PEER INTERACTIONS IN MIXED-AGE EFL SECONDARY SCHOOL CLASSROOMS

Tomas Kos

This thesis is submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy'.

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ABSTRACT

Drawing from a sociocultural framework, this study investigated peer interactions in mixed-age (M-A) English as a foreign language (EFL) secondary school classrooms in Germany which are simultaneously mixed-ability classrooms. M-A is increasingly used (Thurn, 2011), but is under-researched in language classrooms. Research in mainstream M-A classrooms suggests benefits for both younger and elder learners (Kuhl et al. 2013; Little, 2001; Thurn, 2011; Veenman, 1995). Although some research has been conducted in L2 mixed-proficiency settings, there has been no study conducted on peer-interactions within M-A groups/pairs in L2 contexts.

Twelve mixed-age pairs of young adolescent learners were audio-recorded when interacting on regular classroom tasks, which were a part of one unit of work, lasting a period of two and half months. After the unit of work, individual interviews were conducted in order to elicit learners' perceptions of their interactions. Results show that M-A pairs formed predominantly patterns of interaction, which are conducive to learning, namely *expert/novice* and *collaborative* pattern (Storch, 2001a). One pair was

identified as *dominant/dominant* and one pair could not be identified according to Storch's framework and was identified as *expert/passive* (Watanabe & Swain, 2007).

With regards to the extent and ways of assistance provided, some pairs assisted one oanother in ways similar to teacher scaffolding, while some in ways which resemble to what Donato (1988, 1994) called *collective scaffolding*. Results also show eight out of ten younger learners, which were the focus of the analysis, showed some level of increased independence of target-like use. However, the extent of target-like use use varied greatly across learners. In relation to perceptions of their interactions, the majority of peers expressed a positive attitude towards their interactions, and perceived an equal contribution of both partners to their joint work. However, while younger peers perceived learning outcomes, some of their elder partners did not.

INDEX WORDS: patterns of interaction, peer assistance, LREs, peer perceptions, classroom tasks, sociocultural theory

I declare that this thesis is my own work. I also declare that it has not been submitted in substantially the same form for the award of a higher degree elsewhere.

DEDICATION

To my loving father for all his hard work and support

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by

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1. INTRODUCTION

Having taught English as a foreign language and other subjects in primary and secondary school mixed-age (M-A) classrooms for the past 8 years, I soon came to realize both their potential benefits as well as pitfalls. I also came to know the enormous pedagogical importance of peer interactions in these classrooms because many classroom tasks were completed in an interaction with a partner. I also became aware that my role as a teacher was very different to that in teacher-centred classrooms I had taught before. Teacher-led sessions in my M-A classrooms were less frequent, and were mostly limited to an introduction of a new topic or of a new language. There was less time to practise newly introduced language together with my learners. A great deal of such work was done by students themselves during so-called study times, during which I was present only to a certain extent. My role in such study times was to circulate during individual or group work and, on occasion, to provide explanations or to serve as a resource. During study times students often had to rely either on their own language resources or on those of their peers.

As a teacher in these classrooms, I simply wanted to know whether there is a pedagogical value for elder (usually more proficient) students to be paired with younger (usually less proficient) students. For example, given that a great deal of work is done in peer interaction, in pairs or groups composed of learners of differing ages *and* language proficiencies, I felt it was important to know whether and how they can support each other in order to complete their tasks in ways that would be beneficial to each individual learner. In fact, I was always inclined to believe that there are differences between teaching and instruction on one hand, and interactions among peers on the other. For example, my teaching experience suggested to me that although it is likely that the more capable or knowledgeable peer in a dyad composed of secondary school learners is able to recognize the less capable partner's current language abilities, I believed it to be unlikely that he/she would be capable of creating the necessary possibilities for development by assisting his/her partner in a way that would promote language development. My personal view was that the process of recognizing where the partner is, providing appropriate support, and transferring of control to the less capable student is very delicate and arguably something that secondary school learners may not be capable of performing.

After I had taught in M-A classrooms for nearly three years, I began my studies at Lancaster University. I began to investigate about theories of language learning and pedagogical practices which could deepen my understanding of peer interaction and its potential within learner-centred pedagogy in theoretical terms. I also hoped to find practical advice which could support my teaching endeavour in M-A classrooms. Later, during my studies, I conducted two pilot studies, in which I used tasks as a teacher/researcher to elicit particular linguistic features, interactional behaviour, attention to form and deliberations about form. As my knowledge about language theories and tasks deepened, I began to see how M-A peer interactions on classrooms tasks could be investigated while drawing on theories of language learning. I intended to provide some evidence of how M-A age peer interactions may promote language learning, thus validating the theory in a new context.

The very conceptual underpinnings of the mixed-age (M-A) classrooms is based on the notion that the elder students learn by helping their younger partners, while the younger learn by being helped by the elder (Kuhl et al. 2013; Little, 2001; Thurn, 2011; Veenman, 1995). In fact, due to the learner-centred approach which is prevalent in these classrooms, learners very often have no other choice but to obtain help from their peers as the teacher is busy working with other learners or groups (Thurn, 2011). This is also the case at the research site.

It follows that peer interaction, and in particular peer teaching and peer assistance are the pillars on which M-A classrooms stand, as a great deal of learning is done in peer interaction. In other words, the quality of learning greatly depends on the quality of peer teaching and peer assistance. Hence, one of the most important roles of the teacher in M-A classrooms is to create opportunities for learners to engage in communication with each other, and in meaningful peer interaction. However, if we are to understand M-A classrooms so that we can develop efficient teaching approaches and create successful learning environments, we need to understand what occurs when peers of differing ages and proficiencies interact on classroom tasks. We need to understand to what extent and in what ways they provide assistance to one another when carrying classroom tasks, which may also be beyond one or both linguistic level. In other words, because pairs/groups in these classrooms are usually composed of learners of differing ages *and* language proficiencies, it is important for both, language teachers and researchers of M-A classrooms to know if there is pedagogical value for elder (usually more proficient) students to be paired with younger (usually less proficient) students.

Unfortunately, we know very little from the general education research about peer-interactions among learners in M-A classrooms. Moreover, although some research has been conducted in L2 mixed-proficiency settings, to my knowledge, there has been no study conducted on peer-interactions within M-A groups/pairs in second language classrooms. This research project aims to bridge this gap.

The study explores classroom based peer interactions in M-A EFL secondary school classrooms that are simultaneously mixed-proficiency classrooms. The overarching goal is to bridge the gap in our knowledge regarding M-A peer interactions and assistance in M-A second language classrooms. The study has three main aims. The primary aim is to explore to what extent and how M-A peers provide assistance to each other in order to complete classrooms tasks assigned to them by the teacher. For example, it aims to explore whether assistance comes necessarily from the elder (more knowledgeable) to the younger (less knowledgeable) or whether it flows in both directions. In other words, it investigates whether assistance provided during such interactions may resemble the kind of mediated assistance provided during teacher-learner interaction or whether it is similar to what Donato (1994) calls collective scaffolding, which refers to a form of peer assistance, where the flow of assistance is not directed by one learner but rather it is distributed across all learners of the pair or group during collaborative activity. In order to investigate forms of assistance provided within pairs, episodes of assistance were identified in the transcribed audio-data. The qualitative analysis show how learners provided assistance to one another. It also shows to what extent such assistance may promote increased independence of target-like use of language targeted by the tasks. Furthermore, applying Storch's (2001a) framework, the secondary aim is to examine patterns of interaction the pairs establish. This is important as Storch (2001a) has shown that only some patterns of interaction may be conducive to learning. Finally, the third aim is to explore how learners perceive their interactions with elder (upper grade) or younger (lower grade) partners. This is important as research (Watanabe & Swain, 2007; Watanabe, 2008) has shown that learners' perceptions of their interlocutor impacts on their engagement with each other's contributions, and thus affects opportunities for learning. Learning about learners' perceptions is especially important, as pairs under investigation are learners of different ages and proficiencies. For example, perceiving a partner as a novice with low abilities can result in dominant behaviour by the elder/more proficient learner and with the

younger/less proficient learner taking a rather passive role (Watanabe & Swain, 2007; Watanabe, 2008).

This study contributes to the available body of EFL research by providing a picture of actual peer collaborative dialogue among M-A learners when engaged in common foreign language classroom tasks assigned by the teacher as studies which investigated peer interactions in foreign language (FL) classrooms are rare (Davin & Donato, 2013; McDonough, 2004; Moranski & Toth, P. D., 2016; Philp & Tognini, 2009; Philp, Walter & Basturkmen, 2010; Toth, Wagner & Moranski, 2013 in press; Williams, 2001). It also contributes to the body of research which has explored peer assistance (Antón & DiCamilla, 1999; Davin & Donato, 2013; DiCamilla & Antón, 1997; De Guerrero & Villamil, 2000; Foster & Ohta, 2005; Gagné & Parks, 2013; Nassaji & Jun Tian, 2010; Ohta, 2000, 2001; Shehadeh, 2011; Tharp & Gallimore, 1991), and in particular the ways of assistance among peers of differing proficiencies (Ohta, 2000; Storch & Aldossari, 2012; Watanabe & Swain, 2007). Moreover, participants in the majority of studies on peer interaction have been high school, university or adult students (Storch, 2001a; Storch, 2008; Watanabe & Swain, 2007), and only a small number of studies investigated younger learners or children (Qin, 2008; Philp, Oliver & Mackey; 2006). Hence, this study contributes by exploring whether forms of assistance found among adult students resemble those found among young adolescent learners. In a similar vein, it contributes by investigating whether Storch's (2001a) framework of patterns of interaction also applies to interactions among young adolescents. The thesis also sheds some light on how peer assistance and patterns of interaction may be related to learners' age, proficiency and to learners' production of and engagement with *Language Related Episodes* (LREs) as has been shown by some studies involving high school learners and adults (Nassaji & Jun Tian, 2010; Storch, 2001a, 2007, 2008; Watanabe & Swain, 2007). It also contributes to the body of research which has investigated the relationship between task type and the occurrence of LREs (Alegria de la Colina & García Mayo, 2007; Fernández Dobao, 2012; Nassaji & Jun Tian, 2010). It has to be, however, mentioned that some classroom tasks used in this study were similar to the tasks as defined by the TBLT (task-based language learning and teaching) framework (Ellis, 2003; Samuda & Bygate, 2008), and some were language exercises. Finally, it contributes to the body of research which has explored how peers perceive their interactions (Fernández Dobao, 2012; Kim & McDonough, 2008; Nassaji & Jun Tian, 2010; Shedadeh, 2011; Watanabe & Swain, 2007; Watanabe, 2008).

It should be noted that one of the drawbacks of the study is that its design does not allow for an empirical measurement of second language development. It only allows for estimating the potential of M-A peer interactions to promote increased independence of their target-like use of a linguistic structure targeted by a task. In this thesis, I will first review literature relevant to M-A classrooms, to peer interaction in mixed-proficiency settings and learners' perceptions of their interactions (Chapter Two). Chapter Three will provide the basic underpinnings of Sociocultural theory, and review the literature related to peer interaction conducted by sociocultural researchers, with the focus on the research on peer assistance. Chapter Four will explain the methodology applied in the study. Chapter Five will provide an explanation of procedures in the data analysis. Chapter Six, Seven, Eight will present findings related to research questions one, two and three, respectively. Finally, I will conclude in the Chapter Nine which also includes limitations of the study, pedagogical implications, and thoughts on future directions.

2. LITERATURE REVIEW

This chapter will first address the general education research conducted in M-A classrooms. It will be followed by a review of L2 research on peer-peer interaction in mixed-proficiency settings. I will then discuss the relevant research related to patterns of interaction, and learners' perceptions of their interactions. The literature related to peer assistance and its role in L2 learning will be discussed together with the underlying theoretical framework in the chapter three.

2.1 Research on M-A classrooms

Classrooms which consist of two or three different grades are called M-A classrooms (sometimes referred to as *multi-grade*, *mixed-grade* or *composite classes*). In one M-A class the grades can range from the 1st to the 3rd, from the 4th to the 6th and from the 7th to the 9th grade in the case of three-grade classrooms. Schools that set up M-A-age classes do so either out of demographic and economic necessity (Smit et. al, 2015), or mainly because of the belief of the teaching community in the positive pedagogical and social outcomes of this approach. The latter is the case at the research site. Schools that set up M-A classes based on such a belief, have become a common phenomenon not only in Germany but also worldwide (Hattie, 2002; Kalaoja & Pietarinen, 2009; Lindstrom & Lindahl, 2011; Little, 2001; Veenman, 1995).

2.1.1 Some benefits and pitfalls of M-A classrooms

One of the main arguments for M-A classes is that grouping learners simply according to their age does not take learners' cognitive and social development into account (Thurn, 2011). In other words, the supporters of M-A classes claim that even children of same-age classes do not share the same level of academic performance, maturity, sociocultural experiences, interests and abilities (Gerard, 2005, p.243; Thurn, 2011). On the other hand, the philosophy of grouping children across ages and grades is based on the belief that so doing aids cognitive and social growth and diminishes antisocial behavior (Hoffman, 2003, p. 6, Hartup, 2005). For example, Song et al. (2009) argue that M-A classrooms afford more cooperative behavior and diminish competition as they represent "a natural environment for social behaviors to thrive such as helping, sharing, and taking turns" (p.5). It is also often claimed that the younger learners benefit

from being tutored or mentored by their elder peers, while the elder learners benefit from teaching the younger ones (Little, 2001; Veenman, 1995). For example, through elder peers' modeling of "more sophisticated approaches to problem solving", younger learners are able to accomplish tasks which they would not have been able to do alone without this assistance (Song et al., 2009, p.5; Spradlin & Plucker, 2009). On the other hand, younger learners benefit by being encouraged to use more sophisticated skills in order to engage their elder expert peers (Song et al., 2009). In addition, tutoring younger children is said to solidify elder peers' own understandings, and is argued to be of a metacognitive value for learning in M-A groups as it promotes cognitive conflict (DeVries, 1997; Little, 2001; Smit & Engeli, 2015; Veenman, 1995). According to the theory of Piaget (1985), cognitive conflict originates when children's prior beliefs encounter new beliefs in interactions with one another. The conflict between prior beliefs and newly encountered beliefs is then resolved in the process of equilibration. This conflict is argued to be a catalyst for learning in M-A classrooms (DeVries, 1997) because children internalize new understandings through experiences of cognitive conflict during interactions with children of mixed-ages (Song et al., 2009) as topics, themes, or subjects are revisited throughout the grades in M-A classrooms (Harden, 1999). Another mentioned benefit of M-A classrooms is that all students, regardless of age, develop intellectual and communication skills as a result of wider differences in the learning community, and master skills as a result of modeling for diverse learners (Song et al., 2009, p.5). Important for language development is also the notion that during M-A interactions, the elder children afford the younger children with more complex play and language, which the younger children would not be able to produce by themselves, yet (Gerard, 2005). For example, they may use a more complex vocabulary, descriptions, or engage in more complex conversations than in same-age contexts (Gerard, 2005).

With regards to the pitfalls of M-A classrooms, the research commonly states that teaching in M-A class teaching is more difficult than in single-grade classes (Mason & Burns 1996, 1997; Veenman 1995). Teachers report difficulties in implementing and operating M-A teaching due to their lack of training to meet all students' needs. For example, they seem to have difficulties to sufficiently challenge elder students while keeping the younger children engaged and confident in their learning abilities (Benveniste & McEwan, 2000; Berry & Little, 2007; Veenman, 1995). This is certainly an important pedagogical issue. However, the difficulties that teachers may have also

depend on the context, as a poorly resourced and widely heterogeneous single-grade class can be more difficult than a well-resourced M-A class with appropriate support structures (Mulryan, 2007).

The research is inconclusive with regards to cognitive development and academic performance of M-A vs. same-age learners. Some researchers found no differences in academic performance or in social skills to single-grade classrooms (Gutiérrez & Slavin, 1992; Hattie, 2002; Kuhl et. al, 2013; Quail & Smyth, 2014; Veenman, 1995). In contrast to this, Lindström and Lindahl (2011) in a study conducted in Sweden, where M-A classrooms are increasing, found that M-A classes have a significantly negative effect on 4-6 grade cognitive development measured by cognitive tests. This runs counter to the claim that complex social settings are essential for the development of children's thinking (Piaget & Inhelder, 1975). Gerard (2005, p. 249) calls for more research which would examine cognitive gains made across time and study of achievement, reaching into the secondary years for M-A students. Such research should include qualitative images of cognitive growth in M-A classrooms. However, Smit and Engeli (2015) argue that rather than single-grade vs. multi-grade research in terms of academic performance, research is needed that would examine the effects of good mixed-age teaching on achievements. In line with other studies (Kuhl et al., 2013; Quail & Smyth, 2014; Wilkinson & Hamilton; 2003), Smit and Engeli (2015) claim that it is the quality of teaching which is attributable to learners' achievements in M-A classrooms.

Research in general education has explored peer tutoring among cross-age (not identical to M-A context) and same-age peers and their effects on learning gains. Studies by Topping (2005, 2011) and Topping and Bryce (2004) found that peer tutoring may promote learning of both the tutor and the tutee. Interestingly, in their study which involved tutors and tutees of similar abilities, they found that same-age peer tutoring may boost similar learning gains as cross-age peer tutoring. However, they also explained that the effectiveness of peer tutoring is increased if students are allowed to choose to be a tutor or a tutee, according to the task and its nature (Topping & Bryce, 2004). Contrasting results were found by Robinson, Schofield and Steers-Wentzell (2003) who reported that cross-age tutoring hinders establishment of reciprocal tutoring, and is therefore not as effective as same-age tutoring. Similarly, the study by Duran and Monereo (2005) showed that an interaction between a tutor and a tutee in an equal, reciprocal nature is most effective in terms of learning gains.

2.1.2 Teaching strategies in M-A classrooms

Research has also addressed teaching strategies that are applied across various types of M-A classrooms. Teaching strategies seem to depend on the particular school policy, and it is not known which strategy generally prevails (Lindström & Lindahl 2011). For example, teaching can take place ultimately in M-A (multi-grade) lessons. Such teaching of the same instructional material across grades (ages) for pedagogical reasons is often called M-A or multi-age teaching (Mason & Burns, 1997; Smit & Engeli, 2015). In this approach, the whole class is taught simultaneously; and students are given differentiated tasks according to their ability and regardless of grades. Pedagogical practices are based on a curriculum integrated for all age groups of the class, and not for each group separately (Hoffman, 2003; Smit & Engeli, 2015). This is also the case at the research site. Teaching can also take place as a combination of multi-grade and same-grade lessons. In other words, classes can be split between grades, and some subjects can be taught in multi-grade classes while for some subjects or activities students are grouped by grades (Cornish, 2006; Smit & Engeli, 2015).

Research has also investigated the use of cooperative methods in M-A classes. It suggests that teachers' lack of use of cooperative methods limits opportunities for peer support learning and collaborative learning experiences that are generally afforded by cooperative methods (Aðalsteinsdóttir, 2008). Teachers also tend to be unaware of the benefits of flexible groupings. For example, Lloyd's study (1999) involved teachers' beliefs about flexible grouping. It showed that teachers do usually group students within one grade, and not across grades, which corresponds to their common practice of teaching M-A classes as two separate grades, rather than as a group of children, regardless of age (p. 244). Despite the fact that teaching and the lesson structure depend on the inclinations of each particular teacher, research suggests that flexible groupings hold a great promise. For example, Chapman (1995, p.425) recommends to use a variety of strategies rather than searching for the best one. Importantly, if learning of new conceptual knowledge is involved, maximum support of a teacher must be provided (p.425). This can be achieved in the form of whole-class experiences or small-group, teacher led instruction. Chapman (1995) underlines the need to group and regroup, and suggests that "one way to think of grouping is by applying Vygotsky's (1978) notion of the zone of proximal development" (p.425). She argues that the most important role of the teacher is to provide learners with opportunities to learn both at their *developmental level* (where they are at now) and in their *learning zone* (potential levels). Chapman

(1995) says that M-A teaching is often grounded in either social learning theories such as Sociocultural theory which is based on the notion that learning is a social mediated activity (Vygotsky, 1978), or in constructivist theories of learning which underline aspects such as individualized learning, meta-cognition, "active learning" or learning from experts (cognitive apprenticeship) (Smit & Engeli, 2015). Constructivist theories of learning hold that knowledge and development are individually constructed (Lourenço, 2012). For example, Piaget saw the individual's level of development as a condition for all a child learns. In other words, what a child learns, such as facts, norms, concepts, and values depends to a great extent on her current level of development and understanding (Lourenço, 2012, p.287). What is more, a child's development is not determined by social factors, although they are necessary (p.287, see Piaget & Inhelder, 1969 for a more detailed description). This is in contrast to Sociocultural theory which holds that a child develops as she interacts with others (Vygotsky, 1978). The relationship with others established by a child is essential for the child's cognitive development (Lourenço, 2012). According to Smit and Engeli (2015, p.137), constructivist notions of learning go hand-in-hand with teaching approaches based on learner-centeredness and a differentiated instruction which is due to age-related heterogeneity. Smit and Engeli (2015) reviewed several studies on M-A teaching (Hargreaves, 2001; Hoffman, 2002; 2003; Little, 2007; Stone, 1998) and have found seven central elements of mixed-age teaching which are as follows: (1) the role of the teacher as a facilitator; (2) differentiated and individual learning; (3) cooperative learning or socially collaborative classroom; (4) flexible and multi-age grouping, where elder pupils may become tutors of the younger ones; (5) common learning topics for different levels; (6) open-ended, problem-oriented learning tasks; and (7) formative assessment (p. 137). Of particular importance for the current study are the elements of socially collaborative classroom (3), and open-ended, problem-oriented learning tasks (6). The former implies "supportive classroom climate, in which students help each other and collaborate flexibly" (Smit & Engeli, 2015, p.138). Moreover, a socially collaborative classroom indicates that learners work on tasks collaboratively in pairs or in small groups. This goes hand-in-hand with socio-constructivist theories of learning which see learning as a process occurring between learners in a social context (Smit & Engeli, 2015, p.138). Furthermore, a socially collaborative classroom implies that M-A pairs or groups need to learn how to help one another in order to collaborate effectively (p.138).

The latter element of the use of open-ended, namely explorative and problem-oriented tasks in M-A classrooms (Benveniste & McEwan, 2000; Stone, 1998) implies that tasks must be carefully selected if students of differing ages and abilities are to participate within the same topic or theme (Broome, 2009; Hoffman, 2002; Smit & Engeli, 2015, p.138). In line with Vygotskyan perspective, it is expected that during work on such an open-ended task, support is provided by a more able student to a less able student. Support can be provided for example, by skill modeling or scaffolding (Wood, Bruner, & Ross, 1976). In relation to this, some researchers also suggested to implement a spiral curriculum (Bruner, 1960), which means that topics, subjects or themes are iteratively revisited throughout the grades (Harden, 1999 in Smit & Engeli, 2015, p. 138). As Smit and Engeli (2015, p. 138) explain, differentiated tasks are created prior to the school year, based on a consideration of the scope and the sequence of the subjects for all grades. This is also the case at the research site.

Of particular importance for this study is the teaching strategy called *weekly plan,* which is used mainly in German-speaking coutries, in order to implement differentiated and individualized instruction (Smit & Engeli, 2015, p. 139, Koerrenz, 2011; Thurn, 2011). A weekly plan contains subject areas or assingmnents tailored for individual students or groups, and which are to be completed by the end of the week. A weekly plan may also include tasks which are "non-obligatory for additional training or those that are especially challenging" (Smit & Engeli, 2015, p. 139). At the study site, the so-called *study plan*, a slight modification of the weekly plan was used (see Chapter 4).

Finally, among the central elements mentioned by Smit and Engeli (2015) is the notion that the teacher's role in M-A classrooms differs to that in traditional same-age classrooms. Rather than transmitting knowledge to all students at the same time, teachers in M-A classrooms instruct individually (Miller, 1991). What is more, their role is to create learning environments in order to stimulate learners' efforts to engage in learning processes, and construct knowledge individually or with their peers (Benveniste & McEwan, 2000).

