and an error correction task. Results showed that the PI FFI group outperformed the PI group on all of the four auxiliary measures, but on none of the four past participle measures, whereas the PI FFI CF group outperformed the PI group on all auxiliary measures and two past participle measures. The PI FFI CF group outperformed the PI FFI group on one past participle measure, but on none of the auxiliary measures.

In experiment 2, 77 third-semester learners of German were assigned to one of the same three groups as in experiment 1 and engaged in peer interaction activities that revolved around the discussion of the movie *Almanya – Welcome to Germany* during an instructional treatment over four consecutive class periods. Only the PI FFI group and the PI FFI CF group received form-focused instruction on vocabulary relevant to the movie, which were 25 German nouns along with their gender and plural forms, and only the PI FFI CF group received training on how to correct peers' vocabulary mistakes. Results from a pretest and two posttests showed that both the PI FFI and the PI FFI CF group outperformed the PI group on seven of eight measures assessing productive and receptive vocabulary knowledge, as well as knowledge of grammatical gender and plural forms. The PI FFI CF group outperformed the PI FFI group on three of four

measures of productive and receptive vocabulary, but on none of the four measures of grammatical gender and plural forms.

Overall, the findings of the two experiments suggest that peer interaction was most effective when combined with form-focused instruction, and even more effective when peer feedback training was also provided to learners, suggesting that peer corrective feedback is a useful pedagogical intervention in foreign language classrooms. These findings are complemented by qualitative data from semi-structured interviews, that showed learners held positive beliefs about peer interaction and peer corrective feedback, regardless of the treatment group they had been assigned to, although learners from the PI and the PI FFI group were more likely to withhold peer corrections due to social considerations. Qualitative data further showed that the noticing of mistakes, as well as peer corrective feedback, was most likely to occur in the PI FFI CF group. These findings are discussed within the context of the interaction approach (Long, 1983a, 1996; Gass & Mackey, 2015) and the noticing hypothesis (Schmidt, 1990, 2001). Pedagogical implications for foreign language learning in classroom environments are also discussed.

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## List of Abbreviations

- CF:** Corrective Feedback
- EFL:** English as a Foreign Language
- ESL:** English as a Second Language
- FFI:** Form-Focused Instruction
- FonF:** Focus on Form
- FonFs:** Focus on Forms
- L1:** First Language
- L2:** Second Language
- LRE:** Language-Related Episode
- NNS:** Non-Native Speaker
- NS:** Native Speaker
- PI:** Peer Interaction
- SLA:** Second Language Acquisition

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# CHAPTER 1: Introduction

## 1.1 Description of the Problem

Acquiring the grammar of a second language (L2) is not an easy task for L2 learners. Although grammatical structures are often explicitly taught in foreign and second language classrooms, many learners fail to achieve native-like mastery of L2 grammar (Loewen, 2015). While native-like mastery of L2 grammar is typically not the goal in foreign language classrooms, there is good reason to consider the teaching of grammar an important aspect of the classroom, mostly because grammatical accuracy—among other linguistic areas—is important for comprehensibility (Saito, Trofimovich, & Isaacs, 2015). It is further noteworthy that L2 learners tend to believe that grammar instruction is beneficial for their learning (e.g., Loewen, Li, Fei, Thompson, Nakatsukasa, Ahn, & Cheng, 2009), which is another reason to include grammar lessons into foreign language classrooms.

Similarly, the acquisition of second language vocabulary often poses challenges to L2 learners, as is evident in the large number of studies investigating learning strategies designed to help learners better memorize vocabulary, such as the keyword method (e.g., Atkinson & Raugh, 1975; Dolean, 2014; Stork, 2003), among other mnemonic devices. Further, vocabulary researchers argue that knowing a word goes beyond just mapping meaning onto form. For instance, learners must also acquire morphological and syntactic features of the words and further develop a semantic network for each new vocabulary item (e.g., Henriksen, 1999; Read, 2004), making the acquisition of vocabulary an even more challenging task for L2 learners. Like the teaching of grammar, the teaching of vocabulary is typically considered an important component of many of today's foreign language classrooms. There is good reason to teach

vocabulary, because—as it is the case with grammatical accuracy—accurate use of vocabulary is essential for comprehensibility (Saito et al., 2015). Moreover, research has shown that learners need large L2 vocabularies to communicate successfully (Schmitt, 2008).

Teacher-learner interactions in communicative and content-based language classrooms are often primarily focused on meaning with some shifts of attention to linguistic form, including grammar instruction, vocabulary instruction, and corrective feedback on learners' nontarget-like productions. Thus, teacher-learner interactions are often successful at promoting learners' ability to negotiate meaning in the L2 while also facilitating their acquisition of grammatical structures and vocabulary, among other linguistic areas. In contrast, learner-learner interactions in communicative and content-based language classrooms are often focused on meaning or task completion with no or little attention to form. Research has shown that, during meaning-focused peer interaction activities, learners rarely shift their attention to linguistic forms or provide corrective feedback to other learners (Adams, Nuevo, & Egi, 2011; Sato & Lyster, 2012), unless they are specifically trained to do so by their teachers, or if attention to form is encouraged by the nature of the task. Thus, peer interaction without corrective feedback or some other type of focus on form component often does not have a significant impact on accuracy development (Sato & Lyster, 2012). Nevertheless, pair and group work are widely used in today's foreign language classrooms, since they provide learners with ample practice opportunities and can improve their confidence and fluency in the language (Sato, 2013; Sato & Lyster, 2012).

The goal of the present dissertation is to evaluate methods of increasing learning opportunities during peer interaction in foreign language classrooms. To this end, this dissertation seeks ways to improve learners' acquisition of linguistic forms, including grammatical accuracy and vocabulary development, while also providing them with valuable

practice opportunities during otherwise primarily meaning-focused peer interaction activities. To draw learners' attention to linguistic forms during these activities, the present study uses oral peer corrective feedback as a novel pedagogical tool in addition to form-focused instruction as a well-established pedagogical intervention. Two experiments were conducted, with the first targeting the acquisition of grammatical structures and the second targeting the acquisition of vocabulary. Three experimental groups participated in each experiment. The PI group engaged in peer interaction activities, but received no form-focused instruction or peer feedback training. The PI FFI group engaged in peer interaction activities and received form-focused instruction, but no peer feedback training. The PI FFI CF group engaged in peer interaction activities while also receiving form-focused instruction and peer feedback training.

The present dissertation used a mixed-methods design, including both quantitative and qualitative measures. Quantitative data were collected by means of a pretest-posttest design. For each experiment, a pretest, an immediate posttest, and a delayed posttest were administered. In the case of experiment 1, these tests included an oral production task and a written error correction task. In the case of experiment 2, the tests included a productive and a receptive vocabulary test, as well as a test of the morphological features of the vocabulary items, which were grammatical gender and noun plurals. Qualitative data were collected by means of semi-structured interviews. After each experiment, a subset of learners participated in post-treatment interviews regarding their beliefs about the interventions used in the study.

By using a mixed-methods design, this dissertation aims not only at evaluating the effectiveness of the interventions employed in the study by assessing learning outcomes through quantitative measures, but also at gaining insights into learners' beliefs about those interventions through qualitative measures, with the ultimate goal of providing a more detailed picture of peer



interaction, form-focused instruction, and peer corrective feedback in the context of foreign language classrooms.

## **1.2 Layout of the Dissertation**

This dissertation is organized as follows: Chapter 2 presents the background literature most relevant to the present dissertation. This includes a discussion of the theoretical motivation and a review of empirical studies addressing peer interaction, form-focused instruction, and corrective feedback in the foreign language classroom. The chapter concludes with a description of the present study and its research questions, highlighting the relevant gaps in previous research. Chapter 3 presents the methodology and the results of the quantitative portion of the first experiment, followed by a discussion of the findings. Chapter 4 presents qualitative data pertaining to the first experiment, which includes a description of the methodology, results, and a discussion of the findings. Chapter 5 presents the methodology and the results of the quantitative portion of the second experiment, followed by a discussion of the findings. Chapter 6 presents qualitative data pertaining to the second experiment, which includes a description of the methodology, results, and a discussion of the findings. Finally, chapter 7 provides a summary of the results, discusses the major theoretical and pedagogical implications of the study, and draws conclusions pertaining to the research questions addressed in the present dissertation. The chapter also discusses some potential limitations of the present study and poses questions for future research.

## CHAPTER 2: Literature Review

### 2.1 Theoretical Background

#### *Theories Supporting Peer Interaction and Peer Corrective Feedback*

Second language acquisition (SLA) researchers have looked at (peer) interaction and (peer) corrective feedback using different theoretical frameworks, most notably the interaction approach (Gass, 2003; Gass & Mackey, 2015; Long, 1996), skill acquisition theory (DeKeyser, 2015; Lyster & Sato, 2013; Ranta & Lyster, 2007), and sociocultural theory (Aljaafreh & Lantolf, 1994; Lantolf, 2000; Lantolf, Thorne, & Poehner, 2015; Nassaji & Swain, 2000). In short, the interaction approach predicts that interaction facilitates L2 development, skill acquisition theory claims that learners can proceduralize and automatize language forms through practice and feedback, and sociocultural theory claims that corrective feedback can be effective if provided within the individual learner's zone of proximal development. This section focuses on how the interaction approach accounts for the efficacy of peer interaction and peer corrective feedback and outlines the predictions it makes for classroom-based second language learning that makes use of peer interaction and peer corrective feedback.

#### *Long's Interaction Hypothesis*

A theory that researchers studying interaction and feedback—in natural environments, laboratory environments and classrooms settings—frequently refer to is the interaction hypothesis (Long, 1996; for more recent overviews see Gass, 2013; Gass & Mackey, 2015; Loewen, 2015; Long, 2015; Mackey, Abbuhl, & Gass, 2012; Mitchell, Myles, & Marsden, 2013; Pica, 2013). In an early version of the interaction hypothesis, Long (1983a) claimed that input

becomes comprehensible through the speech modifications of native speakers when they address non-native speakers of the target language. He tested native and non-native speakers of English and found that native speakers modify interaction to two main ends: to avoid conversational trouble (strategies) and to repair the discourse when trouble occurs (tactics). Long identified 15 devices (strategies and tactics) that native speakers use in conversation with non-native speakers, such as selecting salient topics, treating topics briefly, checking comprehension, and repeating their own utterances. Through these devices, native speakers make the input comprehensible to non-native speakers, when communication would otherwise break down. Long (1983a)

concludes that comprehensible input is the prerequisite for acquisition:

It is widely assumed, and probably rightly, that samples of a SL [second language] heard but not understood by a would-be acquirer of that language serve no useful purpose in the SLA process. Only comprehensible input will do. (p. 138)

Long's early version of the interaction hypothesis was motivated partially by Krashen's (1980) input hypothesis, which claims that input that is comprehensible—yet slightly above the learner's level of proficiency—is the driving force behind language acquisition (see also Krashen, 1985). According to Krashen, a second language can be acquired automatically if the learner is exposed to comprehensible input and has a low affective filter. There is no role for corrective feedback in Krashen's input hypothesis or Long's early version of the interaction hypothesis, since comprehensible input alone was believed to be sufficient.

The claim that comprehensible input is sufficient was challenged by Swain (1985), who found that learners' production skills lag behind their comprehension skills if they do not have sufficient opportunities to speak or write the target language. Swain's output hypothesis (Swain, 1985), which was incorporated into later versions of the interaction hypothesis (Mackey et al., 2012), claims that producing output plays a crucial role in the development of the L2.

Based on Swain's and other empirical work showing that input alone is often not sufficient for adult L2 learners to achieve native-like proficiency (e.g., Schmidt, 1983), Long (1996) revised the interaction hypothesis. The revised version still acknowledged the importance of comprehensible input, but at the same time emphasized that comprehensible input alone is insufficient, creating a role for both positive evidence and negative evidence: Through positive evidence, native speakers (or language teachers) offer models of what is grammatical or acceptable in a language, and through negative evidence, they provide direct or indirect information about what is ungrammatical. Thus, in his revised interaction hypothesis, Long argues that negative evidence facilitates second language acquisition, in particular the acquisition of vocabulary, morphology, and syntax, and may even be essential for learning "certain specifiable L1-L2 contrasts" (p. 414).

Long (1996) takes this even one step further. Despite still stressing the importance of comprehensible input, he notes that in certain situations it can actually hinder learning:

Paradoxically, comprehensible input may actually inhibit learning on occasion, because it is often possible to understand a message without understanding all the structures and lexical items in the language encoding it, and without being aware of not understanding them all. Linguistic redundancy, contextual information, and knowledge of the world can all compensate for the unknown elements. Learners may not notice new forms precisely because, at a global level, a message is comprehensible, with the result that their focal attention is directed elsewhere. (p. 425)

Even though he emphasizes the important role of the environment, Long (1996) also argues that the fact that many learners fail to achieve native-like proficiency in the L2 cannot be attributed to the environment alone: "Part of the explanation lies inside the learner, most importantly in the areas of attention, awareness, and cognitive processing" (p. 425). Therefore, learners' attention needs to be drawn to form, for example through grammar instruction or corrective feedback (CF). Long concludes that negative feedback is necessary to acquire

structures for which positive evidence is insufficient, in particular structures that are different in the L1 and the L2.

### *The Interaction Approach Today*

Today, the interaction hypothesis is typically referred to as the *interaction approach* (Gass & Mackey, 2015), as it integrates constructs of input, interaction, feedback, and output. Moreover, Mackey and Gass (2006) have argued that the interaction approach contains elements of a hypothesis (an idea that needs to be tested about a single phenomenon), a model (a description of a process that comprises a phenomenon), and a theory (a set of statements of natural phenomena that explain why events occur the way they do), and therefore argued that it might be better viewed as an approach rather than a hypothesis, which resulted in the establishment of the term *interaction approach* in the literature. Over the years, many empirical studies have investigated the relationship between interaction and L2 development in various settings. Taken together, these studies provide strong evidence for the benefits of interaction (e.g., Ellis & He, 1999; Gass & Varonis, 1994; Jeon, 2007; Mackey, 1999; see also a meta-analysis by Mackey & Goo, 2007).

The interaction approach was initially proposed for interactions between native speakers and non-native speakers (or teachers and students). In a recent monograph on peer interaction, Philip, Adams, and Iwashita (2014) state that “a question arises as to the extent to which this model can appropriately be applied to peer interaction in classrooms” (p. 41). Moreover, they argue that “although feedback may occur in peer interaction, this occurrence may not be very promising for learning” (p. 55). Further, in an empirical study, Adams et al. (2011) found limited evidence for a relationship between implicit peer feedback and L2 learning and a negative effect

for explicit peer corrections. They conclude that “feedback may not play as important a role in learner-learner interactions as it plays in NS-learner interactions” (p. 56). An empirical study by Sato and Lyster (2012) challenges these claims, as it has shown a positive relationship between instructed peer CF and L2 development. Sato and Lyster’s (2012) findings would suggest that the interaction approach is likely to be applicable to learner-learner contexts, especially if learners receive training on how to provide feedback (see also Chu, 2013; Rahimi, 2013; Sippel & Jackson, 2015).

### *The Noticing Hypothesis*

The concepts of noticing and attention play an important role within the interaction approach (Mitchell et al., 2013; Spada & Lightbown, 2009).<sup>1</sup> Schmidt’s (1990, 2001) noticing hypothesis claims that noticing is a necessary precondition for second language development and that it is not possible to learn aspects of a second language that are not consciously noticed. Today, some studies have found that learning can occur in the absence of noticing (e.g., Williams, 2004), but independent of whether it can or cannot, proponents of the interaction approach claim that encouraging learners to notice mismatches between their own productions and target language forms will maximize learning opportunities during interactions (Mitchell et al., 2013).

Empirical evidence for the noticing hypothesis comes from an early case study in which a participant—Schmidt himself—learned Portuguese during a 5-month stay in Brazil (Schmidt & Frota, 1986). The results showed that there was a close connection between noticing of forms

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<sup>1</sup> See, however, Mackey (2007): “Interaction research has typically made little reference to specific models of noticing, awareness, and attention, although most researchers place importance on these processes. Rather, these terms have been used in a general (and often seemingly interchangeable) way in claims about the utility of interaction.” (p. 96)

and their emergence in production, and that understanding was likely to lead to correct production whereas misunderstanding was likely to result in incorrect output. In a later paper on attention, Schmidt (2001) argues that “the concept of attention is necessary in order to understand virtually every aspect of second language acquisition” (p. 3) and that “SLA is largely driven by what learners pay attention to and notice in target language input and what they understand the significance of noticed input to be” (p. 3f.). Schmidt (2001) concludes that no aspect of a second language can be learned without attention:

Nothing is free. [...] In order to acquire morphology (both derivational and inflectional), one must attend to both the forms of morphemes and their meanings, and in order to acquire syntax one must attend to the order of words and the meaning they are associated with. (p. 30f.)

#### *Learner-Learner Interactions versus Teacher-Learner Interactions*

Research has shown that interactions among native speakers (NS) and interactions between native speakers and non-native speakers (NNS) differ in important ways (e.g., Gass, 1997; Sato & Lyster, 2007; Varonis & Gass, 1985). In an early study with NS-NNS dyads and NNS-NNS dyads, Varonis and Gass (1985) found that negotiation of meaning and negotiation of form were more likely to occur in NNS-NNS dyads than in NS-NNS dyads. They argued that interactions between learners were less face-threatening for learners and that learners recognized their “shared incompetence” (p. 84), which resulted in a greater amount of negotiation of meaning and negotiation of form.

Similar findings were reported by Sato and Lyster (2007), who also compared NS-learner to learner-learner interactions. In their study, each learner was paired once with a native speaker and once with another learner. The results suggested that, although there was a similar amount of negotiation for meaning in NS-learner and learner-learner interactions, learner-learner interactions were different in two aspects: First, learners provided each other with more

elicitation feedback than native speakers, and second, learners who were interacting with another learner produced more modified output than learners who were interacting with a native speaker. Follow-up recall sessions with the learners helped to explain these results. Learners reported that they felt less pressured and more comfortable when interacting with other learners, and also that they had more time to plan what they were going to say. This led to a more active engagement of the learners when they were working with another learner, as explained by a participant in the follow-up recall session reported by Sato and Lyster (2007):

My native-speaker partner was giving me very specific questions so I was answering his questions all the time. Plus, I could have more information when I was working with him, so it was much easier to complete the task compared to when I was working with Taka [another learner]. I think I was a listener when I was communicating with my native-speaker partner, and I was a speaker when I was working with Taka. (p. 140)

One of the predictions of the interaction approach is that negotiation of form and negotiation of meaning will positively affect second language development. If peer interaction is more likely to create such opportunities than teacher-learner interaction (Varonis & Gass, 1985), then peer interaction might be of particular value within the theory and for language pedagogy. Moreover, the interaction approach emphasizes the importance of opportunities to produce output (Swain, 1985). If peer interaction is more likely to encourage modified output than teacher-learner interactions (Sato & Lyster, 2007), then peer interaction would be an ideal context for interaction and would be expected to lead to at least similar gains in L2 development as teacher-learner interaction.

One of the predictions of Schmidt's (1990, 2001) noticing hypothesis is that noticing is a necessary precondition for second language development. As explained above, proponents of the interaction approach argue that learners should be encouraged to notice mismatches between their own productions and target language forms as a way to promote learning (Mitchel et al., 2013). With respect to the efficacy of peer CF, that means that peer CF might heighten learners'



awareness of linguistic forms, since they are encouraged to not only notice corrections provided by peers, but also nontarget-like utterances in their peers', as well as in their own, productions and subsequently provide feedback or self-correct their mistakes. Although the quality of feedback provided by learners might be lower than the quality of feedback provided by native speakers or teachers (Philip et al., 2014), peer CF is superior to teacher CF in the sense that it encourages learners to monitor their own and their peers' productions and therefore promotes the noticing of mistakes. If noticing is a precondition for learning (Schmidt, 1990, 2001), then the benefits of increased noticing can be expected to compensate for the potentially lower quality of peer CF.

### *Focus on Form*

The interaction approach and the noticing hypothesis motivated a teaching approach referred to as *focus on form* (Long, 1991; see also section 2.3). In contrast to alternative approaches such as *focus on meaning*—which focuses on meaning without any reference to form—and *focus on forms*—which focuses on form without any reference to meaning—focus on form is a more analytic approach (Long & Robinson, 1998). Focus on form encourages shifts of attention to linguistic form in otherwise primarily meaning-focused classrooms. Such shifts of attention can occur through explicit instruction or through corrective feedback, and they are theoretically justified by the aforementioned claims of the interaction approach and the noticing hypothesis. If interaction and noticing are a precondition for second language learning, then focus on form would be expected to greatly benefit second language learners, as both interaction and conscious noticing will be encouraged in the classroom. Focus on meaning, in contrast, would be expected to be insufficient, because—although it does encourage interaction—it would

not actively encourage conscious noticing of forms and learners would not receive sufficient negative evidence.

### *Summary: The Interaction Approach*

In summary, the interaction approach claims that (a) interaction facilitates second language learning, (b) noticing facilitates second language learning, and (c) both positive and negative evidence are necessary for successful second language acquisition. Although the interaction approach was originally developed based on interactions between native speakers and learners, it is likely the case that learners can benefit not only from interacting with native speakers, but also from interacting with other learners. The interaction approach claims that positive evidence alone is insufficient in interactions between teachers and learners, and some recent research suggests that this is also the case in learner-learner interactions (e.g., Sato & Lyster, 2012). The interaction approach and the noticing hypothesis motivated a teaching approach referred to as *focus on form*, which aims at promoting learners' awareness of linguistic forms by drawing their attention to forms through explicit instruction and corrective feedback.

## **2.2 Peer Interaction**

### *Definition*

Blum-Kulka and Snow (2004) describe peer interaction (PI) as a collaborative, multi-party, and symmetrical activity. It is collaborative, because learners work together towards a common goal, and it is multi-party, because it involves two or more learners. Finally, it is symmetrical because a learner-learner relationship is equal, in contrast to a teacher-learner

relationship, where the teacher is the more experienced participant and is therefore viewed as more authoritative.

Philip et al. (2014) define peer interaction as “any communicative activity carried out *between learners*, where there is minimal or no participation from the teacher” (p. 3). Although the teacher’s participation during peer interaction activities is minimal, teachers still play an important role, which includes not only establishing a collaborative classroom environment prior to implementing peer interaction (Sato & Ballinger, 2012), but also setting up PI activities, motivating learners, and providing them with the tools necessary to successfully master PI activities (Philip et al., 2014). In addition, teachers sometimes provide guidance and corrective feedback during peer interaction activities, and they may intervene when those activities become unproductive (Philip et al., 2014).

### *Characteristics of Peer Interaction*

Since Long’s interaction hypothesis, which was based on interactions between native speakers and non-native speakers, a number of studies have investigated the characteristics of peer interaction by comparing it to interactions between native speakers and non-native speakers, or teacher-learner interactions (e.g., Fernández Dobao, 2012; Sato, 2007; Sato & Lyster, 2007), showing that peer interaction is unique in several ways. According to Sato and Ballinger (2016), peer interaction is different from teacher-learner interaction in “four key interactional features: input modifications, corrective feedback, modified output, and self-initiated modified output” (p. 2).

Regarding the input that learners receive from native speakers and peers, many studies have shown that input provided by peers is generally not as rich and, further, less complex than

input provided by native speakers (e.g., Sato, 2015). Moreover, input provided by learners often contains ungrammatical forms (e.g., Foster and Ohta, 2005). At the same time, native speakers may use “foreigner talk”, when addressing non-native speakers (Gass & Varonis, 1985; Tarone, 1980). Foreigner talk, which is a way native speakers modify their speech when talking to non-native speakers, can result not only in less rich and less complex input, but also in ungrammatical input. In Sato’s (2015) study with Japanese EFL (English as a foreign language) learners and English native speakers, he found that native speakers omitted more copulas than non-native speakers, and that foreigner talk correlated with learners’ mistakes. He concluded that the speech of native speakers “can be simplified to the extent that it becomes comparable to learners’ speech” (p. 323).

Peer interaction is also different from teacher-learner interactions in terms of feedback.<sup>2</sup> While feedback occurs more frequently in teacher-learner interactions (Philip et al., 2014), it is often deliberately withheld during peer interaction, typically because of social factors (Philip, Walter, & Basturkmen, 2010), such as face-saving or perceived inappropriateness (see also, Fujii & Mackey, 2009; Foster & Ohta, 2005). Although corrective feedback may occur during peer interaction, Philip et al. (2014)—in reference to studies by Adams (2007), Adams et al. (2011), McDonough (2004), and Toth (2008)—claim that “this occurrence may not be very promising for learning” (p. 55), since it is not as focused as teacher feedback and is not necessarily perceived as corrective by learners. In addition, feedback provided by peers may be inaccurate. Most of these studies, however, are observational, and to date there is little experimental research on the effects of peer corrective feedback on L2 development using pretest-posttest designs. However, some recent studies show that peer corrective feedback can indeed be promising for

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<sup>2</sup> For a more detailed discussion of corrective feedback and peer corrective feedback, see section 2.4.

learning if teachers encourage learners to correct their peers' mistakes and also provide them with the tools to do so (see Chu, 2013; Sato & Lyster, 2012; Sippel & Jackson, 2015).

Finally, studies comparing peer interaction and teacher-learner interaction also showed that learners modify their output more often not only in response to feedback during interactions with peers (e.g., Sato & Lyster, 2007), but also in the absence of feedback during interactions with peers (that is, self-initiated output or self-corrections). For instance, in an observational study with classroom learners of Spanish, Buckwalter (2011) found that more than 90% of the output that learners modified during peer interaction activities was self-initiated. Further, in a study comparing corrective feedback during teacher-learner and learner-learner interactions, Sippel and Jackson (2015) reported that self-initiated output was more than three times more likely to occur during learner-learner interactions.

### *The Effects of Peer Interaction on Second Language Development*

The idea of using peer interaction as a facilitator for L2 development is not new. Researchers have emphasized the importance of interactions between L2 learners in classroom contexts for decades, especially with the emergence of the communicative teaching approach (e.g., Allwright, 1984). Although peer interaction is widely used in today's foreign language classrooms, research on peer interaction is still in the early stages, particularly experimental or quasi-experimental studies that measure the effects of peer interaction on L2 development (but see Fernández Dobao, 2014, 2016; McDonough, 2004; Sato & Lyster, 2012; Sato & Viveros, 2016).

In an earlier study on peer interaction, McDonough (2004) found that learners who actively participated in peer interaction activities showed improvement in the production of the

target forms as measured by a pretest and two posttests. Sato and Viveros (2016) compared peer interaction in a low and a high proficiency class and found that especially the learners in the low proficiency group made gains in L2 development, which was measured by vocabulary size and past tense use. Fernández Dobao (2014) compared pair and small group work and found that groups produced and correctly resolved more language-related episodes (LREs) than pairs. Moreover, learners who had engaged in small group work retained more vocabulary on the posttests than learners who had engaged in pair work. In a later study, Fernández Dobao (2016) examined whether silent learners can benefit from LREs during peer interaction activities. Results from a vocabulary pretest and posttest showed that silent learners learned almost as much new vocabulary as the non-silent learners who had triggered the LREs.

Sato and Lyster (2012) examined how peer interaction activities employed over one semester in a Japanese EFL classroom affected learners' fluency and accuracy development. Results showed that learners in the peer interaction group significantly improved on fluency measures from the pretest to the posttest, while learners in the control group who had not engaged in peer interaction activities made no significant gains on the same measures. However, neither learners in the peer interaction group nor learners in the control group made significant gains on grammatical accuracy, suggesting that peer interaction alone—without any reference to form—may not be sufficient to promote the acquisition of grammatical structures.

Overall, these studies suggest that peer interaction can have a positive impact on L2 development, although it will likely depend on how L2 development is defined. If defined in terms of vocabulary learning, peer interaction may be beneficial (Fernández Dobao, 2014, 2016; Sato & Viveros, 2016), and if defined in terms of fluency development, peer interaction may also be beneficial (Sato & Lyster, 2012). However, if defined in terms of grammatical learning, peer

interaction may or may not be beneficial (McDonough, 2004; Sato & Viveros, 2016; Sato & Lyster, 2012).

### *External Factors Mediating the Effects of Peer Interaction*

Although the conceptualization of L2 development is important, there are several external factors that mediate the effects of peer interaction. According to Sato and Ballinger (2016), those factors include task type (e.g., Gass, Mackey, & Ross-Feldman, 2005; Kim & Taguchi, 2016; McDonough, Crawford, & De Vleeschauwer, 2016), modality (e.g., Baralt, Gurzynski-Weiss, & Kim, 2016; García Mayo & Azkarai, 2016; Loewen & Wolff, 2016, Roushad & Storch, 2016; Roushad, Wigglesworth, & Storch, 2016), proficiency level (e.g., Bigelow & King, 2016; Leeser, 2004; Sato & Viveros, 2016; Shin, Lidster, & Sabraw, 2016; Storch & Aldosari, 2013; Watanabe & Swain, 2007), and learner relationships (e.g. Martin-Beltran, Chen, Guzman, & Merrills, 2016).

Tasks have received a considerable amount of attention in peer interaction research. For example, Gass et al. (2005) investigated interactional patterns among learners during three types of tasks in a classroom and a laboratory setting. They found that the two required information exchange tasks used in their study—a picture differences task and a map task—were more beneficial for learning than the optional information exchange task—a consensus task—, as they promoted more negotiation for meaning and resulted in more LREs. Similarly, Pica, Kanagy, and Falodun (1993), in a comparison of five different tasks, found that required information exchange tasks—in their study jigsaw and information gap activities—, which force learners to exchange information, since only person holds the necessary information, were most useful for learning (but see Foster, 1998, who found no difference between required and optional

information exchange tasks). In addition to investigating different types of tasks, researchers have also compared tasks with different levels of complexity. In a study with Korean EFL learners, Kim and Taguchi (2016) found that complex pair writing tasks created more learning opportunities and generated more interactions and negotiations among learners than simple pair writing tasks. Overall, the results of these studies suggest that task type is an important factor that can impact the effectiveness of peer interaction.

The role of modality in peer interaction (oral versus written communication and, more recently, face-to-face versus computer-mediated communication) has also been examined in several studies. The few studies that compared oral and written peer interaction show that learners tend to direct more attention to form in written interaction (e.g., Adams & Ross-Feldman, 2008; García Mayo & Azkarai, 2016), although the findings of a study by Loewen and Wolff (2016) suggest precisely the opposite. Recently, studies have also compared face-to-face to computer-mediated communication, generally suggesting that face-to-face communication is more conducive for learning, as it promotes more attention to form and also increases the learners' level of engagement (e.g., Baralt et al., 2016; Rouhshad & Storch, 2016; but see also Loewen & Wolff, who found no difference in interactional features between face-to-face and computer-mediated communication).