2.2 L2 research on peer-peer interaction in mixed-proficiency settings

As mentioned above, L2 research into M-A peer interactions is still lacking. There has, however, been a considerable body of research conducted in mixed-proficiency settings. In fact, previous studies have shown that how learners are grouped impacts on language learning and some groupings are argued to be more conducive to learning than others (Guerrero & Villamil, 1994; Kowal & Swain, 1994, 1997; Leeser, 2004; Lockhart & Ng, 1995; Storch, 2001a; Watanabe & Swain, 2007; Yule & Macdonald, 1990). Although the research in mixed-proficiency settings has been carried out among same-age learners, it is of particular relevance to this study in that it involves interaction among learners whose proficiencies differ. This line of research has mainly addressed the following issues: The effect of proficiency difference within a pair or group on 1) negotiation of meaning, 2) scaffolding, 3) focus on form and 4) patterns of interaction. Research suggests that it is difficult to predict the effects of proficiency on interactions. However, there are patterns which appear across studies. For example, as proficiency within a pair/group increases, learners tend to attend to form more often (Leeser, 2004; Williams, 1999). In other words, it is high proficiency (HP) learners rather than low proficiency (LP) learners who are more likely to contemplate language form and resolve linguistic problems they encounter when collaborating on tasks. Learners, however, attend to lexis regardless of their proficiency (Kim & McDonough, 2008; Leeser, 2004; Williams, 1999) and negotiate meaning more when proficiency differences among partners increase (Long & Porter, 1985; Varonis & Gass, 1985). For example, Lee's study (2008) examined the effects of mixed-proficiency pairing on scaffolding using synchronous computer-mediated communication (CMC). The results show that the "novices" were provided both, linguistic and cognitive assistance by the "experts" in the process of feedback negotiation. As a result of the negotiation of corrective feedback, the novices self-repaired their errors and incorporated correct forms into their follow-up turns (p.58). However, Lee suggests that "cognitively, it may not be possible for the novices to pay attention to the meaning and the form simultaneously" (p.58). However, these findings are related to CMC that is contextually different from face to face interactions.

Leeser (2004) who investigated interactions of 21 pairs of Spanish (L2) learners on a dictogloss task concluded that the most suitable pairing for the HP learners is with fellow HP learners. Although LP learners may benefit from being paired with their HP partners, the HP partners may simply be disadvantaged.

In a similar vein, Kowal and Swain (1994) caution that heterogeneous groups may not work more effectively than homogenous because the HP learner can even leave out his LP partner from the interaction. Kowal and Swain's (1994) study examined the effects of mixed-proficiency peer interaction on scaffolding. The study was based on the data with grade eight French immersion students organized in both similar and mixed L2 proficiency pairs. Kowal and Swain (1994) suggest that the LP partner may be disadvantaged in a mixed-proficiency pairing and that LP learners may feel more comfortable when interacting with peers rather than with HP partners. A HP learner may dominate the interaction when paired with a LP learner, particularly when the proficiency gap between the two partners is too large. Such a large proficiency gap may cause group members to not respect each other's perspectives or trust each other's opinions and therefore endanger successful scaffolding. The researchers report that HP learners tended to accomplish all the work because the LP students were afraid to contribute to the task due to their limited proficiency even though their ideas were accurate. These results are somewhat similar to those reported by Leeser (2004) which indicated that LP learners might not benefit from being helped by HP learners as they may not be developmentally ready to discuss some linguistic problems. In the similar line of reasoning Ellis (2003, p. 268) cautions that the varying proficiency level is likely to hinder the completion of the task as the HP learners "will try to dominate and the LP students will get their peers to do the work for them."

Kim and McDonough (2008) investigated the effect of proficiency pairing on the number of LREs produced in the L2 (Korean) classrooms. They found that more LREs were produced and correctly resolved by intermediate-advanced pairs than by intermediate-intermediate pairs. This suggests that linguistic resources of the advanced learners were necessary to produce and resolve LREs. What is more, confirming Leeser's findings (2004), the study found that with the increased proficiency level within a pair/group, learners tend to attend more to form, but they attend to lexis regardless of their proficiency. The study also considered the type of relationship the pairs formed. Learners formed different relationships when working with a fellow intermediate or more advanced partner. For example, learners who formed a collaborative relationship with a fellow intermediate partner were passive when paired with a more advanced partner. On the other hand, learners whose behaviour was dominant when paired with an intermediate partner formed a collaborative relationship when interacting with an advanced partner. This suggests that the proficiency

differences do impact on the pattern of interaction formed or (and) that perceptions of the interlocutor's proficiency may as well be of some importance.

Different findings come from the study conducted by Watanabe and Swain (2007) which investigated the role of relationship in production of LREs and learning among adult learners. They found that more LREs were produced by learners who collaborated in comparison to pairs where the interaction was dominated by one learner. The pairs who collaborated also showed more evidence of learning (Storch, 2001a). This study suggests that differing proficiency groupings may be conducive to learning, given that pairs collaborate. However, the possibility that pairing of learners of proficiency differences may result in different patterns of interaction was admitted by both researchers.

While Watanabe and Swain's (2007) study investigated only pairs composed of learners of differing proficiency, Storch and Aldosari (2012) considered whether pairs composed of learners of similar proficiency are more likely to build a collaborative pattern of interaction than different proficiency pairs. This study focused on the nature of pair work in an English as a Foreign Language (EFL) class in a college in Saudi Arabia. It investigated thirty learners of a heterogeneous class completing a short composition. Pairs were of similar (high-high, low-low) and mixed L2 proficiency. The analysis focused on the learner's overt focus on language use and amount of L2 used and considered the effect of proficiency pairing and patterns of interaction formed within pairs. They found that proficiency pairing impacted on the number of LREs produced. For example, the largest number of LREs was produced by H-H pairs, followed by H-L and by L-L. In other words, H-H pairs focused more on form than other pairings. However, no impact of proficiency pairing on the amount of L2 used was found. With regards of the relationship between patterns of interaction and LREs, the study found that collaborating pairs produced the highest number of LREs. L-L pairs produced few LREs even when collaborating. In addition to this, low proficiency learners benefited from being paired with their fellow high proficiency learners only when they formed a collaborative or expert/novice relationship (p. 43). Storch and Aldosari (2012) conclude that rather than proficiency pairing it is the relationship formed that may be of greater significance (see also Watanabe & Swain, 2008). However, given that low proficiency learners produced LREs only when paired with their high proficiency fellows suggests that proficiency differences may have greater impact than is suggested by the researchers. For example, LREs are more likely to be

produced and resolved in the presence of a higher proficiency learner, although the aim and the nature of the task as well as its cognitive demands do certainly have an impact. As Storch and Aldosari (2012) rightly point out, the aim of the activity must be taken into consideration when making decisions regarding the optimal pairing of students in heterogeneous classes.

Another study that has shown that students do benefit from mixed-proficiency groupings is the study conducted by Davin and Donato (2013). The study found that students at varying levels of proficiency were able to collaborate in order to create a list of questions in Spanish. It also showed how they were able to take responsibility for peer scaffolding. In contrast to the above mentioned studies, this study was conducted in the primary school setting. The researchers claim that with early language learners in particular, grouping learners "based on compatible personalities is more important than grouping based on proficiency level" (p.46). This study confirmed findings from previous studies (Donato, 1994; Ohta, 2001) that mixed-proficiency groupings are beneficial. For example, it showed that learners organized in mixed-proficiency pairs are sources of new orientation for each other, are capable of pooling their linguistic resources in order to guide each other through complex linguistic problem solving (p.46). As such, peers can be simultaneously experts and novices, thus complementing each other's weaknesses and strengths (see also Ohta, 2000). In line with Ohta (2001), Davin and Donato (2013) claim that it is inappropriate to label the peers as 'more' or 'less' capable or proficient learners. This seems to run counter to Vygotsky's theory (1987), which is based on the notion that only a person who is more competent is able to help a person who knows less to achieve autonomy. However, the reviewed studies show enough evidence to say that L2 learners can learn with other L2 learners who might be less advanced than they are. Importantly, they learn more when they collaborate. In other words, the relationship they form is important for learning, as explored below.

2.3 Research on patterns of interaction

Some of the above mentioned studies suggest that organizing learners into heterogeneous pairs/groups in terms of proficiency is likely to result in greater collaboration than grouping learners of the same proficiency levels (Storch, 2001a, Storch & Aldosari, 2012; Watanabe & Swain, 2007). In relation to this, research has

shown that an important factor that impacts on second language development is the quality of learners' engagement (Damon & Phelps, 1989) and the patterns of interaction established by the learners when working on a task (Storch, 2001a). Quality of engagement is explained by Damon & Phelps (1989) in terms of equality and mutuality. Both partners' engagement is equal if both parties take direction from another, rather than one party submitting to a unilateral flow of direction from the other (p. 10). In other words, equality refers to an equal amount of control over the direction of a task. Interaction is high on equality when learners equally contribute to the task and regularly take directions from one another. Mutuality means that the discourse in the engagement is extensive, intimate, and connected (p. 10). In other words, mutuality is high when both learners frequently engage with each other's contributions, providing a rich reciprocal feedback and sharing ideas (p.13).

Referring to the sociocultural theory, Storch (2001a; 2002) investigated the nature of pair interaction in an adult classroom. Storch was mainly interested in how students approach the task, the roles they assume, and "the level of involvement and contribution of each member of the dyad to the task" (2002, p.126). She found four distinct patterns of interaction (collaborative-dominant/passive-dominant/dominant-expert/novice). Based on Damon and Phelps (1989) she distinguishes these patterns in terms of equality and mutuality. She suggests that it is collaborative pattern of interaction, which is the most conducive to learning because in the collaborative pattern, both students work together throughout the whole task and help each other. The collaborative and expert/novice patterns also resulted in more knowledge transfer than in the case of pairs that formed non-collaborative patterns of interaction such as dominant/dominant and dominant/passive. It follows that a consideration of patterns of interaction is important as how learners are organized in a group and how they engage with each other's contributions may impact on learning and development. It is especially important, as the pairs under investigation are learners of different ages and proficiencies. For example, it is likely that such a pairing of learners would result in an unequal interaction with a low degree of engagement with each other's contributions if the task-based work were dominated by the older and/or by the more proficient learner while the younger and/or less proficient learner's participation were passive (Kowal & Swain, 1994; Leeser, 2004). It is therefore important to investigate what pattern of interaction is likely to be formed when learners are organized in M-A (simultaneously mixed-proficiency) pairs, and how it may impact on learning. It is important to note that Storch conducted

her studies with adults, and because the ways adults and younger learners differ, her findings may not be applicable to younger learners' settings.

2.4 Research on learners' perceptions of peer-peer interactions

Vygotsky (1978, 1986) argued that knowledge and cognition are constructed through social interaction. Bearing this in mind, a consideration of how social relationships impact on the nature of interaction, and thus learning, is important. However, only a few studies on peer–peer interactions have focused on participants' linguistic behaviour during the interaction and elicited learners' perceptions, attitudes or feelings about the interactions they experienced (Fernández Dobao, 2012; Fernández Dobao & Blum, 2013; Kim & McDonough, 2008; Nassaji & Jun Tian, 2010; Shedadeh, 2011; Storch, 2005; Watanabe & Swain, 2007; Watanabe, 2008). Studies without such accounts ignore the role of emotions impacting learning outcomes (Swain & Miccoli, 1994; Swain, 2011), or the fact that each learner displays his/her own agency during their classroom learning (van Lier, 2000, 2008). Agency was defined by Ahearn (2001, p. 112) as "the socioculturaly mediated capacity to act" which also "entails the ability to assign relevance and significance to things and events" (Lantolf & Thorne, 2006, p.143).

Studies have mainly investigated second and foreign language learners' perceptions and attitudes toward collaborative writing activities. Studies have generally report learners' positive perceptions toward the collaborative writing experience. For example, the participants in Storch's (2005) study mentioned that pair work allowed them to pool their linguistic resources, and to express their ideas in different ways. They also reported enhanced grammatical accuracy and vocabulary learning. However, five participants expressed some reservations, which were related to their limited language abilities, which in turn made them cautious to express their opinion. Two participants expressed feelings of nervousness and embarrassment by their limited language skills.

Shehadeh (2011) compared individually and collaboratively working learners of English as a foreign language. Similar to Storch's study, most learners reported a positive experience. In addition, collaborative writing afforded learners with opportunities to share and generate ideas, to discuss and plan, to give each other immediate feedback, and to improve the quality of their texts. Learners also mentioned enhanced self-confidence and speaking and writing skills.

Fernández Dobao and Blum (2013) investigated Spanish FL students' perceptions and attitudes toward collaborative writing in pairs and in small groups. Students who worked in pairs valued active participation while students interacting in small groups mentioned that they were able to share more ideas and knowledge, and therefore more opportunities for language development. Interestingly, a third of all learners did not perceive a positive influence of collaborative activity on linguistic accuracy or L2 development (p.375) but merely as "an opportunity to practice previously acquired knowledge of the foreign language" (p.375). Moreover, majority of learners perceived that "little or no learning can occur from working with other learners or the same proficiency level, even though the analysis of their interactions revealed the contrary" (p.375). This points to the gap between what learners perceive and what actually occurs. As Fernández Dobao and Blum (2013) rightly conclude, such findings "highlight the importance of raising learners' awareness of the potential and actual beliefs of the activities they are asked to perform in the classroom" (p.375).

Finally, Watanabe's (2008) study which explored interactions and reflections of adult ESL learners who interacted with either a higher- or a lower proficiency peer on problem solving tasks. Regardless of their partner's proficiency level, peers reported that they prefer working with adult peers who shared many ideas (p. 627). Importantly, learners valued that their partners were willing to engage in collaborative dialogue with them, regardless of whether they were more proficient or less. This seems to indicate that these participants valued collaborative dialogue as an opportunity for learning (see also Watanabe & Swain, 2007). However, not all pair work seemed to have provided occasions for learning. The higher proficiency learner of the expert/passive dyad did not seem to trust in or expect much from his lower proficiency partner in terms of contribution to their pair work. This in turn made his lower proficiency partner take on a passive role. In contrast to this, learners who despite of proficiency differences between them, formed collaborative pattern of interaction, perceived their contributions to be equal which in turn seemed to have positively impacted on their interactions. This finding led Watanabe to suggest that "the way individual learners interact with their partners affects the way their partners interact with them, regardless of their proficiency differences" (p.626-627). According to Watanabe (2008), this explanation is to be attributable to learners' agencies and the varying relations among agencies in particular, which are sometimes conflictive and sometimes collaborative. The strength of the design of Watanabe's study is that through the examination of how the *same* student

interacts with peers of different proficiency levels, the co-constructed nature of agency is revealed (p.627).

2.5 Summary

To sum up, the relevant research suggests that it may not be proficiency differences that are the main moderating factors of collaborative work, but the relationship between pair members, the pattern of interaction co-constructed by both learners and their perceptions of the partner's language competence that might have greater impact (Storch, 2002, Watanabe & Swain, 2007; Watanabe, 2008). It follows that how individual learners interact with their partners will greatly influence how their partners interact with them, regardless of their proficiency differences (Watanabe, 2008). However, although proficiency differences within pairs/groups do not seem to directly impact on the nature of peer assistance and L2 learning, they can create a different pattern of interaction, which will have an effect on learning (Storch & Aldosari, 2012). The present study, therefore, seeks to understand the patterns of interaction found among the pairs and potentially the relationship between patterns of interaction and the extent and quality of assistance provided among them (Storch, 2001a). Although the discussed studies were conducted in different socio-historical contexts, in which approaches to teaching and learning differ from the context of this research study, and their implications for studies involving secondary school learners in FL settings must be taken with caution, they do address important issues that may be relevant to researching M-A peer-interactions. They suggest that if we are to understand how peer interaction works in M-A classrooms and benefit from its implementation, it is important to investigate how grouping of learners across age (simultaneously proficiency) may impact on patterns of interaction formed by learners. Such investigation may for example reveal to what extent both learners contribute to the task, their willingness to offer and engage with each other's contributions or their abilities to create and maintain "joint problem space" (Antón & DiCamilla, 1999). Moreover, many of the reviewed studies analysed interactions for production or/and resolution of LREs. A consideration of LREs production and resolution in M-A peer interactions is important due to the learner-centred approach with a limited exposure to a teacher's linguistic explanations, learners must often rely on the help of a more knowledgeable peer to solve linguistic problems or work out linguistic rules.

Finally, the above mentioned studies stressed the importance of exploring how learners perceive their interactions because perception of a partner's proficiency is likely to affect learners' patterns of interaction, and therefore learning. Bearing this is mind, the current study explores learners' perceptions of their collaborative work. The next chapter will address the theoretical framework for the study, namely the sociocultural theory.

3.   THE THEORETICAL FRAMEWORK OF THE STUDY

This chapter will provide the theoretical underpinnings of this study. This chapter will begin by a brief overview of relevant research on how interaction aids second language development from the cognitive perspective, including its main premises as well as limitations. I will then turn to a discussion of the theoretical framework of this study, namely sociocultural theory (SCT) and on its view of interaction and learning and development. And because one of the aims of the current study is to investigate assistance provided among M-A peers, I will then discuss some important concepts of the theory, which are closely related to peer assistance: *mediation* and *ZPD*. Later, I will address *scaffolding*, another important concept related to peer assistance. Finally, it will review the the socioculturally informed research related to peer assistance.

3.1 Interaction, learning and cognitive perspective

Although interaction occurs at both an intrapersonal (Havranek, 2002; Muranoi, 2000; Ohta, 2001) and interpersonal level, the focus of this study is on interpersonal interaction. Interaction was described by Philp and Tognini (2008, p.246) as "the use of language for communicative purposes, with a primary focus on meaning rather than accuracy." Within FL classroom contexts, however, the purposes of T-L (teacher-learner) and L-L (learner-learner) interaction seem to depend on the instructional framework within which interaction is intergrated (Philp & Tognini, 2009, p.259). In their review of research findings on interaction in foreign language contexts, Philp and Tognini (2009, p.254) explain that "L-L interaction varies according to the age of learners, their purposes for learning and the pedagogical orientation of the class." They highlight diverse apsects of L-L interaction: (1) interaction as practice, including the use of formulaic language; (2) interaction that concentrates on the exchange of information; and (3) collaborative dialogue including attention to form (p.254). The role of interaction in SLA has been predominantly explored from the sociocultural perspective, and from a cognitive perspective. The cognitive approach claims that interaction activates the cognitive processes important for acquisition. It has informed us that those negotiations of meaning promote second language acquisition by making input more comprehensible. Learners benefit when input is interactionaly modified (tailor-made comprehensible input) through clarification checks, confirmation checks,

and repairs. As such it is appropriate to learners' level, and to their learning needs (Long, 1996; Mackey & Goo, 2007). Interaction also provides opportunities for output. What is more, negotiation triggered by an interlocutor via negotiation moves or corrective feedback can lead learners to produce modified output to be more coherent, accurate and appropriate (Mackey & Goo, 2007). For example, through successful output learners may consolidate prior knowledge. Fluency may also increase as output helps them to retrieve forms more in a more automatic way (Swain, 2005).

Interaction also promotes *noticing* as it helps to draw learners' attention to L2 forms, to notice meaning-form connections (van Patten, 2004) and to notice the gap between their inaccurate production and the accurate target language element (Schmidt, 1990, 1995). Noticing gaps in one's own comprehension or production is of great importance to second language development because learners begin to restructure and refine existing second language knowledge (Gass, 2003). As they face difficulties in comprehension and production learners receive a feedback from their interlocutors which plays a major role in this process, particularly in FL contexts where opportunities for L2 learning are limited because learners are not sufficiently exposed to L2 input to learn implicitly (N. Ellis, 2007; Philp & Tognini, 2009).

3.2 Limitations of the cognitive approach

However, there are some limitations of the cognitive approaches. The underlying assumption of the cognitivist perspective is that *learning* is *acquisition* of new grammatical, lexical, and phonological forms and that *language* is some sort of commodity, that "is accumulated by the learner, and the mind is construed as the repository where the learner holds the commodity" (Pavlenko & Lantolf 2000, p.155; see also Sfard, 1998). Such ontology resembles the positivist ontology of natural sciences and their methodology, which has been predominantly quantitative. The research from the cognitive perspective has emphasised individual cognition, cognitive processing and information processing, while focusing on individual performance and abilities measured in numbers. This body of research has mainly focused on predictions of an effect of a particular treatment under certain conditions and aimed at discovering systematically occurring relations and the testing of a hypothesis (Richards, Ross & Seedhouse, 2014, p.22-23). The impact of a single controlled variable on another such as the impact of the type of recast on uptake has usually been investigated using pre-

test/post-test experimental design with the primary aim being to gain generalizable results from a wider population. As a result, it has focused only on learning outcomes, but has failed to reveal the complex and dynamic nature of learning processes, its unique peculiarities (Williams, 2012, p.549; Lantolf, 2000) and specific individual contexts or individuals (Richards et al., 2014, p.23). The research from the cognitive perspective has been also criticized for failing to take into account the sense-making of learners' activities and experiences when learning a language, in addition to social aspects of language learning (Lantolf, 2000). Storch (2002) criticized the research from the cognitive perspective for assuming that pairs/groups act in similar ways and for ignoring the fact that the relation within a pair/group does impact on learning outcomes because peers "negotiate not only the topic but also their relationship" (p.120). Finally, this body of research has aligned itself epistemologically more with the natural sciences, and neglected the fundamental epistemological difference between the natural and social sciences, namely that social science research involves people as subjects and objects of research (Roebuck, 2000; Thorne, 2005). This is a serious limitation of the cognitive perspective because people's relationships with the environment do greatly impact on interaction and learning (Roebuck, 2000).

3.3 Interaction and Sociocultural Theory

Interaction is also a central aspect in sociocultural theory (SCT). The importance of interaction in SLA according to SCT is that interaction is a necessary tool for working within a ZPD (zone of proximal development) of a particular learner. According to the SCT, interaction can play several roles in second language development. Interaction mediates collaborative problem-solving because during problem-solving activities learners address and notice their language difficulties, construct and analyse new linguistic forms. Interaction evokes private speech, which facilitates development, as private speech enables learners to organize, rehearse and gain control over new language forms and over new verbal behaviour (Ellis, 2003, p.197-8). In addition, interaction provides opportunities for gaining of knowledge of how to learn, as learners take notice of the processes and practices within a pair/group (Putney et al., 2000, p. 88). Thus, interaction has the potential to enhance agency. Finally, interaction provides learners with opportunities for creative meaning-making activity, and as such, promotes L2 development. However, it also needs to be said that some studies have shown that

peer– peer interaction does not necessarily provide an opportunity for learning (Lockhart & Ng, 1995; Storch, 2001a).

I would like to argue that the potential of M-A pairs to aid second language development can be examined if we ground our approach to second language development in the sociocultural theory of mind (SCT). The following discussion will illustrate why SCT is a suitable framework to study collaborative dialogue and its impact on second language development. Vygotsky, whose work provided the foundation for SCT, saw social interaction as a crucial space for the child's development because it provides the child with structures that he/she internalizes in later stages as cognitive capacities. To cite from Vygotsky (1986):

> Any function in the child's cultural development appears twice, or on two planes. First it appears on the social plane, and then on the psychological plane. First it appears between people as an inter-psychological category, and then within the child as an intra-psychological category…Social relations or relations among people genetically underlie all higher functions and their relationships (p. 63).

This quote implies that learning is social, and children develop cognitively through interaction with people in their environment. Cognitive development has its origin in social interaction in which "cognitive functions such as voluntary memory, reasoning, or attention are mediated mental activities", which originate in the activities that the learner participates in (Swain, 2000, p.103). This social interaction is mediated through various semiotic tools of which language is the most important one. And because social interaction takes place for the most part through language, language is thus the 'mediating' tool which also allows the learner to regulate the processes of learning (Ellis, 2003). In other words, as the learner appropriates and internalizes mediation for individual use, he/she attains self-regulation and is capable of using the mediated ability in different contexts.