Many studies have investigated what role learner proficiency plays when pairing learners for peer interaction activities, but the results of these studies are mixed. While some studies suggest that pairing learners with different proficiency levels creates an ideal context for learning (e.g., Kim & McDonough, 2008), others have claimed that the more proficient learner will be disadvantaged when paired with a less proficient learner (e.g., Leeser, 2004). On the other hand, Watanabe and Swain (2007) as well as Storch and Aldosari (2013) argue that proficiency does



not matter as much as the relationships between learners and the patterns of their dyadic interactions (e.g., whether a pair can be described as collaborative, expert/novice, dominant/passive, or dominant/dominant; see also Storch, 2002).

Finally, social relationships between learners have been shown to be an important yet often neglected factor in peer interaction research. Sato and Ballinger (2012) and Ballinger (2013) have emphasized the importance of a collaborative mindset among learners for successful peer interaction in foreign language classrooms. Moreover, a recent study by Martin-Beltrán et al. (2016) showed that adolescent learners were more likely to direct their attention to forms during peer interaction activities, as they used social discourse to build relationships with their peers.

#### *Learners' Beliefs about Peer Interaction*

While most studies on peer interaction focused on interactional features and learning opportunities emerging from peer interaction, as well as several external factors that mediate it, few studies have investigated learner beliefs about peer interaction. In a laboratory study with Japanese EFL learners, Sato (2007) compared learner-learner to learner-NS interactions and conducted stimulated recall sessions afterwards. An analysis of these sessions showed that learners felt more comfortable and less pressured when they interacted with learners. Moreover, learners felt like they had more time to plan what they were going to say when they were talking to learners. Finally, they also reported that they felt more able to notice grammatical features when they were interacting with learners.

In a classroom-based study with Indonesian EFL learners, Tulung (2008) found that, overall, learners had a positive attitude towards peer interaction and preferred it over teacher-

fronted lessons. Learners reported that they felt more engaged, more motivated, less bored, less shy, and more relaxed during peer interaction activities as compared to teacher-fronted lessons. They also worried less about making mistakes, and enjoyed the less threatening atmosphere when working with peers. Moreover, learners believed that peer interaction was beneficial because it helped them become more confident in their speaking. Some learners also reported indirect learning of pronunciation or vocabulary from listening to their peers.

Sato (2013) investigated Japanese EFL classroom learners' beliefs about peer interaction both before and after an instructional intervention during which learners engaged in peer interaction activities. Questionnaire and interview data showed that learners enjoyed peer interaction to some extent prior to the intervention and to a greater extent after the intervention. Like Tulung (2008), Sato reported that learners enjoy peer interaction, because they do not need to worry about making mistakes when speaking to peers. However, Sato's data also showed that "a weakness of peer interaction is that it is sensitive to social relationships between learners" (p. 620), since many learners stated that their feelings toward peer interaction would depend on the peer that they interact with. Regarding learners' beliefs about the effectiveness of peer interaction, Sato found that learners believed in its effectiveness both before and after the intervention, as it gave them opportunities to speak and practice the language.

Although the research on learner beliefs about peer interaction in classroom contexts is still scarce, Tulung (2008) and Sato (2013) showed that Indonesian and Japanese college-level learners who were used to teacher-centered lessons and who did not have much experience with peer interaction prior to the respective instructional interventions held mostly positive beliefs about peer interaction. However, more research is needed that examines learner beliefs about

peer interaction in different instructional settings, with learners from other cultural backgrounds, and with learners who are already used to peer interaction from previous classes.

## 2.3 Form-Focused Instruction

### *Definition*

Although interaction—be it between learners or between learners and teachers—“may result in a better ability to communicate, interaction without any attention to linguistic accuracy does not necessarily improve linguistic accuracy” (Loewen, 2015, p. 57). Therefore, researchers have proposed focus on form (FonF), also referred to as form-focused instruction (FFI), to help learners improve not only their ability to negotiate meaning, but also their degree of accuracy as they engage in interactions in the L2. According to Loewen (2014), FonF “occurs when learners briefly pay attention to linguistic items within a larger meaning-focused context” (p. 57). Thus, it can be said that the terms *focus on form* and *form-focused instruction* are “somewhat misleading” (Ellis, 2016), since the focus is not only on form, but rather on establishing form-meaning connections. In contrast, focus on forms (FonFs) is an explicit type of L2 instruction in which the linguistic forms are the overt objects of L2 instruction. Focus on meaning, on the other hand, is almost exclusively communicative in nature, with shifts of attention to linguistic forms only in the case of communicative breakdowns (Loewen, 2015).

The definition of FonF has broadened over the years after it had been initially proposed by Long (1991) (see Ellis, 2016, for a comprehensive overview of the historic development of FonF). For Long (1991), FonF was a teaching approach that shifted learners’ attention to linguistic forms as they incidentally arose during communication. Thus, FonF typically occurred during negotiation of meaning in response to a communicative problem. Today, researchers—

including Long (2015)—argue that FonF can be either incidental or intentional, and can also be implicit or quite explicit (see also Ellis, 2016). Moreover, the term FonF has broadened in the sense that “form” is no longer only applied to grammar, but also to other areas of language, such as vocabulary, phonology, or pragmatics (see Ellis, 2016; Nassaji, 2016).

### *The Effects of Form-Focused Instruction on the Acquisition of Grammar*

Most studies investigating form-focused instruction have focused on grammatical structures. Some early studies compared whether form-focused grammar instruction leads to better learning outcomes than no instruction at all (e.g., Day & Shapson, 1991; Doughty, 1991; Lightbown & Spada, 1990; Lyster, 1994; White, 1991; see also Long, 1983b, for an early review, and Norris & Ortega, 2000, for a meta-analysis). Overall, these studies found that instruction is indeed superior to no instruction when learning is measured in terms of grammatical accuracy. For example, in an observational study with child ESL (English as a second language) learners in Canada, Lightbown and Spada (1990) observed the teachers’ use of FFI in four different classes and subsequently measured the learners’ accuracy on several grammatical forms. The results showed that the learners in the class in which the most FFI was provided were the most accurate on the production of progressive forms and possessive determiners. They were also the most native-like on presentational forms (*there is* instead of *you have*). In contrast, learners in the class in which the least FFI—that is, virtually no FFI—was provided were the least accurate on these forms. Nevertheless, those learners did not lag behind the learners from the other classes on overall performance, such as comprehension skills.

Other studies, rather than comparing FFI to no instruction, have explored different types of FFI or compared various types of FFI to each other, including enhanced input and non-

enhanced input, incidental and intentional (or planned) FFI, integrated and isolated FFI, deductive and inductive instruction, explicit and implicit instruction, as well as different types of corrective feedback (e.g., Cerezo, Caras, & Leow, 2016; Grim, 2008; Lee, 2007; Lindseth, 2016; Loewen, 2005; Morgan-Short, Sanz, Steinhauer, & Ullman, 2010; Nassaji, 2010, 2013; Spada, Jessop, Tomita, Suzuki, & Valeo, 2014; White, Spada, Lightbown, & Ranta, 1991; Winke, 2013; for research on corrective feedback see section 2.4). Some of these studies included control groups that did not receive FFI and found that learners in the control groups lagged behind the learners in the experimental groups that received some kind of FFI (e.g., Cerezo et al., 2016; Lee, 2007; Lindseth, 2016). Moreover, these studies show that several different types of FFI can have positive effects on the acquisition of grammatical structures, including incidental focus on form (e.g., Loewen, 2005; White et al., 1991), enhanced input (e.g., Lee, 2007; Lee & Huang, 2008; Sagarra & Abbuhl, 2013; but see Izumi, 2002; Winke, 2013, for counterevidence), deductive and inductive instruction (e.g., Cerezo et al., 2016), as well as explicit and implicit types of instruction (e.g., Morgan-Short et al., 2010).

### *The Effects of Form-Focused Instruction on the Acquisition of Vocabulary*

Some studies examined the impact form-focused instruction has on the acquisition of vocabulary (e.g., File & Adams, 2010; Laufer & Girsai, 2008; Shintani, 2013; Tian & Macaro, 2012; see also Laufer, 2009, for an overview). For instance, in a classroom study with beginning-level child learners of EFL, Shintani (2013) compared the effects of focus on form (FonF) and focus on forms (FonFs) on the acquisition of nouns and adjectives. She found that both types of instruction were equally effective for the acquisition of nouns, but FonF was more effective for the acquisition of adjectives, as only learners in the FonF condition were able to use the

adjectives in free production. These results were explained by means of an analysis of the process features of instruction, which showed that contextualized input, negotiation of meaning, and student-initiated production had occurred only in the FonF condition.

In a classroom study with adult ESL learners, File and Adams (2010) compared the effects of isolated and integrated form-focused instruction on vocabulary learning through reading. Learners in the isolated FFI condition were taught vocabulary prior to reading a text, while learners in the integrated FFI condition were taught the vocabulary as they were reading the text. A pretest and two posttests measured not only the learners' knowledge of the words taught during the treatment, but also their knowledge of words that were in the text, but not taught during the treatment, to determine whether these words had been learned incidentally. The results showed that both isolated and integrated FFI led to better learning than incidental exposure alone, although incidental vocabulary learning did occur as well. There were no significant differences between the two FFI conditions, but on a descriptive level isolated FFI led to slightly better results than integrated FFI. While the results of this study and several other classroom studies (e.g., Tian & Macaro, 2012) suggest that intentional form-focused vocabulary instruction may be superior to incidental vocabulary exposure in classroom contexts, it is important to note that a number of studies have shown that a fair amount of vocabulary can also be learned incidentally (e.g., Bisson, van Heuven, Conklin, & Tunney, 2014; Gablasova, 2014; Liu & Todd, 2016; Newton, 2013; Pellicer-Sánchez, 2016).

### *Learners' Beliefs about Form-Focused Instruction*

Several studies have examined learners' beliefs about form-focused instruction (e.g., Jean & Simard, 2011; Loewen et al., 2009; Schulz, 1996, 2001; Siebert, 2003). This section focuses

on learners' beliefs about form-focused instruction in terms of grammar learning and grammar instruction. (For learners' beliefs about corrective feedback and peer corrective feedback see section 2.4.)

In an earlier study with 824 learners and 92 instructors of various foreign languages at the university level, Schulz (1996) compared learners' and teachers' beliefs about grammar instruction and error correction. The results of a questionnaire showed that, overall, both learners and teachers had positive attitudes toward grammar instruction because they believed it helped to learn a foreign language. Moreover, 80% of the learners and 64% of the teachers believed that the formal study of grammar is essential to eventually master the foreign language. Interestingly, 46% of the learners indicated that they liked the study of grammar, while only 18% of the teachers felt that this was the case. Overall, this study showed that learners held more positive beliefs about the study of grammar than their teachers. Several following studies confirmed this finding (e.g., Schulz, 2001; Siebert, 2003).

Chavez (2007) investigated how 369 university learners and 23 teachers in the first, second, third, and fourth year of a German Language Program viewed the need for accuracy during oral production for four different goals: achieving a personal sense of accomplishment, being comprehensible to a native speaker, being pleasant to a native speaker, and receiving an A in the class. Nineteen different target forms were examined. Most of these were grammatical, but phonological, lexical, and pragmatic forms were also included. The results showed that regardless of the year, learners believed accuracy was important to receive an A in the class and to be pleasant to a native speaker. In contrast, accuracy was viewed as less important to achieve a sense of accomplishment or to be comprehensible to a native speaker. Results further indicated that learners believed accuracy in nominal morphology with a lexical load (e.g., personal

pronouns) was more important than accuracy in verbal morphology (e.g., tenses). Accuracy in nominal morphology without a lexical load (e.g., gender or case markings) ranked among the least important features.

In another questionnaire-based study with 754 learners of 14 different target languages at an American university, Loewen et al. (2009) investigated learners' beliefs about grammar instruction and error correction. They found that most learners believed that studying grammar benefited their language learning. While some learners perceived grammar as the foundation of the language, others explained that the study of grammar improved their speaking, writing, listening, or reading skills. Another reason learners found grammar important was of more extrinsic nature, since knowledge of grammar can be necessary to earn a good grade in the class. Although learners believed grammar instruction was beneficial, there was less agreement on whether or not it is enjoyable. Some learners reported they found the study of grammar interesting and explained that they enjoyed discovering patterns of the language, while other learners indicated they did not like or even hated grammar instruction, often because they found it boring. Nevertheless, even those learners who did not like grammar instruction sometimes expressed "an attitude of having to put up with it because it was beneficial" (p. 99).

Similarly, in another questionnaire-based study with 2321 high school students and 45 high school teachers of French and English in Canada, Jean and Simard (2011) found that learners valued grammar instruction because of its perceived usefulness, even though the vast majority of learners did not enjoy studying grammar because they did not find it interesting. Thus, grammar instruction was viewed as a "mal nécessaire" (a necessary evil) (p. 478) not only by the learners, but also by the teachers.



## 2.4 Corrective Feedback<sup>3</sup>

### *The Effects of Corrective Feedback on Learners' Grammatical Accuracy*

Although corrective feedback today is considered a useful pedagogical tool by many researchers and teachers, it has not always been viewed positively. Based on findings from first language acquisition research, which showed that children do not need negative evidence (i.e., corrective feedback), but positive evidence (i.e., comprehensible input) to acquire their first language (e.g., Chomsky, 1975), some SLA researchers have argued against the use of corrective feedback in second language learning contexts. For instance, Krashen (1982) claimed that language acquisition is the result of comprehensible input, not of error correction. Moreover, he argued that error correction can be harmful because it puts learners on the defensive and can cause them to try to avoid mistakes in the future by using less complex structures. According to Krashen, error correction can also cause learners to focus too much on form and not enough on meaning. Therefore, he argues that error correction has no direct benefit to language acquisition and should be eliminated entirely from any communicative activities in classroom contexts.

In a review paper on written error correction, Truscott (1996) claimed that the correction of grammatical mistakes in writing is not only ineffective, but also harmful. According to Truscott, this is true not only for comprehensive error correction (i.e., correction of different types of mistakes), but also for selective error correction (i.e., correction of only one or very few types of mistakes). He concluded that “grammar correction has no place in writing classes and should be abandoned” (p. 361). In a later paper on oral error correction, Truscott (1999) argued that corrective feedback on grammatical mistakes during oral interactions “is no more appropriate than written correction” (p. 438). He claimed that since oral error correction is “an

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<sup>3</sup> Although corrective feedback is typically considered a type of form-focused instruction in SLA research, it is treated separately here due to the experimental manipulation in the present study, in which FFI is conceptualized as the explicit teaching of grammar rules (chapter 3) and vocabulary items (chapter 5).

extremely complex process” (p. 443), even the most experienced teachers will not be able to correct their learners’ mistakes effectively. Some of his arguments against oral error corrections include the inconsistency of oral corrections that teachers provide and the interruption of the communicative flow that these corrections cause. Moreover, Truscott argues that learners may not notice, understand, accept, and incorporate the teacher’s corrections. Truscott further rejects oral peer corrections because they move learners’ attention away from the communicative purpose of the activity and are also of lower quality than teacher corrections since they can be inaccurate. Truscott concludes that oral correction of grammatical mistakes is not only ineffective, but also causes “overwhelming problems for teachers and for students” and therefore “should be abandoned” (p. 453).

In response to the claim that corrective feedback is not effective or can even be harmful, a large body of research has investigated how oral CF affects learners’ grammatical accuracy. Those studies provide strong overall evidence for the effectiveness of oral CF provided by teachers. This has been shown both in classroom contexts (e.g., Ammar, 2008; Ammar & Spada, 2006; Ellis, 2007; Ellis, Loewen, & Erlam, 2006; Goo, 2012; Kartchava & Ammar, 2014; Li, Zhu, & Ellis, 2016; Loewen & Philip, 2006; Lyddon, 2011; Lyster, 2004; Sheen, 2004, 2007, 2010; Van de Guchte, Braaksma, Rijlaarsdam, & Bimmel, 2015; Yang & Lyster, 2010) and laboratory contexts (e.g., Egi, 2007a; Iwashita, 2003; Li, 2013; Loewen & Nabei, 2007; Mackey & Philip, 1998; McDonough, 2005, 2007; Nassaji, 2009; Trofimovich, Ammar, & Gatbonton, 2007; Yilmaz, 2013, 2016).<sup>4</sup> In addition, several meta-analyses have provided support for the effectiveness of teacher CF (e.g., Li, 2010; Lyster & Saito, 2010; Mackey & Goo, 2007; Russell & Spada, 2006).

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<sup>4</sup> See also Lyster and Izquierdo (2009), for a study that combined the classroom and laboratory environment.

One of the important variables that has been shown to mediate the effectiveness of teacher CF is the type of feedback. Probably the most commonly studied type of oral CF is the recast, an input-providing type of feedback, which is also the most popular feedback type among teachers (Lyster & Ranta, 1997; see also Brown, 2016, for a meta-analysis). Another frequently studied type of oral CF is the prompt, an output-pushing type of feedback. In contrast to recasts, which provide learners with positive evidence (i.e., the correct linguistic form) in response to an error, prompts provide negative evidence and encourage the learners to correct the error themselves. Importantly, learners can only be prompted to retrieve knowledge that already exists in some form (Lyster & Sato, 2013). Therefore, prompts may be particularly effective for grammatical structures that are already known but not yet mastered by the learner, because they provide additional practice in retrieving already existing knowledge and assist learners in restructuring their interlanguage through contextualized practice (Lyster & Sato, 2013). Thus, some researchers have argued that prompts are more beneficial than recasts (e.g., Ammar & Spada, 2006; Ellis, 2007; Ellis et al., 2006; Lyster, 2004; Yang & Lyster, 2010).

While many studies have examined oral CF provided by teachers, there have been relatively few studies investigating oral CF provided by peers (but see Chu, 2013; Sato & Lyster, 2012; Sippel & Jackson, 2015).<sup>5</sup> One of the strengths of peer CF is that learners are more engaged in the learning process, since they are not only feedback receivers, but also feedback providers (Sato & Lyster, 2012). In fact, there is evidence in the written peer CF literature that learners benefit more from providing than from receiving CF (Lundstrom & Baker, 2009).

In Chu's (2013) study with Taiwanese junior high school EFL students, the learners were taught different types of CF and then instructed to use their preferred type of CF during peer

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<sup>5</sup> Most studies dealing with peer feedback have focused on written peer feedback rather than oral peer feedback (e.g., Allen & Mills, 2016; De Guerrero & Villamil, 1994, 2000; Lundstrom & Baker, 2009; Miao, Badger, & Zhen, 2006; Storch & Wigglesworth, 2010; Villamil & De Guerrero, 1998; Yu & Lee, 2015; Zheng, 2012).

interaction activities. The results indicated that the learners improved from pretest to posttest on speaking tasks. However, since there was no control group and no group that engaged in peer interaction activities but received no instruction, it was unclear whether this improvement was a result of peer CF or of peer interaction and practice more generally.

To tease apart the effects of practice and feedback, Sato and Lyster (2012) investigated the effects of PI and oral peer CF on accuracy and fluency development among advanced Japanese EFL learners. One group of learners engaged in PI activities and provided feedback to peers in the form of prompts (PI-prompt group), a second group engaged in PI activities and provided feedback to peers in the form of recasts (PI-recast group), a third group engaged in PI activities but was not instructed to provide feedback to peers (PI-only group), and a fourth group did not engage in either PI activities or feedback training (control group). The results showed that while all experimental groups outperformed the control group on fluency measures, only the PI-prompt and PI-recast groups improved significantly on grammatical accuracy measures. By including four groups into the study, Sato and Lyster demonstrated that peer CF led to improved accuracy without impeding fluency development. Regarding the type of feedback, Sato and Lyster found no significant differences between the PI-prompt group and the PI-recast group, pointing to an important difference to the teacher CF studies described above (e.g., Ammar & Spada, 2006; Ellis, 2007; Ellis et al., 2006; Lyster, 2004; Yang & Lyster, 2010), which found an overall advantage of prompts over recasts. These results suggest that the type of feedback might be a less important variable in peer CF than in teacher CF.

While the studies above provided evidence that peer CF can be beneficial for the acquisition of grammatical structures, other researchers have claimed that peer feedback “may not be very promising for learning” (Philip e al., p. 55). For instance, in a classroom study with

adult ESL learners, Adams et al. (2011) found that peer CF did not contribute to interlanguage development. It is noteworthy that, in contrast to Sato and Lyster's (2012) and Chu's (2013) study, Adam et al.'s (2011) study did not include a training component designed to teach learners how to provide CF to one another. In fact, Adam et al. did not ask learners to provide CF at all, and research has shown that the degree to which learners point out each other's mistakes during pair and group work without explicit instruction to do so is low (e.g., Williams, 1999; Sato, 2007; Philip et al., 2010). These findings suggest that peer CF is more likely to be effective if combined with a training component, since learners might be hesitant to provide CF without specific instructions.

To examine whether learners can be trained to be more successful interactors and feedback providers during peer interaction, Fujii, Ziegler, and Mackey (2016) investigated how metacognitive instruction impacts learner-learner interactions. The experimental group participated in a metacognitive instruction session designed to help learners understand the benefits of peer feedback and practice how to provide it, whereas the control group did not participate in such sessions. Results from a pretest and a posttest showed that learners in the experimental group provided more feedback and made use of the feedback they received more frequently than learners in the control group. These findings, together with the findings of other studies such as Sato and Lyster (2012) and Sippel and Jackson (2015), suggest that feedback training or metacognitive instruction sessions are useful tools to maximize learning opportunities during peer interaction activities.

### *The Effects of Corrective Feedback on Vocabulary Acquisition*

The vast majority of studies on oral CF have targeted grammatical structures, in particular morphological features, even though learners' mistakes are not limited to grammar: In a study by Mackey, Gass, and McDonough (2000), learners made mistakes and received feedback on errors regarding grammar, phonology, lexis, and semantics (see also Lyster, 2001). Further, Gass and Lewis (2007) found that lexical feedback episodes during interactions between Italian language learners and near-native speakers of Italian were more frequent than feedback episodes related to other linguistic areas, such as morphosyntax, semantics, and phonology. Moreover, some studies reported that learners' perceptions of feedback on lexis were more accurate than their perceptions of feedback on morphosyntax: For instance, in a study by Mackey et al. (2000), learners often misinterpreted feedback on morphosyntax as feedback on lexis, but correctly interpreted feedback on lexis as feedback on lexis. Consequently, learners' uptake was higher after lexical feedback episodes than after morphosyntactic episodes (see also Egi, 2007b), indicating that feedback on vocabulary may be particularly promising from a pedagogical perspective.

Nevertheless, relatively few CF studies have targeted linguistic areas other than morphology (but see Dilans, 2010; Nakata, 2015, for CF on vocabulary; Lee & Lyster, 2016; Saito, 2013, 2015; Saito & Lyster, 2012, for CF on phonology; Takimoto, 2006, for CF on pragmatics). Because the effects of feedback may vary depending on the linguistic target, this area has been referred to as "an especially propitious type for further investigation" (Lyster, 2015, p. 225).

In a classroom study with intermediate ESL learners, Dilans (2010) investigated the effects of teacher CF on learners' vocabulary knowledge. During a four-step vocabulary activity,

prompts, recasts, or no feedback on vocabulary was provided to the learners. The results revealed that prompts and recasts led to greater gains in vocabulary knowledge than no feedback, and that prompts were slightly more effective than recasts in the long-term. Nakata (2015) examined the role of feedback timing on Japanese EFL learners' vocabulary acquisition. Learners studied 16 English-Japanese word pairs using a computer program in a classroom setting. They received either immediate or delayed feedback on their response. Results from a pretest, an immediate posttest, and two delayed posttests showed that both immediate and delayed feedback were effective. Overall, the results of these studies show that feedback on vocabulary items can be just as beneficial as feedback on grammatical structures and suggest that limiting CF research to grammar might be a too narrow view of SLA research and L2 pedagogy.

Dilan's and Nakata's studies investigated the impact of oral teacher feedback on vocabulary learning using a pretest-posttest design. Empirical studies that examined the effects of oral peer feedback have focused exclusively on grammatical accuracy (e.g., Chu, 2013; Sato & Lyster, 2012; Sippel & Jackson, 2015). However, to my knowledge, no studies have investigated whether training learners to provide oral peer CF on vocabulary can facilitate vocabulary development. In a study on classroom vocabulary learning, De La Fuente (2006) compared the effectiveness of task-based and more traditional vocabulary lessons. Qualitative analysis showed that shifts of attention to linguistic form, as well as CF moves, were almost non-existent during learner-learner interactions. The question arises if greater gains on vocabulary acquisition could have been achieved if learners had been taught to pay attention to form and provide CF to one another during peer interaction activities.

### *Learners' Beliefs about Oral Corrective Feedback*

Many studies have examined learners' beliefs about oral corrective feedback, most typically feedback provided by teachers. Overall, these studies indicate that learners want to receive corrective feedback from their teachers on their oral mistakes (e.g., Chu, 2013; Jean & Simard, 2011; Schulz, 1996, 2001). For instance, Schulz (1996) found that university learners' attitudes toward CF were "surprisingly positive" (p. 346). Of the 824 participating learners, 90% indicated they wanted their oral mistakes corrected, and only 4% stated they disliked it when they were corrected in class. In comparison to the learners, the 92 participating teachers had a less favorable attitude toward corrective feedback. For example, while 90% of learners believed that oral mistakes should be corrected, less than 50% of the teachers agreed with this statement. Moreover, only one third of the teachers believed that learners felt favorable toward error correction, although the majority of learners actually preferred to be corrected.

In a later study, Schulz (2001) investigated learners' beliefs about grammar instruction and corrective feedback across contexts, including both foreign language learners in the US and foreign language learners in Colombia. Overall, the results confirmed the findings of the 1996 study. Although the Colombian learners had a slightly stronger preference for oral corrective feedback than the American learners, the vast majority of learners—Colombian and American—wanted their oral mistakes to be corrected. Like in the 1996 study, only 4% of the learners indicated they disliked being corrected in class.

Similarly, Jean & Simard (2011) found that almost all of their 2321 participating French and English high school students wanted their oral mistakes to be corrected, even though for some learners, that applied to all of their mistakes and for others, only to specific mistakes (for example, those that interfere with meaning or those that have to do with the grammatical focus of



the lesson). The majority of the 45 participating high school teachers also believed that oral mistakes should be corrected, but fewer teachers than learners believed that all oral mistakes should be corrected.

One study that found conflicting evidence is Loewen et al. (2009), who reported that corrective feedback was viewed “somewhat negatively” (p. 101) by their 754 participating university learners. After performing a factor analysis, the direction of the factor loadings (either positive or negative) revealed that learners agreed with negative statements (e.g., “I dislike it when I am corrected in class”) and disagreed with positive statements (e.g., “I like to be corrected in small group work”). These findings are somewhat surprising given that the same learners had overall favorable attitudes toward grammar instruction.

Although some teacher CF studies have found that learners tend to prefer teacher corrections over peer corrections (e.g., Schulz, 2001), the research on learners’ beliefs about peer CF per se is rather scarce. In a case study without a peer feedback training component, Yoshida (2008) used class observation and interviews immediately after class to examine how low-proficiency learners of Japanese perceived peer feedback, as it arose incidentally during peer interaction. The results showed that peer CF led to frustration among these learners, because both “expert” (more proficient) and “novice” (less proficient) learners were dissatisfied with their roles in pair work. Moreover, learners did not trust in their peers’ ability to provide accurate corrections and did not necessarily understand the feedback that peers were providing to them. These findings raise the question whether peer feedback training could make peer feedback more effective and further reduce learners’ frustrations about it.

In a study with Taiwanese junior high school students, Chu (2013) used questionnaires and interviews to investigate how these adolescent learners had perceived peer CF in six English-

speaking lessons that included a peer feedback training component. She found that, although learners were willing to correct peers, they did not seem to be confident in their own ability to provide accurate feedback. Receiving feedback from peers was viewed positively by some learners, because they believed it was helpful for their progress in the language. Other learners, however, did not appreciate peer feedback, because they did not find it helpful or because it made them feel embarrassed. Overall, the learners preferred teacher corrections over peer corrections, because they believed teacher corrections are more accurate and therefore have the largest effect on their learning. Moreover, they considered the provision of CF as a responsibility of the teacher rather than of their peers.

Like Chu's (2013) study, Sato's (2013) study with Japanese EFL learners also included a peer feedback training component. Pre- and post-intervention questionnaire data, as well as post-intervention interview data, revealed that learners held positive beliefs about peer CF both before and after the intervention. Unlike Chu's participants, Sato's learners had a certain trust in the accuracy of their peers' corrections and believed that peer CF was not only socially acceptable, but also beneficial for language learning. The learners further reported that the peer feedback training helped them notice both their own mistakes and their peers' mistakes as they were speaking. Moreover, the questionnaire data showed that, over time, learners became more willing to provide feedback and more confident in doing so. Despite these positive attitudes toward oral peer feedback, learners also expressed concerns about disrupting the communicative flow and hurting their peers' feelings when correcting their errors.

In summary, the mixed findings of these studies suggest that learners' beliefs about oral peer CF are likely to vary across contexts. For example, it is possible that high school students, such as Chu's participants, may feel more peer pressure and thus less comfortable when

providing and receiving peer feedback than university learners, such as Sato's participants. Moreover, since the participants in Yoshida's, Chu's and Sato's study were all learners from Asian countries (Japan and Taiwan), it is necessary to extend research on learners' beliefs regarding oral peer CF to learners with other cultural backgrounds. The proficiency of the learners may also play a role. While Sato's participants were advanced learners who were able to rely on many years of experience in the formal study of English grammar when providing peer CF, Yoshida's and Chu's participants were low-proficiency learners and thus much less experienced. Finally, another important variable seems to be whether or not learners receive peer feedback training. Sato's findings in particular point to the importance of providing peer feedback training to learners, since this may positively affect their beliefs about peer CF.

## **2.5 Summary and the Present Study**

In the previous sections, I reviewed the existing literature on peer interaction, form-focused instruction, and corrective feedback. Quasi-experimental classroom research on peer interaction has pointed to important ways in which it can contribute to learning. For example, studies have shown that peer interaction can lead to vocabulary learning (Fernández Dobao, 2014, 2016; Sato & Viveros, 2016), fluency development (Sato & Lyster, 2012), and, sometimes, grammatical learning (McDonough, 2004; Sato & Viveros, 2016; but see Sato & Lyster, 2012). At the same time, one of the weaknesses of peer interaction is that learners focus mostly on meaning and rarely negotiate linguistic forms or point out other learners' mistakes (e.g., Philip et al., 2010). To address this issue, Sato and Lyster (2012) have provided peer feedback training to learners, showing that learners with such training made greater gains in terms of accuracy than learners without such training.