3.4 Mediation and peer collaborative dialogue

The concept of 'mediation' is related to one of Vygotsky's most important claims that "human action typically employs mediational means such as tools and language and that these mediational means shape the action in essential ways" (Wertsch, 1991, p. 12). It is through meditational means such as language that we gain awareness and control

of our mental abilities (Lantolf & Thorne, 2006, p.59-60). Daniels (2015, p.36) further adds that "it is through meditational means that the individual acts upon and is acted upon by social, cultural and historical factors". In other words, mediation implies "the process through which the social and the individual mutually shape each other" (Daniels, 2015, p.34).

And because language is an important tool which mediates social interaction, and it is through language (including speaking and writing activity) through which higher forms of human mental activity are mediated, it can be said that it is in social interaction that learning occurs. It follows that a social interaction between two learners using a language while working together to complete a language task has the potential to mediate learning. In fact, researchers have investigated how peer collaborative dialogue mediates second language learning and development. Researchers have argued that peer collaborative dialogues mediate the construction of linguistic knowledge, and that this process of joint construction contributes to L2 development (Swain, 1998, 2000, 2010; Swain et al., 2009). Swain and her colleagues conducted studies in which they analyzed students' pair/group talk for language-related episodes (*languaging, metatalk*) during various tasks in such collaborative dialogues (Swain, 2010; Swain et al., 2009). These studies have shown that such episodes promote second language development. As learners attempt to solve a linguistic problem, they construct and analyse the new linguistic forms, which enables them to learn new language or knowledge about language, thus improving their language use. As Swain (2006) further explains, "languaging refers to the process of making meaning and shaping knowledge and experience through language. Languaging is when language is used to mediate problem solutions, whether the problem is about which word to use, or how best to structure a sentence" (p.98). Holunga's (2000) study has also shown how languaging helps to focus learners' attention, to create hypotheses, to test them, and to supply possible solutions. According to Holunga, languaging also mediates implementation such strategic behavior as planning and evaluating. The potential benefits of languaging (LREs) in peer interaction have been investigated by research (McDonough, 2004; Philp & Tognini, 2008; Williams, 2001). For example, Williams (2001) explored languaging in a classroom based study which implemented oral tasks. She reported a predominant focus on lexical items and therefore a more frequent occurrence of lexical LREs. In contrast to this, studies investigating peer interaction on more pedagogic tasks such as text reconstruction and reformulation task reported a high focus on grammar resulting

in more grammatical LREs (Iwashita, 2001; Kowal & Swain, 1994; Swain & Lapkin, 2002).

3.5 Zone of Proximal Development (ZPD)

Vygotsky regarded learning as a process under someone's mediation in the *zone of proximal development* (ZPD). This concept is essential for understanding how it is that second language development of a particular learner can be aided by the use of peer collaborative dialogue. Vygotsky (1978) explains that, an essential feature of learning is that it determines the *zone of proximal development* (ZPD), which is:

> […] the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (p. 86).

The crucial idea of the ZPD is that learning will take place only when the knowledge to be acquired is within the learners' ZPD. The implications for teaching and instruction are, as Daniels (2012, p.685) argues that they "should create the possibilities for development, that it should be negotiated, and that it should entail transfer of control to the learner. It is in this way that the ZPD is created."

Furthermore, according to the general view of ZPD, as mentioned, for example, by Lantolf, (2000), it "necessarily involves interaction between an expert and a novice in which the expert eventually transmits ability to the novice through social interaction" (p.17). However, this basic assumption of ZPD that learning always flows from "experts" to "novices" is debatable and does not seem to fully convey what occurs during collaborative peer interactions. Learners engage in a larger variety of collaborative forms than such a bidirectional view of ZPD implies. ZPD does not seem to flow in one direction but back and forth between the novice and the expert. Van Compernolle and Williams (2011) also argue against reducing the the ZPD metaphor to a mere novice's development under expert guidance. Similarly to Donato (1994), Lantolf and Poehner (2008, p.14-16) think of the ZPD as "collaborative interaction between experts and novices or peers who use mediational means to achieve jointly constructed expertise." They explain that ZPD is determined in the process of learning, and peers create a natural context by adjusting the zone to the needs and abilities of each member of the pair/group in interaction. Thus partners' relationships in the zone can

change in the course of interaction (p.14-16). This interpretation of ZPD as a process or transformation resonates with Connery's et al. (2010) view of ZPD as *actively* and *socially created.* Connery et al. (2010) and Holzman (2009) understand ZPD as a social activity rather than a zone, space or distance. In other words, the ZPD activity means that the zone (environment) and learning are determined simultaneously. Such a view of the ZPD seems to reflect Vygotsky's (1978, p.90) notion of the *collective* form of the social process, and not exclusively or even primarily a dyadic relationship. It suggests that the key to ZPD may be that people are doing something together regardless of how many they are (Holzman, 2009). The view of ZPD being actively and socially determined also implies a very important notion of SCT that learners cannot be viewed as passive recipients of information or knowledge from the environment, but as "active agents who change themselves as well as the activity itself through the activity they are engaged in" (Wertsch 1991, p.8). As Wertsch (1991) further puts it, "they create their surroundings as well as themselves through the actions in which they engage" (p.8).

3.6 Scaffolding in peer-peer interaction

A discussion of learning and development within learners' ZPD necessarily brings about another important question, namely: How is effective assistance in peer collaborative dialogue to be provided within the ZPD in order to promote second language development? In order to do this, the concept of *scaffolding* needs to be addressed. Scaffolding, an important part of sociocultural theory, seems to be of particular relevance to M-A collaborative dialogue as it implies that the more proficient learner helps the less proficient learner to complete the task at hand. Scaffolding is defined as "a collaborative process, through which assistance is provided from person to person such that an interlocutor is enabled to do something she or he might not have been able to do otherwise" (Ohta, 2000, p. 52). Or to borrow Ellis' (2003, p.180) definition, "scaffolding is the dialogic process by which one speaker assists another in performing a function that he or she cannot perform alone." Van de Pol et al. (2010) conducted a review of the general education literature on scaffolding and suggest that the three key characteristic features of scaffolding mentioned by the sixty-six studies reviewed are *contingency* (referred to as responsiveness or adjusted support (p.274), *fading* (gradual withdrawal of the scaffolding, and *transfer of responsibility* (responsibility for the performance of a task is gradually transferred to the learner) (p.275). According to

Wood, Bruner, and Ross (1976), support that is provided includes initiating interest in the task, simplifying it, maintaining pursuit of the goal, marking critical features and discrepancies between what has been produced and the ideal solution, controlling frustration during problem solving, and demonstrating an idealized version of the act to be performed. This suggests that through scaffolding, an expert is able to help a novice in various ways during their collaborative interaction on a task. However, whether such help leads to learning may depend on various factors and may be a very delicate process. For example, Aljaafreh and Lantolf (1994) argue for the importance of controlling the quantity and quality of assistance, and see problems in an inadvertently over- or under provision of assistance. In the same vein, Ohta (2000) says that "development cannot occur if too much assistance is provided or if a task is too easy" and stresses the need for the peer interlocutor to be "very sensitive to the partner's readiness for help" (p.52). She explains that assistance occurs "in the form of peers' waiting for each other to finish their utterances, prompting, through co-constructions or recasts" (p.52). In Ohta's (2000) study, two university learners of Japanese completed an oral task. In this study, Hal (HP) provided assistance to Becky (LP) thanks to which Becky rapidly improved in her use of a difficult construction. What is more, Becky was able to provide assistance to her more proficient partner. The study shows that both LP and HP learners can benefit through this process, given that the HP student is very attentive to the LP students' readiness for help, and that both learners show a high level of collaborative engagement as they approach a task.

Ohta's findings resonate with results of the study conducted by Donato (1994), who investigated scaffolding within a peer group. He found that even though each individual member of the dyad lacked the necessary knowledge to produce a grammatically correct form in French, each member of the group contributed by his/her particular knowledge to the problem solution, and this contribution resulted in learning. The study by Swain et al. (2002, p. 172-3) supports Ohta's and Donato's findings, and has revealed that peers who work within their ZPD are able to support their learning. The participants in Swain's study did so through questioning, proposing possible solutions, disagreeing, repeating, and managing activities in addition to social and cognitive behaviours (p. 172-3). These studies are of particular interest as they challenge the notion of scaffolding as being a behavior in which some language knowledge or skills are transmitted from the more knowledgeable individual (usually teacher) to the less knowledgeable one. They interpret scaffolding as a process of assistance among peers

who are engaged in joint activity, in which, however, none of the group members necessarily directs the flow of assistance as assistance is distributed among the peers themselves. In a similar vein, Stone (1993) argues that scaffolding should not be understood as a technique, but is a fluid, interpersonal process characterized by an active involvement of the participants who construct mutual understanding or *intersubjectivity* in the process of communication.

It has to be, however, noted that none of the studies mentioned above did operationalize scaffolding in the light of the features mentioned by van de Pol (2010) or Wood, Bruner, and Ross (1976) because these features are characteristic for teacher-student interactions, which are simply rarely seen in peer interactions; in particular among children. Moreover, above mentioned studies (Donato, 1994; Ohta, 2000) have focused on university students, who may be capable of scaffolding each other's learning within their ZPD, and who may do so in ways, which are not necessarily different from teacher-learner scaffolding. However, while the purpose of scaffolding as seen in teacher-learner interactions or among university level peers may be to enhance second language development or a development of conceptual understanding (Davin & Donato, 2013), the purpose of assistance among secondary school learners is most likely to merely complete the task at hand, although this may vary across individuals.

I would argue that despite the wide use of the term scaffolding in various contexts, including teacher-learner interaction, and peer interaction, there seems to be no or limited consensus with regards to its definition. I understand scaffolding as a purposive help, which is matched and graduated to the particular learner's current linguistic needs with the purpose of enhancing second language development. I am in agreement with van de Pol et al. (2010) who underlined that the key characteristic features of scaffolding are contingency, fading, and transfer of responsibility. I would also argue that when seen in this light, scaffolding is not something that secondary school learners normally do or/and are capable of doing without being explicitly taught how to do so. Although secondary school peers may be able to support each other during task-work, this support will most likely concern the emergent problems of the task and occur without an intention to enhance second language development. This is, however, not to say that second language development resulting from this support cannot occur.

3.7 Peer assistance and related research

Based on what has been said, I would argue that *scaffolding* is not an accurate term for describing the support that peers provide to each other. Therefore, I will use the term *assistance*, which seems to more appropriate to convey what secondary school learners do during collaboration. Foster and Ohta (2005, p.413-414) refer to assistance "as a feature of learner talk that is claimed to promote L2 development. This comes about as learners collaborate to create discourse in the target language." Assistance may for example be sought, provided and received with language issues during the so-called LREs, "where students reflect consciously on the language they are producing" (Swain, 2001, p. 53; Swain & Lapkin 1998). Peers seek, provide and receive assistance in a variety of ways. They may directly ask for, and receive assistance from each other, they may continue utterances that a partner is having difficulty with, they may offer suggestions, or they may offer and accept corrections (Foster & Ohta, 2005; Gagné & Parks, 2013; Ohta, 2001).

Peers may provide help to each other with regards to comprehension, noticing, developing fluency or provision of feedback. They may also provide a context for L2 use, for noticing, for hypothesising, or for trying out language (Philp et al, 2014). They are also capable of drawing each other's attention to linguistic features such as lexis, morphosyntax or phonology (Foster & Ohta 2005). However, assistance is not necessarily provided explicitly as peers may only wait for the partner to compose an utterance (Foster & Ohta, 2005). Research has shown that they resort to various ways of providing assistance such as requests for assistance, confirmation checks, clarification checks, other-corrections, repetitions of a correct response (DiCamilla & Antón, 1997; Foster & Ohta, 2005; Ohta, 2001, 2005).

Ohta (2001) investigated assistance provided and received among Japanese adult language learners. Learners were helping each other by offering and accepting corrections, by continuing utterances which were difficult for a partner, or by suggesting possible solutions. Peers also helped each other by waiting for each other to compose an utterance. Importantly, Ohta (2001) showed that learners were able to incorporate the provided assistance thus creating a discourse which is called *assisted performance* (Tharp & Gallimore 1991). Ohta (2001) claimed that assisted performance is a necessary condition for individual production.

The use of L1 (first language) is also a commonly used feature of peer assistance. Studies such as (Antón & DiCamilla, 1998; Storch, 2001; Storch & Aldosari, 2010; Alegría de la Colina & García Mayo, 2009; Swain & Lapkin, 1998, 2001; Villamil & De Guerrero, 1996) confirmed its important function in peer collaborative dialogue. L1 as an important mediational tool helps peers to support and sustain interaction.

An important study related to peer assistance is that by Foster and Ohta (2005) who explored peer assistance from both, the sociocultural and the interactionist research perspectives. They demonstrated that when peers interact on tasks, they rarely engage in negotiations of meaning originating in communication breakdown as it is assumed by the interactionist research. Rather than acknowledging non-understanding or not being understood, they provide assistance in the form of co-constructions, other-corrections, self-corrections, continuers and repetitions. Repetitions are one of the most common features of peer assistance in the literature (DiCamilla & Antón, 1997; Ohta, 2005; Davin & Donato, 2013). It serves a variety of functions. For example, in their investigation of adult Spanish learners DiCamilla and Antón (1997) found that through repetition learners distribute help to one another throughout the activity, thus mediating cognitive activity such as thinking, hypothesizing, evaluating. Other-repetitions can also generate more language (p.627-628). Ohta (2005) found that repetitions were used to 1) confirm understanding 2) to signal an error, 3) make an unexpected utterance, or 4) express understanding to encourage a peer to continue. Davin and Donato (2013) show that within peer scaffolding, in addition to signalling an error, repetition may also be used to create a shared understanding, encourage, or distribute help (p.10). They found that repetition can also generate more language. This can be done for example by repeating with rising intonation which may provide space for the speaker to expand or reformulate his or her utterance (Foster & Ohta, 2005). Importantly, such repetition does not necessarily follow a comprehension breakdown but an invitation of the speaker to continue speaking because he or she is simply interested in the speaker's utterance or intends to involve her/him (Foster & Ohta, 2005). Foster and Ohta (2005, p.419) use the term continuer which serves the function to "express an interlocutor's interest in what the speaker is saying and to encourage the speaker to go on." They provide an example of a continuer:

1 M: I wasn't so fat before I came to England
2 V: fat?

3 M: yeah, but now I eat a lot of bread.

They explain that V's use of a continuer enables M to elaborate on his/her utterance. They argue that in this way continuers express interest thus providing a "supportive environment which encourages increased L2 production" (Foster & Ohta, 2005, p. 419-420).

Learners may also help each other by offering correct words or morphosyntax as a response to a hesitant use of incorrect language. As such hesitation may be considered as "an indirect request for assistance" (Foster & Ohta, 2005, p.420).

Suggestions are another important form of peer assistance. Some researchers claimed that suggestions and questions are not only elicitation techniques but important semiotic tools with a capacity to mediate mental activity in a social context (McCormic & Donato, 2000). For example, they help to invite partner's participation, attract attention, and help to maintain on-going interest in the task (Antón & DiCamilla, 1998; Storch, 2001a). In L2 peer interaction, suggesting may focus partner's attention on specific linguistic items, elicit feedback or even confirm or disconfirm one's hypothesis about language (Swain & Lapkin, 1998; Storch, 2001a).

Another relevant line of research comes from general education which explored various ways that students learn from one another, and which may lead to enhanced knowledge and understanding (Brown & Palinscar, 1989; Webb & Palinscar, 1996; Webb & Mastergoerge, 2003b). As Webb and Mastergoerge (2003b, p. 362) sum up, "students may learn from one another by giving and receiving help, by sharing knowledge, by building on each other's ideas, by recognizing and resolving contradictions between their own and other students' perspectives, by observing others' strategies, and by internalizing problem-solving processes and strategies that emerge during group work. " Studies have not only investigated the nature of such helping behaviour within peer-directed small groups but also the relationship between helping behaviour and learning gains and ways of promoting helping behaviour in classrooms (Mastergeorge et al., 2000; Topping, 2005; Topping et al. 2004; Topping et al., 2011; Webb & Mastergoerge, 2003a,b). For example, Webb and Mastergoerge (2003a) explain that high quality verbal helping behaviour refers to utterances produced by peers in order to ask for explanations, giving explanations, or apply them during tasks. Although they argue that such high quality helping behaviour may benefit both, the help giver and the help receiver, in order for the help to be beneficial to the help receiver it

has to be on time, appropriately elaborated, accurate, and tailored to the need for help. Most importantly, the help must be further applied by the help receiver (Webb & Mastergoerge, 2003a). They point out that very often students do not often benefit from the help received because they lack such specific behaviour which is essential for obtained help to enhance learning. While most studies explored helping behaviour that is solicited, i. e. when help is requested, Oortwijn et al. (2008) in their investigation of immigrant pupils working on mathematical tasks considered helping behaviour which is unsolicited, i.e. when help is not requested and when one student takes on the role of tutor guiding the tutee during problem-solving activities. Interestingly, they found that unsolicited helping behaviour led to higher learning gains than solicited helping behaviour.

In their paper which addressed how effective behaviour can be promoted in peer-directed groups, Webb and Mastergoerge (2003a) paid particular attention to requesting and providing explanations. They explain that explanations can be seen both from the Vygotskian as well as from the Piagetian perspective on learning, i.e. cognitive conflict theory according to which a cognitive conflict arises when a contradiction occurs between learners's existing knowledge and an experience in the process of interacting with others (Piaget, 1932). Webb and Mastergeorge, 2003a) explain that

> in the process of explaining and justifying their perspectives, students may clarify or reorganize material in new ways in their own minds, recognize and fill in gaps in their understanding, correct their perspectives or develop new ones, and construct increasingly elaborate conceptualizations When explaining their problem-solving processes, students think about the salient features of the problem. (p.76)

Cooper (1999) adds that the process of explaining is crucial for the development of problem solving strategies and of metacognitive awareness of what learners do and do not understand. When seen from the Vygotskian theory, the less-skilled learner benefits from receiving an explanation from the more-skilled learner (Webb & Mastergeorge, 2003a, p.75). During this process, he or she may "correct misconceptions, fill in gaps in her understanding, strengthen connections between new information and previous learning, and develop new problem-solving skills and knowledge" p.75). Second, having an opportunity to explain "one's own thinking and understanding" helps the less capable learner construct her/his knowledge (p.76). In addition to this, in line with the theory of Piaget, explanations provided during interactions of peers whose relationship is equal are more likely to be at the right level of both learners' understanding and

challenging to both (Webb & Mastergoerge, 2003a; Damon, 1984). This theory also holds that equal peers are more likely to attempt to resolve and reconcile conflicting views, take feedback seriously, or accept communication and corrections from the other learner (Damon, 1984; Webb & Mastergoerge, 2003a).

Although most studies focused on learning of mathematics, their findings related to what happens in the process of explaining have relevance to other subject matters including L2 learning. When L2 learners encounter difficulties understanding language material of a particular language task or the task itself, they will most likely seek and provide explanations to one other.

Finally, I would like to briefly mention the body of research which investigated the relationship between social factors, such as peer relationships and learning (Martin-Beltrán et al. 2014; Breen, 2001). In fact, some researchers (Firth & Wagner 2007; Swain & Deters 2007) argued that in L2 research insufficient attention is given to social factors and peer relationships. For example, Martin-Beltrán et al. (in press) described how adolescent peer learning was mediated using relationship-building discourse. They showed how negotiating for support, which has been defined as "sympathizing, feeling for the other, or showing appreciation" (Aston 1993, p.231) afforded opportunities for co-construction of knowledge and second language learning.

3.8 Summary

By explaining the most relevant concepts of sociocultural theory in relation to peer assistance, and by reviewing the body of research on peer assistance conducted from the sociocultural perspective, this chapter has shown that sociocultural theory provides a suitable framework for the investigation of assistance provided among M-A peers and its contribution to L2 learning. Sociocultural theory provides a lens through which to view L2 learning because it underlines the role of language and especially of dialogic interaction in learning and development. Sociocultural theory holds that children develop cognitively only through the process of social interaction, and that this process is enabled by semiotic tools such as language, which have the capacity to mediate our learning. The SCT does not see learning and development as something which can be explained in terms of processes that occur in the brain but in terms of processes that occur in learners' interaction with people in his/her environment such as in cooperation with his/her peers (see Vygotsky 1978, p. 90). And because the knowledge building that

occurs *in* and *through* the collaborative dialogue resonates with the concept of SCT that social interaction aids cognitive development and it is in this interaction that new knowledge occurs, it is fair to say that SCT is a suitable framework to study collaborative dialogue and its role in L2 learning. Moreover, because learning occurs in social interaction, it is through analysis of classroom discourse over time which allows the researcher to investigate this process.

A review of studies on peer assistance has illustrated the role of peer assistance in L2 learning, as well as various forms of assistance used by peers during their interactions. Among the most common forms of assistance reported by research are explanations, suggestions, other-corrections, repetitions of a correct response, request for assistance, confirmation checks or clarification checks. In FL contexts in particular, peers also frequently resort to L1 when requesting and providing assistance.

It has to be mentioned that the majority of reviewed studies on peer assistance involved high school or adults learners, and were conducted in contexts other than FL classroom. What is more, studies of peer assistance in M-A-age peer interactions are missing. This study, then, adds to the existing research on peer assistance by examining peer assistance among secondary school learners in the context of M-A classrooms.

3.8.1 Context

The context of this study was English as a foreign language classroom at an alternative school secondary school in Germany. Because learners' language proficiencies widely differ and very low proficiency and very high proficiency learners share the same classroom, such great heterogeneity in terms of proficiency is the main argument for an individualized and learner-centred approach at this school. Therefore, learners are usually allowed individual learning paths and to progress at their own speed and level. Learning relies on assignments, which learners accomplish either on their own, with a partner, in small study-groups, or with the teacher's help, depending on their needs and abilities. It can be said that since the first grade, learners at the study site have been taught according to the principles of learner autonomy (Dam, 2008; Legenhausen, 2008; Little, 2001). Dam (2008, p. 21) explains that the autonomous learner "is willing to take charge of his/her own learning and is capable of doing so." Principles of learner autonomy were also applied during English lessons. For example, learners were encouraged to making decisions regarding how they want to engage in learning tasks

(i.e., when planning, deciding on activities, choosing materials, goal setting, evaluating) (Legenhausen, 2008).

In line with the principles of learner-centred classrooms, the teacher's role is mainly to act as a facilitator, and the learners receive help only if they cannot do without it (Legenhausen, 2008; Thurn, 2011). Teachers' main responsibility is to design a rich learning environment in which the learners have optimal conditions for their individual or collaborative learning endeavours and are actively supported in that process (Legenhausen, 2008, p. 36).

English curriculum at the research site consisted of three lessons a week of which two were teacher-led lessons and one was *self-study time* (Studiezeit), during which I was not present, and during which learners worked on tasks included in their *study plan* (Fachplan). Although the function of a study plan is similar to the weekly plan, a study plan consisted of subject areas and assignments for the whole unit of work. In order to complete their assignments included in the study plan, learners had to work either on their own or with the help of a more knowledgeable peer. Each of the two study plans used in the current study encompassed one unit of work, lasting two and half months. They contained collaborative tasks which were to be completed with a self-selected partner, as long as he/she was of a different age/grade. The reason for this step was that allowing learners to choose their partner is the usual practice in these classrooms, as revealed in the interviews that had been conducted with other language teachers. It also has to be mentioned that some of the participants are very close friends and some are acquaintances. The majority of learners have known each other for a long period of time. Some spend a considerable amount of time learning together and doing assignments related to other subjects.

This classroom based research study investigates the nature of M-A peer interaction referred to as patterns of interactions formed by the M-A pairs. Further, it explores to what extent and how M-A peers, whose relative proficiency differs, do assist one another when engaged in classroom tasks. Finally, it explores what they think and how they feel about their interactions. This study attempts to answer the following interrelated research questions.

3.9 Research questions

(1) What patterns of interaction can be found among mixed-age pairs of German learners of English as a foreign language at an alternative secondary school?

(2) To what extent and in what ways do the learners, organized in mixed-age pairs provide assistance to each other during classroom pair collaborative tasks?

(3) How do the learners perceive their collaborative work over a unit of work lasting two and half months?