In the previous sections, I also reviewed the large body of SLA research on oral corrective feedback. Most of these studies have investigated teacher feedback while relatively few studies have explored peer feedback, and most of these studies have focused on grammatical structures while relatively few studies have focused on other linguistic targets, such as vocabulary. The few experimental peer feedback studies that included a training component have all targeted grammatical structures, showing that peer feedback indeed facilitated the acquisition of these structures (Chu, 2013; Sato & Lyster, 2012; Sippel & Jackson, 2015). The few teacher CF studies that have targeted vocabulary rather than grammar showed that teacher CF was beneficial for vocabulary acquisition (Dilans, 2006; Nakata, 2015).

I also reviewed the literature on form-focused instruction, which provides evidence that a focus on form component in otherwise meaning-focused classroom lessons is beneficial both for the acquisition of grammatical structures (e.g., Lightbown & Spada, 1990; Cerezo et al., 2016) and vocabulary (e.g., File & Adams, 2010; Shintani, 2013). Exclusive focus on meaning, on the other hand, can help learners develop communicative skills in the second language, but is often insufficient for the development of linguistic accuracy (Loewen, 2015).

Finally, I reviewed the literature on learners' beliefs about form-focused instruction, corrective feedback, and peer interaction. Those studies have shown that the vast majority of learners wish to receive instruction on grammatical structures, as well as teacher corrective feedback, because they believe they are effective, although some learners do not find the study of grammar particularly interesting (e.g., Jean & Simard, 2011). Unlike the research on learner beliefs about teacher corrective feedback, studies on learner beliefs about peer corrective feedback have yielded mixed results. While Sato (2013) reported that learners held positive attitudes toward peer corrective feedback, other studies point to issues learners may have with it,

such as feeling embarrassed or not believing in the accuracy of peers' corrections (e.g., Chu, 2013; Yoshida, 2008). Learners' attitudes toward peer interaction, on the other hand, seem to be overwhelmingly positive (Sato, 2013; Tulung, 2008).

Using a mixed-methods design, the present dissertation further examines the effects of peer interaction, form-focused instruction, and peer corrective feedback on L2 development, as well as the beliefs that learners hold about these interventions. A mixed-methods design was used which allowed both quantitative data on learners' L2 development and qualitative data on learners' beliefs to be collected within the same study (see Riazi & Candlin, 2014, for mixed-methods research in language teaching). The study was quasi-experimental in nature and was conducted in intact classrooms with third-semester learners of German. Two experiments were conducted, one focusing on the acquisition of grammar and one focusing on the acquisition of vocabulary. The following sections outline these two experiments.

### *Experiment 1*

Experiment 1 builds on Sato and Lyster (2012), who investigated the effects of peer interaction and peer corrective feedback on the acquisition of grammatical structures. The present dissertation adds a third component: form-focused instruction on the grammatical target structure, which is operationalized as a teacher-led grammar lesson. In Sato and Lyster's study, form-focused instruction on the target structures was not provided to learners, since their study compared the effects of peer interaction with peer corrective feedback to the effects of peer interaction without peer corrective feedback. Sato and Lyster's learners were able to provide and benefit from peer corrective feedback in the absence of form-focused instruction, possibly because they were at an advanced stage and were able to rely on their metalinguistic (yet not

proceduralized) knowledge resulting from many years of formal grammar instruction. In contrast, the participants of the present study were third-semester learners who were expected to have lower levels of metalinguistic knowledge due to their lack of experience (i.e., the relatively short amount of time that they have spent learning the language). It was therefore assumed that the participants in the present study are able to benefit more from peer interaction and peer feedback if form-focused instruction was also provided.

Thus, unlike previous studies, the present study investigates whether peer interaction combined with form-focused instruction and peer feedback training (PI FFI CF condition) leads to better learning outcomes than peer interaction combined with form-focused instruction but without peer feedback training (PI FFI condition), and whether the latter is superior to peer interaction alone (PI condition). To my best knowledge, the present study is the first to investigate whether peer feedback training still makes a difference when learners also receive form-focused grammar instruction directly before peer interaction activities that target those forms. This is an important question since providing form-focused instruction to learners prior to pair and group work is a commonly used procedure in foreign language classrooms. Moreover, the present study investigates whether low-proficiency learners can also benefit from providing and receiving peer corrective feedback.

Experiment 1 further examines learners' beliefs about peer interaction, form-focused instruction on grammatical structures, and peer corrective feedback. Since many previous studies have pointed out that learners tend to hold favorable attitudes toward form-focused instruction, the present study focuses on learners' beliefs about peer interaction and peer corrective feedback, which so far have been under-investigated in SLA research. In their studies with intermediate Indonesian and advanced Japanese university learners of EFL, Sato (2013) and Tulung (2008)

have shown that learners' attitudes toward peer interaction were positive. However, it is necessary to extend this research to other contexts, such as different proficiency levels and different cultural backgrounds, as well as other target languages. The present study therefore contributes to the existing research by examining what beliefs low-proficiency learners of German at an American university hold about peer interaction. Further, the study contributes to the research on learners' attitudes toward peer corrective feedback. In some previous studies, learners' attitudes toward peer feedback were mostly positive (e.g., Sato, 2013), while other studies reported they were rather negative (e.g., Yoshida, 2008). Thus, more research is needed to further investigate these conflicting findings.

To answer the questions described above, participants in the present study were assigned to one of the following three experimental groups: The PI group engaged in peer interaction activities and was exposed to the target form but did not receive form-focused instruction or peer feedback training. The PI FFI group engaged in peer interaction activities and received form-focused instruction, but no peer feedback training was provided. The PI FFI CF group engaged in peer interaction activities while also receiving form-focused instruction and peer feedback training. Time spent on task was kept constant among the three groups. The grammatical target was the German present perfect tense, which includes auxiliary selection and past participle formation. Learning was measured through a pretest and two posttests, and each test consisted of an error correction task and an oral production task. Statistical analyses were performed to determine whether the differences between the three groups at the three different testing times were significant.

To examine participants' beliefs about this intervention, semi-structured interviews were conducted after the intervention. The interviewer used a set of prepared questions regarding the

topics of interest (i.e., peer interaction, form-focused instruction on grammatical structures, and peer corrective feedback) and then asked the interviewees additional questions based on their responses. While all learners who gave consent were interviewed, only five participants from each experimental group were randomly selected for data analysis, resulting in a total of 15 interviews that were included in the analysis.

The following research questions were addressed in experiment 1:

1. Does peer interaction combined with form-focused instruction on grammatical structures lead to greater gains in grammatical accuracy than peer interaction alone?
2. Does peer interaction combined with form-focused instruction on grammatical structures and peer feedback training lead to greater gains in grammatical accuracy than peer interaction and form-focused instruction alone?
3. What are learners' beliefs about peer interaction and peer corrective feedback for the acquisition of grammatical structures?

### *Experiment 2*

Like experiment 1, experiment 2 also builds on Sato and Lyster (2012), but it is different in that it examines the effects of peer interaction, form-focused instruction, and peer corrective feedback on vocabulary acquisition rather than the acquisition of grammatical structures. Although teacher feedback studies have shown that corrective feedback can facilitate vocabulary acquisition (e.g., Dilans, 2010), and peer feedback studies have shown that peer feedback training can facilitate the acquisition of grammatical structures, no studies to my knowledge have investigated whether peer feedback training is also beneficial for vocabulary acquisition. This question is addressed in experiment 2.



The set-up of experiment 2 is similar to experiment 1. The main goal of experiment 2 was to investigate whether peer interaction, combined with form-focused vocabulary instruction and peer feedback training (PI FFI CF condition), leads to better learning outcomes than peer interaction combined with form-focused vocabulary instruction, but without peer feedback training (PI FFI condition), and whether the latter is more beneficial than peer interaction alone (PI condition). Like experiment 1, experiment 2 also investigated learners' beliefs about peer interaction, form-focused instruction, and peer corrective feedback, although the focus of experiment 2 was vocabulary rather than grammar.

As in experiment 1, participants were assigned to either the PI group, the PI FFI group, or the PI FFI CF group. The PI group engaged in peer interaction activities and was exposed to the relevant vocabulary through reading and listening, but received neither form-focused instruction on vocabulary nor peer feedback training. The PI FFI group engaged in peer interaction activities and received form-focused instruction on vocabulary, but no peer feedback training was provided. The PI FFI CF group engaged in peer interaction activities, while also receiving form-focused instruction on vocabulary and peer feedback training. Time spent on task was kept constant among the three groups. The targeted vocabulary items were 25 German nouns along with their grammatical genders and plural forms. Learning was measured through a pretest and two posttests, each consisting of a test of productive vocabulary, a test of receptive vocabulary, and a test of grammatical gender and plural forms. Statistical analyses were performed to determine whether the differences between the three groups at the three different testing times were significant.

To examine participants' beliefs about this intervention, semi-structured interviews were conducted after the intervention, using the same methodology as in experiment 1. However, 15

new learners who had not participated in the interviews following experiment 1 were interviewed. Moreover, the interviews revolved around peer interaction, form-focused instruction, and peer corrective feedback in terms of vocabulary rather than grammatical structures.

The following research questions were addressed in experiment 2:

1. Does peer interaction combined with form-focused vocabulary instruction lead to greater gains in vocabulary knowledge than peer interaction alone?
2. Does peer interaction combined with form-focused vocabulary instruction and peer feedback training lead to greater gains in vocabulary knowledge than peer interaction and form-focused vocabulary instruction alone?
3. What are learners' beliefs about peer interaction and peer corrective feedback for the acquisition of vocabulary?

## **CHAPTER 3: Experiment 1**

### **3.1 Methodology**

#### **3.1.1 Participants**

One-hundred and twenty-five students were eligible to participate in the experiment. All of those potential 125 participants were enrolled in a third-semester German language class at a large American university. Of the 125 potential participants, 120 gave consent to participate. Of the 120 participants, 32 were subsequently excluded because they were absent on at least one of the treatment or testing days. In addition, one participant was excluded because she was a heritage speaker of German. Thus, 87 participants (53 males and 34 females) were included in the analysis reported here.

As revealed by a language history questionnaire (Appendix A), 78 participants were native speakers of English. Three of the 78 native English speakers reported they had a second native language in addition to English. The remaining nine participants were native speakers of Chinese (4), Spanish (2), Russian (1), Hungarian (1), and Korean (1). Participants had various majors, including business, engineering, history, information sciences and technology, international politics, journalism, and public relations. None of the participants was majoring in German. Fifteen participants were taking German as a free elective while 72 were taking it to fulfill a requirement. Of the 72 participants who took German as a requirement, 32 were planning to continue studying German in the future. For most of the participants, exposure to the German language occurred almost exclusively through the classroom. Sixty-eight of the 87 participants had no or very little contact with German native speakers outside of the classroom. The remaining 19 participants had contact with German natives monthly (8), weekly (6), or

(almost) daily (5). Most of the participants had never studied or lived abroad, but 17 participants had. Nine of those 17 participants had studied or lived in a German-speaking country. However, their stays were either short (about four weeks) or had occurred during childhood, so that those participants were still considered classroom learners and thus included in the study.

Two sections of the third-semester German class were assigned to the PI group ( $N = 27$ ), two sections were assigned to the PI FFI group ( $N = 32$ ), and two sections were assigned to the PI FFI CF group ( $N = 28$ ). Table 1 shows participants' average age, years of previous German study, as well as their self-rated proficiency for reading, writing, speaking, and listening on a scale from 1 (very poor) to 10 (like a native).

Table 1

*Participants (Experiment 1)*

	PI Group		PI FFI Group		PI FFI CF Group	
	$(N = 27)$		$(N = 32)$		$(N = 28)$	
	<i>M (SD)</i>	<i>Range</i>	<i>M (SD)</i>	<i>Range</i>	<i>M (SD)</i>	<i>Range</i>
Age (years)	19.5 (2.3)	18-30	19.8 (1.9)	18-26	20.0 (4.4)	18-39
Years of German	3.1 (1.7)	1-6	3.8 (3.1)	1-13	3.8 (2.0)	1-8
Self-ratings (max. 10)						
Reading	5.4 (1.5)	3-8	6.0 (1.8)	2-10	5.8 (1.8)	1-9
Writing	5.4 (1.9)	2-8	6.0 (1.8)	2-9	5.4 (1.8)	1-9
Speaking	4.4 (1.9)	1-8	4.9 (1.8)	1-8	4.9 (1.7)	1-8
Listening	5.5 (1.7)	2-8	5.2 (2.0)	1-9	5.8 (1.8)	3-9

A one-way ANOVA revealed that the participants from the three groups did not differ significantly in age ( $F(2, 86) = 0.24, p = .786$ ), years of previous German study ( $F(2, 86) = 0.78, p = .462$ ), or their self-rated proficiency in reading ( $F(2, 86) = 1.01, p = .370$ ), writing ( $F(2, 86) = 1.10, p = .338$ ), speaking ( $F(2, 86) = 0.67, p = .516$ ), or listening ( $F(2, 86) = 0.82, p = .443$ ).

Three instructors participated in the study. A native speaker of German with five years of teaching experience in German, who is the author of this dissertation, taught the two sections of the PI group. A native speaker of Swedish with native-like proficiency in German and 20 years of German teaching experience taught the two sections of the PI FFI group. A native speaker of German with eight years of teaching experience in German taught the two sections of the PI FFI CF group. The instructor of the PI FFI group and the instructor of the PI FFI CF received all materials and lesson plans from the author of the present dissertation.

### **3.1.2 Linguistic Target**

The linguistic target of experiment 1 was the German present perfect tense, which is used to describe events in the past. German textbooks sometimes refer to it as the *conversational past*, because it is typically used in spoken German, although not exclusively. Even though the present perfect tense is usually introduced in the first or second semester of German, it often presents continued difficulties to learners, mostly because they must master two separate components of the tense: auxiliary verb selection, which is rule-based, and past participle formation, which is more lexically-based. Additionally, word order can also pose challenges to learners, because the auxiliary verb (*haben* ‘to have’ or *sein* ‘to be’) is placed in the second position of a main clause, whereas the past participle is placed at the end:

- (1) *Die Kinder haben ihre Hausaufgaben gemacht.*  
*The kids have their homework done.*  
 [The kids did their homework.<sup>6</sup>]
- (2) *Der Mann ist nach Hause gegangen.*  
*The man is to home gone.*  
 [The man went home.]
- (3) *Das Baby ist um 6 Uhr aufgewacht.*  
*The baby is at 6 o'clock woken up.*  
 [The baby woke up at 6 o'clock.]
- (4) *Die Jugendlichen haben auf der Straße getanzt.*  
*The teenagers have on the street danced.*  
 [The teenagers danced on the street.]

Auxiliary verb selection can be considered a rule-based structure because transitive verbs typically select *haben* (as in example (1) above), whereas intransitive verbs that express a change of location (as in example (2) above) or a change of state (as in example (3) above) select *sein*. If they do not express a change of location or a change of state, intransitive verbs usually select *haben* (as in example (4) above).<sup>7</sup>

Past participle formation, on the other hand, can be considered a mostly lexically-based component, because learners must know for each verb whether it is regular (also referred to as “weak”), irregular (also referred to as “strong”), or mixed (a combination of “weak” and “strong”). The regular past participle is formed with the circumfix *ge...t* and the verb stem (*machen* ‘to do’ → *gemacht* ‘done’). Irregular past participles are formed with the circumfix *ge...en* and the verb stem (*schlafen* ‘to sleep’ → *geschlafen* ‘slept’), or with *ge...en* and a stem-change in the vowel between the infinitive form and the past participle (*gehen* ‘to go’ → *gegangen* ‘gone’). Mixed verbs take the regular circumfix *ge...t* but change the stem (*bringen* ‘to

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<sup>6</sup> For the translations of the examples (1), (2), (3), and (4), the English simple past was chosen because it is closer in meaning to the German present perfect tense than the English present perfect tense.

<sup>7</sup> There are some relevant exceptions to this rule, which include the verbs *sein* (‘to be’) and *bleiben* (‘to stay’), which select the auxiliary verb *sein*, although they express neither a change of location nor a change of state.

bring → *gebracht* ‘brought’). Because there are many irregular past participles in German, L2 learners are often advised to study each verb along with its past participle, and German language textbooks typically provide the past participle in addition to the infinitive form in vocabulary lists and glossaries.

### 3.1.3 Instructional Materials and Procedure

The instructional treatment took place over three consecutive 50-minute class sessions in week 4 of the semester. The theme of the unit taught during this week was the culture and history of the city of Munich. An overview of the treatment is provided in figure 1 below.

	<b>PI Group</b>	<b>PI FFI Group</b>	<b>PI FFI CF Group</b>
<b>Treatment Day 1</b>	Pretest (15 minutes)		
	Exposure to present perfect tense through reading (10 minutes)		
	Fluency-focused PI activities (25 minutes)	Form-focused instruction and accuracy-focused activities (25 minutes)	
<b>Treatment Day 2</b>	Exposure to present perfect tense through reading and fluency-focused PI activities (20 minutes)		Feedback Training (20 minutes)
	Fluency-focused PI activities with present perfect tense (30 minutes)		
<b>Treatment Day 3</b>	Fluency-focused PI activities with present perfect tense (35 minutes)		
	Immediate posttest (15 minutes)		

Figure 1. Treatment Overview (Experiment 1)

At the beginning of treatment day 1, participants in all groups completed the pretest. Afterwards, participants in all groups were introduced to the topic of the unit by means of a worksheet that asked participants to match pictures (e.g., a picture of the Oktoberfest) and the corresponding activity (e.g., *aufs Oktoberfest gehen* ‘go to the Oktoberfest’). The purpose of this

activity was to introduce participants to the topic of the unit and to expose them to the new vocabulary. Then, participants in all groups read a text that contained forms of the target structure. This text was a dialogue between two students in Germany. One of them had spent a weekend in Munich and told the other student about it, while the other student talked about his weekend at home. The participants read this text with a partner. After reading the text, participants in the PI FFI and in the PI FFI CF group were asked to highlight all the forms of the present perfect tense in the text, including the auxiliary verb and the past participle, and to write them down in a table provided on the worksheet. The German infinitives and their English translations were already provided in the table, along with a few examples of present perfect tense forms from the text. After the instructors had compared the answers with the participants, they explained the rules of auxiliary selection. The instructors' explanation was supported by a handout, which contained the concepts of transitivity, change of location, and change of state, as well as some relevant exceptions (e.g., *sein* 'to be' and *bleiben* 'to stay'). Immediately following the explanation, the participants worked with a partner to complete a short exercise on auxiliary selection, in which they had to circle the appropriate auxiliary and explain why this was the appropriate auxiliary (e.g., intransitive, change of location). Next, the instructors explained how past participles are formed, including information about regular, irregular, and mixed past participles. Immediately following the explanation, the participants worked with a partner to complete a short exercise on past participles.

The participants in the PI group read the same text, but their attention was never drawn to the forms. Rather than highlighting forms in the texts or receiving explanations from the instructor, the participants in the PI group were asked content questions about the text, and they discussed the questions with a partner. The questions were in the present perfect tense and



required answers in the present perfect tense, since the participants were asked to report what the students in the dialogue had done over the weekend. However, the participants were not specifically instructed to use the present perfect tense in their responses. After this activity, the participants talked with their partner about what they had done over the weekend themselves, and how they imagine a perfect weekend to be like. Then, the participants reported to two new partners what their old partners had told them. The participants were told that the goal of these activities was to promote their fluency in German.

On treatment day 2, the participants in the PI FFI CF group received training on how to provide CF to their peers. Following Sato and Lyster (2012), the training occurred in three stages: modeling, practice, and use-in-context.

During the modeling stage, the instructor demonstrated how CF can be provided by administering a mini role play in front of the class, together with one of the participants. The mini role play contained four mistakes and four respective feedback moves, two regarding auxiliary selection and two regarding past participle formation. Afterward, the instructor discussed how feedback had been provided using a PowerPoint presentation that contained relevant excerpts of the mini role play. Rather than being taught a single feedback strategy such as either recasts or prompts (e.g., Sato & Lyster, 2012), the participants in the present study were taught a more open-ended feedback strategy: Whenever they noticed a mistake in their peers' speech, they were asked to point out that mistake, for example through repetition of the erroneous part of the sentence using rising intonation (e.g., *\*gespielen?* 'played') or through a metalinguistic explanation (e.g., "you need a regular past participle"). Only if this kind of feedback did not help, participants were asked to provide the correct answer, that is, a recast.

During the practice stage, participants were put in groups of three or four and given a role-play scenario designed to help them practice providing CF to peers (see Sato & Lyster, 2012). They were also given a list of five sentences that they had to use during the role play (Appendix B). Those sentences contained mistakes regarding auxiliary verb selection and past participle formation. After a few minutes of planning time, the participants acted out the role play in their groups. While the speaker's role was to purposefully include the errors in their speech, the listeners' role was to detect and point out the errors.

During the use-in-context stage, participants were encouraged to use the CF technique in more open-ended and communicative activities, that is, in all fluency-focused PI activities following the feedback training.

The participants in the PI FFI group and the PI group were not instructed to correct their peers' mistakes. Instead, they received additional exposure to the present perfect tense and additional practice opportunities. First, they read a text about the history of Munich that contained forms in the present perfect tense. Afterwards, they completed PI activities in which they discussed questions about the text with a partner. The questions were in the present perfect tense and required answers in the present perfect tense, since the text was about the history of Munich.

For the last 30 minutes of treatment day 2 and the first 35 minutes of treatment day 3, participants in all groups completed fluency-focused PI activities which prompted them to produce utterances that contained the present perfect tense. Those activities included an information gap activity, a fictional story retelling task, a retelling task of the history of Oktoberfest, a question-and-answer activity on the history of Oktoberfest, as well as a bingo activity. Participants in all groups completed the same PI activities, but only participants in the

PI FFI CF group were instructed to point out and correct their peers' mistakes. At the end of treatment day 3, participants in all three groups completed the immediate posttest.

### 3.1.4 Testing Materials

To measure the effects of peer interaction, form-focused instruction, and peer corrective feedback on the acquisition of the present perfect tense, the present study used a pretest-posttest design. All three groups completed the pretest at the beginning of treatment day 1, the immediate posttest at the end of treatment day 3, and the delayed posttest two weeks after the immediate posttest. The pretest and the two posttests consisted of an oral production task and an error correction task. All tasks were administered in the classroom and the oral production task was always administered before the error correction task.

#### *Oral Production Task*

The oral production task was adapted from Sippel and Jackson (2015).<sup>8</sup> It contained 13 pictures of the same person performing various activities over the course of the day (e.g., getting up, going to work). Of the 13 pictures, 12 were included in the analysis, as the first one was given as an example to ensure that participants understood the task. Above each picture, participants were given an element (a word or a short phrase), which they should use to start the sentence. For 4 of the 12 pictures included in the analysis this was the subject (e.g., *sie* 'she'), and for the remaining 8 it was a time phrase (e.g., *um 1 Uhr* 'at 1 o'clock'). Below each picture, participants were given the infinitive form of the verb to describe the action in each picture (e.g., *aufstehen* 'to get up'). They were told that everything happened yesterday, and they were asked

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<sup>8</sup> The oral production task can be found in Appendix C in all three versions (pretest, immediate posttest, and delayed posttest).

to tell a story about what the person did that day using the present perfect tense. Participants used digital voice recorders to record their stories. The same verbs were used on the pretest and the two posttests, but the pictures were different, in that, for each version of the task, a different person performed the activities in different environments. The elements above the pictures were also different. Of the 12 verbs targeted in the oral production task, 6 used *sein* ‘to be’ as the auxiliary verb and 6 used *haben* ‘to have’. Eight of the 12 verbs had irregular past participles and 4 had regular past participles.

### *Error Correction Task*

The error correction task (Appendix D) was a text consisting of 33 sentences. More specifically, the text was a letter written by the fictional German learner Alex from Pennsylvania, who went to Germany for his vacation with his friends. The letter was addressed to Alex’s grandmother and talks about his experiences in Germany. Most of the letter was written in the present perfect tense as Alex was writing about the things he did in Germany.

Participants were told that the letter contained mistakes, and they were instructed to correct any mistakes that they noticed. Of the 33 sentences, 11 were grammatical and 22 were ungrammatical. Of the 22 ungrammatical sentences, 6 contained an incorrect auxiliary, 6 contained an incorrect past participle, and 10 contained other mistakes (filler items). None of the ungrammatical sentences contained more than one mistake. The six incorrect auxiliaries were all instances in which *haben* was used instead of *sein*. *Sein* was never used instead of *haben* because *haben* generally functions as the default in German learners, especially in those learners whose native language does not have a split auxiliary system, such as English. The six incorrect past participles included three regular and three irregular forms, and all of those forms had been

targeted during the instructional treatment. The 10 filler items included six word order mistakes and four subject-verb agreement mistakes. Neither word order nor subject-verb agreement had been targeted during the instructional treatment. Example sentences with an incorrect auxiliary, an incorrect past participle, and incorrect subject-verb agreement are provided in (5), (6), and (7).

(5) *Am Montag*      *\*haben*      *wir*      *in Berlin*      *angekommen.*  
*On Monday*      *have*      *we*      *in Berlin*      *arrived.*  
 [On Monday we arrived in Berlin.]

(6) *Wir*      *haben*      *ein Bier*      *im Hofbräuhaus*      *\*getrunken.*  
*We*      *have*      *a beer*      *in the Hofbräuhaus*      *drunk.*  
 [We drank a beer in the Hofbräuhaus.]

(7) *Deutschland*      *\*gefallen*      *mir*      *gut.*  
*Germany*      *appeals*      *to me*      *well.*  
 [I like Germany.]

The error correction task was administered on paper, and participants were given 10 minutes to complete it. After 10 minutes, the instructors collected the papers, even if participants had not finished the task.

### 3.1.5 Scoring and Data Analysis

On the oral production task, one point was given for each sentence in which participants correctly used *sein* as the auxiliary. Sentences in which *haben* was the correct auxiliary were disregarded because *haben* generally functions as the default auxiliary verb for L2 learners of German.<sup>9</sup> Since six of the twelve sentences in the oral production task required the auxiliary *haben* and six required *sein*, the maximum score for the auxiliary on the oral production task was six. For the past participle, one point was given for each sentence in which the participants used the correct past participle. Since all 12 sentences in the oral production task required the use of a

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<sup>9</sup> Indeed, instances in which participants used *sein* instead of *haben* were rare in the data.

past participle, the maximum score for the past participle on the oral production task was 12. Partial credit was not given for the auxiliary or past participles. Participants did not lose points for grammatical errors unrelated to the target structure, such as subject-verb agreement (*\*er sind gegangen* ‘he went’ instead of *er ist gegangen* ‘he went’) or word order (*\*um halb 7 Anna ist nach Hause gekommen* ‘at half past seven Anna came home’) instead of *um halb 7 ist Anna nach Hause gekommen* ‘at half past seven Anna came home’).

On the error correction task, participants were given one point for each of the six auxiliary mistakes and one point for each of the six past participle mistakes that they identified and corrected appropriately (e.g., the mistake was *\*getrinken* ‘drunk’, and the participant underlined or crossed out the word and changed it to *getrunken* ‘drunk’). They were not given a point if they identified a mistake but did not correct it appropriately (e.g., the mistake was *\*getrinken* ‘drunk’, and the participant underlined or crossed out the word and changed it to *\*getrinkt* ‘drunk’). Participants did not receive or lose points for filler items that they corrected or for grammatical items that they misidentified as ungrammatical and subsequently “corrected”. The maximum score on the error correction task was six for the auxiliary verb and six for the past participle.

Since pretest scores were not distributed normally according to Kolmogorov-Smirnov tests, nonparametric tests were used for the statistics analyses. However, it should be noted that the pattern of results did not differ when parametric tests were used, although these results are not reported here. For each task, Kruskal-Wallis tests were performed to determine whether there were significant differences between the three groups at any given testing time (pretest, immediate posttest, or delayed posttest). Mann-Whitney tests were then used to compare the performance of two groups at a time for each testing time.

## 3.2 Results

### 3.2.1 Oral Production Task

Of the 87 participants, three participants were not included in the analysis of the oral production task due to technical difficulties with the voice recorders, and four participants were not included because their recordings were incomplete. Additionally, eight participants were excluded because they misunderstood the directions and told the story in the present tense rather than in the present perfect tense. Thus, a total of 72 participants was included in the analysis reported here (PI group:  $N = 18$ ; PI FFI group:  $N = 29$ ; PI FFI CF group:  $N = 25$ ).

#### *Auxiliary Verb Choice*

Figure 2 shows the results of the oral production task for the auxiliary verb choice.

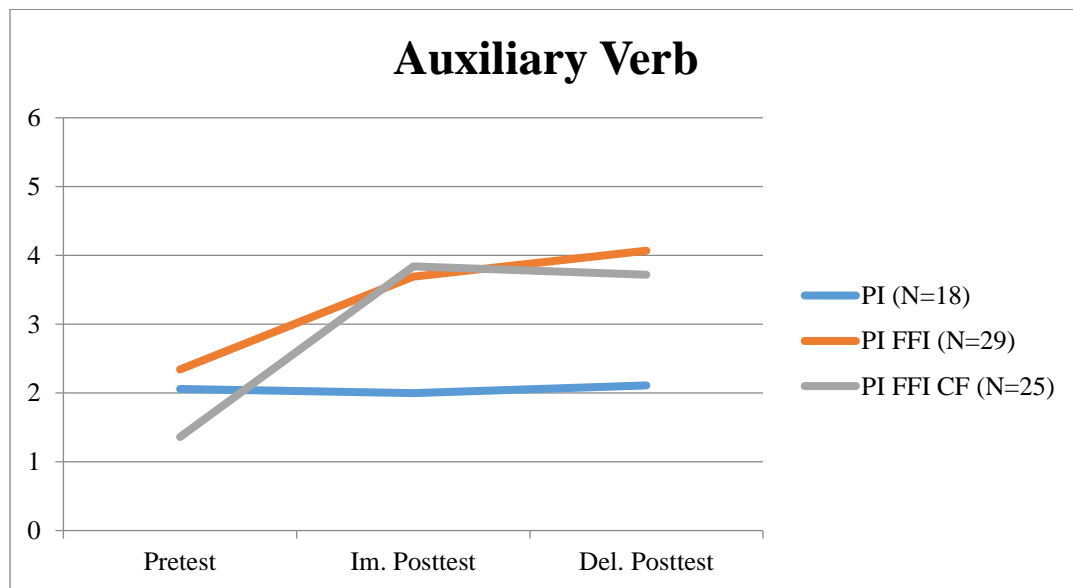


Figure 2. Oral Production Task (Auxiliary Verb)

A Kruskal-Wallis test revealed that the three groups did not differ significantly on the pretest ( $\chi^2(2) = 3.80, p = .150$ ). On the immediate and delayed posttest, there were significant differences between the groups (immediate posttest:  $\chi^2(2) = 8.91, p = .012$ ; delayed posttest:  $\chi^2(2) = 7.83, p = .020$ ).