4. METHODOLOGY

The previous two chapters have provided the rationale for the current study by reviewing the body of related research and identifying the gap this study is meant to bridge. Chapter Three has provided its theoretical background. The next two chapters aim to describe the methodological procedures of the study. Chapter Four will describe the methods for data collection, and Chapter Five will explain data analysis.

4.1 An overview of the research design

The main features of the study are as follows: It is a qualitative study, including some quantitative elements in the analysis. The study was conducted during everyday common classroom lessons, and not in an experimental setting. In fact, studies which have investigated peer interactions in genuine foreign language (FL) classrooms are rare (Davin & Donato, 2013; McDonough, 2004; Moranski & Toth, P. D., 2016, in press; Philp & Tognini, 2009; Philp, Walter & Basturkmen, 2010; Toth, Wagner & Moranski, 2013; Williams, 2001) and researchers (Nunan, 1992; Storch, 2001a; van Lier, 1988) have called for research in genuine classrooms in order to learn more about linguistic behaviour in the context of a real life classroom.

Tasks used in the study were part of the curriculum. Their content, therefore, related to the themes outlined in the curriculum. Some were genuine tasks in line with the framework of task-based language teaching and learning (TBLT). Some were mere exercises of previously introduced linguistic items. The majority of the tasks were collaborative in nature. They were mainly oral tasks including some elements of reading and writing.

The study was over extended period of time: the audio recordings of the pair-work involved one unit of work lasting two and half months. The longitudinal character of the study allowed me to identify changes over time with regards to patterns of interaction and assistance provided (see also Storch, 2001a).

A variety of research tools and sources were used in this study to collect the data. These involved audio-recordings, interviews, artefact collection of student's pieces of writing, students' notes, and classroom achievement tests.

4.2 My stances and choice of research methodology

This section will provide a rationale for opting for a qualitative study in this investigation. It will include some important assumptions and stances related to ontology and epistemology, and consider how these assumptions and stances have affected the research methodology for the present study. When designing a classroom research study, a classroom researcher makes a number of important considerations and choices. The most usual ones are those related to appropriate data collection methods, data analysis, research participants, and tasks employed. However, these important considerations and choices are essentially based on the ways the researcher sees the world, looks at knowledge, and the relationship between human beings and the environment. A researcher's philosophical assumptions and stances will directly affect her/his research purpose and what she/he believes is a valuable contribution to knowledge, the choice of a theory, the research design, its execution, and the interpretation of findings. A researcher's stances will influence her/his decision to either align herself/himself with a quantitative research methodology, according to which the social reality can be broken down and the parts then studied, to incline to qualitative research, according to which the reality is complex and can only be studied holistically (McKay, 2006, Chapter 1, section 2), or to choose mixed-method research, which combines qualitative and quantitative methodologies. In addition to this, they will greatly affect the ethical considerations he/she makes.

   As the proposed study involves peers interacting on classroom tasks, I will first discuss my stances concerning learners, language learning and learners' relationship with the classroom activity. I will mainly draw on the ontologies and epistemologies of sociocultural theory, which is the theory in which my research is grounded and which claims that all learning is social and occurs in social interaction, provided that there are appropriate forms of assistance available (Lantolf & Thorne, 2006). I will then consider my stance relating to the fact of being the researcher in my own classrooms and its repercussions. I will also briefly address the notions of subjectivity and objectivity. I will end this section by outlining the implications of my philosophical stances for the choice of classroom research methodology.

4.2.1 Classroom-based interactions and language learning

I will begin by a discussion of the relationship between human beings and their environment. This is important because human beings are both the subject and object of study and their relationships with their environment and the activity they are engaged in will impact on learning. For example, the decision that the classroom researcher has to make is whether learners are seen as responding mechanically and deterministically to the demands of the activity or as initiators of their own actions with free will and creativity who shape the activity they are involved in and how it impacts on learning (Cohen et al., 2011).

Roebuck (2000, p.94) argues that "it cannot be assumed that subjects will do what they are asked to do or what is expected from them." She points out that the theory of activity, an important component of sociocultural theory, is based on the belief that "people are uniquely constructed individuals and that human activity is a complex process, determined by the context and the goals and sociocultural history of the participants" (p.79). In fact, one of the fundamental concepts of sociocultural theory is that every human action is socially embedded (Lantolf & Thorne, 2006). Moreover, it views individuals as "active agents who change themselves as well as the activity itself through the activity they are engaged in' and not 'passive recipients of information from the environment" (Wertsch 1991, p. 8). At the same time they construct their social relationships. Sociocultural theory challenges the belief that "individuals and their activity can be controlled" because human activity, which is practical goal-directed intentional activity arising from motives, cannot be reduced to *output* as it is the case in a number of laboratory studies (Lantolf & Thorne, 2006, p.54). The social character of "any kind of grouping, whether naturally occurring or invented" and the importance given to motive and goal in human mental (and social activity) is the reason why researchers from the sociocultural perspective are cautious with attempting to control the variables that "may be at work in the classroom as a locus where social activity takes place" (p.54). For example, Roebuck (2000, p.84) demonstrates that subjects' *activities* differ despite being engaged in the same *task* and sees the reason for this behaviour in the fact that "learners bring to the task their unique histories, goals and capacities" (see also Batstone, 2012; Coughlan & Duff, 1994). To clarify the difference between task and activity, "the task represents what the researcher (instructor) would like the learner to do, and activity is what the learner actually does. Thus, activity is how learners – as agents – construct the task" (Roebuck, 2000, p.84). This is not to say that the inherent

properties of the task do not impact on learners' performance on the task (Batstone, 2012; Ellis 2003). However, as Thorne (2005) rightly points out, if the researcher's focus is on the actual processes of learning and development that "take the learner's point of view into account, then a focus on activity is necessary and desirable" p.400). The task of the researcher is to discover how learners, who are aware of being individual agents, engage in and shape their activity based on their specific goals, motives and sociocultural histories (Roebuck, 2000, p.94). In a similar vein, my epistemological stance is to focus on how learners accomplish tasks, why they do accomplish them the way they do, and how the process of accomplishing might promote language learning.

4.2.2 Being the researcher in my own classrooms

I am the teacher of the classes under investigation. As I have pointed out, my aim is a holistic investigation of classroom interactions. This is in line with a non-interventionist epistemological stance, which means that the researcher does *not* attempt "to influence the normally occurring patterns of instruction and interaction" because she/he wishes "to describe and understand these processes rather than to test specific hypotheses about cause-and-effect relationships" (Allwright & Bailey, 1991, p.41-2). However, having said that, in the research study this will be possible only to some extent because of the fact that I am the teacher of the participants, and my instruction and help during peer interactive work will inevitably result in some amount of intervention and positioning. However, my intervention as the teacher into the process of learning is inevitable and natural, and has to be taken into account when interpreting the results (Allwright & Bailey, 1991, p.41-2). For example, the fact that I have known my students for some time, and that I have been working with the class for over four years will inevitably affect my behaviour as the researcher. On the other hand, the participants may act more naturally during their interactions when observed by someone whom they know and who is usually present in their classroom. The Hawthorne effect, which is when "participants perform differently when they know they are being studied", may thus be reduced (Dörnyei 2007, p.53). Moreover, the teacher-researcher "unity" has a potential to generate valuable insights because I am familiar with the research topic, the classroom context, the group dynamics and with some socio-historical, cognitive and affective aspects of the participants. As Allwright and Bailey (1991, p.13) point out, "the teacher who is already in the classroom, who has already the day-to-day experience of working with learners, is surely in a particularly privileged position to decide what

needs to be investigated." Nevertheless, there is no doubt that it will be one of the major challenges not to impact on the reliability of the data due to my interventions as a teacher as well as due to my excessive familiarity with the context. The results of the study will have to be interpreted with caution as the processes will likely be influenced by the 'teacher-researcher's' intervention and positioning.

4.2.3 Objectivity vs. Subjectivity

Just as it is difficult to conduct a purely deductive or inductive study (Morgan, 2007), it is also difficult to find absolute subjectivity or objectivity. As far as objectivity is concerned, Atkinson (2011, p.5) argues that "the separation of the object from the subject studying it is a fundamental requirement of mainstream science and cognitive science." Quantitative approaches which are predominantly implemented by mainstream science and are based in the positivistic ontology presuppose the subject-object dualism. This means that there is no direct connection between the researching subject, the human being in the 'here and now' and the mind (object of study) which is 'out there' (Atkinson, 2011, p.5). Interestingly, however, even the natural sciences, on which the mainstream cognitive research perspective in L2 research is based on, show with the example of the Heisenberg uncertainty principle, the principle of quantum mechanics, "that the position and the velocity of an object cannot both be measured exactly, at the same time, even in theory" (Encyclopaedia Britannica 2017). In other words, absolute objectivity of measuring two related, observable quantities cannot be attained because a measurement of one produces uncertainties in the measurement of the other. Therefore, the researchers' intervention always impacts on the results. Objectivity is inevitably affected by various factors such as researchers' own values, views and interpretations (Cohen et al., 2011, Kindle version, section 2.1). It can also be said that a researcher's objects of analysis are always formed a priori to his/her experience of the world. Therefore, the factors which are part of theoretical propositions do not exist on their own but exist only in relation to their prior reference (Husserl as cited in Habermas, 1972, p. 304).

This argumentation clearly refutes the illusion of objectivism coined by the natural sciences and mainstream quantitative L2 learning research. On the other hand, it supports the idea that research should arrive at knowledge by understanding and interpretation, which is a notion advocated by interpretative sciences of Habermas (1972). However, as Cohen et al. (2011, Kindle version, section 2.1) rightly argues, even

here, knowledge will always be mediated by the interpreter's pre-understanding of the phenomena under study. In other words, a researcher's initial situation and pre-understanding always intervenes in his/her interpretation of knowledge (Habermas, 1972, p.310). Habermas (1984, p.10) calls this notion of interpreting an already interpreted world *double hermeneutics*.

4.2.4 Summary

Based on what has been said, with regards to the research paradigm, a holistic, naturalistic and non-interventionist approach has been followed because such approach is more likely to enable a true understanding of the complexity of classroom interactions as it demands obtaining multiple perspectives, detailed understanding of meaning-making actions, of non-observable as well as observable phenomena such as participants' feelings, attitudes, intentions and behaviours (McKay, 2006, Chapter 1, section 3). This line of inquiry is based on an ontology that there is no social reality which is external to individuals, or in other words that there is no objective nature (Cohen et al., 2011) in contrast to the positivist view of reality, according to which the social reality is objective or external. Furthermore, with its epistemology being subjective, such a line of inquiry is capable of taking the participants and the ways the participants see the classroom and its activities fully into account when interpreting and analysing the results. In other words, it combines the etic (the researcher's) and emic (participants') perspectives. McKay (2006, Chapter 1, section 2) suggests that a subjective epistemological stance lends itself better to approaches which are in line with a qualitative research methodology in which the researcher and the object of inquiry are not separate but the researcher and what is researched are interdependent. This stance reflects my role as a researcher, which is not merely to observe and measure while exerting control over the factors under investigation but to be part of what is being studied with the least possible intervention (McKay, 2006). I would argue that the proposed research study lends itself better to a qualitative methodology, because the main aims are to understand the complexity of classroom interactions, to interpret and to describe the processes rather than to test hypotheses and to generalize to other classroom settings. However, this is not to say that I do not see the importance of complementary use of more methods, and the need to accept distinctive strengths and weaknesses of various methods and methodologies. In fact, researchers (see for example, Mercer, 2010) underline the need for more large scale studies combining

qualitative analysis and quantitative assessments to show how talk can enable classroom education to be successful. Although the study is qualitative in nature, numbers will not be avoided and will be used in the analysis. However, the quantitative analysis only involves categories which emerged post-hoc from the qualitative analysis of the data. Its aim is mainly to illustrate the extent of certain categories in the data, and to enable across and within pair comparison.

The main aim of the study is to understand, to interpret and to describe the processes rather than to test hypotheses and to generalize to other classroom settings. It follows that I will not claim that what has been discovered about second language learning in task-based M-A peer interactions must be true of other task-based peer interactions in other M-A classrooms, but I might claim that whatever understanding has been gained by an in-depth study of task-based M-A peer interactions in a real-life classroom may illuminate issues for other M-A classroom contexts. It is also for this reason that I will rely more on interpretation, as well as on participants' perspectives, rather than on the use of statistical techniques which are used in experimental or quasi-experimental studies (see Allwright & Bailey, 1991, p. 51), although numerical elements will be used in the analysis stage. Furthermore, the fact that I am the participants' teacher, familiar with them and the setting, and that the study will be conducted in a natural setting, may contribute to ecological validity of the study. On the other hand, my aim to conduct a study in a natural setting with the least possible intervention or manipulation will most likely be inhibited by the very same fact that the teacher is the researcher of his own classroom. Finally, this section has underscored that the sociocultural perspective is a suitable perspective to study classroom interaction as it is an approach, which puts emphasis on activity, on the process of learning while including the contextual and the socio-historical aspects of learning.

4.3 Participants

The participants involved in this study were learners of English as a foreign language at an alternative school secondary school in Germany. They attend three M-A classes.

Twenty-two learners took part in this study (Table 1). However, the data is available only from twenty learners due to illness and attrition. Pseudonyms will be used throughout the study. The participants were ten pairs composed of 7th, 8th and 9th graders. Prior to the unit, they were told to select a partner as long as she/he is of a

different grade. They were told that they were responsible for the completion of the assigned tasks included in their individual study plans. However, this is not to say that all tasks were to be completed in pairs. Individual tasks were also included in the study plan. Sometimes, when a partner was either ill or took a part in extra-curricular activities, a student from another group or pair joined them. This data is not included because this study explores interactions of same pairs across various tasks.

One of the drawbacks is that learners' language proficiency could not be assessed independently of school based assessment. Participants' "relative proficiency" can only be estimated by two classroom achievement tests which were taken throughout the first term. These tests measured listening, reading and writing competences. The last classroom achievement test was taken by the students two weeks prior to the unit of work. Their "relative proficiency" was also determined by other summative classroom assessment practices which aimed to assess learners' speaking skills, grammatical knowledge and vocabulary. Summative forms of assessment were supplemented by formative assessment practices in the form of observation of learners' performance during lessons and taking notes. All assessment practices were administered by me. Table 1 shows relative proficiency score as determined by all the assessment practices mentioned above. However, these assessment practices differed across grades, and a true comparison of learners' language abilities is not possible. In other words, the assessment practices were specific to grade, and therefore the description is relative to the particular grade, and not an estimate relative to overall proficiency. It also has to be mentioned that all three classes are considerably lively, and this frequently causes distractions, disengagement and off-task behaviour during pair/group work.

4.3.1 A brief discussion of age-related differences

Research suggests that some age-related differences among participants may impact on their language development. While the age-range of 11-14 is defined by some educational psychologists as 'pre-adolescence', the age-range of 15-19 is usually referred to as adolescence (Berman, 2004). Research suggests that there are marked differences between adolescent learners (high-school learners) and pre-adolescent (younger children) related to lexical expression, syntax and style (Jisa & Viguie, 2005). It is claimed that metalinguistic awareness (to be able to think about language as an object from without) is more developed among adolescent learners (Gombert, 1992).

Adolescent learners enjoy debating, arguing for the sake of arguing and using language to think through ideas (Duchesne et al., 2013, p.22), and can better reflect on knowledge and explicitly formulate it (Hoff & Shatz, 2007, p.355). In sum, differences in terms of linguistic abilities among the 9th grade learners (adolescents) and 7th and 8th graders (pre-adolescents) will likely be visible during interactions and will have to be taken into account in the analysis.

Table 1

Participant characteristics

Pair number	Name	Gender	Grade	Relative proficiency
Pair 1	Lara	F	9	H
	Ella	F	8	H
Pair 2	Emilia	F	9	A
	Stella	F	7	A
Pair 3	Irena	F	7	A
	Sara	F	8	A
Pair 4	John	M	9	H
	Will	M	7	H
Pair 5	Lea	F	9	H
	Jess	F	8	A
Pair 6	Lilliana	F	7	H
	Leni	F	8	A
Pair 7	Riki	F	8	A
	Lyn	F	7	L
Pair 8	Gussi	M	8	H
	Jossi	M	7	H
Pair 9	Lenka	F	8	A
	Lucy	F	7	A
Pair 10	Alena	F	8	H
	Enna	F	7	H

H: high proficiency/A: average proficiency/L: low proficiency (relative to year group as assessed by the first term assessment practices)

4.4 Ethical considerations

Prior to the study, I asked the participants and their parents for their permission to conduct the research. Both children and parents were given a consent form which explained the research and children's participation in it (see appendices L-M). Both forms were translated into German. Children were told that they were free to withdraw from the study at any time. They were assured that at every stage, their names would remain confidential. They were assured that the data would be kept securely and would be used for academic purposes only. They were also told that their decision about participation, or non-participation would in no way influence grades or relationship with the researcher. The collected data about the participants were kept confidential, and were stored in a secure place. The procedures ensured that individuals could not be identified indirectly. Overall, I consider the ethical risk to be low.

4.5 A description of the data and the instruments used for data collection

The data was collected during the winter term, over one unit of work lasting two and half months in total. The following data collection instruments were used:

Audio-recordings included recordings of ten pair interactions on four selected classroom tasks which were part of the 8th and 9th grade syllabus. The number of tasks carried out differed slightly across pairs, ranging between 10 to 12 tasks per pair. However, only four to six interactions per pair (total 52 interactions) were selected for the qualitative analysis, and four interactions per pair for the quantitative analysis (Chapter 5). Although some recordings were made by me during regular English lessons, the majority of them were made by students themselves during the study time lessons. It has to be noted that some data is missing due to students' illnesses or technical failure to record interactions properly. This data addressed RQ1 and RQ2.

Although adding video recording could have served to incorporate the learners' paralinguistic expressions such as gestures and facial expressions during their interaction into the analysis (see also Watanabe & Swain 2007, p.127), video recording could not have been conducted because of the inappropriateness of the seating order of the students, who face the wall when they work, and therefore the space for placing the video-camera was insufficient. In order to increase ecological validity, the tasks which

took place in the middle and towards the end of the whole period were chosen for analysis. Another reason for this step was that students will by then have had a chance to become used to the use of microphones/digital recorders (Philp et al., 2010, p. 264), which were provided to the students for the whole period of the unit of work.

Artefact collection includes student's pieces of writing, students' notes and classroom achievement tests which were conducted individually at the end of the unit of work. One of the tests contained one task which was identical to the task which students had been required to complete jointly.

Interviews (see interview questions in appendix A) were conducted mainly within the first two days after the last task had been completed. However, due to curricular reasons and learners' illnesses three interviews were conducted in pairs, and two were conducted at the beginning of the second week after the last task. The aim of the interviews was to understand participants' feelings and perceptions of their interactions with an older/younger classmate over the whole period. Learning about learners' perceptions is especially important in this context because it is likely that perceptions of partner's age or/and proficiency will affect behaviour on tasks at hand, and as such impact on learning (Watanabe & Swain, 2007). As such, interviews can reveal some salient features of the interactions, which cannot be inferred from audio-recordings only. For the sake of learning about learners' perceptions of their collaborative work (RQ3), interviews with all participants were conducted. Interviews were audio recorded using individual microphones/digital recorders and transcribed using a transcription software f4. Conducting a *stimulated recall interview* one day after a chosen lesson with selected participants had also been considered. Stimulated recall is a type of introspective method, which is used to stimulate recall of participants' thoughts when they were engaged in the activities (Gass & Mackey, 2000). This method could have been very useful in order to understand participants' behaviour and their thinking processes during their interaction which may not have been detectable from audio-recordings and their transcripts (see alsoWatanabe & Swain 2007). However, there were two reasons for not using this method. The first was the lack of time and the organizational difficulties as the researcher is also the teacher of the classes, and because learners had subsequent lessons. The second was that the main purpose of conducting the interviews was not to gain understanding of their immediate perceptions and feelings of work on one task at

hand but to learn about general perceptions and feelings of their interactive work over a longer period of time.

With regards to the interviews, I would like to align with the constructionist stance which treats interviews as "collaborative or interactional events in which the interviewer or moderator plays an important, participative role" (Edley & Litosseliti, 2011, p.155). In other words, I do not regard an interview as "as mechanism by which one party (i.e. the interviewer) extracts vital information from another (i.e. the interviewee)" but as a social interaction on or reciprocal or two-way exchanges" (p.157). However, I am aware that one of the main weaknesses of the interviews is that the participants attempt to present themselves in a positive light which may hinder finding the necessary facts (p.157). Moreover, participants may supply "what they imagine is the 'right' or 'sought after' response" (p.163). It follows that it is dangerous to presume that this is what they really think (p.163). I opted for a semi-structured interview given that while I wished to ensure some level of order and the wording to be used during each interview, I also strived for a more "free-flowing and indeterminate process" (p.158). Interviews were piloted twice. While piloting, I became aware that I tended to impose predetermined questions on my students, which seemed to have hindered the flow of talk as well as my neutrality as an interviewer. Therefore, for the main study, I attempted to preserve neutralness of our talk, and make it seem as if it was a conversation, rather than eliciting some scientific data using a set of prescripted questions. I tried to remain neutral during the interview process, to avoid opinions, to ask simple and open questions and to make my students feel as comfortable as possible. However, because participants were my students, it also became obvious that some tended to give what Edley and Litosseliti (2011) call 'standardized' answers based on what they thought was 'a right', 'expected' answer in order to please their teacher. For example, when asked about their perceived benefits of working with an elder or younger partner, some tended to give answers based on what they had heard from other teachers or the headmaster when discussing these issues. It follows that I do not claim that absolute neutrality was achieved, or that my identity as a teacher together with my behaviour and questions had no bearing or impact on what the participants said. Despite their limitations, interviews provided some important insights into students' perceptions and feelings, and were also helpful in order to understand what was actually happening during interactions. Finally, the transcriptions of the interviews were compared with the audio recordings of the

interactions. As such, combining audio recordings and interviews achieved method triangulation and content validity.

4.6 Tasks

Over a period of two and half months, students carried out a number of tasks. Some tasks were carried out during regular English lessons, which were taught by me. Some were, however, carried out by the students in the so called study times, during which I was not present. Tasks included mainly collaborative tasks, which combined speaking, writing and reading. Students also collaboratively carried out several grammatical exercises, which were aimed at a practise of certain linguistic items, which had been introduced by me. The pedagogical benefits of the tasks and exercises were discussed with another English teacher. In order to achieve ecological validity, I used tasks and exercises provided in the text-book, which were a part of the 8th and 9th grade syllabus and were included in the 8th and 9th grade textbooks named Orange Line 4 and 5. The main data for this study comes from the tasks, which were completed by students themselves in the study time when I was not present. It also has to be noted that some tasks implemented were not consistent with some general frameworks of task-based language teaching and learning (see for example, Samuda & Bygate, 2008) according to which *a task* involves *holistic language use*, achieves *one or more meaningful outcomes*, or is made up of *different phases*. Finally, it has to be noted that some pairs carried out more tasks than other pairs due to their illnesses and extracurricular reasons.

4.6.1 Examples of tasks

Although pairs carried out a variety of tasks and exercises (see appendices B-K) ranging from 10 to 15 per pair, due to space, I will only include four tasks here.

Comic – Students carried out this task towards the end of the unit. They were asked to jointly read the comic and work out the meaning of the story. Then, they jointly completed a grammar exercise (pre-task phase) in order to practice the backshift of tenses (see appendices B-E) before engaging in the main task. The main task was to write the comic as a story and read their story to the class. In the subsequent 45-minute lesson (post-task phase) learners were given a grammar exercise eliciting the same linguistic feature but used in a different context. They were asked to complete this exercise individually. This task took about 135 minutes (one 90-minute and one 45-

minute lesson) to complete (see Table in the appendix D). These lessons were spread over two days and took place in the middle of the unit of work. The first 90-minute lesson consisted of a pre-task and a task, which were completed jointly. The task elicited a targeted linguistic feature, namely back shifting in indirect reported speech. However, this task required students to use back shifting from present simple into past simple only. It must be noted that students' L1 does not employ back shifting of tenses and as such could have posed great difficulty to the participants. All students were briefly introduced to back shifting in indirect reported speech in the previous lesson. However, the 9th grade students were first introduced to tense back shifting in indirect reported speech in the previous year, and had already had some opportunities to practice.

Thus, while for the 7th and 8th graders the task meant exposure to and practice of new grammatical forms, for the 9th graders, this task served as an opportunity to gain increased control over forms that had already been encountered and practiced previous year. To borrow from Storch (2008), the task provided them with an opportunity to consolidate their existing knowledge or extend their existing knowledge to new contexts. Two weeks after the Comic task learners took an individual classroom achievement test, which included the same task. The aim was to check for longer term retention following the analysed lessons (see also Samuda & Bygate 2008, p.159). It has to be noted, however, that the aim of the achievement test was not to make accurate predictions about learners' language ability, because according to sociocultural theory "change must be assessed within, not apart from, the specific activity setting in which the developmental change occurred" (Forman et al. 1993, p.225). Finally, because it elicits a particular linguistic feature; namely reported speech, the Comic task will serve as a tool to search for evidence of independent use of a targeted linguistic feature. This step in the analysis is related to the exploration of peer assistance (RQ2). In other words, the analysis of peer interactions on this task will attempt to show to what extent peer assistance may contribute to second language learning.

- *Text-reconstruction task (a cloze task)* - Students carried out this task towards the end of the unit. This task required student learners to jointly identify and fill in the missing targeted linguistic features. Later, they were asked to replace the identified features with different words. Research (Nassaji & Jun Tian, 2010) suggests that a cloze task promotes LREs as learners' attention is very much drawn to the blank space which

is demanding missing words or text. The task took about 40 minutes to complete (see also appendix F).

- *Looking for help?* – Students carried out this task in the middle of the unit. They were asked to jointly read a text concerning a teenager looking for help and three replies of agony aunt or uncle who are online experts, providing a confidential advice and guidance. Then, they were asked to sum up the main text, determine the replies and talk about what they would do in a similar situation. The task took about 30 minutes to complete (see also appendices G-H).

- *Grammar exercises* – Students carried out these exercises throughout the unit. They jointly completed several grammatical exercises in order to practice and consolidate their knowledge of linguistic features such as *phrasal verbs* and *infinitive with/without to*. The exercises took about 45 minutes to complete (see also appendix I).

In general, *Looking for help, Comic* and *Text-reconstruction* tasks aimed at encouraging students to think about language in the context of a meaning-focused activity (Willis & Willis, 2007, p.116), while the grammar exercises were merely aimed at a practice of linguistic features. The *Comic* and *Text-reconstruction* tasks were convergent tasks that is, task "in which all speakers are working to a joint agreed outcome" (Ellis, 2003, p.123). In addition to this, the Text-reconstruction task is one of the most commonly used tasks to generate LREs (Alegria de la Colina & García Mayo, 2007; García Mayo, 2002; Storch, 1998, 2008). The *Looking for help* task was a task, which required a joint agreed outcome only to a certain extent, allowing also for divergent solutions. All three tasks combined reading, speaking and writing. Research suggests that using writing/speaking tasks, rather than speaking tasks alone, would increase the amount of engagement with a language form while learners' attention is also directed to meaning (Alegria de la Colina & García Mayo, 2007; Nassaji & Jun Tian, 2010; Storch, 1998, 2008). It has to be noted, however, the *Comic* task lacked its sole focus on meaning as it contained a grammar exercise in the pre-task phase in order to raise students' awareness of the targeted linguistic form before engaging in the task. However, this was a pedagogical step suggested by the designers of the text-book. In fact, research has suggested that consciousness raising activities in the pre-task phase may be particularly effective for eliciting attention to form and deliberations about form

(Leeser, 2004; Kim & McDonough, 2011; Park, 2010; Swain & Lapkin, 1998, 2001, 2002).

Finally, I would like to mention that the focus of this study is predominantly on the process of task-based work, rather than on its outcomes. The reasoning behind this is that studying processes of task-based work could shed more light on what learners actually do with the task, for example how they plan and manage tasks. As research suggests, although certain tasks may elicit certain types of linguistic features or LREs, this will most likely vary across instructional context and populations. As Philp and Tognini (2009) explain:

> in the complex setting of the classroom, task features alone may not predict incidence or quality of a focus on form: what the students themselves bring to the task is important, both individually and collectively. The students' own L2 knowledge, task expectations, and relationships with one another, including past experiences with class members, are also factors that impact on their attention, perceptions, and willingness to follow through on difficulties in L2 production and comprehension. (p.275)

4.7 Summary

This chapter has provided a rationale for using a qualitative study and applied methodology. It has also described the study site, participants, data sources, and the data and the instruments used for data collection. The study was conducted in FL context, and recruited secondary school learners of mixed-age classrooms in Germany. The study draws on multiple sources of data. These include audio-recordings of pair interactions over an array of tasks and exercises, students' writing and interviews. By conducting a qualitative, classroom-based study of M-A peer interactions, and gaining understanding of participants' perspectives, I hope to shed more light on what is occurring naturally in these interactions.

5. DATA ANALYSIS

This chapter will first provide a general description of my approach to analysis, which was guided by available research. I will, then, provide a detailed explanation of the analytical process and coding procedures related to each of the three research questions.

5.1 A general description of my approach to data analysis

The analytical process was informed by several research guides on how to do analysis in qualitative research (Dörnyei, 2007; Mercer, 2010; Mercer et al. 1999; Richards et al. 2013, Cohen at al., 2011). Mercer (2010), in his article on the analysis of classroom talk, discusses several strengths and weaknesses of both, qualitative and quantitative approach to analysis. For example, he mentions that one of the strengths of the qualitative analysis is the preservation of the emerging aspects of communication without using in prior analytic scheme, and the generation of categories by analysis and not based on prior assumptions. Although I began the process of analysis by listening to some tapes in order to obtain a general sense of the data, I did use pre-selected categories, which were, however, based on my reading of the available research, and which were also confirmed by the pilot study. These categories were then imposed on the data. In other words, categories did not emerge post-hoc from the qualitative analysis of the data, but were based on my prior assumptions based on the reading of available research. Where it was appropriate for the data produced, these categories were imposed back on the data and further analysed. In fact, it became evident during the process of transcribing and reading the transcripts that these categories were also present in the data. Although this approach of using pre-selected categories may not correspond with some the principles of qualitative research, one of the great advantages, according to Dörnyei (2007, p.253), is that having a prepared set of categories makes it possible to deal with the initial coding in "a focused and time-efficient manner, creating links between extracts from different accounts earlier in the process". Also Miles and Huberman (1994) stress the usefulness of combining the deductive and inductive ways of analysis, i.e. "to arrive at analytical categories deductively (i.e.) bringing codes to the data) and getting gradually to them inductively (i.e.) finding them in the data" (as cited in Dörnyei, 2007, p. 254). When coding, I immersed in the data and worked with the codes line-by-line, looking for similarities between "my" codes of "my" data and

between codes in the data of other research studies. I was, however, aware of the dangers of this approach as the researcher may apply his/her preconceptions to the data in order to produce quick and easy interpretations and descriptions (Dörnyei, 2007). In order to avoid this pitfall, I revisited the data several times in later stages of the analysis, and revised some categories (Dörnyei, 2007, p. 253). In other words, I moved back and forth between data analysis and interpretation, and compared my notes from previous times. I also took notes every time I was transcribing the recordings. For example, while transcribing the data, I highlighted relevant passages, took short notes, and these notes were then compared with those when the data was revisited at later stages. In addition to this, in order to increase transparency of the analytical process, peer talk was complemented with the analysis of students' writing produced during the tasks. Moreover, the analysis of peer talk was compared with students' own words from the interviews in order to compare what students do and what they say they do. At the same time, I paid a great deal of attention to details in order to bring out the unique nature of the interactions (Richards et al., 2014, p.48). However, I also kept in mind that it is necessary to preserve the balance between paying too much attention to the unique details of the classroom interaction, and to merely provide a description which is homogenous and similar to other instances (Richards et al. 2014). One of the ways of dealing with this issue and to provide a picture which is illustrative of the whole data set is to combine qualitative and quantitative analysis (Mercer, 2010; Mercer & Wegerif, 1999; Storch, 2001a). My approach to analysis follows Mercer's suggestion of a complementary use of qualitative and quantitative approaches. The analysis was mainly qualitative in nature, implementing a micro-genetic approach (i.e. close study) of the talk as it develops utterance by utterance (Donato, 1994; Lazareton & Davis, 2008; Ohta, 2000). The analysis also included some quantitative elements. However, the aim of the quantitative analysis was to merely support the qualitative results, and not to test a hypothesis. The quantitative analysis only employed elements of descriptive statistics such as frequency counts of certain interactional features (Storch, 2001a). Where appropriate, categories were quantified and numerical elements were implemented in order to illustrate the extent of some interactional features across and within pairs. For example, in order to demonstrate the extent and ways of assistance provided (RQ2), categories such as co-constructions, explanations, other-corrections, and other forms of assistance were quantified. In addition to this, measures such as number of conversational turns, number of LREs, a turn-LRE ratio and a number of initiations of,

response to an initiation of and resolution of an LRE were included because they could support the qualitative analysis as they may be indicative of patterns of interaction and peer assistance. Data analysis involved several stages, which will be explained in the next sections. Finally, I would like to note that because the data were collected during regular classes, and when all students were engaged in pair-work, the higher level of noise resulted in some sequences of recordings being incomprehensible.

5.1.1 Stage 1 of data analysis - listening, transcribing, note taking

The first stage of the data analysis involved listening to selected tapes in order to a get a general idea of the data. I took notes of all thoughts and ideas that came to my mind. This is referred to the research as analytical memos, which involves explorations of ideas, hunches, and thoughts about codes (Dörnyei, 2007, 254). It can be said that the process of interpretation of the data began while listening to the tapes. Having done that, I began transcribing the interactions on tasks. When transcribing, I took notes. I wrote a brief summary for each interaction that I transcribed.

I transcribed all audio-recordings with the help of f4 transcription software, which allows for slowing down and looping sound files when transcribing. When transcribing the sound-files I encountered a number of instances, when I could not make any guess of what the utterance was or when I was not absolutely certain about it. I wrote [unclear] in brackets, and first consulted some of my colleagues, who are native speakers of German. However, only instances which seemed to have been of importance for the analysis of data were consulted. Thus, much of the learners' off-task talk was not consulted, and left untranscribed. Although native speakers were able to identify some utterances, there were times when they were not certain about what the utterance was. When this occurred I consulted the participants themselves. I played the sequence, and asked them what their guess was. In this way, a number of unclear segments were resolved. When all uncertainties were resolved, I uploaded the transcribed documents into a Microsoft Word document, and further analysed the transcripts.

As I pointed out above, the process of analysis actually began when transcribing the sound files. I took notes when I encountered utterances which could be important for the analysis of talk, assistance or for understanding of the pair dynamics in general. For example, friendly or unfriendly tone of utterances, instances of laughter, yawning etc. were noted as they were indicative of students' behaviour on the task.

It also needs to be mentioned that some participants did not interact on all tasks, because they either worked on other tasks, or interacted with another student when their partners were absent. Therefore, some transcripts were missing, which resulted in 56 transcriptions of classroom interactions in total. Interviews involved seventeen transcripts related to three pair- and 14 individual interviews.

5.1.2 Stage 2 of data analysis – segmentation of data

This stage of data analysis involved segmentation of data into on- and off-task talk. Only on-task talk, in which learners were engaged in the task (Storch, 2001a) was further analysed. It has to be mentioned that episodes of off-task talk, during which learners are engaged in talk not relevant to the task, were also counted and considered in further stages of analysis. For example, a high occurrence of off-task is indicative of students' low engagement with the task. This has an impact on pattern of interaction formed by pairs, and on assistance provided. Off-task talk was, however not further analysed.

5.1.3 Stage 3 of data analysis – segmentation of on-task talk

On-task talk was further segmented. Within the on-talk, learners talked mainly about 1) the task at hand, 2) about language use and choices, and 3) about other task-related content such as about main characters or events. Episodes in which learners talk about how to go about completing the task at hand, are referred to as talk about task (TRE-Task related episodes). These task-related episodes (TREs) also included instances in which learners negotiated or assigned roles, announced or negotiated the next stage in the task (Storch, 2001a) and so on.

In order to illustrate what I mean by a task related episode (TRE), here is an excerpt from the data, in which the younger but more proficient member of the dyad helps her partner to understand the task by checking on her understanding of it and then by inviting her to speak English.

Excerpt 1

Li: Also jetzt haben wir die erste Aufgabe gemacht und jetzt machen wir die
nächste. Die lese ich jetzt mal vor. [*So, now we've done the first task and*

now we're going to do the next one. I'm going to read it.] What makes a person friend for you? What qualities are important?

Li: Was heist das Leni? [*What does it mean, Leni?*] (saying as a teacher).

Le: Na ja was ein Freund für dich ausmacht. [*Well, what a friend is to you*]. (overlap).

Li: Genau! (saying as a teacher) Was ist für dich wichtig? [*Exactly, what is important to you?*]

Li: Sollen wir auf Englisch sprechen? [*Shall we speak in English?*]

Le: Ja ich denke schon. [*Yes, I think so.*]

Episodes, during which learners talked about language use and their choices are referred as language related episodes (LREs; Swain & Lapkin, 1998). Language related episodes (LREs) were coded on the basis of Swain and Lapkin's (1998, p. 326) definition as "any part of a dialogue where language learners talk about the language they are producing, question their language use, or correct themselves or others." Each LRE begins when a student first proposes or begins to discuss language or resolve a linguistic problem and ends when the discussion or resolution of the problem is complete (Davin & Donato, 2013). Research has found that peer collaborative dialogue has the potential to mediate the construction of linguistic knowledge and that this process of joint construction aids L2 development because while attempting to solve a linguistic problem, learners jointly construct and analyse particular linguistic forms, which makes it possible for them to learn new language or knowledge about language, and subsequently improve their language use (Swain, 1998, 2000, 2010; Swain et al., 2009).

LREs were categorized according to what aspects of language learners talked about. This Table can reveal learners' language focus during both tasks. Coding of LREs was adopted from Storch (2008) and LREs were as follows:

Table 2

Coding of LREs

Form-focused LREs	**F-LREs**	parts in the data in which learners discussed aspects of morphology or syntax
Lexical LREs	**L-Res**	parts in the data in which learners dealt with word meanings and word choices
Mechanical LREs	**M-LREs**	parts in the data in which learners dealt with aspects of spelling

In order to illustrate the coding of LREs, here are some examples of different types of LREs from the data.

Form-focused LRE (F-LRE)

Excerpt 2 provides an example of F-LRE from an interaction on the Comic task, in which learners transform a comic strip into a recount, by jointly changing the sentence *Sandy tells others that the mural looks great* into *Sandy told others that the mural looked great*. Lara reads a sentence (turn 36). Ella immediately provides the past simple form (turn 37). This is acknowledged by Lara (turn 38). Lara uses her resources to explain that *look* is not an irregular verb (turn 39). The correct verb form is then immediately completed by Ella (turn 40).

Excerpt 2

36 L: Sandy tells others …

37 E: told!

38 L: ja. [*yes*]

39 L: na ja look ist kein unregelmäßiges [*well, look is not an irregular verb*]

40 E: also looked

41 L: looked (repeats and writes the sentence down)

42 L: Sandy told others that the mural … (saying while writing the sentence down).

43 E: looked great

Lexical LRE (L-LRE)

Excerpt 3 provides an example of an L-LRE, in which learners attempt to replace the word *kids* with a word of a similar meaning.

Excerpt 3

> A: Und kids ist people oder so? [*And kids is people or something like that?*]
>
> E: Students?
>
> A: Students oder people oder so was. [*Students or people or something like that.*]
>
> E: Aber students ist doch Schüler aber ne Kinder oder? [*But students is pupils but not children, right?*] ...children!

Mechanical LRE (M-LRE)

Excerpt 4 shows an example of an M-LRE. In line 29 Lara (the elder student) requests assistance from Ella by asking her to find the correct spelling of *thought* in the dictionary. Ella then provides the correct spelling (turn 30).

Excerpt 4

> 29 L: Jaden thinks that it is no good letting the gang down. Ok. Guck mal bitte wie das geschrieben wird... thought, die Vergangenheit von think. [*Please, have a look at the spelling of thought, the past simple ot think*].Weiss ich nämlich noch ne…[*I don't know this one, yet…*]
>
> 30 E: *t-h-o-u-g-h-t.*

Episodes, during which learners perform the task but do not talk about task or about language use are referred to as *content related episodes* (CRE). In these episodes, learners for example talk about characters, events etc. Excerpt 5 provides an example of a CRE from the data. John (grade 9) and Will (grade 7) talk about what they do in their free time. As the excerpt reveals, they talk about the content of the task, i.e. perform the task, without deliberating about the task itself, or about their language choices.

Excerpt 5

> J: Why do you go swimming in the summer?
>
> W: Because it's beautiful when you can diving or swimming or jumping and it's

better than when you play computer or handy.

J: What do you do? …What of the three things that you say is the best?

W: I found that diving is better that all…

J: because... (inviting W. continue)

W: because ... laughter... it's beautiful when you can see the...

W: Was soll ich den sagen? [*What shall I say?*] When I can see the underwater world... laughter...

LREs were the most frequent episodes pairs engaged in during the four tasks and exercises (the Comic, the Text-reconstruction, Looking for help and grammatical exercises). Across four tasks, ten pairs engaged in 433 LREs (Language related episodes), in 88 TREs (Task related episodes) and in 107 CREs (Content related episodes). In other words, learners discussed linguistic forms elicited by the tasks more frequently than the aspects of the tasks and of the task content. These numbers seem to be, however, mainly attributed to the nature of the tasks, which elicited grammatical features. I will elaborate in more detail on this measure in Chapter 7, which discusses findings of the RQ2. Importantly, the three mentioned types of episode (TREs, LREs and CREs) will be used as units of analysis for the investigation of patterns of interaction (RQ1) and the extent and ways of assistance provided (RQ2).

5.1.4 Stage 4 of data analysis - quantification of oral production

In this stage, some salient features related to RQ1 (patterns of interaction) and RQ2 (peer assistance) were quantified (see Storch, 2001). These involved quantification of oral production, namely number of conversational turns (see Table 3).

Table 3

Number of conversational turns over four tasks

Pair	Student/grade	Total
Pair 1	Lara (9)	282
	Ella (8)	220
Pair 2	Emilia (9)	358
	Stella (7)	370
Pair 3	Irena (8)	143
	Sara (7)	149
Pair 4	John (9)	79
	Will (7)	83
Pair 5	Lea (9)	195
	Jess (8)	161
Pair 6	Leni (8)	226
	Lilliana (7)	224
Pair 7	Riki (8)	66
	Lyn (7)	54
Pair 8	Gussi (8)	181
	Jossi (7)	199
Pair 9	Lenka (8)	251
	Lucy (7)	197
Pair 10	Alena (8)	163
	Enna (7)	191

In order to compare relative time on task, the number of turns was used as a measure of comparison to assess the length of the interaction. A turn in this study refers to a completed utterance of one learner. When one learner started speaking before the turn of the other learner has finished – that is when overlap (interruption) occurred, both turns were included in the word count (Example 1). However, when both learners started speaking at the same time, and it was not clear who started talking first, the turns were not included in the word count (Example 2).

Example 1

      J: The blue

      J, G: colour was a great idea Fetch. (overlap, reading)

Example 2

      J, G: Diese blaue Farbe war eine gute Idee, Zach. (simultaneously translating a

          sentence)

Number of turns was selected over word count of the oral speech produced because interactions often involved vocalized reading of sentences of the task input. However, these instances of reading had to be transcribed in order to preserve the sense of learners' interaction and in order not to omit important events of the interaction. Moreover, it would have been technically very difficult to separate such instances of reading from those of their talk, when computing a word count. Thus, computing the number of students' turns rather than word count seemed to have been not only technically more easy, but also more indicative of learners' patterns of interaction and assistance as this is an investigation of peer talk.

5.1.5 Stage 5 of data analysis – micro-genetic approach

In order to investigate patterns of interaction (RQ1) and the extent and ways of assistance (RQ2), I adopted a micro-genetic approach (i.e. close study) of the talk as it develops utterance by utterance (Donato, 1994). The microanalysis focused on the moment by moment interaction by tracing the trajectories on learners' language use within LREs, TREs, and CREs. I will elaborate on the analytical procedure and coding when discussing the analysis related to each RQ.

5.1.6 Stage 6 of data analysis – interviews

The final stage of data analysis involved analysis of post-task interviews (RQ3), which addressed learners' perceptions of their collaborative task-based work. Based on the pre-determined categories, which were adapted from literature (Watanabe, 2008), the transcribed talk of the interviews was analysed. Although the focus was on the predetermined categories, new topics and ideas emerged from the data as I was transcribing and reading the transcripts. For example, overall perceptions towards pair interactions with the younger/elder partner seemed to have brought about a topic related to overall perceptions of practices of cross-age interactions in a particular classroom. It

follows that the the contextual factors of the classroom practices had to be considered when analysing perceptions of particular interactions.

5.2 A description of analysis and coding procedures with regards to each RQ

Having provided a general overview of the process of data analysis, and having outlined the segmentation of the data, in this section I will explain the analytical procedure and coding with regards to each RQ.

5.2.1 RQ1: What patterns of interaction can be found among mixed-age pairs of German learners of English as a foreign language at an alternative secondary school?

Transcribed talk of ten pairs interacting on a variety of tasks across a period of two and half months was analysed for patterns of interaction. For the sake of determining the patterns of interactions, the following categories were adopted from Storch (2001a, 2002). As pointed out above, Storch (2002, p.128) identified four patterns of interaction, namely collaborative/dominant-dominant/dominant-passive/expert-novice.

Table 4

Patterns of interaction

Collaborative	Learners' engagement is moderate to high equality and moderate to high mutuality. Learners display willingness to offer and engage with each other's ideas, they create and maintain "joint problem space". Learners offer and discuss, which lead to resolutions acceptable to both partners (Storch, 2002, p.128)
Dominant/dominant	Learners display moderate to high equality, but a moderate to low level of mutuality. Although both learners may equally contribute to the task, they are not willing or unable to fully engage with each other's contribution.

Dominant/passive	Learners show low level of mutuality and equality. The dominant partner leads the task with little negotiation with the other passive partner, who cannot or does not contribute to the task or challenges the other.
Expert/novice	The level of equality may be moderate to low but the level of mutuality ranges from moderate to high. Differs from dominant/dominant in terms of the willingness of the expert to actively encourage the novice to participate in the task.

These categories were imposed on the data and further analysed. During this step, each episode (TRE, LRE, TCE) was reviewed and assigned to one of the above mentioned patterns of interaction. Adopted from Storch (2001a, 2002), the patterns of interaction were coded for: 1) *pattern of contribution 2) decision-making behaviour 3) nature of assistance 4) discourse and linguistic features.* The rationale for looking at these elements in particular is that they are indicators of the extent of mutuality and equality among learners, and of collaboration. Interaction is high on equality if both parties in an interaction take directions from one another, rather than one party submitting to an unilateral flow of direction from the other (Damon & Phelps, 1989, p. 10). In other words, equality refers to an equal extent of control over the direction of a task. Mutuality means that the discourse in the engagement is extensive, intimate, and connected (p. 10). In other words, mutuality is high when both learners frequently engage with each other's contributions, providing a rich reciprocal feedback and sharing ideas (p.13). Moderate to high equality and mutuality indicates that a collaborative pattern of interaction is established (Storch, 2001a). As mentioned above, four categories were adopted for the analysis: 1) *pattern of contribution 2) decision-making behaviour 3) nature of assistance 4) discourse and linguistic* features (see Storch, 2001a, p.279-280) for an overview of patterns of dyadic interaction and associated traits). I will now briefly comment on each category.