Follow-up Mann-Whitney tests revealed no significant difference between the PI and the PI FFI group on the pretest ( $U = 247.00, z = -0.31, p = .755, r = -.05$ ), but there was a significant difference between those two groups on the immediate posttest ( $U = 144.50, z = -2.58, p = .010, r = -.38$ ) and delayed posttest ( $U = 147.50, z = -2.56, p = .011, r = -.37$ ), because the PI FFI group outperformed the PI group.

There was no significant difference between the PI and the PI FFI CF group on the pretest ( $U = 166.50, z = -1.49, p = .136, r = -.23$ ), but there was a significant difference between those two groups on the immediate posttest ( $U = 115.50, z = -0.42, p = .006, r = -.81$ ) and delayed posttest ( $U = 134.00, z = -2.29, p = .022, r = -.35$ ), because the PI FFI CF group outperformed the PI group.

The difference between the PI FFI and the PI FFI CF group approached significance on the pretest, with the PI FFI group performing better than the PI FFI CF group ( $U = 262.00, z = -1.81, p = .071, r = -.25$ ). There was no significant difference between those two groups on the immediate posttest ( $U = 356.00, z = -0.12, p = .908, r = -.02$ ) or on the delayed posttest ( $U = 318.00, z = -0.79, p = .428, r = -.11$ ).



## Past Participle

Figure 3 shows the results of the oral production task for the past participle.

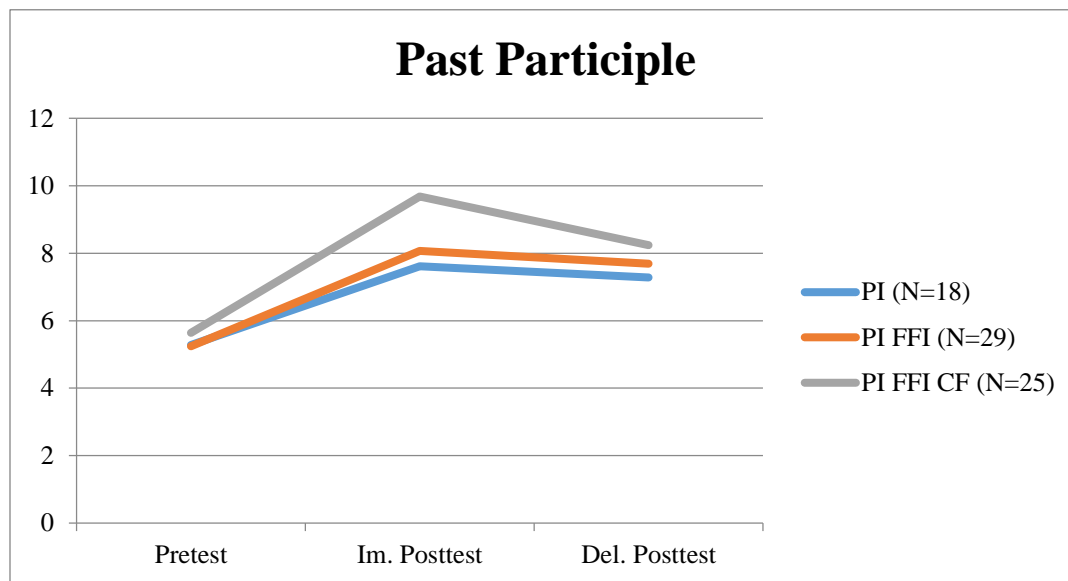


Figure 3. Oral Production Task (Past Participle)

A Kruskal-Wallis test revealed that the three groups did not differ significantly on the pretest ( $\chi^2(2) = .27, p = .875$ ). On the immediate posttest, there was a significant difference between the groups ( $\chi^2(2) = 12.06, p = .002$ ), but there was no significant difference between the groups on the delayed posttest ( $\chi^2(2) = 2.49, p = .288$ ).

Follow-up Mann-Whitney tests revealed no significant differences between the PI and the PI FFI group at any testing time (pretest:  $U = 244.50, z = -0.37, p = .715, r = -.05$ ; immediate posttest:  $U = 216.50, z = -0.99, p = .325, r = -.14$ ; delayed posttest:  $U = 232.50, z = -0.63, p = .529, r = -.09$ ).

There was no significant difference between the PI and the PI FFI CF group on the pretest ( $U = 217.50, z = -0.19, p = .852, r = -.03$ ), but there was a significant difference between

those two groups on the immediate posttest ( $U = 92.50, z = -3.32, p = .001, r = -.51$ ), because the PI FFI CF group outperformed the PI group. There was no significant difference on the delayed posttest ( $U = 168.50, z = -1.40, p = .161, r = -.21$ ).

There was no significant difference between the PI FFI and the PI FFI CF group on the pretest ( $U = 336.00, z = -0.47, p = .640, r = -.06$ ), but there was a significant difference between those two groups on the immediate posttest ( $U = 218.00, z = -2.54, p = .011, r = -.35$ ), because the PI FFI CF group outperformed the PI FFI group. There was no significant difference on the delayed posttest ( $U = 295.00, z = -1.19, p = .236, r = -.16$ ).

### **3.2.2 Error Correction Task**

Of the 87 participants, one participant was not included in the analysis of the error correction task because she already performed at ceiling, defined as 100% accuracy, on both the auxiliary and the past participle at the time of the pretest. Thus, a total of 86 participants was included in the analysis reported here (PI group:  $N = 27$ ; PI FFI group:  $N = 31$ ; PI FFI CF group:  $N = 28$ ).

### Auxiliary Verb Choice

Figure 4 shows the results of the error correction task for the auxiliary verb choice.

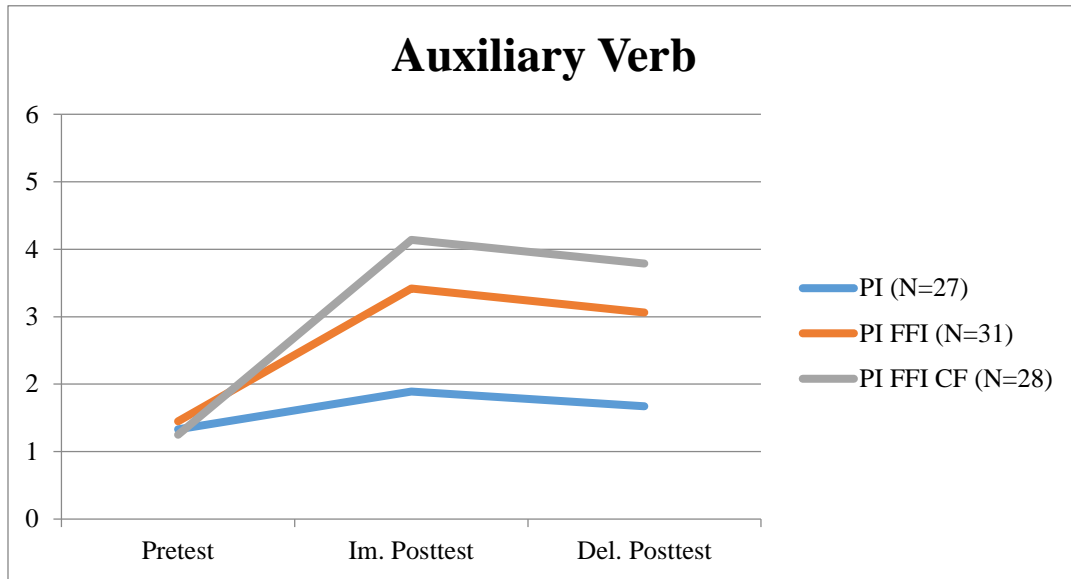


Figure 4. Error Correction Task (Auxiliary Verb)

A Kruskal-Wallis test revealed that the three groups did not differ significantly on the pretest ( $\chi^2(2) = .18, p = .916$ ). On the immediate and delayed posttest, there were significant differences between the groups (immediate posttest:  $\chi^2(2) = 13.75, p = .001$ ; delayed posttest:  $\chi^2(2) = 12.58, p = .002$ ).

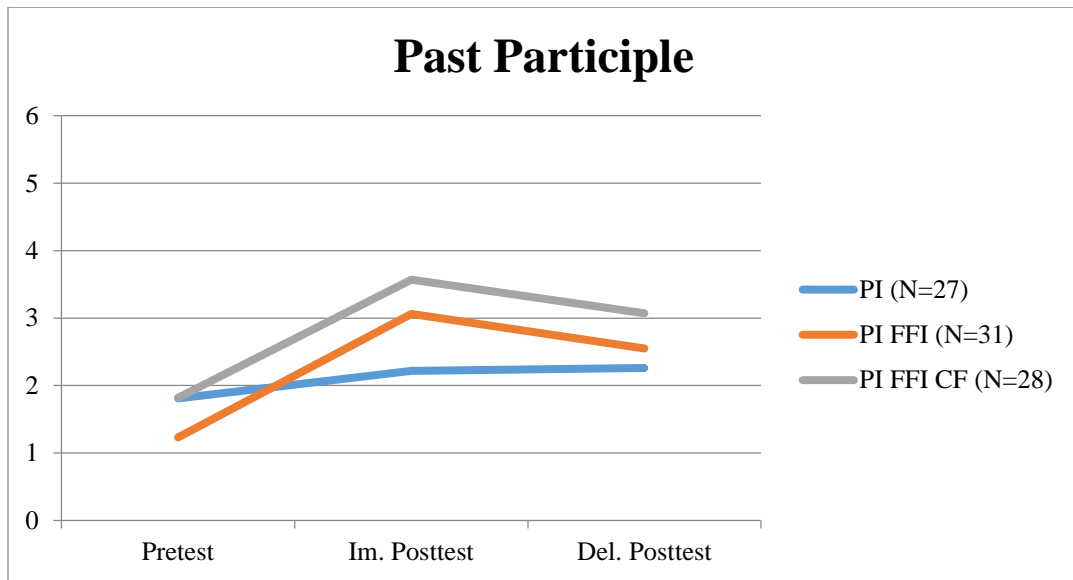
Follow-up Mann-Whitney tests revealed no significant difference between the PI and the PI FFI group on the pretest ( $U = 404.00, z = -0.25, p = .806, r = -.03$ ), but there was a significant difference between those two groups on the immediate posttest ( $U = 256.00, z = -2.58, p = .010, r = -.34$ ) and delayed posttest ( $U = 273.50, z = -2.35, p = .019, r = -.31$ ), because the PI FFI group outperformed the PI group.

There was no significant difference between the PI and the PI FFI CF group on the pretest ( $U = 355.00$ ,  $z = -0.42$ ,  $p = .674$ ,  $r = -.06$ ), but there was a significant difference between those two groups on the immediate posttest ( $U = 171.00$ ,  $z = -3.55$ ,  $p < .001$ ,  $r = -.48$ ) and delayed posttest ( $U = 178.00$ ,  $z = -3.45$ ,  $p = .001$ ,  $r = -.47$ ), because the PI FFI CF group outperformed the PI group.

There were no significant differences between the PI FFI and the PI FFI CF group at any testing time (pretest:  $U = 424.50$ ,  $z = -0.16$ ,  $p = .872$ ,  $r = -.02$ ; immediate posttest:  $U = 347.00$ ,  $z = -1.34$ ,  $p = .180$ ,  $r = -.17$ ; delayed posttest:  $U = 344.00$ ,  $z = -1.38$ ,  $p = .165$ ,  $r = -.18$ ).

### *Past Participle*

Figure 5 shows the results of the error correction task for the past participle.



*Figure 5. Error Correction Task (Past Participle)*

A Kruskal-Wallis test revealed that the three groups did not differ significantly on the pretest ( $\chi^2(2) = 3.83, p = .148$ ). On the immediate posttest, there was a significant difference between the groups ( $\chi^2(2) = 8.83, p = .012$ ), but there was no significant difference on the delayed posttest ( $\chi^2(2) = 2.66, p = .265$ ).

Follow-up Mann-Whitney tests revealed no significant difference between the PI and the PI FFI group on the pretest ( $U = 321.50, z = -1.58, p = .113, r = -.21$ ). On the immediate posttest, the difference between those two groups approached significance ( $U = 308.50, z = -1.75, p = .080, r = -.23$ ), because the PI FFI group performed better than the PI group. On the delayed posttest, there was no significant difference between the two groups ( $U = 375.00, z = -0.69, p = .490, r = -.09$ ).

There was no significant difference between the PI and the PI FFI CF group on the pretest ( $U = 368.50, z = -0.16, p = .870, r = -.02$ ), but there was a significant difference between those two groups on the immediate posttest ( $U = 205.00, z = -2.98, p = .003, r = -.40$ ), because the PI FFI CF group outperformed the PI group. There was no significant difference between the two groups on the delayed posttest ( $U = 286.00, z = -1.58, p = .113, r = -.21$ ).

The difference between the PI FFI and the PI FFI CF approached significance at the time of the pretest ( $U = 321.50, z = -1.78, p = .075, r = -.23$ ), because the PI FFI CF group performed better than the PI FFI group. There were no significant differences between the two groups on the posttests (immediate posttest:  $U = 354.50, z = -1.24, p = .216, r = -.16$ ; delayed posttest:  $U = 366.50, z = -1.04, p = .299, r = -.14$ ).

### **3.3 Discussion**

#### **3.3.1 Summary of Findings**

Overall, both peer interaction combined with form-focused instruction and peer interaction combined with form-focused instruction and peer corrective feedback were effective for the development of grammatical accuracy. Peer interaction alone, on the other hand, was less effective.

On the oral production task, both the PI FFI group and the PI FFI CF group significantly outperformed the PI group on auxiliary selection on the immediate and delayed posttest. There were no significant differences between the PI FFI and the PI FFI CF group on auxiliary selection on either of the two posttests. On past participle formation, there were no significant differences between the PI FFI and the PI group on either of the two posttests. The PI FFI CF group significantly outperformed both the PI FFI group and the PI group on the immediate posttest, but there were no significant differences between the PI FFI CF group and either of the other two groups on the delayed posttest.

On the error correction task, both the PI FFI group and the PI FFI CF group significantly outperformed the PI group on auxiliary selection on the immediate and delayed posttest. There were no significant differences between the PI FFI and the PI FFI CF group on auxiliary selection on either of the two posttests. However, descriptive results indicated that the PI FFI CF group performed better than the PI FFI group on both posttests. Whereas the PI FFI CF group on average identified and appropriately corrected 4.14 out of 6 auxiliary errors on the immediate posttest and 3.79 out of 6 on the delayed posttest, the PI FFI group on average only identified and appropriately corrected 3.42 auxiliary errors on the immediate posttest and 3.06 on the delayed posttest. On past participle formation, there were no significant differences between the

PI FFI group and the PI group on either of the two posttests. The PI FFI CF group significantly outperformed the PI group on the immediate posttest, but there was no significant difference between those two groups on the delayed posttest. There were no significant differences between the PI FFI CF and the PI FFI group on either of the two posttests.

In summary, the PI FFI group performed significantly better than the PI group on four of eight measures, whereas the PI FFI CF group performed significantly better than the PI group on six of eight measures. The PI group never performed significantly better than another group. The PI FFI CF group performed significantly better than the PI FFI group on one of eight measures, but on a descriptive level, the PI FFI CF group performed better than the PI FFI group on two additional measures. The PI FFI group never outperformed the PI FFI CF group.

Table 2 summarizes the findings of experiment 1.

Table 2

*Summary of Results (Experiment 1)*

	PI vs. PI FFI	PI vs. PI FFI CF	PI FFI vs. PI FFI CF
Auxiliary, oral production, immediate posttest	*	*	n. s.
Auxiliary, oral production, delayed posttest	*	*	n. s.
Past participle, oral production, immediate posttest	n. s.	*	*
Past participle, oral production, delayed posttest	n. s.	n. s.	n. s.
Auxiliary, error correction, immediate posttest	*	*	n. s.
Auxiliary, error correction, delayed posttest	*	*	n. s.
Past participle, error correction, immediate posttest	n. s.	*	n. s.
Past participle, error correction, delayed posttest	n. s.	n. s.	n. s.

*Note:* Each asterisk in the “PI vs. PI FFI” column indicates that the PI FFI group significantly outperformed the PI group. Each asterisk in the “PI vs. PI FFI CF” column indicates that the PI FFI CF group significantly outperformed the PI group. Each asterisk in the “PI FFI vs. PI FFI CF” column indicates that the PI FFI CF group significantly outperformed the PI FFI group.

### 3.3.2 The Impact of Peer Interaction and Form-Focused Instruction

Experiment 1 showed that peer interaction alone did little to promote the acquisition of the present perfect tense in third-semester learners of German. These findings are consistent with Sato and Lyster’s (2012) findings, which also indicated that peer interaction alone was not effective for the development of grammatical accuracy whereas peer interaction combined with a form-focused component (which in their study was peer corrective feedback) was effective.



As detailed in section 3.1.3, all three groups received exposure to the present perfect tense and engaged in the same peer interaction activities. Thus, the greater gains of the PI FFI group as compared to the PI group cannot be explained in terms of exposure to the target structure. Rather, the findings can be explained as a result of the form-focused instruction that was provided to the learners in the PI FFI group. The present experiment therefore supports the large body of previous studies showing that form-focused instruction facilitates the acquisition of grammatical structures (e.g., Cerezo et al., 2016; Day & Shapson, 1991; Doughty, 1991; Lee, 2007; Lightbown & Spada, 1990; Lindseth, 2016; Lyster, 1994; Norris & Ortega, 2000; White, 1991).

### **3.3.3 The Effects of Peer Corrective Feedback on the Acquisition of Grammar**

With respect to the efficacy of peer corrective feedback, the results of the present experiment showed that peer interaction combined with form-focused instruction and peer corrective feedback was slightly more effective than peer interaction combined with form-focused instruction, but without peer corrective feedback. Although the PI FFI CF group significantly outperformed the PI FFI group only on one measure, there were two additional measures on which the PI FFI CF group performed better than the PI FFI group, even though the difference between the groups did not reach significance. It is possible that significance would have been reached if there had been less participant attrition (33 of the initial 120 participants had to be excluded in this experiment for various reasons), or if a larger number of target items had been included in the tests (there were only six items each for auxiliary verb selection and past participle formation).

Moreover, it is noteworthy that the PI FFI CF group significantly outperformed the PI group on six measures whereas the PI FFI group significantly outperformed the PI group only on four measures, which indicates that the performance of the PI FFI CF group was also superior to that of the PI FFI group in the sense that peer interaction combined with form-focused instruction and peer feedback training resulted in greater gains when compared to peer interaction alone than did peer interaction combined with form-focused instruction, but without peer feedback training.

Further, it is important to emphasize that the time spent on task was kept constant among the three groups. The PI FFI CF group did not receive more exposure to the present perfect tense or more opportunities to practice using the target structure in meaningful contexts than the other two groups, since the PI FFI group and the PI group engaged in additional activities exposing them to the present perfect tense while the PI FFI CF group was learning how to provide peer feedback. Therefore, it is not the case that the PI FFI CF group made the greatest gains because of additional exposure or practice opportunities. Rather, these gains can be interpreted as a result of receiving feedback from peers as well as providing feedback to peers (see Sato and Lyster, 2012).

As such, the present experiment supports the findings of the few previous studies that examined peer corrective feedback and reported that it was beneficial for the acquisition of grammatical structures when feedback training was provided (e.g, Chu, 2013; Sato & Lyster, 2012; Jackson, 2015). The present study adds to the existing peer corrective feedback literature by including one group that received form-focused instruction and peer feedback training (the PI FFI CF group) and one group that received form-focused instruction, but no peer feedback training (the PI FFI group). Previous studies have compared peer interaction with peer feedback

training to peer interaction without any kind of focus on form (e.g., Sato and Lyster, 2012), or compared form-focused instruction combined with peer feedback to form-focused instruction combined with teacher feedback, but not to form-focused instruction without corrective feedback (Sippel & Jackson, 2015), or investigated the effects of peer interaction combined with peer feedback training, but without including additional experimental groups (Chu, 2013).

Thus, an important conclusion of the present experiment is that any kind of intervention that draws learners' attention to grammatical forms before or during peer interaction activities (that is, form-focused instruction or peer corrective feedback) is likely to promote learners' grammatical accuracy. In contrast, peer interaction alone appears to be less likely to promote grammatical accuracy. Moreover, while form-focused instruction was effective, form-focused instruction combined with peer feedback was even more effective, suggesting that there is a role for peer corrective feedback not only in the absence of form-focused instruction (Sato and Lyster, 2012), but also in the presence of form-focused instruction, as was the case in the present experiment. As such, the findings of the present experiment support the noticing hypothesis, which predicts that learning does not occur in the absence of noticing: In the present experiment, form-focused instruction and peer feedback training were used to draw learners' attention to linguistic forms before and during peer interaction activities, which promoted noticing and therefore resulted in better learning outcomes than peer interaction alone. Hence, these findings challenge Philip et al.'s (2014) claim that peer feedback "may not be very promising for learning" (p. 55). In fact, the findings of this experiment suggest that peer feedback may be very promising for learning as long as learners receive appropriate peer feedback training.

Finally, another remarkable finding of this experiment is that low-proficiency learners with a low degree of metalinguistic knowledge were able to benefit from peer feedback training,

suggesting that the efficacy of peer feedback does not appear to be limited to the context of low-intermediate learners (Sippel & Jackson, 2015), intermediate learners (Chu, 2013), or advanced learners with high degrees of metalinguistic knowledge (Sato & Lyster, 2012).

### **3.3.4 The Impact of the Treatments on Auxiliary Selection vs. Past Participle Formation**

Since the German present perfect tense includes a rule-based component (the selection of the auxiliary verb) and an item-based component (the formation of the past participle), it is important to note that the results revealed somewhat differential effects of the three treatments on the acquisition of those two linguistic targets. For example, the PI FFI group outperformed the PI group on all four auxiliary measures, but on none of the four past participle measures. Similarly, the PI FFI CF group also outperformed the PI group on all four auxiliary measures, but only on two of the four past participle measures. Thus, it seems to be the case that form-focused instruction worked better for the rule-based structure than for the item-based structure, indicating that the rules of auxiliary selection might have been easier to remember for the learners than individual past participle forms. With respect to the PI group, the results suggest that peer interaction alone had no effect on the acquisition of the rule-based structure but possibly a small effect on the acquisition of the item-based structure, since the learners in the PI group never performed worse than the PI FFI group on the past participle measures. This may be because the past participle carries more lexical meaning than the auxiliary and therefore could have been more salient to the learners in the PI group.

It is further interesting to note that the only measure on which the PI FFI CF group significantly outperformed the PI FFI group was a past participle measure. This finding is consistent with Sippel and Jackson (2015), who also found that peer feedback was somewhat

more effective for past participles than for auxiliaries. A possible explanation is that identifying incorrect past participles in their peers' speech may be easier for learners than identifying incorrect auxiliaries because past participles involve discrete lexical items and therefore may be more salient to learners (see Sippel and Jackson, 2015, for further discussion). Nevertheless, the PI FFI CF group also performed descriptively better than the PI FFI group on two auxiliary measures, suggesting that peer feedback can be useful for both rule-based and item-based structures.

## **CHAPTER 4: Learners' Beliefs about Peer Interaction and Peer Corrective Feedback for Grammatical Structures**

### **4.1 Methodology**

#### **4.1.1 Participants**

All learners who had participated in experiment 1 (chapter 3) were eligible to participate in a post-treatment interview. Thirty-five learners gave consent to participate in the interviews. Of the 35 participants, 5 from each treatment group were randomly selected for data analysis, so that a total of 15 participants was included in the analysis. To assure confidentiality, each participant was assigned a pseudonym by the author. Participants received either monetary compensation or course credit for their participation.

Table 3 presents basic information about the 15 participants.

Table 3

*Interview Participants (Experiment 1)*

	Group	Age (years)	Years of German	Motivation
Cassie	PI	18	4	personal interest, study abroad
Cathleen	PI	20	1	requirement, personal interest
Hector	PI	19	1	personal interest
Henry	PI	20	1	requirement
Leo	PI	19	1	requirement
Anna	PI FFI	18	5	study abroad
James	PI FFI	20	1	requirement
Kayla	PI FFI	21	1	requirement
Larry	PI FFI	19	6	personal interest
Tess	PI FFI	19	6	requirement
Ben	PI FFI CF	20	1	requirement
Bonnie	PI FFI CF	21	1	personal interest
Christie	PI FFI CF	18	4	requirement
Jenna	PI FFI CF	18	4	personal interest
Laura	PI FFI CF	18	8	requirement, personal interest

### **4.1.2 Procedure**

All participants were interviewed by the author of the present dissertation. The interviews took place 0-4 days after the last treatment day, as described in section 3.1.3. Participants were interviewed individually, and the interviews were audio recorded. Each interview lasted approximately 30 minutes and was conducted in English. Following Sato (2013), the interviews were semi-structured: Participants were encouraged to respond to and elaborate on a set of prepared questions (Appendix E). Depending on the participants' responses, more specific follow-up questions were asked.

Each interview began with general questions regarding the participants' language background, previous foreign language classroom experiences, and motivation to study German. The next section dealt with their attitudes towards grammar instruction and grammar learning, followed by a section on peer interaction and a section on corrective feedback, which included both teacher and peer feedback. In the final section, the interviewer asked specific questions about the instructional treatment and its effectiveness, as perceived by the participants.

### **4.1.3 Data Analysis**

The 15 interviews that had been randomly selected were first transcribed. Next, participants' responses to the prepared closed-ended questions (e.g., yes-no and either-or questions) were quantified to create a general overview of results and to allow for a between-groups comparison. Finally, participants' responses to the open-ended questions and their responses to the more specific follow-up questions were analyzed to identify coding themes that emerged from the data, such as the social dimension of peer interaction or the perceived effectiveness of peer corrective feedback. Those data are presented in the following sections.