1) Pattern of contribution – this category implies the extent of individual learner's contribution to the task and learners' willingness to offer and engage with each other's contributions (Storch, 2001a). For example, in the collaborative pattern of interaction, the pattern of contribution is equal or one learner's contribution to the task is slightly higher. However, as excerpt 7 below shows, the more active learner seeks involvement

of the less active learner, contributing to involvement of both in all aspects of the task (Storch, 2001a). Similarly, as shown in excerpt 6 below, in the expert/novice pattern despite the expert's greater contribution, he/she encourages the 'novice' to contribute. In contrast to this, in the dominant/dominant pattern, one learner contributes more controlling and directing the task while the other learner resists domination (Storch, 2001a).

Excerpt 6 (translated from German)
> J: Ok. Will. So we should look at one picture and then imagine that we are one of the people and then one of us should ask the other one why one does it. Which are we going to take?
> W: Well, swimming.

2) Decision-making behaviour – this category involves for example how agreements are sought, disagreements expressed, or whether learners' discussions lead to resolutions which are acceptable to both of them (Storch, 2001a). As shown in the excerpt 7 below, for example, decisions in the collaborative pattern are resolved in a process of co-construction, in which both learners "add and extend on each other's contributions, pooling their resources". Learners negotiate disagreements and reach consensus (Storch, 2001a, p.279). In the dominant/passive pattern it is the dominant learner who makes the majority of decisions, with minimal or no involvement of the passive learner.

Excerpt 7 (translated from German)
> 12 A: So, it was a beautiful day (laughter). Okay. I'm going to write now. In English or in German? Shall we write it in German first and then translate it?
> 13 E: Good idea. So, let's write in German first.

3) Nature of assistance – this category relates to the direction of assistance provided. For example, as excerpt 8 below shows, assistance in the collaborative pattern is provided either by learners in turn or "co-constructed as collective resources of both learners are pooled and decisions reached"(Storch, 2001a, p.280). In contrast to this, in the dominant/dominant pattern, although assistance is provided or offered, it is rejected without much consideration (p. 280).

Excerpt 8 (translated from German)

    1 Le: space (referring to the word space which they are about to replace)

    2 Lu: Can we also say other planets? (suggesting)

    3 Le: Yes, that fits well. (saying and writing it down)

4) Discourse and linguistic features – this category involves occurrence of certain discourse moves and linguistic features. For example, the collaborative discourse is marked with a high occurrence of requests, questions, explanations, repetitions, instances of collaborative completions, simultaneous talk or use of phatic utterances (Storch, 2001a). Furthermore, in collaboration, intersubjectivity is established when "interlocutors share some aspect of their situation definitions" (Wertsch, 1985, p. 59). Antón and DiCamilla (1999) further explain that this occurs "when individuals working in collaboration define the objects (both concrete and abstract), events, and goals of a task in the same way" (p.236).

As shown in excerpt 9 below, with regards to linguistic features, these include a high frequency of first-person plural pronouns such as *we, our*, or using *let's, could you?, do you think that?,* which are features indicative of mutuality and a joint ownership of the task (Storch, 2001a). On the other hand, predominance of first- and second-person pronouns indicates a non-collaborative pattern of interaction (Storch, 2001b).

Excerpt 9

    A: **We** must make the next...

    E: Task?

    E: Read the sentence about the comic and tell the story. Jaden tells the
        gang...(reading the example)

    A: Ok.

    E: Also **we** must do this story and then **we** must ...do this comic and then **we**
        must tell the story.

    E: Jaden tald ne [no] told (self-correction) weil **wir** müssen Vergangenheit
        machen, oder? [*because **we** have to use past, right?*]

However, as will be shown further in the analysis (section 6) in more detail, a difficulty in classification according to Storch's framework arose in the case of some pairs. This difficulty was mainly related to a certain level of ambiguity with regards to some

associated traits of patterns of interaction identified by Storch as 1) pattern of contribution 2) decision-making behaviour 3) nature of assistance 4) discourse and linguistic features. In other words, I encountered some difficulties to code the pair talk for these traits and to match each pair with one of the four patterns of interaction. According to Storch (2001a), these traits indicate the extent of mutuality and equality among learners, and of collaboration. However, such a claim does not seem to be straightforward. For example, Storch (2001a) argues that the discourse within the dominant/dominant pattern of interaction is marked predominantly with the first person pronoun and the second person singular while the frequent use of the first person plural (e.g., *we*) is a sign of collaboration. However, the pronoun *we* as in "*We must use simple past here!*" can have a different connotation depending on the intention of the particular speaker. When uttered in a bossy way, it can be intended to embarrass or ridicule a partner. However, when uttered in a friendly tone, it can serve the function of clarifying or even inviting the partner into a joint pursuit of the task at hand. In fact, the analysis of excerpts revealed that it was not necessarily the discourse and linguistic features as such but the contextual aspect of a particular interaction and utterances that was more suggestive of the level of equality or mutuality.

For example, interactions of one pair Gussi-Jossi (see excerpts 17, 18) showed little evidence of first person plural. According to Storch's framework, this would imply that both learners lack a joint ownership of the task, suggesting that the pair is low on mutuality and can only be matched with the dominant/dominant or dominant/passive patterns of interaction. However, as seen in the analysis, both learners often exchanged views and opinions about the task and language while using the first person singular (e.g., I think, war nicht sehr beeindruckt [translating *wasn't very impressed*]). What is more, they were engaged in all aspects of the task, extended each other's contributions, and pooled their linguistic resources. In addition to this, both learners frequently challenged one another engaging in disagreements which were sometimes uttered in an argumentative tone (e.g., *No, he has forgotten it!*), which were not necessarily resolved. However, they also seemed to have enjoyed all tasks, spent a relatively long time on them, listened to each other, joked about the language and laughed about each other's utterances. In addition to this, they produced lengthy LREs and their LRE/conversational turn ratio was high. Finally, they produced a relatively high number of co-constructions, which according to Storch (2001a) indicates mutuality and collaboration (see also Donato, 1994).

We can see that there is some level of ambiguity with regards to Storch's definition of mutuality and its associated traits. Based on Storch's framework, this pair could be classified as dominant/dominant but a closer examination of other contextual aspects of their interactions which are not included in Storch's description resulted in classifying this pattern of interaction as collaborative.

Similarly, the interaction between Lara-Ella (see excerpts 19, 20) was rich on disagreements with each other expressed via other-corrections (e.g., No…His girlfriend was angry! [argumentative tone] or requests for explanation (e.g., *Why is that?* [in argumentative tone]). These disagreements were also sometimes unresolved. Storch (2001a) claimed that this indicates a lack of a shared perspective of the task. This lack of shared perspective is according to her (see also Antón and DiCamilla (1999) suggestive of low mutuality. However, despite Lara's lack of responsiveness to the propositional content of her partners' utterances, the analysis of excerpts showed that both learners spent a considerably long time on all tasks, worked together from the beginning to the end of the assigned task, produced a high ratio of LREs, a relatively high LRE turn/conversational turn ratio, and engaged in frequent co-constructions. These seem to be all figures associated with high mutuality and high equality. Both examples show that there was some difficulty to apply Storch's framework to all pairs. This difficulty seems to be related to the associated traits identified by Storch as being indicative of mutuality and equality.

Based on this reasoning, the analysis will take into account traits identified by Storch, such as engagement with each other's contributions, reciprocal feedback or frequent sharing of ideas in order to determine mutuality. However, it will also consider other traits such as challenging each other using disagreements in the form of other-corrections or clarification requests because they may as well be indicative of mutuality as they suggest a joint pursuit of the task at hand. Importantly, unresolved disagreements will not necessarily be considered as an indication of low mutuality. In other words, lack of agreement may not necessarily imply low mutuality. In contrast, lack of responsiveness to the other's utterance is most likely create an interaction low on mutuality. Therefore, lack of responsiveness will be considered as a sign of low mutuality. The analysis will also take into account measures such as time on task, number of conversational turns, LREs/conversational turn ratio and number of co-constructions as these measures may indicate the extent of equality and mutuality. Importantly, because Storch's framework does not seem to fully take the contextual

aspects of utterances into account, the analysis will consider aspects such as laughter, off-task talk and the tone and function of utterances as they may be suggestive of the extent of mutuality and equality.

To sum up, Storch's framework will be used to classify the patterns of interaction found among M-A pairs but above mentioned measures and aspects of interactions will be considered and taken into account. Finally, where applicable, the difficulties to apply Storch's framework to M-A pairs will be addressed. The following excerpt (10) illustrates the analysis of the pair talk for patterns of interaction. The interaction pattern for this pair was categorized based on the categories and codes identified by Storch (2001a) but above mentioned criteria were added to the analysis. The excerpt comes from the interaction of John (9th grader) and Will (7th grader), two high achieving and motivated students, discussing the objectives of a discussion task and subsequently performing it.

Excerpt 10

1 J: So agree with your partner on one of the photos. Imagine that you…(reading the task)

2 J: Ok. Will, wir sollen uns das Bild anschauen und dann vorstellen, dass wir einer von den Leuten sind und dann sollen wir uns gegenseitig fragen, warum der es macht. [*Ok. Will. So we should look at one picture and then imagine that we are one of the people, and then we should ask one another why we do it.*] (explaining and inviting into a joint pursuit of the task)

3 J: Welches nehmen wir? [*Which one are we going to take?*]

4 W: Well, swimming.

5 J: Swimming? (confirmation check)

6 W: Yes.

7 J: Ok. So, I am going to ask you. So… [*Ok. So, ich werde dich fragen. So…*]

8 W: Yes.

9 J: Why do you go swimming in the summer?

10 W: Because it's beautiful when you can diving or swimming or jumping and it's better than when you play computer or handy.

11 J: What do you do? …What of the three things that you say is the best?

12 W: I found that diving is better that all …

13 J: because...(inviting W. To continue)

14 W: because…laughter… it's beautiful when you can see the... Was soll ich denn sagen? [*What am I supposed to say?*]...When I can see the…underwater world...laughter

As we can see, John controls and directs the task. He reads the task to Will (turn 1) and provides him with an explanation of the task objective (turn). He then asks Will about his preference (turn 3). Later he suggests that he will start by asking him (turn 7) and encourages him to answer his question (turn 9). Interestingly, John even prompts Will to give a reason for his statement (turn 13). John actively encourages Will to participate in the task, which is linguistically demanding for Will. Not only does Will provide him with sufficient time to answer, but also prompts him to say more. The discourse is marked with frequent explanations, suggestions and questions in the form of requests for confirmation or explanations. Explanations and suggestions are given mainly by John, and are further questioned or elaborated upon by Will. Assistance is provided predominantly by John ('expert') but is accepted by Will. The discourse is also marked with a frequent use of the pronoun "we" (turns 2, 3), which in this particular context indicates John's willingness to offer and engage Will in the task and to create and maintain space, in which ideas could be discussed. These discussions then lead to resolutions acceptable to both of them. We can see that although John has a higher degree of control over the direction of the task, and it is rather Will who takes directions from John, both learners seem to contribute equally to the task. It follows that the interaction is moderate on equality. The excerpt also reveals that both learners engage with each other's contributions, share ideas and are responsive to each other's suggestions. It can be said that the discourse is intensive, connected and in a friendly manner. In other words, the interaction is high on mutuality. In fact, on the interviews (excerpt 11) both learners pointed out the advantage of pair work as in pair work learners are more likely to arrive at a correct solution.

Excerpt 11 (translation from German)

W: When you do a task, there are usually two different opinions, and it is therefore possible to be more sure… so two opinions are more definite…

When you are alone, you only have one opinion and you think that you are right. (Interview with Will)

A broad description of what typifies the broad range over time and across tasks will be provided. Subsequently, an in-depth analysis will illustrate the patterns of interaction found among M-A pairs. The post-task interviews were used to triangulate the analysis of audio-recordings.

5.2.2 RQ2: To what extent and in what ways do the learners, organized in mixed-age pairs provide assistance to each other during classroom pair collaborative tasks?

The second aim of the study is to explore the extent and the ways through which M-A age pairs assist one another when engaged in the collaborative dialogue on regular classroom tasks, and the role of this assistance in second language development (Gagné & Parks, 2013; Ohta, 2001; Foster & Ohta, 2005).

The analysis will consist of both, qualitative and quantitative elements. Adding a quantitative component to the analysis might provide a better understanding of the variations within and across pairs the extent of provision of existence. Moreover, the analysis of peer interactions will be triangulated with the analysis of interviews. As mentioned in the section 5.1.3., the talk among pairs was segmented into episodes. Learners provided assistance to one another while engaged in TREs (Task related episodes), in the LREs (Language related episodes) and CREs (Content related episodes). These three types of episodes were taken as units of analysis of assistance.

In order to answer RQ2, codes were developed through the process of repeated reading of transcripts, and careful reflection, in addition to a comparison with previous research. I re-read the transcribed interactions of ten pairs interacting on a variety of tasks in order to get a more detailed picture of how peers provided assistance to one another, and what strategies they used. While re-reading the transcripts I took notes in order to understand the contextual background of assistance during later stages of the analysis. It became evident from the re-reading of the transcripts that the ways peers helped one another were consistent with previous research on peer interaction. The most salient ways of requesting assistance in the data were *request for information*, *request for explanation* and *request for confirmation*. In terms of providing assistance pairs relied mainly on *co-constructions, explanations, suggestions, other-correction* and

other-repetitions. Instances of *self-correction, and self-repetition* were rare. However, when reading the transcripts I also found evidence of assistance strategies which were not found in the pilot study. These were *continuers, active listening* and *checking partner's understanding*. However, it has to be said that these strategies were found only in those interactions identified as *expert/novice*.

The subsequent process of analysis continued by making a tally each time an episode of assistance was detected. Episodes of assistance were counted for each pair and for each pair member across four tasks. I re-read the transcripts several times, and checked my accounts. In this way, I confirmed the codes. Their examples from the data and their definitions are provided in Table 5 below. However, it also needs to be mentioned that some codes, which are in the literature sometimes referred to as one were coded separately. Thus, *request for assistance* were further coded into *request for confirmation, request for information* and *request for explanation.* On the other hand, some codes were merged into one. Thus, *completion* and *co-construction* were merged into one category as they both imply that learners do something together. In the same way, instances which are in the literature referred to as *continuers*, *active listening* and *checking partner's understanding* (Foster & Ohta, 2005; Gagné & Parks, 2013) were merged into one category, which I named *teacher-like assistance* (see Table 5 below), as strategies typically used by a teacher in teacher-learner interactions. However, on occasion, they may also be used by a more skilful partner when helping her/his less skilful partner by encouraging to continue an utterance or to provide her/him with feedback (Foster & Ohta, 2005; Gagné & Parks, 2013). I will provide a more detailed explanation of what I mean by this later. Furthermore, assistance strategies often occurred in combination, rather than in isolation (see also Foster & Ohta, 2005).

The most problematic in terms of coding was *request for confirmation* which has been referred to in the research literature in various ways because of a variety of pragmatic functions of its use. In the research on learners' negotiation of meaning the term confirmation check is referred to "any expression by a speaker immediately following an utterance by the interlocutor which was designed to elicit confirmation that the utterance had been correctly understood or correctly heard by the speaker" (Foster & Ohta, 2005, p.410; Gass & Varonis, 1985; Pica & Doughty, 1985). However, as Foster and Ohta (2005, p.410) rightly point out, confirmation checks "do not necessarily indicate a communication breakdown, but may perform different discourse functions such as confirmation that the utterance is correct or as encouragement to

continue". However, I became aware that many of such instances, in which learners sought confirmation of their utterance being correct, actually implied a *suggestion*. In other words, those were instances, in which learners seek "confirmation in response to one's own suggestion" (Storch, 2001a, p. 165). I decided to code such instances as *suggestions*, as suggesting seemed to be the main pragmatic function of such utterances. The following Table (5) provides definitions of the codes and their examples found in the data.

Table 5

Assistance/definitions of codes/examples from data

	Requesting assistance	
Request for confirmation	A request seeking confirmation of correct understanding (Foster & Ohta, 2005, p.410).	A: **Hast du *has to* oder *had to* gesagt?** [*Did you say has to or had to?*] E: that she had to stay…to stay
Request for information	A request eliciting lexis, morpho-syntax or spelling. (Storch, 2001a)	L: **What means fortführen?** E: to continue
Request for explanation	A request eliciting responses such as explanations or opinions.	J: **Kannst du mir bitte sagen, was wir hier Machen sollen?** [*Can you tell me what are we supposed to do here, please?*] L: Na, klar. [*Yes, sure.*]

	Providing assistance	
Co-construction	"The joint creation of an utterance, whether one person completes what another has begun, or whether various people chime in to create an utterance." (Foster & Ohta, 2005, p. 420)	L: Well, look is not an irregular verb E: So then, looked L: (repeats and writes the sentence down). L: Sandy told others that the mural … (saying while writing the sentence down). E: looked great
Other-correction	An utterance which "involves a peer correcting his or her partner." (Foster & Ohta, 2005, p. 420)	L: Sandy tells others … **E: told!** L: yes
Explanation	Refers to instances, during which learners explain language related or task related issues. Explanations also include justifications of their linguistic choices. They may be *solicited*; given in response to requests" or *unsolicited*; offered as an elaboration on a suggestion. (Storch, 2001a)	G: That's great! This is clear but why do we need it here? It does not matter that he let them down. **J: He let them down and that is why they are mad at him.**
Suggestion	Refers to instance during which one learner puts forward an idea or plan related to the task at hand, morphosyntax, lexis, or spelling for his/her partner's consideration This can be done upon or without request. (Storch, 2001a)	L: called the other gangs gang he gang and told them that… **E: that Jaden finished the mural?** **L: Yes.**

Other-repetition	A repetition of other's utterances with or without some type of expansion or modification	A: Later in a cafe Jaden felt (reading) E: guilty A: **guilty** but his lovely girl wasn't too impressed.
Teacher-like assistance	*Continuer*; is an "instance where an interlocutor takes an interest in the speaker's utterance and encourages him/her to continue" (Foster & Ohta, 2005, p.420). Continuers may also occur when a speaker indicates to the interlocutor that the utterance is incomplete by rising intonation (Gagné & Parks, 2013, p.207) *Active listening;* a listening strategy where trained learners become skillful partners in giving feedback by using verbal/non-verbal methods of active participation in conversation, such as back-channeling and the use of "wh" questions to help the speakers to continue (what?, where?, who?, when?, why?). (Fujii & Mackey, 2009). See also the notion of *assisting questions* (Tharp & Gallimore, 1989).	E: **But Jaden explained that he… that he….that he…** S: had? E: Yes, yes, great. Le: So we have done the first task and now we're going to do the next one. I'm going to read it. „What makes a person friend for you? What qualities are important?" Li: **What does this mean Le?** (sounding as a teacher). Le Na ja was ein Freund für dich ausmacht. (translates into German). Li: Exactly! (sounding as a teacher) **Was ist für dich wichtig?** (adds a translation of the next question)

In order to better determine the extent of assistance provided to one another, I complemented the qualitative analysis with the descriptive quantitative analysis of how the forms of assistance were distributed within and across pairs. As indicated above,

LREs were the most frequent episodes in the data. What is more, some researchers have shown that LREs mediate assistance because as learners reflect on the language they are producing they often seek, provide and receive assistance from their partner (Swain, 2001, p. 53; Lapkin et al. 2002; Swain & Lapkin 1998). Therefore, in addition to forms of assistance, figures such as the occurrence of LREs and their resolution maybe an indication of the extent of assistance provided. Therefore, the analysis also took into account to what extent do M-A pairs engage and resolve LREs. And because pairs under investigation are composed of learners of different ages and proficiencies, the analysis considered the extent of individual learners' initiation of, response to and resolution of LREs within these pairs.

The final step of the analysis was to explore the role that assistance provided among M-A peers might have played in students' increased target like use of the linguistic feature targeted by a task. As mentioned above, assistance, as a feature of a talk has been claimed to promote L2 (Foster & Ohta, 2005; Ohta, 2000). The construct *increased target like use* was operationalized in terms of learners' gains in their performance to construct correct sentences containing the targeted structures while preserving appropriate meanings. My assumption was that construction of target like sentences would require less and less help (Lantolf & Aljafreh, 1995; Lantolf & Thorne, 2006), and would occur with increased fluency as learners work through the tasks. In other words, the focus of the analysis was also on whether and how learners' assistance to each other may promote the target like use of the linguistic feature. It was also assumed that learners would show gains in their target like use throughout the same task.

Based on sociocultural theory, I intend to illustrate how the targeted linguistic structure is appropriated from social use for individual use (Lantolf & Aljafreh, 1995; Ohta, 2000). Although interactions from other tasks were also analysed, the focus of the analysis was on the Comic task, because in contrast to other tasks, the length of the Comic task allowed me to trace the evidence of increased target like use. As mentioned above, the Comic task (appendices A-H) elicited back-shift of present tense into past tense. The analysis involved the whole task which began by a joint completion of a grammar exercise, the main task involving writing the comic as a story (main task phase), and an individual completion of a grammar exercise eliciting the same linguistic feature but used in a different context (post-task phase). The analysis focused on younger learners only as the targeted linguistic feature was only introduced to them in the previous lesson, and was therefore relatively new to them. The analysis involved the

transcripts, students' pieces of writing such as the collaboratively written comic, the individually completed grammar exercises, and the achievement test.

5.2.3 RQ3: How do the learners perceive their collaborative work over a unit of work lasting two and half months?

In order to respond to this RQ, the transcripts of *interviews* (see interview questions in appendix A) were analysed. The majority of interviews were conducted individually (14 in number) but because of curricular constraints, illness, and students' preferences, three interviews had to be conducted in pairs. Interviews aimed at understanding participants' feelings and perceptions of their interactions with their elder or younger classmate, which took place during the unit of work lasting two and half months. Transcribed talk of the interviews was analysed for the following categories adapted from Watanabe's (2008) study, which examined interaction between L2 learners of different proficiency levels and their perceptions and feelings about their interaction.

(1) *Overall perceptions about the pair interactions*

(2) *Perceptions towards the degree of contribution*

(3) *Perceived learning outcomes*

The insights gained from interviews are grouped along patterns of interaction found in the RQ1, namely: *collaborative, expert/novice, dominant/dominant* and *expert/passive*. This is in line with Watanabe's (2008) findings which suggested that learners' perceptions about their interactions seem to be related to their patterns of interaction. It has to be, however, mentioned that in contrast to Watanabe's study which investigated adult students' perceptions about their interactions on one task only, the current study explored perceptions of children who interacted over an extended period of time across an array of tasks.

5.3 Inter-rater reliability – double coding

After I had identified the codes and categories, and analysed each of the transcripts, I asked an independent second rater to code the part of the data. The rater was my colleague, an experienced English teacher, who has worked with me at the research site for five years. He has published two papers, and is currently investigating FL classrooms as a part of a PhD programme in Applied Linguistics. Thus, he has some

experience with quantitative and qualitative codings. Although his perspective may seem biased as he has taught at the school, and has known some of the participants, his role of an instructor and his knowledge of the research site allowed for a reliable debate concerning the coding.

The second rater took part in two training sessions with me. In the first session, we first discussed Storch's patterns of interaction, definitions of *mutuality* and *equality*, and reviewed the coding scheme for Storch's study (RQ1). Later, we discussed coding of peer assistance (RQ2) and of peer perceptions of their interactions (RQ3). We then separately coded one transcript for each RQ. After we had completed transcripts, we jointly reviewed the transcripts and the codes. In coding transcripts, we had some disagreements. For example, one was related to the dominant/dominant pattern and to collaborative pattern (RQ1). Because the student within the dominant/dominant pattern did not behave in a way typical of this pattern, the second rater was reluctant to ascribe this pair to dominant/dominant behaviour. However, a closer look at the Storch's coding scheme, which advocates such coding, resulted in agreement. The second rater was then given three transcripts for each RQ, and asked to code the transcripts independently again. Our second session involved a comparison and discussion of our coding. We reached a consensus in 92% instances. Later, we discussed differences and similarities concerning any episodes which remained unresolved and reached agreement. One disagreement was again related to RQ1 (patterns of interaction) and specifically to the level of collaboration within one pair. The second rater tended to ascribe this pair to dominant/dominant pattern because it seemed to him to be of low equality and mutuality. However, we agreed on the fact that despite low level of collaborativness within this pair, there are instances, which distinguish this pair from dominant/dominant.