## 4.2 Results

### 4.2.1 Learners' Beliefs about Grammar Learning

Regardless of treatment group, all 15 participants believed that studying the grammar of a foreign language is important, and some participants believed that one can only become a proficient speaker of a foreign language once the grammar is mastered:

#### EXCERPT 1

*I think grammar is really the basis of the language, and if you wanna be confident in talking or writing it, you gotta know the grammar first. (Kayla, PI FFI)*

Some participants, like Larry (PI FFI) and Bonnie (PI FFI CF), explained that correct grammar is important to them because they do not like making mistakes:

#### EXCERPT 2

*I love having the correct grammar, I hate saying things incorrectly. (Larry, PI FFI)*

#### EXCERPT 3

*I always think if I don't know the grammar in German that I might sound dumb when I'm talking. (Bonnie, PI FFI CF)*

Although seven participants indicated they did not enjoy grammar lessons in the classroom, all participants believed that grammar lessons are beneficial to their language learning:

#### EXCERPT 4

*I wouldn't say they are fun but I definitely think that they are helpful. (Christie, PI FFI CF)*

#### EXCERPT 5

*It's hard and it's not very exciting and it's not very interesting, like the culture or like the music or the history. (Cassie, PI)*

Nevertheless, eight participants reported they found grammar lessons not only beneficial, but also enjoyable:

#### EXCERPT 6

*I enjoy learning about the different cases, the knowledge of accusative, dative case, genitive case. [...] I guess it's almost like, like logic or math, like I can derive the answer, you know, it's singular masculine accusative. (James, PI FFI)*

### 4.2.2 Learners' Beliefs about Peer Interaction

All participants but Henry (PI), Leo (PI), and Ben (PI FFI CF) indicated they enjoyed speaking German in class with their peers in pairs or small groups:

#### EXCERPT 7

*It makes the class more fun when you can talk with your, um, classmates and, um, like, help each other. (Tess, PI FFI)*

Moreover, all but one participant found speaking with peers more comfortable than speaking with the teacher:

#### EXCERPT 8

*It's just kinda scary when you just talk to your teacher and everyone can hear. If you make a mistake then everyone knows, sort of. (Tess, PI FFI)*

However, Henry (PI), Leo (PI) and Ben (PI FFI CF), who in contrast to most other participants had been studying German for only one year, indicated that peer interaction can make them uncomfortable, especially because they felt like their peers were more advanced in the language than they were themselves:

#### EXCERPT 9

*I like it, but sometimes I'm not comfortable, because they know what they're saying and sometimes I don't, and it's hard for them to understand what I'm saying. (Henry, PI)*

#### EXCERPT 10

*I feel like I don't know any vocabulary, I don't know how to say certain things, so it's intimidating because everybody else pretty much knows what certain things mean, I'm just sitting there, asking them "What does that mean?", or I just don't know how to say something in German, so I have to ask the translation of this or that word. So I don't like talking in German with my peers, just because, um, it's not comfortable. (Ben, PI FFI CF)*

Although all but three participants perceived peer interaction as enjoyable, most participants also reported that the extent to which they enjoy speaking with peers would depend on the partner. For instance, for some participants, like Laura (PI FFI CF), it is easier to work with a friend or a person they know:

EXCERPT 11

*I would rather work with someone I've always known, like, a little bit, because it could be awkward with someone I don't really know, so it's harder to keep up the good conversation. (Laura, PI FFI CF)*

Other participants reported that the proficiency of their partner would determine how much they enjoy peer interaction. While Cassie (PI) found it difficult to talk to more advanced speakers, Cathleen (PI) found peer interaction most enjoyable when she was able to work with an advanced speaker:

EXCERPT 12

*If I'm paired with someone much more advanced than me, it can be kind of intimidating, and then they control the conversation and you don't really know what to say. (Cassie, PI)*

EXCERPT 13

*If I speak with someone who is pretty fluently in the language, then I feel like "okay, we're having a real German conversation". But if, like, we're like, like, "um, um, um" too much in a language, then I'm thinking "okay, it's just a practice, it's not like a real time conversation". (Cathleen, PI)*

Regardless of treatment group, all participants except Ben (PI FFI CF) and Leo (PI) believed that peer interaction is beneficial to their language learning, especially to develop fluency in the language. Moreover, participants found it helpful because it gives them more opportunities to practice speaking the language than they would have in a more teacher-centered class:

EXCERPT 14

*It helps with the fluency and, like, actual practicing, not just know, like, in theory how you're supposed to speak, but, like, actually practice it. Like, it's good to have that mixture of, like, okay, we'll learn the grammar, we'll learn the basics, the structure, and then, like, actually applying it, you know, like in everyday life. (Anna, PI FFI)*

EXCERPT 15

*It'd be tough for everyone to speak that much if we were speaking to the teacher and the class, so it definitely is good for just, like, the pronunciation and being comfortable in speaking kind of fluently. (Kayla, PI FFI)*

Ben and Leo believed that peer interaction can or cannot be beneficial. Ben attributed this to his personality traits, while Leo perceived the lack of error correction as a weakness of peer interaction:

EXCERPT 16

*I think it can benefit your speaking skills in another language, but I feel like it also can hinder it as well, because for me, I'm more introvert, so I don't like speaking in class, only when I'm forced to, especially at a time when I'm, like, frustrated it gives me more of a reason, like, not to want to, like, speak, I just wanna, like, curl inside and not say anything. (Ben, PI FFI CF)*

EXCERPT 17

*I think it is, can benefit, because I'm practicing what I wanna say, but [...] if [...] I can't account for the mistakes that I'm making, then I'll just repeat my mistakes and that's just building bad habits, so therefore it's like, that could be also a negative. (Leo, PI)*

Eight participants believed that speaking with peers can be even more beneficial than speaking with the teacher:

EXCERPT 18

*It [peer interaction] is not as intimidating and it gets easier to talk. (Laura, PI FFI CF)*

EXCERPT 19

*It [peer interaction] forces you to get out of your comfort zone and not compose so far in advance before you- your answer, and it's just a lot closer approximation to how you're normally using the language in real life. (Hector, PI)*

However, four participants found teacher-learner interaction more beneficial than interactions among peers because the teacher can help in ways that learners cannot:

EXCERPT 20

*They [the teachers] help you with your grammar or, like, your vocab or whatever. And they correct you if you say something wrong, and your peers don't always correct you when you say something wrong. (Christie, PI FFI CF)*

Finally, all but two participants do not believe that being exposed to their peers' mistakes during peer interaction activities will have a negative effect on their own language learning. On the contrary, participants such as Tess (PI FFI) and Bonnie (PI FFI CF) viewed their peers' mistakes as a learning opportunity not only for their peers, but also for themselves:

EXCERPT 21

*If they do make a mistake, and I notice, then I can help them, and if I don't notice, um, then I probably won't pick up on it, I just make my own mistakes usually. (Tess, PI FFI)*

EXCERPT 22

*If I pick up on their mistakes it helps me, so that I know not to make that mistake in the future. (Bonnie, PI FFI CF)*

#### **4.2.3 Learners' Beliefs about Peer Corrective Feedback**

Regardless of treatment group, all participants indicated that they would like their oral mistakes to be corrected in the foreign language classroom:

EXCERPT 23

*I wanna be able to speak it right, so I want to know what I did wrong. (Cassie, PI)*

EXCERPT 24

*I would want to be called on my mistakes, so I can, um, so I can better myself... and I can learn from my mistakes. I don't wanna keep on repeating the same mistakes. (Leo, PI)*

Laura (PI FFI CF) believed that learning cannot take place in the absence of corrective feedback:

EXCERPT 25

*I don't think I'd learn if I weren't corrected. (Laura, PI FFI CF)*

While nine participants wanted all of their oral mistakes to be corrected, six participants thought that this would not be feasible:

EXCERPT 26

*It'll just be frustrating, cause I'm pretty sure every sentence I say will have a mistake in it. (Ben, PI FFI CF)*

EXCERPT 27

*That would be, I mean, that's not even conceivable. I can't even think about that, cause I'm sure [...] you wouldn't, you couldn't get through half of the class. (Henry, PI)*

Nine participants indicated that they would not feel embarrassed if they were corrected by the teacher, even if it was in front of the whole class. Six participants would feel slightly uncomfortable or embarrassed, but they would still prefer that over not being corrected:

EXCERPT 28

*I feel like that's always a little bit uncomfortable, but I think in the long run you will be more embarrassed if you're in a higher class and then you don't know these things. (Jenna, PI FFI CF)*

EXCERPT 29

*Maybe a little bit, but I would say that little bit embarrassment is just nothing compared to what you've learned [...] So it's, I think it's a really good thing. Yeah, because I can share my mistake with all the other students. (Cathleen, PI)*

All 15 participants, regardless of treatment group, believed that receiving peer corrective feedback was beneficial to the feedback receiver:

EXCERPT 30

*I think that's really, I think that's really good actually. Just because [...] you will listen harder and you memorize it more if you're corrected or if you correct other people. (Christie, PI FFI CF)*

Further, all 15 participants believed that providing peer corrective feedback is also beneficial to the feedback provider:

EXCERPT 31

*The best way to learn is teach, or one of the best ways. (Larry, PI FFI)*

EXCERPT 32

*I think, sometimes I just kinda, like, more passively listen and I just kinda understand what people are saying, but if I'm listening for a mistake, it makes me a more active listener, and I think that in turn helps me to, like, pick up even what my teacher is saying, and other German speakers, what they're saying. (Jenna, PI FFI CF)*

EXCERPT 33

*Helping them is basically helping yourself. That's like studying with a partner and testing them, it's really also testing you, what you know. (Henry, PI)*

Although most participants felt comfortable correcting their peers, Laura (PI FFI CF) and Bonnie (PI FFI CF) found it initially somewhat uncomfortable, and Jenna (PI FFI CF), Tess (PI FFI), Hector (PI) and Henry (PI) found that it depends on the relationship they have with the peer:

EXCERPT 34

*I think if it's someone I know better, then I will correct them a lot more, but if it's just, like, someone I don't really know, or if they do make a lot of mistakes, like, I know [...] they're learning at a different pace and I don't want, you know... I correct a few of their mistakes, I think. (Jenna, PI FFI CF)*

Some participants, like Tess (PI FFI), believed it is not their place to correct peers, since they are all learners at the same level:

EXCERPT 35

*[I corrected my peers' pronunciation mistakes] a couple of times, I think, but not that often, cause I know I pronounce things wrong too. (Tess, PI FFI)*

Additionally, Cathleen (PI) noted that the design and the pace of the activities in class can prevent learners from correcting peers' mistakes:

EXCERPT 36

*I think the activities we were doing were running pretty fast, so, like, as soon as, like, I finish, he starts and then I finish, he starts...It's kind of, like, pretty intense during activities. (Cathleen, PI)*

Four participants in the PI FFI CF group, three participants in the PI FFI group, and three participants in the PI group stated they had noticed mistakes in their peers' speech during the week of the instructional treatment. In the PI FFI CF group, three of those four participants had noticed mistakes related to the present perfect tense, in the PI FFI group, one participant had, and in the PI group, one participant had. In the PI FFI CF group, all four participants who had noticed mistakes stated that they had also corrected mistakes, while there were only two

participants in the PI FFI group and two participants in the PI group who had corrected peers' mistakes. When asked whether they had been corrected by peers, five participants in the PI group, two participants in the PI FFI group, and three participants in the PI group reported that they had. Five participants from the PI FFI CF group, one participant from the PI FFI group, and none of the participants from the PI group stated they had been corrected on present perfect tense mistakes.

All but one participant from the PI FFI CF group indicated that they would believe a peer's correction. In the PI group, three participants stated they would believe their peers. In the PI FFI group, all participants stated that they would not necessarily believe the correction, but that it would depend on the situation or on their perception of the peer who is providing the correction:

EXCERPT 37

*It depends on the student, like, if I know that the student is, like, a good student, always pays attention, like, they know what they're talking about, well then, yeah, I would definitely trust them, unless it's, like a person that listens to music in class, then I'd be like "No, I don't think I should trust you on that". (Anna, PI FFI)*

Although participants generally believed in the effectiveness of peer corrections, nine out of fifteen participants still preferred teacher corrections over peer corrections because they found teachers more trustworthy than peers.

EXCERPT 38

*I prefer teacher corrections because you can definitely trust, you don't have to question whether they're right or not. (Anna, PI FFI)*

The remaining six participants reported that they would like a combination of teacher and peer corrections to maximize their chances to receive feedback on their errors.



### 4.3 Discussion

With respect to grammar instruction, the interview data showed that learners strongly believe in its importance and effectiveness, as was the case in previous studies (e.g., Jean & Simard, 2011; Loewen et al., 2009; Schulz, 1996, 2001; Siebert, 2003). One learner even went as far as describing the grammar as the basis of the language that needs to be mastered before any other skills can be developed, such as speaking and writing skills. Moreover, some learners believe in grammar instruction because they view it as a method that can prevent them from making mistakes, which is something they do not like to do. Although learners agree that grammar instruction is beneficial, there is less agreement as to whether or not it is an enjoyable intervention. While Jean and Simard (2011) reported that virtually all high school students do not like grammar instruction, the present study found that some university learners actually enjoy it (see also Loewen et al., 2009; Schulz, 1996, 2001; Siebert, 2003, for similar findings with university learners), suggesting that the extent to which learners enjoy grammar instruction may not only be dependent on individual learners and their preferences, but also on age.

Regarding the effectiveness of peer interaction, the data from the present study showed that learners held very positive beliefs about it, which is consistent with findings from previous studies (e.g., Sato, 2013; Tulung, 2008). Like in previous studies, the participants of the present study also reported that they believe peer interaction is effective, because it gives them practice opportunities and therefore contributes to their fluency development. Nevertheless, individual learners who did not receive feedback training stated that they dislike the absence of error correction during peer interaction. The obvious response to this problem lies in introducing peer corrective feedback as a pedagogical tool. Since learners may not think about the possibility of

correcting peers on their own or may find it socially inappropriate, feedback training plays a crucial role.

With respect to the question whether or not learners enjoy peer interaction, the present study showed that almost all learners perceive interaction with other learners as enjoyable, partially because it seems less overwhelming than interacting with the more competent teacher in the foreign language (see Sato, 2007, who found that L2 speakers are more comfortable when interacting with other learners as opposed to native speakers). Nevertheless, individual learners reported that peer interaction can be intimidating, particularly to learners who feel like their peers are more proficient than they are. In the present study, this was the case for Henry and Ben, both of whom had taken only two semesters of German in college, while many of their peers had more extensive experience with German from high school. In addition, the extent to which learners enjoy peer interaction appears to be dependent on the partner (see Sato, 2013), although there does not seem to be agreement between learners what the ideal partner would look like. For instance, while some learners reported that they would rather be paired with someone who is more advanced so that they can benefit from their knowledge, other learners found it overwhelming and intimidating to be paired with more advanced peers. Moreover, while some learners would rather be paired with a friend or a person they know, other learners do not mind being paired with a peer that they don't know. It may be the case, then, that the teacher's best bet when pairing learners is to switch up pairs and groups frequently.

Regarding corrective feedback, the findings of the present study contribute to the body of research showing that learners want their oral mistakes to be corrected in the foreign language classroom (e.g., Chu, 2013; Jean & Simard, 2011; Schulz, 1996, 2001). Interestingly, learners held positive beliefs not only about teacher feedback, but also about peer feedback, and this was

the case regardless of treatment group. This finding is consistent with Sato's (2013) findings, who also reported that learners held positive beliefs about peer feedback because they believed in its effectiveness. The participants of the present study stated that not only receiving feedback from peers, but also providing feedback to peers is effective, because it can reinforce their knowledge (see also Sato, 2013). For the most part, learners stated that they would feel comfortable correcting a peer's mistake, although their relationship with the peer (e.g., how well they know the person) could have an impact. Individual learners who were not in the PI FFI CF group also reported they felt like it was not their place to correct peers. Once again, this issue could be addressed by providing peer feedback training to learners, which can help them overcome their reluctance to correct peers' mistakes.

The results of the present study further indicate that, although learners believe in the effectiveness of peer feedback, most of them still prefer teacher feedback (see Schulz, 2001), because they view the teacher as the more reliable and trustworthy source of knowledge. Further, many learners reported that they generally do not blindly accept their peers' suggestions, and that whether or not they would believe another learner would depend on their perception of the person (e.g., whether it is a "good" or a "bad" student). However, learners reported that they would at least consider their peers' input. While this may sound like they did not trust in their peers' abilities, it is actually encouraging because the fact that learners do not blindly accept other learners' corrections can result in more thinking and reflection and potentially stimulate metalinguistic discussions between learners. From this point of view, peer feedback may even be useful if it is inaccurate, as learners may discuss and resolve the issue through discussion with peers.

Finally, learners who had received feedback training reported more noticing of mistakes in their peers' speech than learners who had not received feedback training. This was the case especially with respect to the structures targeted during the instructional treatment. This suggests that peer feedback training promoted the noticing of linguistic forms, which subsequently resulted in better learning outcomes (see section 3.2). As such, the findings of the present study underscore the noticing hypothesis, which predicts that learning occurs as a result of noticing whereas it does not occur in the absence of noticing. Apart from increased noticing, learners who had received feedback training also reported that they had corrected more mistakes in their peers' speech than learners who had not received the training, suggesting that peer feedback training is a useful pedagogical intervention in the foreign language classroom, and that learners can be trained to provide feedback to peers (Fujii et al., 2016).

## CHAPTER 5: Experiment 2

### 5.1 Methodology

#### 5.1.1 Participants

One-hundred and twenty-five students were eligible to participate in the experiment. Those potential participants were the same as in experiment 1. All of them were enrolled in the same third-semester German language class at the same large American university as in experiment 1. Of the 125 potential participants, 121 gave consent to participate in the experiment. Forty of the 121 participants were subsequently excluded because they were absent on at least one of the treatment or testing days, and three participants were excluded because they had not completed all parts of the pretest and posttests, despite being present on all treatment and testing days. In addition, one participant was excluded because she was a heritage speaker of German. Thus, 77 participants (53 males and 24 females) were included in the analysis reported here.

As revealed by a language history questionnaire (Appendix A), 73 of the 77 participants were native speakers of English. Three of the 76 native English speakers had a second native language in addition to English. The remaining four participants were native speakers of Chinese (3) and Spanish (1). Participants had various majors, including business, engineering, history, information sciences and technology, international politics, journalism, and public relations. None of the participants was majoring in German. Of the 77 participants, 13 were taking German as a free elective while 64 were taking it to fulfill a requirement. Of the 64 participants who took German as a requirement, 21 were planning to continue studying German in the future. For most of the participants, exposure to the German language occurred almost exclusively through the

classroom. Fifty-seven of the 77 participants had no or very little contact with German native speakers outside of the classroom. The remaining 20 participants had contact with German natives monthly (8), weekly (8), or (almost) daily (4). Most of the participants had never studied or lived abroad, but 12 participants had. Five of those 12 participants had studied or lived in a German-speaking country. However, their stays were either short (about four weeks) or had occurred during childhood, so that those participants were still considered classroom learners and thus included in the study.

As in experiment 1, two sections of the third-semester German class were assigned to the PI group ( $N = 25$ ), two sections were assigned to the PI FFI group ( $N = 29$ ), and two sections were assigned to the PI FFI CF group ( $N = 23$ ). Each section was assigned to the same condition as in experiment 1. Table 4 below shows participants' average age, years of previous German study, as well as their self-rated proficiency for reading, writing, speaking, and listening on a scale from 1 (very poor) to 10 (like a native).

Table 4

*Participants (Experiment 2)*

	PI Group		PI FFI Group		PI FFI CF Group	
	<i>(N = 25)</i>		<i>(N = 29)</i>		<i>(N = 23)</i>	
	<i>M (SD)</i>	<i>Range</i>	<i>M (SD)</i>	<i>Range</i>	<i>M (SD)</i>	<i>Range</i>
Age (years)	19.6 (2.4)	18-30	19.7 (1.7)	18-26	19.3 (2.4)	18-29
Years of German	3.1 (1.7)	1-7	3.3 (2.9)	1-13	4.3 (2.0)	1-8
Self-ratings (max. 10)						
Reading	5.3 (1.5)	3-8	5.7 (2.1)	2-10	6.4 (1.3)	3-9
Writing	4.8 (1.7)	2-8	5.4 (2.0)	2-9	5.9 (1.3)	3-9
Speaking	4.4 (1.6)	2-7	4.8 (1.9)	1-8	5.4 (1.5)	3-8
Listening	5.3 (1.9)	2-9	5.0 (2.2)	1-9	6.4 (1.6)	3-9

A one-way ANOVA revealed that the participants from the three groups did not differ significantly in age ( $F(2, 76) = 0.29, p = .752$ ), years of previous German study ( $F(2, 76) = 1.91, p = .156$ ), or their self-rated proficiency in reading ( $F(2, 76) = 2.25, p = .113$ ), writing ( $F(2, 76) = 2.68, p = .075$ ) or speaking ( $F(2, 76) = 2.17, p = .121$ ), but there was a significant difference in participants' self-rated listening proficiency ( $F(2, 76) = 3.79, p = .027$ ).

The three instructors who participated in the study were the same as in experiment 1.

### 5.1.2 Linguistic Target

The linguistic target of experiment 2 was a set of 25 German nouns along with their grammatical gender and plural forms. German has three grammatical genders: masculine (e.g., *der Tisch* 'the table'), feminine (e.g., *die Frau* 'the woman'), and neuter (e.g., *das Mäuschen* 'the

small mouse’). Grammatical gender is notoriously difficult to acquire for L2 learners, as gender assignment is based on a complex interplay between morphological, phonological, and semantic cues (see Köpcke, 1982). For instance, a morphological cue is that nouns ending in the diminutive suffix *-chen* are neuter (e.g., *das Mäuschen* ‘the small mouse’), a phonological cue is that monosyllabic nouns are often masculine (e.g., *der Tisch* ‘the table’), and a semantic cue is that nouns designating a female person are typically feminine (e.g., *die Frau* ‘the woman’). A major difficulty for L2 learners is that a large number of these cues exist, and further that the cues mostly apply to polysyllabic nouns, whereas there are often no reliable cues for monosyllabic nouns. Moreover, sometimes different cues compete with each other, as is the case in the word *Mädchen* ‘girl’, which is neuter because of the suffix *-chen*, but since it designates a female person it is sometimes mistaken as a feminine noun by L2 speakers. Consequently, learners must acquire knowledge not only of the cues for gender assignment, but also of the competition between them. Because German gender assignment is so complex, learners are often advised to study each noun with its article (that is, its grammatical gender).

Like gender assignment, the formation of noun plurals in German is highly complex, and therefore often difficult to acquire for L2 learners. German has various plural suffixes, including *-e*, *-(e)n*, *-er*, *-s*, and  $\emptyset$  (no plural ending). While masculine nouns typically add *-e* in the plural, they do not use a plural ending if the singular noun ends in certain suffixes, such as *-er* or *-el*. Feminine nouns typically add *-(e)n* in the plural. Neuter nouns add *-e* or *-er* in the plural, but they do not add a plural ending if the singular noun ends in certain suffixes, such as *-chen* or *-er*. An additional complication for L2 learners is that some noun plurals take an *umlaut* while others do not. Due to the complexity of the German plural system, the rules are sometimes not taught at



all in German language classes and learners are advised to study each noun not only with its grammatical gender, but also with its plural form.

### **5.1.3 Instructional Materials and Procedure**

The instructional treatment took place over four consecutive 50-minute class sessions in week 9 of the semester. The theme of the unit taught during this week was Turkish-German culture, and the participants watched scenes from the 2011 movie *Almanya – Welcome to Germany*, which portrays the life of a Turkish-German family in contemporary Germany, including flashbacks to the time of the economic miracle, when the grandfather of the family first arrived in Germany as a guest worker. An overview of the treatment is provided in figure 6 below.

	<b>PI Group</b>	<b>PI FFI Group</b>	<b>PI FFI CF Group</b>
<b>Treatment Day 1</b>	Pretest (12 minutes)		
	Background information on guest workers and economic miracle (6 minutes)		
	Discussion of movie poster, exposure to new vocabulary through reading, question and answer activity (32 minutes)	Form-focused instruction on 15 new vocabulary items (10 minutes)	
		Form-focused instruction on grammatical gender and noun plurals (12 minutes)	
Vocabulary game (10 minutes)			
<b>Treatment Day 2</b>	Discussion of characters from the movie (15 minutes)	Exposure to new vocabulary through reading, question and answer activity (15 minutes)	Feedback Training (15 minutes)
	Discussion of movie scenes in fluency-focused PI activities (35 minutes)		
<b>Treatment Day 3</b>	Review of topics discussed on treatment day 2 (5 minutes)		
	Exposure to new vocabulary through reading, discussion of stereotypes (15 minutes)	Form-focused instruction on 10 new vocabulary items (7 minutes)	
		Vocabulary game (8 minutes)	
	Discussion of movie scenes in fluency-focused PI activities (30 minutes)		
<b>Treatment Day 4</b>	Review of topics discussed on treatment day 3 (5 minutes)		
	Discussion of movie scenes in fluency-focused PI activities (33 minutes)		
	Immediate posttest (12 minutes)		

*Figure 6. Treatment Overview (Experiment 2)*

At the beginning of treatment day 1, participants in all three groups completed the pretest. Next, participants in all groups briefly discussed the homework, which had been to do research on the guest worker phenomenon and the economic miracle in Germany after World War II. These topics were important to prepare the participants for the movie. Afterward, participants in

the PI FFI CF and the PI FFI group received instruction on 15 new vocabulary items relevant for the movie scenes discussed later in the day and on treatment day 2. All of the vocabulary items were nouns. In pairs, participants received 15 cards with pictures and 15 cards with nouns, including the genders and the plural forms, if applicable<sup>10</sup>, and they were asked to match the pictures and the words. Next, the instructors went over the answers with the participants using a PowerPoint presentation. Then, participants' attention was drawn to formal features of the nouns, that is, grammatical gender and plural forms. Using a handout, the instructors explained some basic and rather simplified rules of German gender assignment and plural formation that applied to the nouns the participants had just learned. For example, participants were taught that many monosyllabic nouns are masculine, that nouns ending in the suffix *-chen* are neuter, and that nouns ending in suffixes like *-ung*, *-schaft*, and *-ei* are feminine. With respect to plural formation, they were taught that the typical plural ending is *-(“)e*<sup>11</sup> for monosyllabic masculine nouns, *-e* or *-(“)er* for monosyllabic neuter nouns, and *-(e)n* for feminine nouns. The participants were given examples of nouns in German that applied to these rules, and they were asked to fill in the blanks with some missing genders and plural forms on a handout. They were also asked to think of and write down other examples of nouns in German that apply to these rules. Afterwards, participants played a game to practice the new vocabulary with a partner. They received 15 cards, each of which contained a picture of one of the new nouns along with either an icon of a mouth, a hand, or a pencil. The goal was to explain the word to the partner without saying it, either through explaining/paraphrasing (mouth), acting (hand), or drawing (pencil). The partner did not see the card and was supposed to guess what the noun was. In addition, the partner was supposed to say the gender and the plural form of the noun.

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<sup>10</sup> While all of the nouns had a grammatical gender, several did not have a plural form (e.g., *Blut* 'blood').

<sup>11</sup> The double quote in parenthesis indicates that an *umlaut* may or may not be used in the plural, depending on the noun.

The participants in the PI group did not receive instruction on these vocabulary items, on gender assignment, or on plural formation, and they did not play a vocabulary game. Instead, participants in the PI group were simply exposed to the new vocabulary by first discussing the movie poster and then reading a text about the movie. The text contained the same 15 nouns that the participants in the other two groups had been taught, but no attention was drawn to the vocabulary items or to their morphological features. After reading the text with a partner, participants were given questions about the text and were asked to discuss them with a partner. At the end of the lesson, the instructor discussed the answers with the whole class.

On treatment day 2, the PI FFI CF group received training on how to provide corrective feedback on vocabulary to their peers. Like the feedback training for the grammatical structures described in 3.1.3, this training occurred in three stages: modeling, practice, and use-in-context (see Sato & Lyster, 2012).

During the modeling stage, the instructor demonstrated how CF can be provided by administering a mini role play in front of the class, in collaboration with one of the participants. The mini role play contained four mistakes and four respective feedback moves, two regarding word choice, one regarding gender, and one regarding plural formation. Afterward, the instructor discussed how feedback had been provided using a PowerPoint presentation that contained excerpts of the mini role play. Like in the grammar treatment described in 3.1.3, participants were taught an open-ended feedback strategy, which encouraged them to start with a prompt and then move on to a recast, in the event that the prompt was not successful.

During the practice stage, participants were put in groups of three. Each participant was given two pictures and four sentences per picture (Appendix F), which they had to use to describe the pictures to their peers. Those sentences contained mistakes regarding word choice,

gender, and plural formation. After a few minutes of planning time, the participants described their pictures to the group. While the speaker's role was to purposefully include the errors in their speech, the listeners' role was to detect and point out the errors.

During the use-in-context stage, participants were encouraged to use the CF technique in more open-ended and communicative activities, that is, in all fluency-focused PI activities that revolved around the movie and followed the feedback training.

The participants in the other two groups did not receive feedback training. Instead, the participants in the PI FFI group read a text about the movie and discussed questions about the text with a partner. The text was similar to the text the PI group read on treatment day 1, but it was a shorter version. It contained the new vocabulary items to provide the participants with additional exposure to the vocabulary, since the participants in the PI FFI CF group had received exposure to the vocabulary through the feedback training. The participants in the PI group engaged in an activity that asked them to express speculations about the movie characters after looking at their pictures.

For the remaining 35 minutes of the lesson, the participants in all three groups watched short movie scenes from the beginning of the movie and engaged in fluency-focused PI activities that asked them to retell, discuss, or comment on what they had seen in the movie scenes. Most of the discussions revolved around identity issues and stereotypes about Germans. Screenshots from the movies and short verbal prompts were used to stimulate the discussions. The discussions took place in pairs or small groups. All three groups watched the same movie scenes and engaged in the same activities with the same materials, but only the participants in the PI FFI CF group were asked to correct their peers' vocabulary, gender, and plural mistakes. None of the groups received corrective feedback from the instructors.

On treatment day 3, all three groups started out with a brief review of the topics discussed on treatment day 2. Next, participants in the PI FFI CF group and in the PI FFI group received instruction on 10 new nouns relevant for the movie scenes discussed later in the day and on treatment day 4. The instruction on the new vocabulary items followed similar procedures as on treatment day 1. Participants first matched pictures and words, and then played the same vocabulary game as on treatment day 1, but with the 10 new nouns. There was, however, no further instruction on gender assignment and plural formation, although the 10 new nouns were presented to the participants along with the respective genders and plural forms. As on treatment day 1, the PI group did not receive instruction on the vocabulary items. Instead, the PI group read a text that dealt with common stereotypes about Germans and Americans, followed by a small group discussion and a class discussion. The text about the stereotypes contained the same 10 nouns that the participants in the other two groups had been taught, but no attention was drawn to the vocabulary items or their morphological features.

For the remaining 30 minutes of the lesson, participants in all three groups watched short movie scenes and once again engaged in fluency-focused PI activities that asked them to retell, discuss, or comment on what they had seen in the movie scenes. The same procedures were used as on treatment day 2. The discussions revolved around identity issues the Turkish-German family in the movie faces.

On treatment day 4, all three groups started out with a brief review of the topics discussed on treatment day 3. For the next 33 minutes, all groups watched short movie scenes and once again engaged in fluency-focused PI activities following the same procedures as on treatment days 2 and 3. The topics discussed revolved mostly around stereotypes that Turks have about

Germans. During the last 12 minutes of treatment day 4, all three groups completed the immediate posttest.

#### **5.1.4 Testing Materials**

To measure the effects of peer interaction, form-focused instruction, and peer corrective feedback on the acquisition of vocabulary, the present study used a pretest-posttest design. All three groups completed the pretest at the beginning of treatment day 1, the immediate posttest at the end of treatment day 4, and the delayed posttest two weeks after the immediate posttest. The pretest and the two posttests consisted of four parts, the first one testing productive vocabulary, the second testing receptive vocabulary, the third testing grammatical gender, and the fourth testing noun plurals. All tests were administered on paper and in the classroom. At all three testing times, participants first received part 1 and part 2 of the test. They were asked to complete part 1 first, and they were asked not to go back to part 1 after having started on part 2. Upon handing parts 1 and 2 to the instructor, participants received parts 3 and 4. This was done to prevent participants from copying the nouns from the gender and plural test (parts 3 and 4) into part 1 (the productive vocabulary test).

##### *Productive Vocabulary*

The productive vocabulary test (Appendix G) was a picture-naming task. It consisted of 10 pictures of vocabulary items. Participants were asked to write the German word below each picture. All target words were nouns, and all nouns had been taught during the instructional treatment. The 10 pictures used in the productive vocabulary test were similar to but different from the pictures used for the instructional treatment. The same 10 pictures were used for each

version of the test (pretest, immediate posttest, and delayed posttest), but the order of the pictures was randomized.

### *Receptive Vocabulary*

The receptive vocabulary test (Appendix H) was a multiple choice test. The test consisted of 10 items. Each item consisted of a picture and four options. One of the four options was correct, and three of them were incorrect (distractor items). All of the distractor items were actual German words. Some distractor items were nouns that had been taught during the instructional treatment, but that did not match the picture (e.g., *Kreuz* ‘cross’, when the picture showed a *Beamte* ‘official’). Some were semantic distractors (e.g., *Anzug* ‘suit’, when the picture showed a *Dirndl* ‘traditional Bavarian dress’), and some were phonological distractors (e.g., *Ampel* ‘stop light’, when the picture showed an *Amt* ‘office’). There were eight pairs in the receptive vocabulary test, that is, there were eight options that appeared twice, but each time with a different picture. Care was taken that one answer was correct for four of the pairs, while none was correct for the other four pairs. For example, the word *Mannschaft* ‘team’ appeared as an option twice, once with the picture of a *Mannschaft* ‘team’ and once with the picture of a *Beamte* ‘official’, so it was the correct answer once. The word *Heimat* ‘home’ also appeared as an option twice, once with the picture of a *Mensch* ‘human’ and once with the picture of a *Fähnchen* ‘small flag’, so it was never the correct answer. As in the productive vocabulary test, all words were nouns, and all nouns had been taught during the instructional treatment. The 10 pictures used in the receptive vocabulary test were different from the pictures used for the instructional treatment. Moreover, two different sets of nouns were used in the productive and receptive vocabulary test, so that participants were tested on each word only once, either in the form of productive or



receptive knowledge. This was done to reduce test-learning effects. The same 10 pictures and the same 30 distractor items were used for each version of the test (pretest, immediate posttest, and delayed posttest), but the order of the pictures was randomized, as was the order of the four options within each item.

### *Grammatical Gender*

The grammatical gender test (Appendix I) consisted of 20 nouns. Participants were asked to fill in *der* ('the', masculine), *die* ('the', feminine), or *das* ('the', neuter) into a blank before each noun. Of the 20 nouns, 15 had been included in the instructional treatment and 5 had not, but they had been distractor items in the receptive vocabulary test. These five items were included to prevent participants from using the test to determine which options from the receptive vocabulary test were the target items. The same 20 nouns were used for each version of the test (pretest, immediate posttest, and delayed posttest), but the order of the nouns was randomized.

### *Noun Plurals*

The noun plural test (Appendix J) consisted of 20 nouns. Participants were asked to fill in the plural form into a blank after each noun. Of the 20 nouns, 15 had been included in the instructional treatment and 5 had not, but they had been distractor items in the receptive vocabulary test. As with the grammatical gender test, these five items were included to prevent participants from using the test to determine which options from the receptive vocabulary test were the target items. The same 20 nouns were used for each version of the test (pretest, immediate posttest, and delayed posttest), but the order of the nouns was randomized.

### 5.1.5 Scoring and Data Analysis

On the productive vocabulary test, one point was given for each picture that participants named and spelled correctly (e.g., *Kloß* ‘potato dumpling’ for *Kloß* ‘potato dumpling’). One point was also given for liberal correct words (e.g., *Knödel* ‘potato dumpling’ for *Kloß* ‘potato dumpling’), and for the correct word but without capitalization (e.g., *kloß* ‘potato dumpling’ for *Kloß* ‘potato dumpling’). Partial credit (.5 points) was given when participants made a minor spelling mistake, which was defined as one missing or incorrect letter (e.g., *Klos* ‘potato dumpling’ for *Kloß* ‘potato dumpling’), or transposing two letters without making the word incomprehensible (e.g., *Kartoffle* ‘potato’ for *Kartoffel* ‘potato’). Partial credit was also given when participants knew the word but used the plural rather than the singular form (e.g., *Klöße* or *Klöße* ‘potato dumplings’ for *Kloß* ‘potato dumpling’). No credit was given when participants used a wrong word (e.g., *Gymnasium* ‘high school’ for *Turnhalle* ‘gym’), an English word (e.g., *cross* for *Kreuz* ‘cross’), or a word with a major spelling mistake, which was defined as a misspelling that made the word incomprehensible or ambiguous, regardless of how many letters were involved (e.g., *Bult* for *Blut* ‘blood’, *Pase* for *Pass* ‘passport’). Since there were 10 pictures, the maximum score on the productive vocabulary test would have been 10. However, four items with relatively high pretest scores were subsequently excluded, so that only the six items on which participants across all three groups scored at 6% or lower at the time of the pretest were included in the analyses. The items included in the analysis were *Stempel* ‘stamp’, *Kopftuch* ‘headscarf’, *Kloß* ‘potato dumpling’, *Turnhalle* ‘gym’, *blaues Auge* ‘black eye’, and *Ratte* ‘rat’. Thus, the maximum score on the productive vocabulary test was 6.

On the receptive vocabulary test, one point was given for each correctly checked answer. Since the receptive vocabulary test was a multiple choice test, no partial credit was given. Since

there were 10 pictures, the maximum score would have been 10. However, four items with virtually at-ceiling pretest scores were subsequently excluded, so that only the six items on which participants across all three groups scored at 70% or lower at the time of the pretest were included in the analyses. The items included in the analysis were *Mensch* ‘human’, *Dirndl* ‘traditional Bavarian dress’, *Fähnchen* ‘small flag’, *Stück Papier* ‘piece of paper’, *Amt* ‘office’, and *Beamte* ‘civil servant’. Thus, the maximum score on the receptive vocabulary test was 6.

On the grammatical gender test and on the noun plural test, one point was given for each correctly assigned gender, or for each correct plural form, respectively. No partial credit was given on these tests. The five filler items for grammatical gender were not included in the analysis, and the five filler items for noun plurals were not included either. Thus, the maximum score on the grammatical gender and noun plural test was 15.

Since pretest scores were not distributed normally according to Kolmogorov-Smirnov tests, nonparametric tests were used for the statistics analyses. However, it should be noted that the pattern of results did not differ when parametric tests were used, although these results are not reported here. For each test, Kruskal-Wallis tests were performed to determine whether there were significant differences between the three groups at any given testing time (pretest, immediate posttest, or delayed posttest). Mann-Whitney tests were then used to compare the performance of two groups at a time for each testing time.

## 5.2 Results

### 5.2.1 Productive Vocabulary

Figure 7 shows the results of the productive vocabulary test.

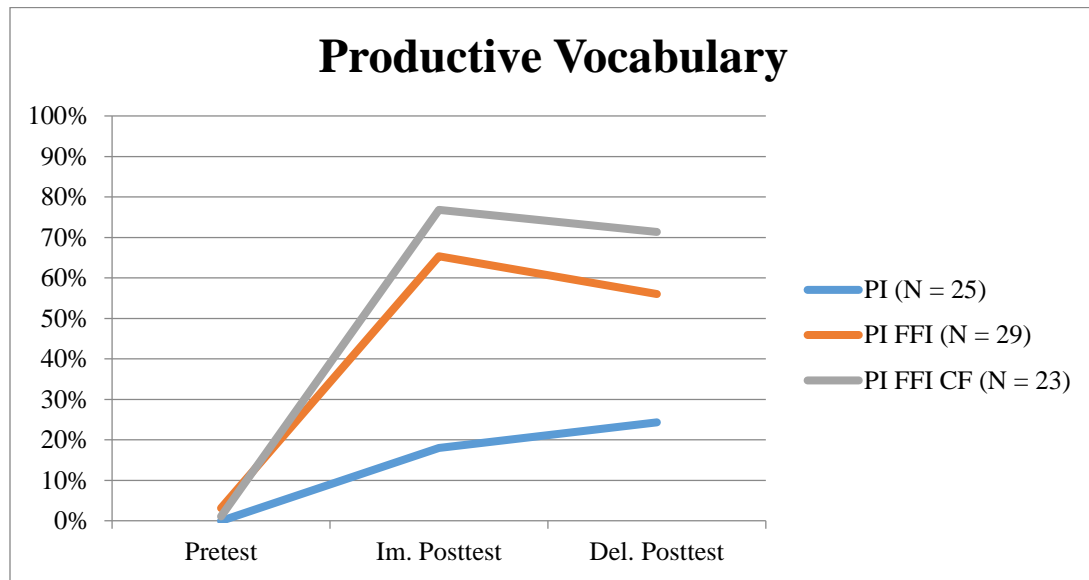


Figure 7. Productive Vocabulary Test

A Kruskal-Wallis test revealed that the three groups did not differ significantly on the pretest ( $\chi^2(2) = 4.93, p = .085$ ). On the immediate and delayed posttest, there were significant differences between the groups (immediate posttest:  $\chi^2(2) = 43.62, p < .001$ ; delayed posttest:  $\chi^2(2) = 36.55, p < .001$ ).

Follow-up Mann-Whitney tests revealed significant differences between the PI and the PI FFI group at all three testing times (pretest:  $U = 300.00, z = -2.16, p = .031, r = -.29$ ; immediate posttest:  $U = 43.50, z = -5.57, p < .001, r = -.76$ ; delayed posttest:  $U = 106.50, z = -4.48, p < .001, r = -.61$ ), because the PI FFI group outperformed the PI group.

There was no significant difference between the PI and the PI FFI CF group on the pretest ( $U = 262.50, z = -1.49, p = .136, r = -.22$ ), but there was a significant difference between those two groups on the immediate posttest ( $U = 18.50, z = -5.59, p < .001, r = -.81$ ) and delayed posttest ( $U = 24.50, z = -5.47, p < .001, r = -.79$ ), because the PI FFI CF group outperformed the PI group.

There was no significant difference between the PI FFI and the PI FFI CF group on the pretest ( $U = 302.00, z = -0.98, p = .327, r = -.14$ ), but there was a significant difference between those two groups on the immediate posttest ( $U = 224.00, z = -2.05, p = .041, r = -.28$ ) and delayed posttest ( $U = 201.50, z = -2.46, p = .014, r = -.34$ ), because the PI FFI CF group outperformed the PI FFI group.

### 5.2.2 Receptive Vocabulary

Figure 8 shows the results of the receptive vocabulary test:

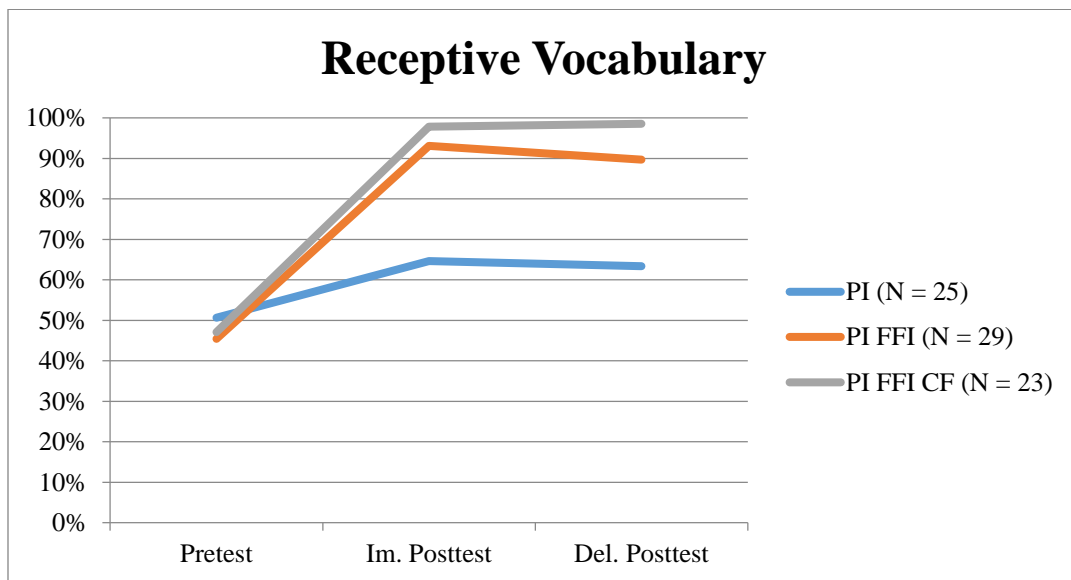


Figure 8. Receptive Vocabulary Test

A Kruskal-Wallis test revealed that the three groups did not differ significantly on the pretest ( $\chi^2(2) = 1.46, p = .483$ ). On the immediate and delayed posttest, there were significant differences between the groups (immediate posttest:  $\chi^2(2) = 45.75, p < .001$ ; delayed posttest:  $\chi^2(2) = 40.26, p < .001$ ).

Follow-up Mann-Whitney tests revealed no significant difference between the PI and the PI FFI group on the pretest ( $U = 295.50, z = -1.20, p = .230, r = -.16$ ), but there was a significant difference between those two groups on the immediate posttest ( $U = 66.50, z = -5.36, p < .001, r = -.73$ ) and delayed posttest ( $U = 108.50, z = -4.56, p < .001, r = -.62$ ), because the PI FFI group outperformed the PI group.

There was no significant difference between the PI and the PI FFI CF group on the pretest ( $U = 254.00, z = -1.20, p = .471, r = -.16$ ), but there was a significant difference between those two groups on the immediate posttest ( $U = 22.00, z = -5.36, p < .001, r = -.73$ ) and delayed posttest ( $U = 30.00, z = -4.56, p < .001, r = -.62$ ), because the PI FFI CF group outperformed the PI group.

There was no significant difference between the PI FFI and the PI FFI CF group on the pretest ( $U = 312.00, z = -0.41, p = .682, r = -.06$ ). On the immediate posttest, the difference between those two groups approached significance ( $U = 259.00, z = -1.82, p = .069, r = -.25$ ), and it reached significance on the delayed posttest ( $U = 221.50, z = -2.66, p = .008, r = -.37$ ), because the PI FFI CF group outperformed the PI FFI group.

### 5.2.3 Grammatical Gender

Figure 9 shows the results of the grammatical gender test:

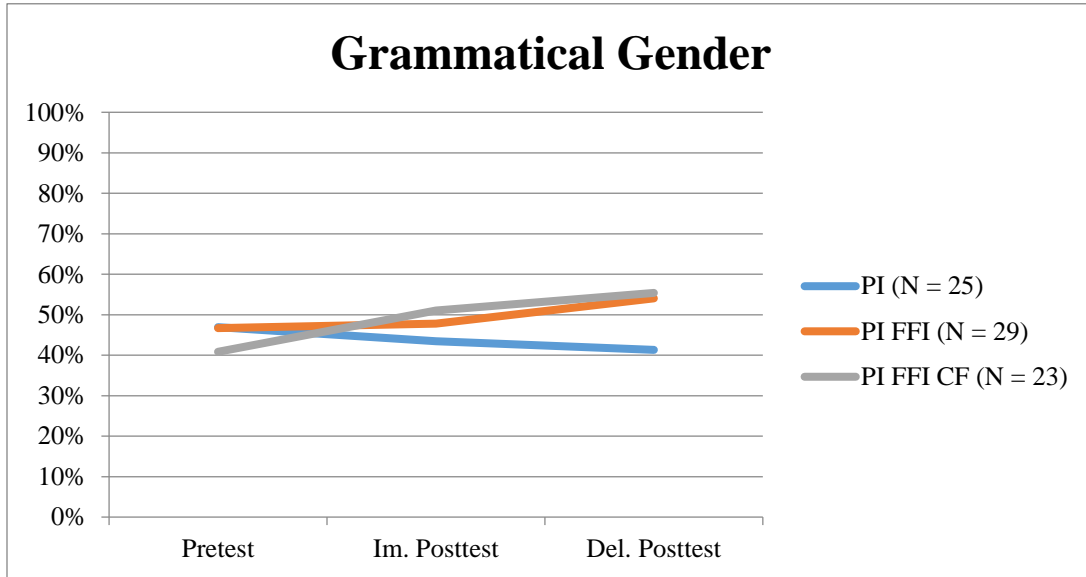


Figure 9. Grammatical Gender Test

A Kruskal-Wallis test revealed that the three groups did not differ significantly on the pretest ( $\chi^2(2) = 1.65, p = .437$ ) or immediate posttest ( $\chi^2(2) = 3.67, p = .160$ ). On the delayed posttest, there was a significant difference between the groups ( $\chi^2(2) = 15.12, p = .001$ ).

Follow-up Mann-Whitney tests revealed no significant difference between the PI and the PI FFI group on the pretest ( $U = 362.00, z = -0.01, p = .993, r > .01$ ) or immediate posttest ( $U = 287.00, z = -1.33, p = .184, r = -.18$ ), but there was a significant difference on the delayed posttest ( $U = 179.00, z = -3.23, p = .001, r = -.44$ ), because the PI FFI group outperformed the PI group.

There was no significant difference between the PI and the PI FFI CF group on the pretest ( $U = 240.50, z = -0.99, p = .325, r = -.14$ ). On the immediate posttest, the difference

between those two groups approached significance ( $U = 196.00, z = -1.96, p = .050, r = -.28$ ), and it reached significance on the delayed posttest ( $U = 119.00, z = -3.53, p < .001, r = -.51$ ), because the PI FFI CF group outperformed the PI group.

There were no significant differences between the PI FFI and the PI FFI CF group at any testing time (pretest:  $U = 266.50, z = -1.25, p = .212, r = -.17$ ; immediate posttest:  $U = 311.50, z = -0.41, p = .681, r = -.06$ ; delayed posttest:  $U = 316.50, z = -0.32, p = .752, r = -.04$ ).

### 5.2.4 Noun Plurals

Figure 10 shows the results of the noun plural test:

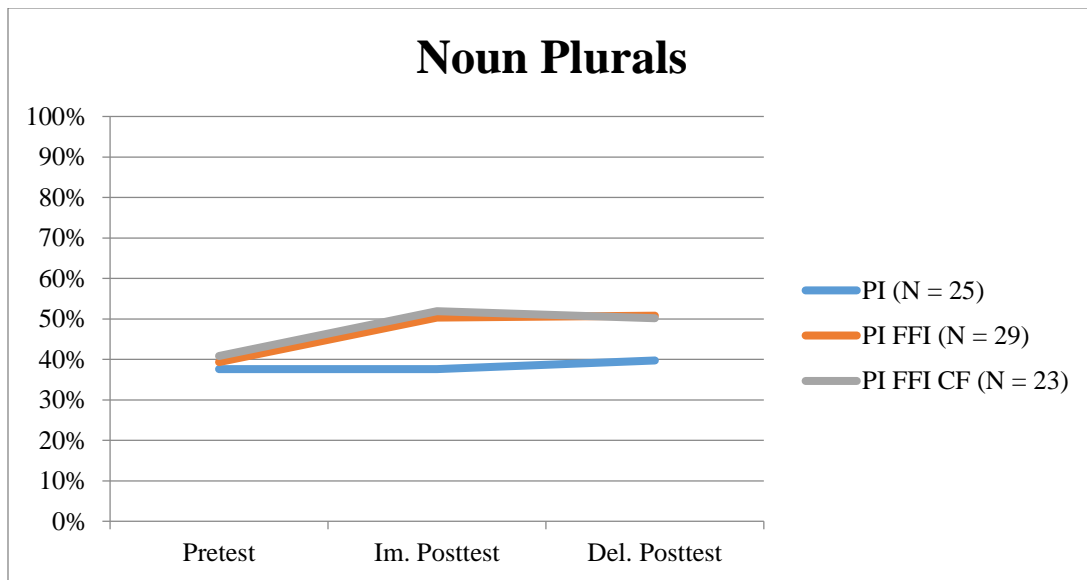


Figure 10. Noun Plural Test

A Kruskal-Wallis test revealed that the three groups did not differ significantly on the pretest ( $\chi^2 (2) = 2.03, p = .362$ ), but there was a significant difference between the groups on the immediate posttest ( $\chi^2 (2) = 16.47, p < .001$ ) and delayed posttest ( $\chi^2 (2) = 9.80, p = .008$ ).



Follow-up Mann-Whitney tests revealed no significant difference between the PI and the PI FFI group on the pretest ( $U = 346.50, z = -0.28, p = .777, r = -.04$ ), but there was a significant difference on the immediate posttest ( $U = 199.50, z = -2.86, p = .004, r = -.39$ ) and delayed posttest ( $U = 216.00, z = -2.58, p = .010, r = -.35$ ), because the PI FFI group outperformed the PI group.

There was no significant difference between the PI and the PI FFI CF group on the pretest ( $U = 217.00, z = -1.52, p = .128, r = -.22$ ), but there was a significant difference between those two groups on the immediate posttest ( $U = 92.50, z = -4.09, p < .001, r = -.59$ ) and delayed posttest ( $U = 151.50, z = -2.84, p = .004, r = -.41$ ), because the PI FFI CF group outperformed the PI group.

There were no significant differences between the PI FFI and the PI FFI CF group at any testing time (pretest:  $U = 284.00, z = -0.93, p = .351, r = -.13$ ; immediate posttest:  $U = 292.50, z = -0.77, p = .444, r = -.11$ ; delayed posttest:  $U = 320.00, z = -0.25, p = .801, r = -.03$ ).

## **5.3 Discussion**

### **5.3.1 Summary of Findings**

Overall, both peer interaction combined with form-focused instruction and peer interaction combined with form-focused instruction and peer corrective feedback promoted vocabulary acquisition, which was defined in terms of productive and receptive knowledge of German nouns, as well as their grammatical genders and plural forms. Peer interaction alone, on the other hand, was less effective for vocabulary development.

On the productive vocabulary test, both the PI FFI group and the PI FFI CF group significantly outperformed the PI group on the immediate and delayed posttest. The PI FFI CF

group significantly outperformed the PI FFI group on both posttests. Similarly, on the receptive vocabulary test, both the PI FFI group and the PI FFI CF group significantly outperformed the PI group on the immediate and delayed posttest. On the immediate posttest, the difference between the PI FFI CF and the PI FFI group approached significance, because the PI FFI CF group performed better than the PI FFI group. On the delayed posttest, the PI FFI CF group significantly outperformed the PI FFI group.

On the gender test, there was no significant difference between the PI FFI group and the PI group on the immediate posttest, but the PI FFI group significantly outperformed the PI group on the delayed posttest. The difference between the PI FFI CF group and the PI group approached significance on the immediate posttest and reached significance on the delayed posttest. On the plural test, both the PI FFI group and the PI FFI CF group significantly outperformed the PI group on the immediate and delayed posttest. There were no significant differences between the PI FFI CF group and the PI FFI group on either of the two posttests.

In summary, the PI FFI group significantly outperformed the PI group on seven of eight measures. The PI FFI CF group significantly outperformed the PI group on the same seven measures, and descriptively outperformed the PI group on the eighth measure as well. The PI group never significantly outperformed another group. The PI FFI CF group significantly outperformed the PI FFI group on three of eight measures, but on a descriptive level the PI FFI CF group outperformed the PI FFI group on one additional measure. The PI FFI group never significantly outperformed the PI FFI CF group. Table 5 summarizes the findings of experiment 2.

Table 5

*Summary of Results (Experiment 2)*

	PI vs. PI FFI	PI vs. PI FFI CF	PI FFI vs. PI FFI CF
Productive vocabulary, immediate posttest	*	*	*
Productive vocabulary, delayed posttest	*	*	*
Receptive vocabulary, immediate posttest	*	*	n. s.
Receptive vocabulary, delayed posttest	*	*	*
Grammatical gender, immediate posttest	n. s.	n. s.	n. s.
Grammatical gender, delayed posttest	*	*	n. s.
Plural, immediate posttest	*	*	n. s.
Plural, delayed posttest	*	*	n. s.

*Note:* Each asterisk in the “PI vs. PI FFI” column indicates that the PI FFI group significantly outperformed the PI group. Each asterisk in the “PI vs. PI FFI CF” column indicates that the PI FFI CF group significantly outperformed the PI group. Each asterisk in the “PI FFI vs. PI FFI CF” column indicates that the PI FFI CF group significantly outperformed the PI FFI group.

### 5.3.2 The Impact of Peer Interaction and Form-Focused Instruction

Experiment 2 showed that peer interaction alone was insufficient to promote the acquisition of vocabulary in third-semester learners of German. This was the case not only for learners’ productive and receptive knowledge of German nouns, but also for their accuracy on grammatical gender and plural forms. Peer interaction combined with form-focused vocabulary instruction, on the other hand, did promote learners’ acquisition of vocabulary. These findings corroborate the findings of experiment 1, which showed that form-focused instruction promoted the acquisition of grammatical structures, whereas peer interaction alone did not.

As in experiment 1, the amount of exposure to the linguistic target was kept constant among the groups. Thus, the fact that the PI FFI group outperformed the PI group on almost all posttest measures is not to be explained in terms of exposure to the vocabulary, but rather as a result of the form-focused vocabulary instruction that was provided to learners. Hence, the present experiment supports the findings of previous classroom studies which showed that form-focused vocabulary instruction was superior to simple exposure to vocabulary items (e.g., File & Adams, 2010; Tian & Macaro, 2012).

### **5.3.3 The Effects of Peer Corrective Feedback on the Acquisition of Vocabulary**

The results of the present experiment showed that peer interaction combined with form-focused instruction and peer corrective feedback was more effective for the acquisition of German nouns than peer interaction combined with form-focused instruction, but without peer corrective feedback, since the PI FFI CF group significantly outperformed the PI FFI group on both measures of productive vocabulary and on one measure of receptive vocabulary. Like in experiment 1, it is noteworthy that time spent on task was the same among the three groups. Hence, the PI FFI CF group did not receive more exposure to the vocabulary or more opportunities to practice using the vocabulary than the other two groups, since the other two groups engaged in additional activities that exposed them to the vocabulary while the PI FFI CF group received peer feedback training. Thus, the fact that the PI FFI CF group performed better than the PI FFI group on productive and receptive vocabulary cannot be interpreted as a result of additional exposure to the target structure or additional practice opportunities, but rather as a result of peer feedback. Overall, these findings suggest that feedback on vocabulary can be

effective not only when provided by teachers (Dilans, 2010), but also when provided by learners, and even if the learners' proficiency is low, as was the case in the present study.

Nevertheless, the performance of the PI FFI CF group was not superior to that of the PI FFI group on any of the measures of gender or plural accuracy. The question arises why peer CF facilitated the acquisition of the nouns, but not the acquisition of grammatical gender and plural forms. One possible explanation is that participants might have focused more on the nouns than on gender or plural forms when providing feedback, since nouns carry lexical meaning and can therefore be considered more important for communication. Because the fluency-focused PI activities of the instructional treatment required participants to communicate meaning to peers under time pressure, it would not be surprising if participants gave priority to vocabulary items with a heavy lexical load, rather than to items with a minimal lexical load. This explanation would be in line with Chavez's (2007) findings, who reported that accuracy in nominal morphology with a lexical load (e.g., pronouns) was considered more important by German learners than accuracy in nominal morphology without a lexical load (e.g., gender and case). The following chapter will further investigate this hypothesis by analyzing learners' responses from interviews that were conducted immediately following the instructional treatment (see section 6.2.3).

## **CHAPTER 6: Learners' Beliefs about Peer Interaction and Peer Corrective Feedback for Vocabulary Learning**

### **6.1 Methodology**

#### **6.1.1 Participants**

All learners who had participated in experiment 2 (chapter 5) and who had not participated in an interview after experiment 1 (chapter 4) were eligible to participate in a post-treatment interview. Twenty-eight learners gave consent to participate in the interviews. Of the 28 participants, 5 from each treatment group were randomly selected for data analysis, so that a total of 15 participants was included in the analysis. To assure confidentiality, each participant was assigned a pseudonym by the author. Participants received either monetary compensation or course credit for their participation.

Table 6 presents basic information about the 15 participants.

Table 6

*Interview Participants (Experiment 2)*

	Group	Age (years)	Years of German	Motivation
Don	PI	18	5	personal interest
Mason	PI	21	3	personal interest
Neil	PI	19	1	requirement
Rachel	PI	18	4	requirement
Tom	PI	21	1	requirement
Bob	PI FFI	20	1	German minor, study abroad
Harry	PI FFI	18	1	requirement
John	PI FFI	18	4	requirement
Lilly	PI FFI	20	1	requirement
Miranda	PI FFI	20	1	requirement
Ethan	PI FFI CF	18	5	requirement, personal interest
Greg	PI FFI CF	20	5	requirement
Joshua	PI FFI CF	19	7	requirement
Max	PI FFI CF	18	4	requirement
Mary	PI FFI CF	18	5	requirement, personal interest

### **6.1.2 Procedure**

All participants were interviewed by the author of the present dissertation. The interviews took place 0-4 days after the last treatment day, as described in section 5.1.3, and the procedure for the interviews was the same as described in section 4.1.2. The structure of the interviews was also almost identical to the interviews described in section 4.1.2, as they included general questions regarding the participants' language background, their previous foreign language classroom experiences, their motivation to study German, as well as sections on peer interaction and peer corrective feedback. The most important difference to the interview structure described in section 4.1.2 was that the interviews did not deal with participants' attitudes towards grammar learning, but vocabulary learning. The full list of prepared questions can be found in Appendix K.

### **6.1.3 Data Analysis**

Data were analyzed in the same way as described in section 4.1.3. After the 15 randomly selected interviews had been transcribed, participants' responses to the prepared closed-ended questions were quantified to create a general overview of results and to allow for a comparison between groups. Additionally, participants' responses to more open-ended questions along with their responses to more specific follow-up questions were analyzed to identify coding themes emerging from the data. Those data are presented in the following sections.