5.4 Summary

This chapter has provided a general overview of the analytical procedure. It has also discussed the analytical procedures taken with regards to each RQ. It has also provided an overview of the codes and categories in relation to each RQ and addressed the procedure of establishing the inter-rater reliability.

6. FINDINGS AND DISCUSSION FOR RESEARCH QUESTION ONE

This chapter will discuss the findings of research question one: What patterns of interaction can be found among mixed-age pairs of German learners of English as a foreign language at an alternative secondary school? First, I will provide overall findings based on a general analysis across tasks and exercises. Then, based on in-depth analysis, I will discuss peer interactions in relation to each pattern of interaction and its features in more depth.

6.1 Overall findings

As shown in Tables 6-8, the same patterns of interactions Storch (2001a) identified in adult and university ESL classrooms can also be found in some of the interactions of the M-A pairs in this study. Overall, the patterns found generally correspond to Storch's classification. However, there was some difficulty to apply Storch's framework to all pairs, which as will be shown by the in-depth analysis. The difficulty seems to be attributable to the ambiguity with regards to some associated traits identified by Storch as being indicative of mutuality. One pair could not be matched with Storch's framework. What is more, some interactions contained traces of more than one pattern of interaction within the same interaction, and although patterns remained relatively stable over time, patterns seemed to have varied depending on the cognitive and linguistic demands of the task the students performed.

It had been anticipated that when elder (more proficient learner) and younger (supposedly proficient learner) work together to solve linguistic problems, their interactions would likely form unequal relationships such as expert/novice or dominant/passive patterns of interaction (Storch, 2001a). These expectations were met only to a certain degree as five out of ten pairs formed an unequal relationship exemplified in the expert/novice and expert/passive pattern (Watanabe & Swain, 2007), but a dominant/passive pattern was not found. Rather surprisingly, five out of ten pairs formed equal relationships namely collaborative (four) and dominant/dominant (one).

As Tables 6-8 show, the most common patterns were the expert-novice and the collaborative patterns of interaction, occurring four times each. One pair formed dominant/dominant and one pair expert/passive pattern of interaction, which was not identified in Storch's study. This difficulty in classification according to Storch's

framework arose by pair Riki (8th grader) – Lyn (7th grader). In this interaction, Riki made several attempts to involve Lyn in the joint construction of the Comic task but the task was simply beyond Lyn's ZPD. In fact, Lyn resisted Riki's assistance. As a result Lyn's contribution was minimal, and Riki had to complete the task on her own. It would, however, be mistaken to label this pattern of interaction as dominant/passive as Riki ('expert') was willing to, and did encourage Lyn (novice) to participate in the task. Therefore, the term expert/passive was chosen. It must be said, though, that the level of 'passiveness' was not stable across all tasks. While on the Comic and Text-reconstruction task, Lyn did not contribute at all, when completing grammatical exercises, Lyn occasionally took directions from Riki, and her participation in the task and contribution slightly increased. It also has to be mentioned that there were qualitative differences between pairs labelled as collaborative. In other words, on the 'scale' from collaborative to non-collaborative (Storch, 2001b), two pairs (5, 10) were closer to collaborative than the other two (pairs 3, 8). The in-depth analysis will reveal this in more detail.

Table 6

Patterns of interaction across tasks and exercises

Pair (Patterns of interaction)	Pair (Patterns of interaction)
1. Lara & Ella (dominant/dominant)	6. Lilliana & Leni (expert/novice)
2. Emilia & Stella (expert/novice)	7. Riki & Lyn (expert/passive)
3. Irena & Sara (collaborative)	8. Gussi/Jossi (collaborative)
4. John & Will (expert/novice)	9. Lenka/Lucy (collaborative)
5. Lea & Jess (expert/novice)	10. Alena/Enna (collaborative)

6.2 Findings of the in-depth analysis

I will now illustrate each of the patterns found in the interactions across tasks and exercises.

6.2.1 Expert/novice pattern

As mentioned above, four out of ten pairs formed expert/novice pattern of interaction. I will present two excerpts, exemplifying this pattern. The first excerpt (12) can be said to be typical for the expert/novice pattern found in the data set, and was selected to demonstrate typical experiences seen in the data. It shows an elder, more proficient student interacting with a younger, less proficient student. The second excerpt (14), however, comes from the interaction of a younger, but simultaneously 'expert' learner, interacting with her elder but less proficient partner. Although this excerpt is not typical for the data, its case clearly illustrates that even younger learners can take on a role of an 'expert'. What is more, this role is accepted and valued by her elder partner.

Pair 5 - Expert/novice
Lea (9th grade, high proficiency) and Jess (8th grade, average proficiency)

This excerpt provides a typical example of expert/novice interaction. It comes from a pair talk of Lea (9th grader) and Jess (8th grader) discussing the objectives of the Comic task, which required them to rewrite a comic as a story in simple past.

Excerpt 12

1 J: Write the story as a comic. (reading) Es ist schwierig wenn man eine Geschichte schreibt. Man braucht auch Wiederholun. [*It is difficult to write a story. One needs a revision.*]

2 L: Weil ich das auch nochmal neu formulieren muss. [*Because I have to express it newly again.*]

3 J: Ich stelle mich im Augenblick dumm an weil ich keine... (inaudible) [*I'm feeling rather stupid at the moment, because I have no…*]

4 L: Ja? [*Yes?*]… (inaudible).

5 J: Ist das nur eine Geschichte oder sind es mehrere? [*Is this only one story or are there more?*] (in a bored tone) ... off-task talk

6 L: Kannst du es dann noch mal nehmen, bitte dass wir jetzt die jetzt Comic machen? [*Can you do that later so that we can start the topic now?*] (recruits attention, politely invites J. to focus on the comic)

7 J: Also. [*So*]. The comic as a story!

8 L: Ich weiss nicht ich habe mir jetzt überlegt, wir können die oberen Beschreibungssaätze einen bestimmten Teil zulassen. [*I don't know. I have just thought that we could use the sentences in the description to some extent.*] (suggesting)

9 J: Ja, aber nicht genauso umschreiben! [*Yes, but we cannot copy them!*]

10 L: Nein! [*No!*]... It wasn't easy for the gang to play (reading the first text in the description under the first picture of the comic)... to plan (self-corrects) the mural but on Saturday they started to work. They... they were... Warte mal ich schreibe mal ja. [*Wait, I am going to write.*]

11 L: They work a long time but sometime but.... some time… (looking for the right word) sometimes?

12 J: Was heißt plötzlich, suddenly, oder? [*What means plötzlich, suddenly, right?*] (requests confirmation]

13 L: Ne, suddenly... doch. [*No, suddenly… yes, right.*] (checking the word in the dictionary… inaudible)

14 L: Also hier steht suddenly immer mit …inaudible [*So, here is always the word suddenly with…*]

15 J: Aber [*But*]… plötzlich suddenly (finds the word *suddenly*, too)

16 L: They work a long time together but suddenly… Jaden looked on his clock…on his watch **(**self-corrects**)**...*Warte mal. Kannst du noch mal sagen, was ich gerade gesagt habe?*[Wait, can you say again what I have just said?]…They work…

17 J: They work for a long time but suddenly Jaden looked? (suggesting)

18 L: Ja. [*Yes.*]

19 J: looked her watch

20 L: But… (writing)

21 L: and cried... I have a date. I nearly forgot. Oder? [*Right?*] (seems to be involving J. in the task)

22 L: inaudible

23 J: Keine Ahnung! [*No idea!*] Schreib einfach! [*Just write!*] (sounds disappointed)

24 L: Es egal. [*Whatever.*] (writing)

25 J: Chloe. Aber [*But*] Chloe wasn't impressed (from now on J's participation increases as she seems to understand the task)

As we can see, the task is led by Lea from the beginning to the end. She talks more than Jess (14 vs.10 turns), takes on a role of the scribe or proposes how to approach the task (turn 8). The talk is, however marked with questions, suggestions, explanations, and agreement seeking behaviour. Lea repeatedly uses "we", which is uttered in a friendly tone, and in this particular interaction indicates a joint ownership of the task and creation of intersubjectivity. As revealed by the back-channelling in line 4, both learners listen to one another, which is an indicator of mutuality. Lea also invites Jess into collaborative work on the task when she is engaged in off-task talk (turn 6), confirms her ideas with Jess (turns 11, 21), and provides feedback (turn 18). In other words, she actively encourages Jess to participate in the task. Thanks to Lea's willingness to do so, Jess contributes to the task (from turn 27). The excerpt reveals that their interaction is moderate on equality and moderate to high on mutuality. As such, it fits with the expert/novice pattern of interaction. However, the quality of the engagement with the LREs (Storch, 2008) was rather low and most of them were resolved in a few turns. Lea's contribution to the resolution of the LREs was far greater than Jess' whose contribution was often limited to looking up a word in a dictionary or a textbook (turns 10-15). This was most likely because the linguistic demands of the task were simply beyond Jess's ZPD (turns 10-15). She even expresses her difficulty understanding the task (turn 23). However, despite all this, the pair maintains a joint pursuit of the task (Wood et all, 1976), remains fully concentrated on the task, completes the task in a relatively short time, and both learners seem to enjoy working together. On the post-task interview, Jess acknowledges Lea's 'expert' role in helping her learning English. In fact, Lea is her very good friend and has worked with Jess on many other tasks including other subjects. As the excerpt 13 below shows, their friendship seems to be the reason why they prefer learning in mixed-age groupings to same-age groupings.

Excerpt 13

Lea: Also mir macht jetzt Spass in der gemischten Gruppe zu arbeiten, weil ich dann Jess hab. Mit den anderen komme ich zwar ein bissl klar aber bin ich ne so sehr befreundet bin. [*Actually I enjoy working in the mixed-age group because I have Jess. Although I get along with the others I am not so friends with them.*] (Interview with Lea)

Pair 6 - Expert/novice
Lilliana (7ᵗʰ grade, high proficiency) and Leni (8ᵗʰ grade, average proficiency)

The next excerpt (14) comes from an interaction between best friends Lilliana (7ᵗʰ grader) and Leni (8ᵗʰ grader), highly motivated English learners, discussing qualities of a friend (pre-task), before subsequently engaging in the Comic task which required them to rewrite a comic as a story in past simple. This interaction exemplifies an interesting example of expert/novice pattern of interaction as the younger but more proficient learner Lilliana takes on the role of an 'expert' and guides her elder partner Leni through the task.

Excerpt 14

1 Le: Also jetzt haben wir die erste Aufgabe gemacht und jetzt machen wir die nächste. Die lese ich jetzt mal vor. [*So we have done the first task and now we're going to do the next one. I'm going to read it.*] „What makes a person friend for you? What qualities are important?" (reading the questions in the task)

2 Li: Was heist das Leni? [*What does this mean Le?*] (checking understanding, sounding as a teacher)

3 Le: Na ja was ein Freund für dich ausmacht (translates the previous line into German)

4 Li: Genau! [*Exactly!*] (sounding as a teacher) Was ist für dich wichtig? [*What is important to you?*] (adding omitted translation)

5 Li: Sollen wir auf Englisch sprechen? [*Shall we speak in English?*]

6 Le: Ja, ich denke schon. [*Yes, I think so.*]

7 Li: It is important that you can trust your friends that you can tell everything your friends. Important that you can have fun with your friends… inaudible… Jetzt bist du dran, Leni. [*Now, it is your turn, Leni.*]

8 Le: Ja, ich denke auch so. [*Yes, I think the same.*]

9 Li: laughter... You must try hard (reminding Le, sounding as a teacher).

10 Le: Ok. Du liest jetzt bitte. [*You read it now, please.*] (Lilliana reads the examples.)

11 Le: Also, wir müssen jetzt alles in Vergangenheit setzen. Die Sätze hier. [*So, we must put everything into past. The sentences here.*]

12 Li: In die Indirekte Rede, die wir so hatten. [*Into the reported speech that we learned.*] Jaden tells Chloe that he is sorry. (reading an example sentence)

13 Le: Wir müssen es aufschreiben. [*We have to write it.*] So, Jaden told Chloe that he was sorry. (reading the already transformed sentence in the example)

14 Li: Warte, wollen wir es ins Heft schreiben? [*Wait, do we want to write it in our exercise books?*]

15 Le: Ja, ich schreibe oder du? Wir schreiben uns jetzt die Präsens, also jetzige Zeit. Jaden tells the gang that he has a date. [*Yes, shall I write or you? So we are going to write the sentences in present tense, so in the present time. Jaden tells the gang that he has a date.*]

16 Li: Ja. Jezt haben wir das nächste Beispiel. [*Yes, so now the next example.*] Jaden tells Chloe that he is sorry.

17 Le: Und ich schreibe dann Jaden told the gang that he had a date. Also die Vergangeneheit. [*And now I am going to write Jaden told Chloe that he was sorry. In past tense.*]

Interestingly, despite being in the lower grade, Lilly takes a leading role in this task and responsibility for task completion. In fact, her talk and behavior resemble that of a teacher as she gives suggestions (turn 5), provides explanations for Lena (turn 12), provides a corrective feedback (turn 3), encourages Lena to participate in the task by asking her to speak and to practice the target language (turns 1, 7). She even checks on Lena's knowledge (turn 2), and reminds her to try harder (turn 9). The discourse is also marked with agreement seeking behavior. Although Lilly takes a leading role in the task, she also seeks Lena's agreement concerning the pursuit of the task and involves her in the decision making process (turns 5, 14). The frequent use of the personal pronoun "we" (turns 1, 11, 13, 14), uttered in a friendly tone, indicates a joint ownership and a joint pursuit of the task. As a result of Lilly's willingness to engage Lena, the interaction is high on mutuality, and moderate to high on equality. Interestingly, Lilly's teacher-like

behavior is accepted by her older partner Lena who respects Lilly as an expert in English and her "English mentor".

6.2.2 Collaborative pattern

Four pairs formed a collaborative pattern of interaction. However, as mentioned above the level of collaboration differed among pairs. In fact, Storch (2001b) has suggested that the level of collaboration may differ across pairs and tasks. Therefore, the first excerpt (15) illustrates an example of a relatively high level of collaboration (pair 10). The second excerpt (16) illustrates an example of collaboration with some signs of dominance of the elder learner (pair 9). The third excerpt (17) will then illustrate an example of an interaction with the least level of collaboration among collaborative pairs.

Pair 10 – Collaborative

Alena (8th grade, high proficiency) and Enna (7th grade, high proficiency)

The following excerpt (10) is an example of a collaborative pattern found in the data. It comes from the pair talk of Alena, a high proficiency 8th grader and Enna, a high proficiency 7th grader. They are discussing the objectives of the Comic task.

Excerpt 15

> 10 A: Sollen wir schreiben was wir verstanden haben? [*Are we supposed to write what we have understood?*]
>
> 11 E: Nein, wir sollen es wie eine Geschichte schreiben. [*No, we are supposed to write it as a story.*]
>
> 12 A: So, it was a beautiful day... laughter. Okay. Ok. Ich schreibe jetzt. Auf Englisch oder auf Deutsch? Sollen wir erst auf Deutsch schreiben und dann übersetzen? [*I'm going to write now. In English or in German? Shall we write it in German first and then translate it?*]
>
> 13 E: Gute Idee. Lass uns erst auf Deutsch schreiben. [*Good idea. So, let's write in German first.*]

As excerpt 15 shows, the discourse is characterized by agreement seeking behaviour. Both learners are willing to engage with each other's ideas as indicated by the frequent use of the first person plural (turns 10, 11, 12, 13), suggestions (turn 13), explanation requests (turns, 10, 12) and explanations (turn 11). They talk and listen to each other in

a friendly tone, hand even praise each other's contributions (turn 13), which indicates high mutuality and equality. As reflected in interviews and my knowledge as a teacher, one possible explanation for this behaviour is that both learners are very good friends, who often work on assignments together and whose English relative proficiency is nearly at the same level.

Pair 9 – Collaborative

Lenka (8ᵗʰ grade, average proficiency) and Lucy (7ᵗʰ grade, average proficiency)

The second example (excerpt 16) illustrates a rather lower degree of collaboration than the first example. It comes from an interaction of two average proficiency acquaintances Lenka (8ᵗʰ) and Lucy (7ᵗʰ), interacting on the Text-reconstruction task. They are attempting to replace the words *lots of* and *experiment*.

Excerpt 16

4 Le: space (referring to the word *space* which they are about to replace)

5 Lu: Aber other planets können wir auch nehmen? [*Can we also say other planets?*] (suggesting)

6 Le: Ja, das passt gut. [*Yes, that fits well*.]… writing

7 Le: Many, much oder so was? [*Many, much or something like that?]* (referring to a word lots of which they must replace)

8 Lu: didn't have… much money.... many money

9 Le: many much money, many much money... laughter

10 Le: Ywona, many, much money? (asking a student from another pair)

11 Ywona: Much ist viel. Many ist wenn man es zählt. [*Much is viel. Many is used when we count things.*]

12 Le: Ich glaube wir bleiben bei much. [*I believe that we'll stay with much.*]

13 Lu: Yes.

(Later in the task)

30 Le: Dann tun wir einfach das und dann das Wort *science*. [*Ok. Now, let's simply do this and then the word science.*]

31 Le: Ok das 9. Experiment, ideas oder? [*Ok the 9. Experiment, ideas, right?*] (referring to the number which marks the word experiment in the sentence)… and he often helped other kids who didn't know how to do the experiments in the class....(reading)

32 Lu: (proposing a word which is incomprehensible)

33 Le: Oder was ist Erfindung? [*Or what is Erfindung?*]... invention?

34 Lu: Das ist… [*This is…*] He helps other children who don't know how to do the experiment in the class, so… (reading)

35 Le: Versuch?... Versuch ist ein gutes Wort! ... Ah, ja... vielleicht sollte man es umdrehen. Sollen wir es irgenwie tauschen? [*Versuch {an experiment, a trial}... An experiment is a good word. ... Oh yes… maybe we should swap them. Shouldn't we swap them somehow?*] (Lucy is silent)

36 Le: He?... Ich hab jetzt hier Deutsch (referring to dictionary)... ich schaffe es nicht mehr... [*What... Here I have German… I cannot make it anymore*] (sighing as she could not find the right word)

37 Le: Versuchen... trying (proposing a word)... Man kann es ja versuchen. obwohl... ich denke dass das Wort trying an sich das Verb sein wird also versuchen (explaning)... Man kann ja nicht die Versuche eingeben? [*Trying? ... One can try it although I think that the word trying itself is a verb. The word Versuch {trial, experiment} has a… inaudible... Can we fill in Versuch?*] (Both learners seem to be looking for a word)

38 Le: tried (mispronounces) inaudible

39 Lu: And he often helped other kids to who didn't know how to do the triad (mispronounces tried) in the class (reading the sentence with the word *tried*)

40 Le: Ja, das past gut. [*Yes, it sounds good.*]

As this excerpt shows this interaction is slightly dominated by Lenka, the older student. This is indicated by a higher number of turns (14 vs. 6), and by length of her utterances. Lenka also took on the role of the scribe. However, it would be mistaken to say that Lenka is not willing to engage Lucy in the interaction. Lenka's discourse is marked with questions, suggestions and negotiation of her decisions with Lucy. As we can see, Lenka frequently requests confirmations of her utterances (turns 31, 35, 37), and requests assistance (turn 33). It seems that this is because she is facing a difficulty with the task at hand and cannot do without co-constructing ideas with Lucy. The joint

pursuit of the task is also indicated by the use of utterances such as *let's*, *we* (turns 30, 35, 37), and by words of appraisal (turns 3, 40). Although Lenka slightly dominates the task, and takes a greater responsibility for task direction and completion, both learners are engaged with each other's contributions, offer and discuss issues and look for resolutions which are acceptable to both of them. In addition to this, both learners seem to be challenging one another and taking risks as they are experimenting with a new language. The task seems to be very demanding to both of them, but the difficulties faced seem to be challenging rather than intimidating. What is more, the challenges are met while a supportive communication and assistance takes place (Damon & Phelps, 1989). These seem to be signs of high mutuality, and a characteristic feature of peer collaboration (Damon & Phelps, 1989). It can be said that although the interaction is moderate on equality as Lenka talks slightly more and attempts to take the task in her hand, it is moderate to high on mutuality. Therefore, this pattern of interaction was labeled as collaborative.

Pair 8 - Collaborative
Gussi (8th grade, high proficiency) and Jossi (7th grader, high proficiency)

The following excerpt (17) illustrates an example of the least level of collaboration among pairs. It comes from the pair talk of Gussi, a high proficiency 8th grader and Jose, a high proficiency 7th grader, translating the text of the Comic task.

Excerpt 17

1 J: Ok. It wasn't easy to plan the mural but on Sunday they started to work. (reading the first sentence in English, as if he was recruiting G.'s interest in the task as G. is involved in off-task behaviour with another student)

2 G: Saturday.

3 J: On Saturday.

4 G: Es war nicht einfach das für die zu plannen. Doch am Samstag geht's mit der Arbeit los (translating from English).

5 J: I have a date. I nearly forgot. (reading)

6 J: Ich hatte ein Date. [*I had a date.*] (translating)

7 G: Nein, ich habe. [*No, I have.*] (correcting)

8 J: Nein ich habe… [*No, I have.*] (correcting)

9 G: Doch das habe ich vergessen, oder so. [*Yes, I have forgotten or something like that.*] (contra-suggestion)

10 J: Doch das habe ich… [*Yes, I have...*] (insisting on his solution)

11 G: Ne, der hat es ja vergessen! [*No, he has forgotten it!*]… maybe because he has no time now for this Graffiti. (correcting in an argumentative tone and explaining)

12 J, G: The blue colour was a great idea Fetch. (overlap, reading)

13 J, G: Diese blaue Farbe war eine gute Idee, Zach. (jointly translating the previous sentence)… laughter

14 J: Yeah, Maggie, yeah but we are. Where are you going Jaden? I have a date. *I nearly forgot.* Jetzt kommt das. *Here again. Her again.* Also sie schon wieder. (translating)

15 J: Oh! She is so nice! (in an ironical tone)

16 J: Later in a cefi (wrong pronunciation) Jaden felt guilty but Chlo (wrong pronunciation) wasn't too impressed. Being on time…

17 G: Nein, ich würde es gerne zu erst übersetzen. [*No, I would like to translate it first*.]

18 G: Später im Cafe Jaden fühlt sich schuldig. (translating the sentence in line 16)

19 J: Fühlte sich Jaden schuldig (correcting)

20 G: *wasn't too impressed*. No idea. Chloe wasn't…

21 J: But...

22 G: I think, war nicht sehr beeindruckt (translating *wasn't very impressed*)… laughter

23 J: Being on time is not your strong point. (reading)

24 G, J: Pünktlich zu sein ist nicht deine Stärke, stimmt's? (translating)

As excerpt 17 shows, both learners contribute to the translation, displaying an equally high degree of control and authority over the task and its direction. However, despite being the younger student in the pair, already at the beginning of the task Jossi has to recruit Gussi's interest in the task as he is involved in off-task talk with another student (turn 1). In fact, as the task progresses, Jossi's direction and control of the task increases to the extent that equals that of Gussi's. High equality is also indicated by similar distribution of turns, and by many overlaps (turns 10, 12, 23). However,

although both learners engage with each other's suggestions they do so predominantly by very explicit other-corrections (turns 3, 7, 9, 18), and by offering counter suggestions (turn 17) without providing any justification. In addition to this, there is little evidence of linguistic features such as first person plural which would indicate a joint ownership of a task. However, it would be mistaken to say that the level of mutuality is low, and to label this interaction as *dominant/dominant* because both learners are engaged in all aspects of the task, they add on each other's contributions, merge their linguistic resources, and arrive at resolutions to a greater degree acceptable to both (Storch, 2001b). Moreover, learners of this pair spend a long time on all tasks, listen to each other, and even laugh about each other's utterances. They produce a relatively high number of co-constructions, which according to Donato (1994) is an indicator of collaboration. The next excerpt (18) from their interaction on the Text-reconstruction task shows another example of a co-construction.