## 6.2 Results

### 6.2.1 Learners' Beliefs about Vocabulary Learning

All 15 participants considered studying the vocabulary of a foreign language important, and all of them reported having learning strategies (such as flashcards) when studying vocabulary at home. Some participants found learning vocabulary even more important than learning grammar, because they considered vocabulary knowledge essential to achieve communicative goals in a foreign language:

#### EXCERPT 1

*It's difficult to communicate, like, you could know all the grammar that you wanted, but if you don't know the words that you wanna say it's really difficult to communicate. (Greg, PI FFI CF)*

#### EXCERPT 2

*You feel like you get so much in German class, but then, I've been to Germany, you read signs and newspapers, and it's like "I haven't seen half these words", so vocab is very important. (Ethan, PI FFI CF)*

Further, while 10 of 15 participants found vocabulary lessons in class enjoyable, all 15 participants considered them beneficial for their learning. For instance, Joshua explained that at his level of proficiency, lexical gaps are the greatest obstacle in terms of communicating in German:

#### EXCERPT 3

*I think now when I'm speaking German the mechanics are there, and I know how to say something in the past tense, you know. The only gaps where I really wouldn't know how to say something is when I don't know, you know, the verb or the noun or what not. But that's really the only, I'd say that's really the only barrier there is in terms of communicating in German, is not knowing all the words. (Joshua, PI FFI CF)*

### 6.2.2 Learners' Beliefs about Peer Interaction

All participants except Harry (PI FFI) and John (PI FFI) indicated they enjoyed speaking German in class with their peers in pairs or small groups. John (PI FFI) did not like speaking

with peers because he felt he was not good enough at it, especially considering that he had taken four years of German in high school, while some of his peers had been learning German for only one year at the university:

EXCERPT 4

*I feel like I'm not that great at it, so it's like, like, I just find it difficult, so I, that's not like something I enjoy. [...] I feel like taking it for five years, I feel like I really don't know as much as I should, for someone who has taken it for so long. (John, PI FFI)*

Miranda (PI FFI) stated she liked speaking with peers, but she did not like the fact that error correction typically does not occur during peer interaction activities:

EXCERPT 5

*I do like it when we, um, speak in class, but sometimes when I'm speaking with peers, um, there is only one professor and there's maybe, like, twenty students, so sometimes if I'm talking to a student I don't know which one of us is correct, and she [the teacher] is not there to always correct us, so sometimes I don't know if what I'm saying is actually correct, or if the person I'm working with is correct. So I, I like doing it so I can practice pronunciation but some-, I don't, I just don't like the fact that I can't be corrected. (Miranda, PI FFI)*

Although all but two participants found peer interaction generally enjoyable, 13 of 15 stated that the extent to which they enjoy it would depend on the peer they are teamed up with. While some participants explained that they would rather work with someone they know, others found it important that their partner is motivated and interested in German, yet others explained that the proficiency of the partner can impact the effectiveness of peer interaction:

EXCERPT 6

*I noticed in my German 003 class a lot of us aren't really on the same level, um, even though we're all in German 003. [...] And it's really difficult to work with, um, people who aren't on the same level, because sometimes they'll just kinda talk over you if they're more proficient, or if they're not as proficient they can't really participate as much. So you don't get as much feedback. (Miranda, PI FFI)*

All participants, including those who indicated they did not enjoy peer interaction, found speaking with their peers more comfortable than speaking with the teacher:

EXCERPT 7

*We're all students. We're all the same age, we're all the same. And we're all going through the German language together, as opposed to the professor that is a native speaker or knows the German language for 20 years, 10 years. (Tom, PI)*

Since they perceived speaking with peers as more comfortable than speaking with the teacher, six participants also believed that it is more beneficial for their learning:

EXCERPT 8

*I think the comfort level lets you, um, speak more freely. And when you're speaking with the teacher you tend to, um, you're really watching what you say. And, um, and I think that [xxx] we make more mistakes, cause we are too careful, but with our peers we can just sort of speak. (Ethan, PI FFI CF)*

On the other hand, six participants found speaking with the teacher superior to speaking with peers in terms of effectiveness, since the teacher can provide more help to them than peers might be able to:

EXCERPT 9

*I mean, speaking with the teacher is good, because they'll be able to point out mistakes that maybe a peer wouldn't notice. Or say, or just help you with the vocab if you're stuck on a word, and the peer could also have forgotten the word. (Bob, PI FFI)*

All 15 participants, regardless of whether or not they liked peer interaction, believed that it is beneficial for foreign language learning. Among others, Ethan (PI FFI CF), Greg (PI FFI CF), and Bob (PI FFI) explained that it provides them with valuable practice opportunities:

EXCERPT 10

*It's a good way to practice. I mean, our teacher can't speak to all of us at once. Um, so it's good to speak with each other. (Ethan, PI FFI CF)*

EXCERPT 11

*I think it helps me practice, it gives me, like, real experience, actually using the language, instead of just looking at a book or talking to myself. (Greg, PI FFI CF)*

EXCERPT 12

*I mean, I don't really get an opportunity when I'm sitting in my apartment to really speak it. So in class is when I really practice speaking. (Bob, PI FFI)*

In addition, Max (PI FFI CF) found peer interaction beneficial because he can learn from peers' mistakes, and Harry (PI FFI) perceived it as good preparation for the "real world":

EXCERPT 13

*In the real world you need to be able to form sentences and be able to talk to peers, and when I'm just thinking on my own "okay, how would I say this?", sometimes I don't try hard enough, but, like, when I'm talking with a peer I feel I have to get the sentence across somehow, and then I'll pull in words that I hadn't used since German 001 and try anyway just to get the thought across. (Harry, PI FFI)*

### 6.2.3 Learners' Beliefs about Peer Corrective Feedback

All 15 participants stated they would like their oral mistakes to be corrected in the foreign language classroom, and 6 of those 15 participants stated they would like all of their oral mistakes to be corrected. Nine participants indicated they would not feel embarrassed if they were corrected by the teacher in front of the whole class, while the remaining six indicated they might be slightly embarrassed. Regardless of treatment group, all 15 participants believed that peer corrective feedback is beneficial, and all participants also stated they would be willing to correct mistakes and did not perceive it as only the teacher's job. Further, all 15 participants believed that peer feedback is beneficial not only for the feedback receiver, but also for the feedback provider. Lilly explained that she found peer feedback useful, because it is more efficient than teacher corrections during peer interaction:

EXCERPT 14

*I think if she had to go around and cor-, like listen to every single one of our things and correct every single thing, like, we wouldn't get anything done, I think it [peer feedback] is just much more efficient. (Lilly, PI FFI)*

All participants in the PI FFI CF group stated they felt comfortable correcting their peers. Ethan explained that peer feedback had been new to him and his peers and that it took him and

his peers some time to get used to it. However, after practicing peer feedback it started occurring naturally in the classroom, even in the absence of the teacher's instruction:

EXCERPT 15

*No one's ever told us to, to do that, um, as peers, but, um, it wasn't uncomfortable it was, it was different. Um, it took us a little bit to get used to it. And now we're, now we've been, you can hear it throughout the class when we're speaking. (Ethan, PI FFI CF)*

However, two participants in the PI FFI group and two participants in the PI group stated they would not feel comfortable correcting peers, because they felt it was not their place:

EXCERPT 16

*You're on the same level, so acting like you know more than him kinda comes off as weird, even though in that situation you do know something that he doesn't know, or some mistake he made. (Neil, PI)*

EXCERPT 17

*Sometimes I don't tell them they do it incorrectly just cause I, I almost feel like it's not my place to be correcting people, and not that it's a big issue, like subtle things like forgetting the verb placement or just by, like, one word. I know they know it, but I'm not gonna say anything about it. (Harry, PI FFI)*

Although these participants were hesitant to correct peers, none of them stated they would feel uncomfortable if they were corrected by a peer:

EXCERPT 18

*And that's the strange thing, cause I don't feel embarrassed, um, when someone corrects me, or I don't feel resentment towards them for correcting me, I just, when I correct other people, I just feel like that's how they view me. (Harry, PI FFI)*

Five participants in the PI FFI CF group, two participants in the PI FFI group, and three participants in the PI group reported they had noticed mistakes in their peers' speech during the week of the instructional treatment. In the PI FFI CF group, four participants had noticed gender mistakes, three had noticed plural mistakes, one had noticed word choice mistakes, and two had noticed mistakes related to grammatical structures not targeted in the instructional treatment. In the PI FFI group, two participants had noticed gender mistakes and one participant had noticed

pronunciation mistakes, while no one had noticed plural or word choice mistakes. In the PI group, no one had noticed gender, plural, or word choice mistakes, but three participants had noticed mistakes related to grammatical structures not targeted in the instructional treatment. In the PI FFI CF group, all five participants who had noticed mistakes stated that they had also corrected these mistakes. There was no participant in the PI FFI group and only one participant in the PI group who reported they had corrected peers' mistakes.

Interestingly, Ethan explained that although he had noticed many gender mistakes in his peers' speech, he had corrected only few of them:

EXCERPT 19

*Most people couldn't go through this, like a whole class without making a gender mistake. [...] Um, there were so many. It would have taken a lot of time [to correct these mistakes]. [...] Because at a certain point it was like I ca-, I can't keep stopping them, you know. (Ethan, PI FFI CF)*

Ethan further explained that he perceived gender mistakes as less embarrassing than word choice mistakes. When asked whether he would feel embarrassed if he was corrected by the teacher in front of the whole class, he explained that it would depend on the type of mistake:

EXCERPT 20

*If it were like an article, then no. If it were, I don't know, if I said "Gesicht" [face] instead of "Geschichte" [story/history], then yeah. [...] Um that's very different. I mean the word is close but they mean very different things. So I guess if it were a word, wrong word, then yeah, but if it were just the difference between "der" and "die", then that's okay. [...] I feel like we all have a hard time with gender. Um, and we all, you know, odds are most people in the room didn't know the gender either. So that's the hard part. (Ethan, PI FFI CF)*

Four participants in the PI FFI CF group, four participants in the PI FFI group, and two participants in the PI group reported that they had been corrected by peers. While all four participants in the PI FFI CF group stated they had been corrected on gender, plural, and/or word choice mistakes, all but one participant in the PI FFI group, and all but one participant in the PI

group stated they had only been corrected on mistakes related to grammatical structures not targeted during the instructional treatment, or on their pronunciation.

Although participants in the PI FFI CF group noticed, corrected, and were corrected more frequently than participants in the PI FFI and PI group, all 15 participants from all three groups reported they had helped each other out whenever possible when they didn't know a word in German. While participants in the PI FFI group and PI group stated they simply provided their peers with the word, Max (PI FFI CF) explained that, to help a peer get to the word, he used a prompt at first and then provided the word if it was still necessary:

EXCERPT 21

*Sometimes I knew [the word that my peers didn't know], and when I knew I tried to, like, help them get to the word without giving them the word, but then if they really couldn't get it I, like, said it. (Max, PI FFI CF)*

When asked whether they would believe a peer's correction, four participants in the PI FFI CF group, two participants in the PI FFI group, and three participants in the PI group stated they would. The other participants explained that they would consider a peer's correction, but that it would depend on their perception of the person providing the correction, the perceived level of confidence of that person, or the type of mistake.

Although all participants believed that peer feedback was beneficial, six participants still preferred teacher feedback over peer feedback, while the remaining nine participants thought a combination of teacher and peer feedback was desirable, as explained by Max (PI FFI CF):

EXCERPT 22

*Well, the teacher corrections you can always trust that the teacher is gonna, like, make a correct correction. Um, and students, um, so they can only correct things that, that they see, and then when they correct you, then you can correct another student, and kinda like correct each other, and then it works out well. (Max, PI FFI CF)*

### 6.3 Discussion

Regarding learners' beliefs about vocabulary learning, the data from the present study showed that learners viewed it as at least equally important as grammar learning. Some learners even described it as more important because—unlike using correct grammar—using correct vocabulary was considered a prerequisite for successful communication. Thus, it can be said that learners understood the importance of the linguistic target (that is, vocabulary items) of the present experiment, at least with respect to lexical items that carry meaning.

Although the 15 learners who were interviewed after experiment 2 were not the same learners as those interviewed after experiment 1, the interview data on their beliefs about peer interaction almost completely corroborate the findings from section 4.2 and from previous research (e.g., Sato, 2013; Tulung, 2008). That is, the vast majority of learners enjoy peer interaction, except for individual learners who may feel self-conscious, because they feel they are not as proficient as their peers. Further, some learners reported they do not like the lack of error correction during peer interaction. Nevertheless, learners find interacting with other learners more comfortable than interacting with the teacher, and they also believe it is beneficial for their language learning, mostly because of the practice opportunities that peer interaction provides.

With respect to corrective feedback, the data from the present experiment indicate that learners find it important that their oral mistakes are corrected in the foreign language classroom, and they also had positive attitudes towards peer corrective feedback, which is consistent with the findings reported in section 4.2.3. A novel finding of the present experiment is that it took learners time to get used to peer feedback, since it was a new practice to them. This suggests that



teachers who introduce peer feedback in their classrooms should be patient but also persistent if this strategy is not successful right from start.

As reported previously in section 4.2.3, some learners who did not receive feedback training stated they would find it socially inappropriate to correct peers' mistakes during peer interaction. Yet, none of the learners indicated they would take offense if they were corrected by a peer. Thus, untrained learners do not object to being corrected by a peer, but they do refrain from correcting their peers for social reasons, an issue that can easily be addressed through peer feedback training, which can establish a classroom environment in which correcting peers is viewed as appropriate and socially acceptable.

Although some learners reported they prefer teacher feedback over peer feedback because they find the teacher more trustworthy, most learners stated they would prefer a combination of teacher and peer feedback. This finding suggests that using peer feedback in addition to teacher feedback may be optimal in foreign language classrooms, as it is in line with learners' preferences and further maximizes their chances of receiving feedback on their errors.

As previously reported in section 4.2.3, learners who had received feedback training reported more noticing of mistakes than learners who had not received such training. This was the case especially with respect to the linguistic targets used in the present study, including gender and plural errors. This finding once again provides support for the noticing hypothesis, as increased noticing was associated with better learning outcomes (see section 5.2). What is new to the present experiment is that some learners reported deliberately withholding feedback on ungrammatical forms without a lexical load (e.g., gender mistakes), even though noticing of such errors had occurred. Although the data in the present study are somewhat limited, it appears that learners withheld such feedback for various reasons. On the one hand, correcting mistakes

without a lexical load may have seemed less important to the learners for the purpose of communicating meaning. Further, mistakes without a lexical load may have seemed less embarrassing to learners than mistakes with a lexical load. On the other hand, correcting mistakes without a lexical load, in particular gender mistakes, may have appeared to be an unfeasible if not impossible endeavor to learners, because these mistakes were too numerous. Thus, it may be the case that peer feedback training targeting forms without a lexical load is ineffective when combined with forms with a heavy lexical load. In other words, it could be the case that the combination of peer feedback on nouns (heavy lexical load), gender (virtually no lexical load, at least for the nouns used in the present study), and plural forms (lexical load, but less heavy than nouns) employed in the present study was overwhelming to learners. Future studies may benefit from targeting either forms with a lexical load or forms without a heavy lexical load, rather than including both. It may further be the case that more extensive peer feedback training is necessary when the linguistic target is a form without a lexical load. This more extensive type of feedback training could benefit from including a discussion about why forms without a lexical load are also important for the successful mastery of a foreign language.

## CHAPTER 7: Conclusions

### 7.1 Overview of Results

The present dissertation explored the effects of peer interaction, form-focused instruction, and oral corrective feedback on the acquisition of grammatical structures (experiment 1) and vocabulary items (experiment 2) in third-semester learners of German. Three experimental groups took part in the instructional treatments, which lasted three consecutive class periods in experiment 1 and four consecutive class periods in experiment 2. During the treatments, the first group participated in meaning-focused peer interaction activities without receiving form-focused instruction or peer feedback training (PI group), the second group participated in the same peer interaction activities and also received form-focused instruction (PI FFI group), and the third group participated in the same peer interaction activities in addition to receiving form-focused instruction and peer feedback training (PI FFI CF group). The linguistic target in experiment 1 was the German present perfect, which included auxiliary verb selection and past participle formation. The linguistic target in experiment 2 was a list of 25 German nouns, which included both the nouns themselves and their morphological features (grammatical gender and plural forms). To gain insights into the effectiveness of the interventions and learners' beliefs about it, the present study used a mixed-methods design: Quantitative data were collected through pretests and posttests, whereas qualitative data were collected through semi-structured interviews.

As stated in section 2.5, the study investigated the following research questions:

1. Does peer interaction combined with form-focused instruction lead to greater gains in grammatical accuracy (experiment 1) and vocabulary knowledge (experiment 2) than peer interaction alone?

2. Does peer interaction combined with form-focused instruction and peer feedback training lead to greater gains in grammatical accuracy (experiment 1) and vocabulary knowledge (experiment 2) than peer interaction and form-focused instruction alone?
3. What are learners' beliefs about peer interaction and peer corrective feedback for the acquisition of grammatical structures (experiment 1) and vocabulary (experiment 2)?

The major findings of the two experiments are presented below. Both quantitative and qualitative data are included.

#### *Experiment 1: Quantitative Data*

1. The PI FFI group had significantly higher scores than the PI group on all four posttest measures of auxiliary selection, but on none of the four posttest measures of past participle formation.
2. The PI FFI CF group had significantly higher scores than the PI group on all four posttest measures of auxiliary selection and on two posttest measures of past participle formation.
3. The PI FFI CF group significantly outperformed the PI FFI group on the immediate posttest of past participle formation.

#### *Experiment 1: Qualitative Data*

1. Across all groups, most participants held positive beliefs about peer interaction, not only because they enjoy the comfortable environment, but also because they

- appreciate the practice opportunities and find them to be beneficial for their language learning.
2. Some participants who did not receive feedback training reported they dislike the lack of corrective feedback during peer interaction.
  3. All participants strongly believed in the importance and effectiveness of grammar instruction.
  4. Regardless of treatment group, all participants held positive beliefs about peer corrective feedback.
  5. Most participants felt comfortable correcting peers, but some participants who did not receive feedback training felt that it was not their place to do so.
  6. Most participants would not blindly accept their peers' corrections, but they would consider them.
  7. Participants from the PI FFI CF group reported more noticing of mistakes in their peers' speech and also correcting those mistakes more often.

### *Experiment 2: Quantitative Data*

1. The PI FFI group had significantly higher scores than the PI group on all posttest measures except the immediate posttest of grammatical gender.
2. The PI FFI CF group had significantly higher scores than the PI group on all posttest measures except the immediate posttest of grammatical gender.
3. The PI FFI CF group significantly outperformed the PI FFI group on both posttest measures of productive vocabulary and on the delayed posttest of receptive vocabulary, but on none of the measures of grammatical gender or plural forms.

### *Experiment 2: Qualitative Data*

1. The participants held virtually the same beliefs about peer interaction as the participants who were interviewed after experiment 1 (see above).
2. All participants believed that learning vocabulary is important for successful mastery of a foreign language.
3. Participants' beliefs about peer corrective feedback were similar to those of the participants who were interviewed after experiment 1 (see above).
4. Although some participants who did not receive feedback training felt that it was not their place to correct peers' mistakes, they would not take offense if they were corrected by a peer.
5. As in experiment 1, participants in the PI FFI CF group reported more noticing of mistakes in their peers' speech and more subsequent peer corrections. However, individual participants from the PI FFI CF group sometimes deliberately withheld peer corrections of ungrammatical forms without a lexical load.

## **7.2 Theoretical Implications**

Section 2.1 discussed the predictions of the interaction approach, which integrates constructs of input, interaction, feedback, and output (Gass & Mackey, 2015). This approach argues that input is very important, yet insufficient, for second language development. Rather, L2 learners need to engage in interaction, as it provides opportunities for negotiation of meaning, negotiation of form, and modified output. Moreover, since proponents of the interaction approach argue that negative feedback is necessary to acquire structures for which positive evidence alone is insufficient, learners' attention in foreign language classrooms should be

drawn to form, for example through form-focused instruction and corrective feedback (Long, 1996).

The findings of the present study provide strong support for these claims of the interaction approach. In the present study, learners who engaged in interaction but whose attention was never drawn to form (that is, the participants from the PI group), benefited less from the intervention than learners whose attention was drawn to form (that is, participants from the PI FFI group and the PI FFI CF group). For instance, learners who received form-focused instruction performed significantly better than learners who did not receive such instruction, in particular on auxiliary selection, grammatical gender, and plural forms. They also had a more extensive productive and receptive knowledge of vocabulary, although this was not the case for past participles. Moreover, learners who received peer feedback training in addition to form-focused instruction performed significantly better than learners who received form-focused instruction but no feedback training on measures of the past participle, and descriptively better on some measures of auxiliary selection. They were also significantly better in terms of productive and receptive vocabulary knowledge, although this was not the case for grammatical gender and plural forms. Taken together, these findings suggest that learners indeed benefit from the opportunities arising from interaction, including focus on form and corrective feedback, as predicted by the interaction approach. Furthermore, the findings support Long's (1996) claim that negative evidence, such as that provided by form-focused instruction and corrective feedback, is necessary to acquire structures for which positive evidence alone is insufficient.

As previously detailed in section 2.1, the interaction approach was initially proposed for interactions between learners and native speakers rather than for interactions between learners and other learners (Long, 1983a, 1996). Yet, there is reason to believe that the approach can also

be applied to the context of learner-learner interactions. For instance, Sato and Lyster (2007) found that interactions between learners resulted in more elicitation feedback and modified output than interactions between learners and native speakers (see also Varonis & Gass, 1985), therefore creating ideal conditions for second language development under the interactionist framework. Nevertheless, some researchers have questioned whether the interaction approach can be applied to peer interaction in foreign language classrooms (e.g., Philip et al., 2014). The findings of the present study, however, especially when combined with findings from previous studies (e.g., Sato & Lyster, 2007, 2012; Sippel & Jackson, 2015), suggest that the interaction approach can be applied to learner-learner interactions, since learners in those studies benefited from interactions with peers in ways similar to how learners typically benefit from interactions with native speakers (see Mackey & Goo, 2007).

Finally, as discussed in section 2.1, noticing also plays an important role within the interaction approach. In his noticing hypothesis, Schmidt (1990, 2001) argues that noticing is a precondition for second language development and that some aspects of a second language cannot be learned in the absence of conscious noticing. Both the quantitative and qualitative data of the present study provide support for this hypothesis. Quantitative data indicated that learners whose attention was drawn to form showed greater gains in second language development than learners whose attention was never drawn to form. Qualitative data indicated that peer feedback training promoted the noticing of mistakes and led to more frequent peer corrections, suggesting that peer CF heightens learners' awareness of linguistic forms, which is likely the underlying reason for the effectiveness of peer CF.



### **7.3 Pedagogical Implications**

The present study can inform foreign language pedagogy in various ways. First, the fact that the PI group in the present study was typically outperformed by the other two groups may appear to suggest that peer interaction alone is not a useful pedagogical intervention. It is important to emphasize that this is not the case. As revealed in previous studies, peer interaction can improve fluency (Sato & Lyster, 2012), a highly valuable skill for any foreign language learner. Moreover, previous research and the present study have shown that peer interaction can increase learners' comfort level and therefore contribute to establishing a classroom environment conducive to learning. Peer interaction further provides learners with ample practice opportunities that they might otherwise not receive, in particular in foreign language contexts.

Therefore, peer interaction without any kind of focus on form component is certainly still a useful tool for foreign language teachers. However, the results of the present study indicate that peer interaction in foreign language classrooms may be even more useful when combined with other pedagogical interventions that draw learners' attention to linguistic forms, such as form-focused instruction and peer corrective feedback. Teachers can use these interventions if their goal is to not only provide learners with practice opportunities and foster their confidence and fluency in the foreign language, but at the same time also promote their acquisition of certain linguistic targets, including grammatical structures and vocabulary items.

Second, with respect to peer CF, it is important that teachers are aware that peer feedback is less likely to occur during peer interaction if no feedback training is provided to learners. Further, the emergence and effectiveness of peer feedback is likely to be dependent on social relationships between learners. Therefore, teachers should make an effort to establish a collaborative classroom environment in which learners feel comfortable when interacting with

their peers. Moreover, teachers who would like to use peer feedback in their classrooms should include feedback training in their lessons to provide learners with effective tools to support their peers during peer interaction activities. Since time is often limited in foreign language classrooms, it is also important to point out that feedback training does not have to be very extensive. For instance, in the present study, only 20 minutes of feedback training were provided in experiment and 15 minutes in experiment 2, which was sufficient for the PI FFI CF group to significantly outperform the PI FFI group on several posttest measures.

Another important pedagogical implication of the present study is that teachers can use peer feedback for various linguistic targets, including grammatical structures and vocabulary (and possibly other linguistic areas, although this was not investigated in the present study). However, it is likely the case that peer feedback is most effective if only one particular structure or a limited number of vocabulary items is targeted, since asking learners to correct any mistakes they notice may be overwhelming, lead to confusion, and potentially even interrupt the communicative flow of peer interaction activities.

The findings of the present study combined with findings from previous studies (e.g., Chu, 2013; Sato & Lyster, 2012) further suggest that teachers can use peer feedback with learners at various levels of proficiency. Nevertheless, an important difference across proficiency levels may be that low-proficiency learners seem to benefit from form-focused instruction on the linguistic target in addition to peer feedback training (as was the case in the present study), whereas more advanced learners may not always need form-focused instruction, at least if they have sufficient metalinguistic knowledge to rely on (see Sato & Lyster, 2012).

## 7.4 Open Questions and Directions for Future Research

The findings presented in this dissertation contribute to our understanding of peer interaction, form-focused instruction, and oral peer corrective feedback in classroom environments and have implications from a theoretical perspective (see section 7.2) and also pedagogically (see section 7.3). Nevertheless, several important questions that were not addressed in the present study remain open for future research.

One of those questions is to what extent the effectiveness of the interventions employed in the present study transfers to other linguistics targets. While the present study focused on morphology and lexis, future studies could target syntax, phonology, and pragmatics, among other linguistic areas. Although some previous research on teacher CF during teacher-learner interactions has targeted these linguistic areas (e.g., Lee & Lyster, 2016; Saito, 2013, 2015; Saito & Lyster, 2012; Takimoto, 2006), no studies to my knowledge have done so using peer corrective feedback during peer interaction.

Another question is to what extent peer interaction and peer corrective feedback in particular can facilitate the acquisition of grammatical structures that are completely new to learners. In experiment 1 of the present study, the target structure was the German present perfect tense. While this structure typically presents difficulty to L2 learners of German—even at higher levels of proficiency—it was not a new structure to the third-semester learners of the present study, since they had previously received instruction on it during their first and/or second semester of German. Consequently, the learners in the PI FFI CF group were likely able to rely on knowledge acquired in previous classes rather than exclusively on the information they received through form-focused instruction in the present study. Similarly, Sato and Lyster's (2012) study also targeted grammatical structures that were not new to learners. Thus, an

interesting question for future research is to what extent peer feedback is useful when learners have virtually no previous knowledge of the grammatical target. Future studies could address this question by using the same target structure as in the present study but in a first-semester class, or by choosing a grammatical target that is typically taught at later stages in the curriculum.

A methodological limitation of the present study is that the instructional interventions were rather short, as they lasted only three or four class periods per experiment, respectively. In particular with respect to linguistic targets that do not have a heavy lexical load and are typically notoriously difficult to acquire for foreign language learners, such as grammatical gender, it may be possible that peer feedback would be more effective if more extensive feedback training was provided and if the instructional intervention took place over a more extended amount of time (see Lyster, 2004, who successfully targeted grammatical gender in French over an extended period of time within a focus on form study that involved teacher corrective feedback). Thus, future studies targeting these kinds of structures may benefit from using a more longitudinal design.

Finally, while the present study provided insights into learners' beliefs about peer interaction and peer corrective feedback, it remains to be determined what beliefs teachers hold about these interventions. Studies comparing learner beliefs on form-focused instruction and teacher corrective feedback to teacher beliefs about those same interventions revealed that learners' beliefs often do not match those of their teachers (e.g., Schulz, 1996, 2001; Siebert, 2003). It would not be surprising if this was the case for the instructional interventions targeted in the present study as well, in particular with respect to peer corrective feedback. Future studies that address this question will be able to provide important insights that would be of value to the advancement of foreign language pedagogy.

## 7.5 Final Summary and Conclusions

The goal of this dissertation was to investigate the effects of peer interaction, form-focused instruction, and peer corrective feedback on grammatical acquisition and vocabulary acquisition in low-proficiency classroom learners of German, as well as learners' beliefs about these interventions. To this end, the present study used a mixed-methods design to collect quantitative and qualitative data in two classroom-based experiments targeting the German present perfect tense, in experiment 1, and German nouns along with their grammatical genders and plural forms, in experiment 2. All in all, both experiments showed that the linguistic targets were acquired most successfully when learners' attention was drawn to form through form-focused instruction, and that form-focused instruction combined with peer feedback training was overall even more beneficial. The study further revealed that learners' beliefs about the interventions employed in the experiments were mostly positive, although various considerations can prevent learners from providing feedback to peers, especially if they were not trained to correct peers' mistakes by their teacher. In this regard, the present study benefited from including both quantitative and qualitative research methods, as qualitative interview data helped inform the quantitative data collected in the two experiments and vice versa.

As a whole, the present dissertation has important theoretical and pedagogical implications. From a theoretical perspective, the findings of the present study suggest that the scope of the interaction approach may be wider than originally proposed, as it may extend to learner-learner interactions. From a pedagogical perspective, the present study points to novel ways in which peer interaction and peer corrective feedback can contribute to second language development in classroom contexts.

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## Appendix A Language History Questionnaire

This questionnaire is designed to give us a better understanding of your experience with other languages. We ask that you be as accurate and as thorough as possible when answering the following questions.

### Part I

#### *Basic information*

1. Gender: \_\_\_\_\_
2. Age: \_\_\_\_\_ years
3. What is your academic major(s)? \_\_\_\_\_
4. Native Language(s) (Please check all that apply.)
  - English
  - Other [Please specify: \_\_\_\_\_]

### Part II

*This section of the questionnaire deals with your foreign language learning experience.*

5. Please list all of the languages you know in order of *dominance* (i.e. how often you use each language), including your native language. Then please list what percentage of the time you use each of these languages on *average* (your percentages should add up to 100%).

Average use (%)

- |    |       |       |
|----|-------|-------|
| 1. | _____ | _____ |
| 2. | _____ | _____ |
| 3. | _____ | _____ |
| 4. | _____ | _____ |

6. If you studied any foreign language(s) before university/college (including German), please check all of the following that apply and indicate the starting age and length of study for any foreign language(s) learned before college.

- Home/Outside of School – Language(s): \_\_\_\_\_  
Starting age? \_\_\_\_\_ For how long? \_\_\_\_\_ years

- Elementary School – Language(s): \_\_\_\_\_  
Starting age? \_\_\_\_\_ For how long? \_\_\_\_\_ years
- Middle School – Language(s): \_\_\_\_\_  
Starting age? \_\_\_\_\_ For how long? \_\_\_\_\_ years
- High School – Language(s): \_\_\_\_\_  
Starting age? \_\_\_\_\_ For how long? \_\_\_\_\_ years
- University – Language(s): \_\_\_\_\_  
Starting age? \_\_\_\_\_ For how long? \_\_\_\_\_ years

7. Have you studied and/or lived abroad for more than four consecutive weeks?

- Yes
- No

**If YES**, where and when did you study, for how long, and what language(s) did you speak?

Country	Approx. dates	Length of Stay	Language(s)

8. Are you (please check all that apply):

- Taking German for a requirement but planning to continue studying German after GER 003
- Taking German for a requirement and NOT planning to continue studying German after GER 003
- Taking German as a free elective
- Other [Please explain: \_\_\_\_\_ ]

9. How much contact do you have with native German speakers (excluding your GER 003 teacher)?

- none    very little    monthly    weekly    (almost) every day

10. Do you like German?

- no    neutral    yes

11. Do you enjoy studying German?

- no    neutral    yes

***Please use the following scale to indicate the degree to which the following reasons for studying German are important to you.***

Rating scale: 0 = not important 1 = slightly important 2 = moderately important 3 = very important

*I am studying German because...*

12. ... I want to use German when I travel to a German-speaking region.

Circle one:        0        1        2        3

13. ... I am interested in German culture, history, or literature.

Circle one:        0        1        2        3

14. ... I feel that German might be useful in my future workplace.

Circle one:        0        1        2        3

15. ... I think foreign language study is part of well-rounded education.

Circle one:        0        1        2        3

If applicable, list additional reasons for taking a German course:

---

***Please rate these statements on a scale from 1 to 5.***

Rating scale:

1 = never or almost never true of me (totally disagree)

2 = usually not true of me

3 = somewhat true of me

4 = usually true of me

5 = always or almost always true of me (totally agree)

16. I would like to sound as native as possible when speaking German.

Circle one:        1        2        3        4        5

17. Being able to speak grammatically correct German is important to me.

Circle one:        1        2        3        4        5

18. Acquiring new vocabulary in German is important to me.

Circle one:        1        2        3        4        5

19. Adequate knowledge of grammar and vocabulary is essential for communicating in a foreign language.

Circle one:        1        2        3        4        5

20. Communicating is much more important than knowing grammar or vocabulary.

Circle one:        1        2        3        4        5

21. Which set of statements best suits your attitude towards speaking a foreign language? (Circle one.)

- a. I like to speak a language perfectly. I like to learn grammar and make sure that I speak correctly when I say things. I like to think about what I will say in a foreign language and how I will say it before I say it.
- b. When I speak a foreign language, I aim to communicate. I don't worry as much about speaking perfectly or getting all of the grammar right. I'm alright with making some mistakes as long as the other speakers understand what I mean.

**Part III. This section of the questionnaire deals with your German language skills. Please rate yourself on each measure by circling the appropriate number.**

22. Your reading proficiency in German. (1 = not literate and 10 = very literate)

Circle one:        1        2        3        4        5        6        7        8        9        10

23. Your writing proficiency in German. (1 = not literate and 10 = very literate)

Circle one:        1        2        3        4        5        6        7        8        9        10

24. Your speaking ability in German. (1 = not fluent and 10 = very fluent)

Circle one:        1        2        3        4        5        6        7        8        9        10

25. Your speech comprehension ability in German. (1 = unable to understand conversation and 10 = perfectly able to understand)

Circle one:        1        2        3        4        5        6        7        8        9        10

## Appendix B Peer Feedback Training Materials (Experiment 1)

Scenario: It is the first day of school after summer break (Sommerferien). You are having a conversation with your friends about what all of you did during summer break. Please include the five sentences below with the errors (the sentences on the left). Also come up with some additional sentences. (What else did you do in Hawaii?) Please do not intentionally include errors in these additional sentences. During this activity, try to identify and point out the errors in your peers' speech. When your peers point out a mistake that you made, self-correct it using the correct sentences (the ones on the right). Upon completion of this activity, please tell your peers if they missed any of your errors and if so which ones. Once you have familiarized yourself with your role, start talking in your group about summer break. You can start the conversation by asking: "Hi, wie geht's? Was hast du in den Sommerferien gemacht?"

### Person 1: Sie waren in Las Vegas.

Error	Correct
In den Sommerferien <b>habe</b> ich nach Las Vegas geflogen.	In den Sommerferien <b>bin</b> ich nach Las Vegas geflogen.
In Las Vegas <b>habe</b> ich ins Casino gegangen.	In Las Vegas <b>bin</b> ich ins Casino gegangen.
Im Roulette habe ich 2000 Dollar <b>gewinnt!</b>	Im Roulette habe ich 2000 Dollar <b>gewonnen!</b>
Wir haben in einem sehr schönen Restaurant <b>geesst.</b>	Wir haben in einem sehr schönen Restaurant <b>gegessen.</b>
Wir <b>haben</b> auch zu einer Show gegangen.	Wir <b>sind</b> auch zu einer Show gegangen.

Was haben Sie noch gemacht? (Souvenire kaufen? trinken? Poker Spielen? schwimmen? Sport machen? etc.)

### Person 2: Sie waren in Italien.

Error	Correct
In den Sommerferien <b>habe</b> ich mit meiner Familie nach Italien geflogen.	In den Sommerferien <b>bin</b> ich mit meiner Familie nach Italien geflogen.
Wir haben Pizza gegessen und Rotwein <b>getrinkt.</b>	Wir haben Pizza gegessen und Rotwein <b>getrunken.</b>
Wir <b>haben</b> nach Florenz und Rom gefahren.	Wir <b>sind</b> nach Florenz und Rom gefahren.
In Rom haben wir <b>geeinkauft.</b>	In Rom haben wir <b>eingekauft.</b>
Es ist nie langweilig <b>gewerdet.</b>	Es ist nie langweilig <b>geworden.</b>

Was haben Sie noch gemacht? (Souvenire kaufen? Eis essen? im Meer schwimmen? an den Strand gehen? Sport machen? etc.)



**Person 3: Sie waren zu Hause.**

<b>Error</b>	<b>Correct</b>
Ich <b>habe</b> in State College geblieben.	Ich <b>bin</b> in State College geblieben.
Von Montag bis Freitag habe ich bei Walmart <b>gearbeiten</b> .	Von Montag bis Freitag habe ich bei Walmart <b>gearbeitet</b> .
An den Wochenenden <b>habe</b> ich spät aufgestanden.	An den Wochenenden <b>bin</b> ich spät aufgestanden.
Ich <b>habe</b> oft im Park gelaufen.	Ich <b>bin</b> oft im Park gelaufen.
Ich habe meine Freunde in Harrisburg <b>besuchen</b> .	Ich habe meine Freunde in Harrisburg <b>besucht</b> .

Was haben Sie noch gemacht? (schlafen? ins Kino gehen? Bücher lesen? fernsehen? auf Partys gehen? etc.)

**Person 4: Sie waren auf Hawaii.**

<b>Error</b>	<b>Correct</b>
In den Sommerferien <b>habe</b> ich mit meinem Freund nach Hawaii geflogen.	In den Sommerferien <b>bin</b> ich mit meinem Freund nach Hawaii geflogen.
Wir <b>haben</b> im Meer geschwommen.	Wir <b>sind</b> im Meer geschwommen.
Wir haben in der Disko <b>getanzen</b> .	Wir haben in der Disko <b>getanzt</b> .
Wir sind am Strand <b>gelauft</b> .	Wir sind am Strand <b>gelaufen</b> .
Wir haben Bücher am Strand <b>gelest</b> .	Wir haben Bücher am Strand <b>gelesen</b> .

Was haben Sie noch gemacht? (Souvenire kaufen? Bücher lesen? fernsehen? auf Partys gehen? an den Strand gehen? etc.)

# Appendix C Oral Production Task

Pretest

Below you can see what Lola did yesterday. Please tell us what she did. Since this was yesterday, it is appropriate to use the present perfect tense (the past). Please include all the pictures below and begin each sentence with the words in green above the picture. Start like this: *Code Name: \_\_\_. Section: \_\_\_. Lola hat gestern lang geschlafen. Um kurz nach 10 ...*

<p><b>Lola...</b></p>  <p>... lang schlafen</p>	<p><b>Um kurz nach 10...</b></p>  <p>... aufstehen</p>	<p><b>Dann...</b></p>  <p>... sich die Zähne putzen</p>	<p><b>Sie...</b></p>  <p>... sich waschen</p>	<p><b>Zum Frühstück...</b></p>  <p>... ein Brot essen</p>
<p><b>Eine Stunde später...</b></p>  <p>... zum Auto laufen</p>	<p><b>Sie...</b></p>  <p>... zur Uni fahren</p>	<p><b>Den ganzen Nachmittag...</b></p>  <p>... in der Bibliothek arbeiten</p>	<p><b>Am Abend...</b></p>  <p>... nach Hause kommen</p>	<p><b>Um 1 Uhr...</b></p>  <p>... ins Bett gehen</p>
<p><b>Nach dem Essen...</b></p>  <p>... fernsehen</p>	<p><b>Lola...</b></p>  <p>... ein Buch für die Uni lesen</p>	<p><b>Sie...</b></p>  <p>... müde werden</p>		

Below you can see what Kumar did yesterday. Please tell us what he did. Since this was yesterday, it is appropriate to use the present perfect tense (the past). Please include all the pictures below and begin each sentence with the words in green above the picture. Start like this: *Code Name: ...*. *Section: ...*. *Kumar hat gestern zu lange geschlafen. Um halb 9...*

**Kumar...**



... zu lange schlafen

**Um halb 9...**



... aufstehen

**Er...**



... sich die Zähne putzen

**Dann...**



... sich die Hände waschen

**Zum Frühstück...**



... Müsli essen

**Um kurz nach 9...**



... zu seinem Auto laufen

**Kumar...**



... zur Arbeit fahren

**Er...**



... den ganzen Tag arbeiten

**Um 7 Uhr...**



... endlich nach Hause kommen

**Nach dem Abendessen...**



... fernsehen

**Danach...**



... ein Buch lesen

**Er...**



... sehr müde werden

**Um halb 12...**



... schlafen gehen

Below you can see what Anna did yesterday. Please tell us what she did. Since this was yesterday, it is appropriate to use the present perfect tense (the past). Please include all the pictures below and begin each sentence with the words in green above the picture. Start like this: **Code Name: \_\_\_**. **Section: \_\_\_**. **Anna hat gestern bis 8 Uhr geschlafen. Um kurz nach 8...**

**Anna...**



... bis 8 Uhr schlafen

**Um kurz nach 8...**



... endlich aufstehen

**Sie...**



... sich die Zähne putzen

**Dann...**



... sich waschen

**Zum Frühstück...**



... Müsli essen

**Nach dem Frühstück...**



... schnell zum Auto laufen

**Sie...**



... zur Arbeit fahren

**Anna...**



... von 9 bis 6 Uhr arbeiten

**Um halb 7...**



... nach Hause kommen

**Nach dem Abendessen...**



... fernsehen

**Sie...**



... ein Buch lesen

**Dann...**



... müde werden

**Um Mitternacht...**



... ins Bett gehen

## Appendix D Error Correction Task

**The text below contains mistakes. Please read the text and correct all the mistakes that you notice.**

Liebe Oma,

seit einer Woche ich bin in Deutschland! Es gefällt mir gut! Wir haben mit dem Flugzeug von NYC nach Berlin geflogen. Am Montag haben wir in Berlin angekommen. Dann habe ich viel geschlafen. Am Dienstag wir sind durch das Brandenburger Tor gelaufen! Zum Mittagessen haben wir Currywurst gegessen. Es schmecken mir sehr gut. Wir haben auch in der Stadt eingekauft und den Reichstag angeschauen. Es warst sehr interessant. Ich habe über die deutsche Politik gelernen. Am Mittwoch haben wir dann zum Checkpoint Charlie gelaufen. Der Checkpoint Charlie war eine Grenze zwischen Ost-Berlin und West-Berlin. In Berlin man kann so viel Geschichte sehen! Natürlich haben wir auch die Reste der Berliner Mauer im Mauermuseum geseht. Am Abend habe ich dann in einen Club gegangen! In Deutschland darf man schon mit 16 Jahren Bier trinken! Am Donnerstag sind wir mit dem Zug nach München gefahrt. Das war um 6 Uhr morgens. Wir haben um 5 Uhr aufgestanden! In München wir haben zuerst unsere Koffer ins Hotel gebracht. Dann haben wir mit der Straßenbahn in die Innenstadt gefahren. Wir haben ein Bier im Hofbräuhaus getrunken! Das Bier war sehr gut. Am Freitag haben wir dann noch das Schloss Neuschwanstein gebesucht. Das Schloss ist wunderschön! Heute ich möchte Fußball in der Allianz Arena sehen! Am Sonntag wir wollen nach Italien fahren. Deutschland gefallen mir gut!

Und wie geht es dir? Wie sind das Wetter in Pennsylvania? Ich hoffe, es ist nicht so kalt.

Ich vermisse dich!

Dein Alex

## **Appendix E Interview Questions (Experiment 1)**

### Part 1: General Questions:

1. Tell me a little bit about how and where you learned German.
2. Can you describe the German classes you took before the GER 003 class you are currently taking? What did you do on a typical day in class?
3. Can you tell me why you are taking German this semester?
4. Would you rather have a native speaker of German or a native speaker of English as your teacher?

### Part 2: Grammar instruction and grammar learning:

5. Would you agree with the statement that a good foreign language teacher is a person who can explain things to you, like grammar rules?
6. Do you think studying the grammar of a foreign language is important?
7. Do you think being taught German grammar rules benefits your language learning?
8. Do you like grammar lessons?

### Part 3: Peer interaction

9. Do you enjoy speaking German in class with your peers (in pairs or small groups)?
10. Does the extent to which you enjoy speaking German in class with your peers (in pairs or small groups) depend on the people you are working with?
11. Do you think speaking German in class with your peers (during pair or group work) is beneficial for learning a foreign language? Do you think it will improve your speaking skills?
12. What do you find more comfortable: Speaking German with the teacher in front of the whole class, or speaking German with your peers in pairs or small groups?
13. What do you think is more beneficial for your language learning: Speaking German with the teacher in front of the whole class, or speaking German with your peers in pairs or small groups?

14. Are you afraid that the mistakes that you hear your peers make during pair or group work will have a negative effect on your own language learning?

Part 4: Corrective feedback

15. Do you want your oral mistakes to be corrected in the foreign language classroom?

16. Do you want all of your oral mistakes to be corrected in the foreign language classroom?

17. If your teacher corrected your mistake in front of the whole class, would you feel embarrassed?

18. In the past couple of days in class, have you ever noticed mistakes in your peers' speech during pair/group work? Do you remember what kinds of mistakes you noticed?

19. In the past couple of days in class, have you ever corrected mistakes in your peers' speech during pair/group work?

20. In the past couple of days in class, have you ever been corrected by a peer during pair/group work?

21. Do you think it is beneficial for your language learning if your peers correct your mistakes?

22. Do you think correcting your peers' mistakes could benefit your own language learning as well?

23. When/if your teacher instructed you to correct your peers' mistakes during pair/group work, did/would that make you feel uncomfortable?

24. Are you willing to correct your peers' mistakes? Or do you think that is the teacher's job?

25. When/if a peer corrected your mistake during pair/group work, did/would you feel uncomfortable/embarrassed?

26. When/if a peer corrected your mistake during pair or group work, did/would you believe him/her?

27. If a peer corrected your mistake during pair or group work, would you find it more comfortable if they told you the right answer right away, or would you find it more comfortable if they gave you a chance to self-correct your mistake?

28. What do you think is more beneficial for your learning: Being told the correct way to say something after you made a mistake, or being given you a chance to correct the mistake yourself?

29. Do you prefer teacher corrections, peer corrections, or a combination of the two?

Part 5: Impact of treatment

30. What would you say you learned in your German class in the past couple of days?

31. Did you learn anything about the present perfect tense in the past couple of days in your German class? Can you tell me what you learned?

32. Is there anything that I haven't asked you about that you would like to tell me?



## Appendix F Peer Feedback Training Materials (Experiment 2)

Bild 1

Error	Correct
Die Kinder sind in der <b>Klassenzimmer</b> und spielen Fußball.	Die Kinder sind in der <b>Turnhalle</b> und spielen Fußball.
Es gibt zwei <b>Team</b> .	Es gibt zwei <b>Mannschaften</b> .
<b>Ein</b> Mannschaft trägt rote T-Shirts.	<b>Eine</b> Mannschaft ( <i>feminine</i> ) trägt rote T-Shirts.
<b>Das</b> andere Mannschaft trägt grüne T-Shirts.	<b>Die</b> andere Mannschaft ( <i>feminine</i> ) trägt grüne T-Shirts.



<http://stiftstrasse-ob.de/2014-2015/neu.html>

## Bild 2

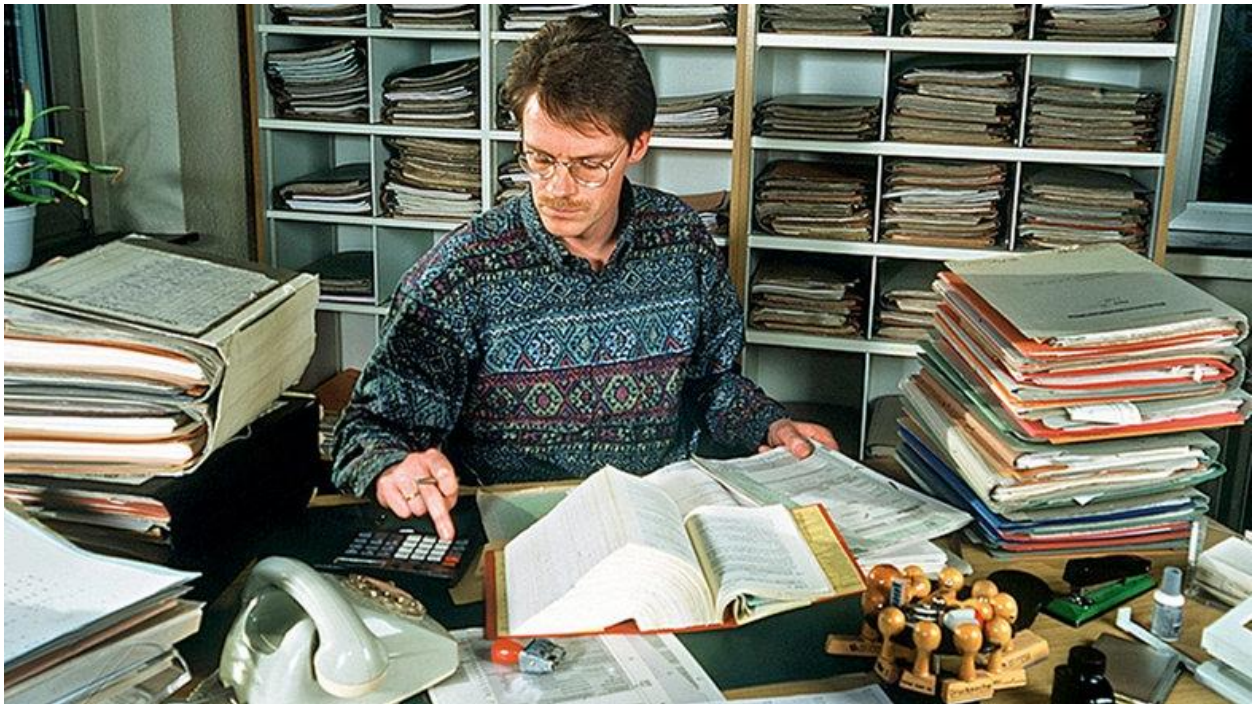
Error	Correct
Hier sehen Sie ein typisch deutsches <b>Gesicht</b> .	Hier sehen Sie ein typisch deutsches <b>Gericht</b> ( <i>dish</i> ).
Zum Trinken gibt es <b>eine</b> Bier.	Zum Trinken gibt es <b>ein</b> Bier ( <i>neuter</i> ).
Zum Essen gibt es zwei <b>Kloß</b> .	Zum Essen gibt es zwei <b>Klöße</b> ( <i>plural</i> ).
Es gibt auch <b>pork</b> .	Es gibt auch <b>Schweinefleisch</b> .



<http://www.allmystery.de/themen/uh60049-20>

**Bild 3**

Error	Correct
Dieser Mann ist in einem <b>Beamte</b> .	Dieser Mann ist in einem <b>Amt</b> .
Der <b>Amte</b> sitzt an seinem Schreibtisch.	Der <b>Beamte</b> sitzt an seinem Schreibtisch.
Auf seinem Schreibtisch sind viele <b>Buche</b> .	Auf seinem Schreibtisch sind viele <b>Bücher</b> .
Auf seinem Schreibtisch sind auch viele <b>Stamp</b> .	Auf seinem Schreibtisch sind auch viele <b>Stempel</b> .



<http://daserste.ndr.de/panorama/archiv/2000/erste7390.html>

#### Bild 4

Error	Correct
Auf diesem Bild sind drei <b>Mann</b> und viele Frauen.	Auf diesem Bild sind drei <b>Männer</b> ( <i>plural</i> ) und viele Frauen.
Alle Frauen tragen ein <b>Dress</b> .	Alle Frauen tragen ein <b>Dirndl</b> .
Die <b>Dirndls</b> sind sehr schön.	Die <b>Dirndl</b> ( <i>plural</i> ) sind sehr schön.
Eine Frau trägt <b>eine grüne</b> Dirndl.	Eine Frau trägt <b>ein grünes</b> Dirndl ( <i>neuter</i> ).



<https://melissaes.wordpress.com/2010/07/18/dirndls-and-lederhosen/>

## Bild 5

Error	Correct
Auf diesem Bild ist eine Frau und <b>eine</b> Mädchen.	Auf diesem Bild ist eine Frau und <b>ein</b> Mädchen ( <i>neuter</i> ).
Die Frau trägt ein weißes <b>Tuch</b> .	Die Frau trägt ein weißes <b>Kopftuch</b> .
Das Mädchen hat zwei <b>Fähn</b> in der Hand.	Das Mädchen hat zwei <b>Fähnchen</b> ( <i>plural</i> ) in der Hand.
<b>Eine</b> Fähnchen ist von Deutschland.	<b>Ein</b> Fähnchen ( <i>neuter</i> ) ist von Deutschland.



<http://www.stimme.de/suedwesten/nachrichten/pl/Auslaender-Integration-Geburtenrate-von-tuerkischen-Frauen-im-Land-sinkt;art19070,2269310>

## Bild 6

Error	Correct
Auf diesem Bild ist <b>ein</b> Frau.	Auf diesem Bild ist <b>eine</b> Frau.
Die Frau hat zwei (Reise) <b>Passen</b> in der Hand.	Die Frau hat zwei (Reise) <b>Pässe</b> in der Hand.
Sie hat <b>eine deutsche</b> (Reise)Pass.	Sie hat <b>einen deutschen</b> (Reise)Pass ( <i>masculine</i> ).
Sie hat auch <b>ein türkisches</b> (Reise)Pass.	Sie hat auch <b>einen türkischen</b> (Reise)Pass ( <i>masculine</i> ).

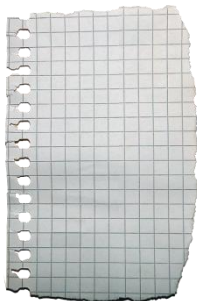


<http://www.susann-ruethrich.de/?p=2544>

# Appendix G Productive Vocabulary Test

## Appendix H Receptive Vocabulary Test

 <ul style="list-style-type: none"> <li><input type="checkbox"/> Mannschaft</li> <li><input type="checkbox"/> Schützenverein</li> <li><input type="checkbox"/> Turnhalle</li> <li><input type="checkbox"/> Überraschung</li> </ul>	 <ul style="list-style-type: none"> <li><input type="checkbox"/> Stoß Papier</li> <li><input type="checkbox"/> Stapel Papier</li> <li><input type="checkbox"/> Stück Papier</li> <li><input type="checkbox"/> Briefpapier</li> </ul>
 <ul style="list-style-type: none"> <li><input type="checkbox"/> Kloß</li> <li><input type="checkbox"/> Schweinebraten</li> <li><input type="checkbox"/> Schützenverein</li> <li><input type="checkbox"/> Schweinefleisch</li> </ul>	 <ul style="list-style-type: none"> <li><input type="checkbox"/> Coladose</li> <li><input type="checkbox"/> Colafass</li> <li><input type="checkbox"/> Colaflasche</li> <li><input type="checkbox"/> Colakiste</li> </ul>
 <ul style="list-style-type: none"> <li><input type="checkbox"/> Urlaub</li> <li><input type="checkbox"/> Dirndl</li> <li><input type="checkbox"/> Anzug</li> <li><input type="checkbox"/> Überraschung</li> </ul>	 <ul style="list-style-type: none"> <li><input type="checkbox"/> Amt</li> <li><input type="checkbox"/> Hirsch</li> <li><input type="checkbox"/> Heimat</li> <li><input type="checkbox"/> Mensch</li> </ul>
 <ul style="list-style-type: none"> <li><input type="checkbox"/> Albtraum</li> <li><input type="checkbox"/> Heimat</li> <li><input type="checkbox"/> Fähnchen</li> <li><input type="checkbox"/> Dirndl</li> </ul>	 <ul style="list-style-type: none"> <li><input type="checkbox"/> Beamte</li> <li><input type="checkbox"/> Kreuz</li> <li><input type="checkbox"/> Mannschaft</li> <li><input type="checkbox"/> Kloß</li> </ul>
 <ul style="list-style-type: none"> <li><input type="checkbox"/> Ampel</li> <li><input type="checkbox"/> Amt</li> <li><input type="checkbox"/> Beamte</li> <li><input type="checkbox"/> Atem</li> </ul>	 <ul style="list-style-type: none"> <li><input type="checkbox"/> Türke</li> <li><input type="checkbox"/> Türkei</li> <li><input type="checkbox"/> Truthahn</li> <li><input type="checkbox"/> Turm</li> </ul>



## Appendix I Grammatical Gender Test

Please write the gender of the nouns below (*der, das or die*).

\_\_\_\_\_ Pass

\_\_\_\_\_ Colaflasche

\_\_\_\_\_ Kopftuch

\_\_\_\_\_ blaue Auge

\_\_\_\_\_ Colafass

\_\_\_\_\_ Anzug

\_\_\_\_\_ Ratte

\_\_\_\_\_ Kreuz

\_\_\_\_\_ Türkei

\_\_\_\_\_ Stempel

\_\_\_\_\_ Colakiste

\_\_\_\_\_ Mannschaft

\_\_\_\_\_ Überraschung

\_\_\_\_\_ Truthahn

\_\_\_\_\_ Fähnchen

\_\_\_\_\_ Albtraum

\_\_\_\_\_ Turnhalle

\_\_\_\_\_ Kloß

\_\_\_\_\_ Hirsch

\_\_\_\_\_ Kartoffel

## Appendix J Noun Plural Test

Please write the plural forms of the nouns below (in German).

Pass → \_\_\_\_\_

Turnhalle → \_\_\_\_\_

Ratte → \_\_\_\_\_

Amt → \_\_\_\_\_

Turm → \_\_\_\_\_

Ampel → \_\_\_\_\_

Colakiste → \_\_\_\_\_

Kloß → \_\_\_\_\_

Albtraum → \_\_\_\_\_

Fähnchen → \_\_\_\_\_

Stempel → \_\_\_\_\_

Kartoffel → \_\_\_\_\_

Colaflasche → \_\_\_\_\_

Kreuz → \_\_\_\_\_

Kopftuch → \_\_\_\_\_

Überraschung → \_\_\_\_\_

Mannschaft → \_\_\_\_\_

Dirndl → \_\_\_\_\_

Schweinebraten → \_\_\_\_\_

Coladose → \_\_\_\_\_

## **Appendix K Interview Questions (Experiment 2)**

### Part 1: General Questions

1. Tell me a little bit about how and where you learned German before taking GER 003 this semester.
2. Can you describe the German classes you took before the GER 003 class you are currently taking? What did you do on a typical day in class?
3. Can you tell me why you are taking German this semester?
4. Would you rather have a native speaker of German or a native speaker of English as your teacher?

### Part 2: Vocabulary learning

5. Do you think studying the vocabulary of a foreign language is important?
6. Do you think being taught German vocabulary in class benefits your language learning?
7. Do you like vocabulary lessons?
8. How do you usually study vocabulary at home?

### Part 3: Peer interaction

9. Do you enjoy speaking German in class with your peers (in pairs or small groups)?
10. Does the extent to which you enjoy speaking German in class with your peers (in pairs or small groups) depend on the people you are working with?
11. Do you think speaking German in class with your peers (during pair or group work) is beneficial for learning a foreign language? Do you think it will improve your speaking skills?
12. What do you prefer/what do you find more comfortable: Speaking German with the teacher in front of the whole class, or speaking German with your peers in pairs or small groups?
13. What do you think is more beneficial for your language learning: Speaking German with the teacher in front of the whole class, or speaking German with your peers in pairs or small groups?

14. Are you afraid that the mistakes that you hear your peers make during pair or group work will have a negative effect on your own language learning?

Part 4: Corrective feedback

15. Do you want your oral mistakes to be corrected in the foreign language classroom?

16. Do you want all of your oral mistakes to be corrected in the foreign language classroom?

17. If your teacher corrected your mistake in front of the whole class, would you feel embarrassed?

18. This week in class, did it happen that one of your peers didn't know a word during pair/group work?

19. This week in class, did it happen that you didn't know a word during pair/group work?

20. This week in class, have you ever noticed mistakes in your peers' speech during pair/group work?

21. This week in class, have you ever corrected mistakes in your peers' speech during pair/group work?

22. This week in class, have you ever been corrected by a peer during pair/group work?

23. Do you think it is beneficial for your language learning if your peers correct your mistakes?

24. Do you think correcting your peers' mistakes could benefit your own language learning as well?

25. When/if your teacher instructed you to correct your peers' mistakes during pair/group work, did/would that make you feel uncomfortable?

26. Are you willing to correct your peers' mistakes? Or do you think that is the teacher's job?

27. When/if a peer corrected your mistake during pair/group work, would you feel uncomfortable/embarrassed?

28. When/if a peer corrected your mistake during pair or group work, would you believe him/her?

29. If a peer corrected your mistake during pair or group work, would it be more comfortable if he/she told you the right answer right away, or would it be more comfortable if he/she gave you a chance to self-correct your mistake?

30. If a peer corrected your mistake during pair or group work, would it be more beneficial if he/she told you the right answer right away, or would it be more beneficial if he/she gave you a chance to self-correct your mistake?
31. Overall, do you prefer teacher corrections, peer corrections, or a combination of the two?

Part 5: Impact of treatment

32. What did you do in your German class this week?
33. What would you say you learned in your German class this week?
34. Did you learn vocabulary? Did you learn grammar? Did you learn about gender? Did you learn about plural formation? Did you learn about culture? Did you get speaking practice?
35. Is there anything that I haven't asked you about that you would like to tell me?

## VITA

Lieselotte Sippel

### EDUCATION

- 2013-present Ph.D. Candidate, German Applied Linguistics and Language Science, The Pennsylvania State University
- 2011-2013 M.A., *Deutsch als Fremdsprache* (German as a Foreign Language), University of Marburg, Germany
- 2008-2011 B.A. *Deutsch-Italienische Studien* (German-Italian Studies), University of Bonn, Germany, and University of Florence, Italy

### SELECTED PUBLICATIONS

- 2015 Sippel, L., & Jackson, C.N.: Teacher versus peer oral corrective feedback in the German language classroom. *Foreign Language Annals* 48(4), 688-705.
- 2015 Sippel, L., & Albert, R.: Der Brust und die Bioladen. Genuslernen mit Mnemotechniken im Anfängerunterricht. *Deutsch als Fremdsprache* 52(4), 214-222.

### SELECTED CONFERENCE PRESENTATIONS

- 2016 Sippel, L. (2016). *Peer corrective feedback for vocabulary development*. Paper presented at the Second Language Research Forum (SLRF), New York City, NY, September 22-25.
- 2016 Sippel, L., & Nimmrichter, S.: *Learners' perceptions of native language use in introductory foreign language textbooks*. Paper presented at the American Association of Applied Linguistics Annual Conference (AAAL), Orlando, FL, April 9-12.
- 2015 Sippel, L.: *The effects of peer and teacher CF on the acquisition of past participles in L2 German*. Paper presented at the Second Language Research Forum (SLRF), Georgia State University, Atlanta, GA, October 29-31.
- 2015 Sippel, L., & Jackson, C.N.: *Peer vs. teacher based oral corrective feedback in the foreign language classroom*. Paper presented at the Germanic Linguistics Annual Conference (GLAC), Brigham Young University, Provo, UT, May 8-9.
- 2014 Sippel, L., Nimmrichter, S., & Whitlock, A.: *Choosing a textbook: From the US or from Germany?* Paper presented at the PSMLA Annual Fall Conference, State College, PA, October 17-18.