Excerpt 18

25 J: Ok. His parents didn't have a lot (reading)

26 G: Jaaaa (in a funny tone)

27 J: money so they couldn't spend

28 G: hundreds (completing previous utterance)

29 J: hundreds (repeating) of dollars for smart clothes for their son.

30 G: Na, das ist ja Schade. [*What a pity!*] (ironical tone)...laughter

31 J: Some of the kids laughed at him but Rico (overlap with G.) was an alien…laughter

32 G: Nee. [*No.*] (laughter)

33 G: was intelligent

34 J: more intelligent

35 G: ne, ach doch. [*Oh yes*]

36 J: more intelligent than many of the other kids in his school.

During this co-construction both learners attempt to co-construct sentences during which they completed utterances begun by their partner (turns 28, 29, 33). Not only do they co-construct both sentences correctly, but they do so in an enjoyable way producing funny utterances resulting in laughter. And although explicit requests, questions or

suggestions are not so frequent as in the previous examples of collaboration, an indication of collaborative work among these two learners are frequent collaborative completions, other-repetitions (turn 29), self-corrections (turn 35), overlaps (turn 31) or laughter (turns 30, 31, 32).

If classified according to the Storch's (2001a) framework, the lack of explicit requests, questions, suggestions and little evidence of the first person plural would suggest that their interaction is low on mutuality and should therefore be matched with the dominant/dominant pattern of interaction. However, the evidence of frequent exchanges of views and opinions about the task, their engagement in all aspects of the task, adding on each other's contributions and pooling of linguistic resources, joking about language and laughter while experimenting with a new language suggests that their discourse was high on mutuality, and therefore collaborative. In other words, based on Storch's framework, this pair would be classified as dominant/dominant but a closer examination of other contextual aspects that are not included in Storch's description leads one to identify this interaction as collaborative.

6.2.3 Dominant/Dominant pattern

Pair 1 - Dominant/Dominant
Lara (9th grader, high proficiency) and Ella (8th grader, high proficiency)

One pair formed dominant/dominant relationship, although there was a difficulty to identify this pair as such. The next excerpts exemplify this. They come from an interaction between best friends Lara and Ella interacting on the Comic task. In excerpt 19, Lara and Ella are attempting to rewrite the Comic as a story in past simple.

Excerpt 19

101 Lara: came, come, came (self-repetition)

102 Lara: came to the date, his girlfriend (while writing)

103 Ella: hier sollte man Punkt machen! [*But you should put a period here!*] (suggesting to Lara in a friendly tone)

104 Lara: Warum? [*Why is that?*] (argumentative tone)

105 Ella: To the date.

106 Lara: No…His girlfriend was angry… (argumentative tone)

104

107 Ella: angry because he was late (sounding disappointed)

108 Lara: angry about about his "spätkommen" [*being late*] (not paying attention to Ella's previous utterance)

109 Ella: because he was late (argumentative tone)

The interaction begins by Lara self-repeating, and writing down what she believes is the right solution of the problem without seeking Ella's agreement about the solution (turns 101, 102). This indicates that she is not willing to involve Ella in the joint composition of the text and shows limited willingness to engage with Ella's suggestions (turns 103, 107) or seek a joint resolution. Lara does not even seem to take Ella's utterances into consideration (turn 108) and barely interacts with her. What is more, she responds in an argumentative tone of voice to Ella's suggestion. However, the argumentative tone of voice is also used by Ella (turn 109), which seems to be a natural reaction to Lara's behaviour. Ella insists that her previous utterance (turn 107) was correct. She seems to be disappointed that Lara is either disrespecting her linguistic resources (turn 104) or not aware of her contribution (turn, 108). Although both learners are involved in the decision making process, this process is characterized by arguments, disagreements and difficulty in reaching consensus (Storch, 2001a, p.279). The excerpt also shows that although Lara displays a higher degree of control and authority over the task and its direction than Ella, Ella is willing to contribute and in fact contributes to the task. She has the linguistic resources to do so, and refuses to take a passive role. She tries hard to keep up with Lara and contributes to the task in her own way. In other words, although Lara dominates the task and barely interacts with Ella, Ella is not passive and shows some willingness to interact. Her contribution to the task is almost as equal as Lara's. It can be said that the level of equality ranges between moderate and high. We can see that there is some difficulty to identify this interaction within Storch's (2001a) classification. Although Lara's behaviour is dominant throughout the whole task and her role is set firmly from the beginning of the task, Ella's dominant behaviour seems to be an attempt to resist Lara's domination (Storch, 2001a). This can be seen in the next excerpt (20).

The next excerpt (20) shows interaction later in the task, in which learners are attempting to replace the word *mad*. The interaction begins by Lara suggesting *mad at Jaden* (turn 132). Without any consultation with Ella, she goes on to write the sentence down (turn 133). Ella proposes *very angry* (turn 134) but Lara demands another word

(turn 135). Ella proposes *mad* (turn 136), which is abruptly dismissed by Lara (turn 137). Ella makes another proposal (turn 138) which is again dismissed by Lara (turn 139). Ella suggests to look up the word *sauer* (turn 140), which Lara does and finds other equivalents (turn 141). What is striking is the impolite tone of an 'expert' which can be seen in words *you say* (turn 141).

Excerpt 20

132 L: ok, ok, ok… After the call the gang were really mad at Jaden

133 L: After his call the gang was… (writing and thinking)

134 E: very angry

135 L: da war noch ein Wort für böse [*there was another word for böse*]

136 E: mad?

137 L: mad ist kakke! [*mad is shit!*]… (making incomprehensible proposals).

138 E: idle?

139 L: Ne! [*No!*] (argumentative tone)

140 E: das ist so bösartig… [*that is bad!*] Sauer? Sauer sauer sauer? [*cross?, cross, cross, cross?*] Sauber [*clean*], ha, ha (laughter)

141 L: looking up the word… Mad siehst du mad cross, turn sauer, scheisse! [*you see, mad, cross, turn, sauer, shit!*]

If matched with Storch's framework, one would be drawn to conclude that the level of mutuality of this pair is low. However, their frequent disagreements may not necessarily imply low involvement with each other's contributions, and therefore low mutuality. In fact, they often challenge one another as they grapple with new language. On the other hand, it is evident that Lara often seems to lack responsiveness to Ella's utterances, which seems to be an indication of low mutuality. In contrast to the above described collaborative pairs, Lara's behaviour is dominant throughout all tasks. Although Ella's dominance is most likely a response to Lara's domination, her behaviour is dominant, too. Therefore, I opted to identify this pair as dominant/dominant, although it needs to be recognized that there is a certain level of ambiguity in this identification. Interestingly, Lara's dominant behaviour, which was similar across all tasks, is rather surprising as both peers have been best friends for many years, have often worked together on various assignments, and the proficiency difference between them is relatively small. Surprisingly, during the interview, Ella said

that she enjoyed working with Lara. Ella also admitted that when working with other same-age or younger learners, she tends to take on the role of the scribe and dominate the task. In other words, her behaviour resembles that of Lara during their interactions (excerpt 87). The fact that despite being best friends the level of their interaction being rather low on mutuality seems to suggest that friendship may not necessarily imply high mutuality. In fact, it may contradict it. However, we need research that would explore the role of friendship in peer assistance and patterns of interaction (see e.g. Hartup, 1994; Kutnick & Kington, 2005).

6.2.4 Expert/passive pattern

One pair did not correspond to any of the patterns of interactions proposed by Storch. The term expert/passive used by Watanabe and Swain (2007) was chosen instead. Watanabe and Swain (2007, p.134) explain that in the expert/passive pattern of interaction the less proficient passive learner's involvement in the task decreases over time despite the ongoing encouragement of the more proficient partner. What is more, the passive learner may become intimidated and reluctant to say anything in front of his/her expert partner. Excerpts 21 and 22 below demonstrate this.

Pair 7 – Expert/passive
Riki (8th grader, average proficiency) and Lyn (7th grader, low proficiency)

As excerpt 21 shows, in this interaction Riki, an average proficiency 8th grader and Lyn, a low proficiency 7th grader, are interacting on the Comic task.

Excerpt 21
(R. is reading the text of the comic and seems to understand.)
1 L:I don't understand at all. (merely copying what Rica writes into her exercise book) (No discussion is taking place as R. is doing the task on her own.)
2 R: Jaden explained that he had to stay. (non-language teacher comes and asks if they need help.)
3 Teacher: Do you know what to do?
4 R, L: No.
5 Teacher: you have to write the comic as a story. (Because they still don't seem to know how to begin, he then helps them to translate difficult sentences.)

6 R: This is the story about Jaden. (begins to write)

7 L: Yes.

8 R: Ich hasse Geschichte schreiben. [*I hate writing stories.*]

9 L: Ich auch. Ich kann's auch in Deutsch schreiben… Ich kann's doch ne auf Deutsch schreiben. [*Me too. I can't write them even in German.*]

10 R: On Saturday the gang started to work on the mural. (reads a sentence in the comic) (L. doesn't say anything and merely writes down what R. says.)

During the pre-task phase, Riki transforms all sentences from the present into past. Lyn merely copies down the sentences into her exercise book. Both learners then go on reading the text of the comic. However, because no discussion follows, the teacher comes over and provides assistance. While Riki seems to understand the objective of the task, Lyn does not at all. Despite Riki's encouragement, Lyn keeps still. As a result, Riki completes the whole task on her own. Despite being a hardworking and a responsible student, Lyn simply lacks the linguistic resources to engage with Riki's contributions and to contribute to the task. At the same time, Riki does not seem to be capable of providing the necessary assistance for Lyn in order for her to participate more. In fact, not even teacher's frequent intervention does not seem to be of any help. As a result, the interaction is low on both, equality and mutuality, and would thus match the dominant/passive pattern. However, Riki's behavior is not dominant. She is actually willing to help Lyn to participate more but she simply has no other choice than complete the task without Lyn. Therefore, expert/passive was chosen over dominant/passive (Watanabe & Swain, 2007, p.134). The expert/passive relationship in Watanabe and Swain's (2007) study was established because the low proficiency learner in the pair was intimidated and reluctant to say anything when interacting with an expert partner. However, the reason for Lyn's low participation does not seem to be her intimidation as both learners have been acquaintances since the first grade, and have often interacted on language and other tasks ever since. In fact, both are fully aware of each other's language resources. Also the next excerpt (16) demonstrates that the reason for Lyn's low of participation seems to have been her lack of linguistic resources, which hindered her to benefit from Riki's support. This excerpt comes from their interaction on a grammatical exercise, which was targeted to deepen their knowledge of *present perfect.* Students had to decide whether the temporal words are related to *present perfect* or *past simple*.

Excerpt 22

1 R: Also... die erste Aufgabe, was ist schon abgeschlossen und was ist noch nicht abgeschlossen. [*So, the first exercise is, what is finished and what is not finished, yet*]

2 L: Ok

3 R: also two days ago? (checking understanding)

4 L: ist noch nicht abgeschlossen [*is not finished, yet*]

5 R: Two days ago (stress on ago) ago… war [*was*]…

6 L: waren also es ist abgeschlossen [*was so it is finished*]

7 R: Also ja... always? abgeschlossen oder nicht? [*So, ok. always, finished or not?*] (checking understanding)

8 L: abgeschlossen [*finished*] (only guessing)

9 R: always abgeschlossen? [*always finished?*] (checking again)

10 L: Nein. [*No*] (guessing, not giving a reason)

11 R: this year also dieses Jahr [*so this year*] (translating for her)... liegt es in der Vergangenheit? [*Is it in the past?*]

12 L: nicht abgeschlossen [*not finished*]

As the excerpt reveals, Riki shows willingness to encourage Lyn to participate in the task. Riki assists Lyn by providing explanations (turn 1), by inviting her to produce an utterance (turns 3, 5, 7), by providing implicit feedback via rising intonation, which indicates that Riki's utterance may not be correct (turn 9), and by translating the target words into L1 with the follow-up question (turn 11). However, Riki's replies are merely limited to short replies, or guesses without any reasoning for her choices (turns 4, 8, 10, 12). The only exception is seen in turn six, where she provides some reasoning for her choice.

6.3 Summary and discussion

As argued above, an analysis of patterns of interactions is important as research (Storch, 2001a) has shown that how learners are organized in a group, and how they engage with each other's contributions impacts on opportunities for learning. Such analysis is especially important, as the pairs under investigation are learners of different ages and proficiencies. For example, it is likely that such a pairing of learners would result in an unequal interaction with a low level of engagement with each other's contributions if the task-based work was dominated by the older, and/or by the more proficient learner while the younger and/or less proficient learner's participation were passive (see also Kowal & Swain, 1994). This would most likely inhibit language focus and learning.

It had been expected that pairs where partners are composed of different ages and proficiencies, would form unequal relationships such as expert/novice or dominant/passive. The analysis has shown that this expectation has been met only to a certain extent as only five out of ten pairs formed unequal relationships. Four of ten pairs formed expert/novice, and one pair formed expert/passive relationships. Surprisingly, the remaining five pairs build equal relationships, among which four were collaborative, and one was dominant/dominant.

The data also suggests that proficiency differences may impact on the formation of patterns of interaction. Pairs, where the proficiency gap was large formed either expert/novice or expert/passive pattern of interaction. Similar proficiency learners formed either collaborative or dominant/dominant relationship. Research (Storch, 2001a; Storch & Aldosari, 2012; Watanabe & Swain, 2007) seem to show that only expert/novice and collaborative patterns of interaction are the most conducive to learning such as by offering opportunities for practice or focus on language use. It follows that eight out of ten pairs have formed relationships, which might promote learning. Moreover, in the case of nine out of ten interactions, elder or higher achieving learners did not seem to dominate the interaction or accomplished the large part of the work. What is more, they were willing to engage their younger/less knowledgeable partner. However, Lyn's case has shown us that low proficiency students may indeed be afraid to contribute to the task (Kowal & Swain, 1994), and/or try to save their face without causing one another embarrassment (Philp & Tognini, 2008). Surprisingly, this may occur despite a good relationship between both students, and despite the 'expert' partner's willingness to engage the 'novice'. In fact, Leeser (2004) cautioned that if the

proficiency gap between both learners is too large, low proficiency learners may not be able to benefit from interactive work with a more proficient partner, as they may lack developmental readiness to engage in discussions about some linguistic problems. This may also hinder the task completion (Ellis, 2003). Furthermore, it had been expected that pairs, where partners are self-selected or pairs where relationship is at the level of very close friendship, would either form patterns other than dominant/dominant or dominant/passive. Only one pair (Lara/Ella) did not meet these expectations. This is important as it underlines the role of the relationship in pair work (Kutnick & Kington, 2005). On the other hand, the case of Lara and Ella shows that the patterns of interaction learners form may not only depend on their relationship, but on their perceptions of their partner's L2 proficiency (Watanabe, 2008). One explanation for Lara's dominant behaviour may be that she perceived Ella's proficiency to be lower than hers. Moreover, the fact that Lara took on the role of a scribe may also have contributed to her dominance. In fact, research has shown that the effectiveness of pair/group work may depend on the roles assigned (Samuda & Bygate, 2008; Willis & Willis, 2007). Importantly, the case of Lara and Ella suggests that best friends may not necessarily form a pattern of interaction which is high on mutuality. However, one of the limitations of this study is that any claims regarding friendship being an important factor contributing to interaction patterns cannot be made. This is because of the difficulty of identifying friendship as a variable which seems to be partly related to the construct itself. Moreover, the data are insufficient for this purpose. Future research could explore the role of friendship in patterns of interaction (see e.g. Hartup, 1994; Kutnick & Kington, 2005).

The case of Lilliana and Leni has shown that the younger member of the dyad can also take on the expert role. Lilliana, despite being the younger student within the pair, took on the role of an expert. As will be shown in the analysis of interviews, Lilliana's role was not only accepted by Leni, but also highly valued. This is important and positive, as it shows that social mediation may also come from younger peers. This case also indicates that there might be qualitative differences among M-A pairs with regards to their discussions related to reasoning, working out what they should do with a task, how they should do it etc. Future studies could explore this in more detail. The analysis has shown that some interactions contained traces of more than one pattern of interaction within the same interaction. It has also revealed that patterns of interaction

seemed to have varied depending on the linguistic demands of the task the students performed.

Finally, we have seen that not all pairs could be identified within Storch's framework. One pair was classified as expert/passive. What is more, matching with Storch's patterns of interaction was not clear-cut due to some level of ambiguity related to associated traits defined by Storch in order to determine equality and mutuality. For example, the analysis has shown that the frequent use of other-corrections, disagreements or the first person plural 'I' may not necessarily imply that the discourse is low on mutuality because learners may simply be exchanging views and opinions about the task and language while pursuing the task at hand. Therefore, the importance to attend to contextual factors of a particular interaction and utterance in order to determine the level of mutuality accurately was stressed.

7. FINDINGS AND DISCUSSION FOR RESEARCH QUESTION TWO

This chapter will provide findings related to research question two, which explored to what extent and in what ways do the learners, organized in mixed-age pairs provide assistance to each other during classroom pair collaborative tasks?

I will illustrate how M-A peers assisted to one another when resolving linguistic problems (LREs), issues related to the tasks (TREs), and when discussing the content of the tasks (CREs). I will also show to what extent the assistance provided may have contributed to their increased use of the targeted structures of the tasks. As pointed out in section 3.6., the term *assistance* was chosen over *scaffolding* (Wood, Bruner, Ross, 1976), because only a small number of instances of help found in the data did not match the key characteristic features of scaffolding, namely contingency, fading, and transfer (van de Pol et al., 2010), which imply that a help is matched and graduated to the particular learner's linguistic needs. I will, however, use the terms scaffolding and collective scaffolding (Donato, 1994) where applicable to illustrate instances of help in the light of these terms.

I will first provide some examples of assistance from the data, and briefly comment on them. Then, I will provide an in-depth description of the assistance provided. In this part, I will attempt to show what evidence there is for increased use of the targeted structures. Finally, I will show the distribution of ways of assistance across all pairs and two tasks. Here, I will include data from two tasks only as they provide a representative

picture of how assistance as these tasks were carried out in the middle and towards the end of the whole period. What is more, the data set for these two tasks is available from all pairs, which allows for a comparison among pairs.

7.1 Ways of assistance found in the data

I will begin by showing and commenting on examples of how assistance was sought for. Later, I will illustrate how assistance was given.

7.1.1 Requesting assistance

Request for assistance is defined as "any request by a speaker for help from his/her interlocutors in order to solve a problem related to the spoken or written language. Requests for assistance can be explicit or implicit and may involve code-switching" (Gagné & Parks, 2013, p.406). The analysis has revealed that M-A peers requested assistance in three different ways. They requested assistance via requests for information, explanation and confirmation.

Request for information

Requests for information involved mainly elicitation of lexis, morpho-syntax or spelling (Storch, 2001a). Here is a typical example of request for information from the data. In line 29 Lara (the elder student) requests assistance from Ella by asking her to find the correct spelling of *thought* in the dictionary.

> *Excerpt 23*
>> 29 L: *Jaden thinks that it is no good letting the gang down.* Ok. **Guck mal bitte wie das geschrieben wird... thought, die Vergangenheit von think.** [*Please, have a look at the spelling of thought, the past simple of think*].Weiss ich nämlich noch ne… [*I don't know this one, yet…*]
>> 30 E: t-h-o-u-g-h-t.

Request for explanation

Requests for explanation included requests eliciting responses such as explanations or opinions. It has to be, however, mentioned that requests for explanation did not necessarily imply utterances indicating a comprehension problem (Long, 1980).

Requests for explanation found in the data mainly elicited explanations related to the linguistic problem at hand or the objective of the task (*requests for clarification*, Foster & Ohta, 2005). The following example (excerpt 24) illustrates this. Jess, the younger member of the pair requests an explanation of the task objective.

Excerpt 24

1 J: **Kannst du mir bitte sagen, was wir hier machen sollen?** [*Can you tell me what are we supposed to do here, please?*]

2 L: Na, klar. [*Yes, sure.*]

Request for confirmation

As mentioned above, requests for confirmation referred here are requests seeking confirmation of correct understanding (Long, 1980). As such it resembles to what Long (1980) or Pica et al. (1989) called a *confirmation check*. "Confirmation checks are always formed by rising intonation questions, with or without a tag. They always involve repetition of all or part of the interlocutor's preceding utterance. They are answerable by a simple confirmation that the event that the preceding utterance was correctly understood or heard, and require no new information from the interlocutor" (Long, 1980: 81–2, original emphasis). Requests seeking confirmation in response to one's own suggestions (Storch, 2002, p.165; Foster & Ohta, 2005) are not included in this category, and are coded separately as *suggestions*. The next example illustrates a request for confirmation from the data.

Excerpt 25

A: **Hast du *has to* oder *had to* gesagt?** [*Did you say has to or had to?*]

E: that she had to stay… to stay

Providing assistance

Having provided some examples of request for assistance, I will now turn a description of how assistance was provided within pairs. The data has revealed that M-A peers assisted one another in a variety of ways. Peers jointly created (co-constructed) utterances, offered suggestions, explanations, and corrections, produced other-repetitions, engaged in active listening by waiting for their partner to compose an utterance, by back-chanelling or by checking partner's understanding. I will now

provide examples from the data in order to demonstrate these forms of assistance in more detail. I will begin by co-constructions.

Co-construction

Co-constructions are defined by Foster and Ohta (2005, p. 420) as "the joint creation of an utterance, whether one person completes what another has begun, or whether various people chime in to create an utterance." As the following example shows, Ella completes Lara's previous utterance, which is then acknowledged by Lara.

Excerpt 26

L: called the other gangs gang he gang and told them that…

E: **that Jaden finished the mural**

However, peers also engaged in co-constructions which were more elaborate, and which included more forms of assistance. The next excerpt (21) illustrates this. While in the example above Ella merely completes what Lara has begun, the interaction shown in the next excerpt is more complex, elaborate and includes various forms of assistance. Learners attempt to change the sentence *Sandy tells others that the mural looks great* into *Sandy told others that the mural looked great*. Lara reads a sentence (turn 36). Ella immediately provides the past simple form (turn 37). This is acknowledged by Lara (turn 38). Lara explains that *look* is not an irregular verb (turn 39). The correct verb form is then immediately completed by Ella (turn 40). We can see that this co-construction includes completions of partner's utterance (turn 37, 43), an explanation (turn 39), an other-repetition (turn 40), and an elaboration on partner's previous utterance (turn 42).

Excerpt 27

36 L: Sandy tells others …

37 E: told!

38 L: ja. [*yes*]

39 L: na ja look ist kein unregelmäßiges [*well, look is not an irregular verb*]

40 E: also [*so*] looked

41 L: looked (writes the sentence down)

42 L: Sandy told others that the mural … (saying while writing the sentence down).

43 E: looked great

As we can see, during co-constructions learners pool their linguistic resources in order to form an utterance that neither of the learners is capable of forming individually. As such, co-constructions resemble Donato's (1994) notion of collective scaffolding, which implies that although prior to the co-construction each individual member of the pair lacked the necessary knowledge to produce a grammatically correct form, each member of the group contributed by his/her particular knowledge to the problem solution. As Donato (1994) showed, such instances may result in learning. Similarly, Foster and Ohta (2005) claimed that such instances help building language skills in the process.

Other-correction

Other-correction "involves a peer correcting his or her partner" (Foster & Ohta, 2005, p. 420). Excerpt 22 illustrates other-correction of morphosyntax in the data. Ella (the younger learner) initiated this F-LRE with an attempt to change a sentence in simple present into past simple (turn 22). Lara (the older learner) repeats her utterance (turn 23) and immediately builds on her own utterance (turn 24). Ella proposes an incorrect *has* (25), which is corrected by Lara (turn 26). Later (turn 31), Ella incorporates Lara's correction into her utterance and correctly completes the sentence, begun by Lara (turn 30).

Excerpt 28

22 E: But Jaden explained

23 L: But Jaden explained

24 L: that he has to stay. But…

25 E: lass mal das has so oder? [*let's leave has there, ok?*)

26 L: **ne ne ne had!** [*no, no, no, had!*]

[…]

30 L: But Jaden explained…

31 E: that he had to stay

In addition to morphosyntax, peers also corrected their partners' lexis and pronunciation. In the next example (excerpt 29), Alena (elder learner) other-corrects Enna's wrong pronunciation of the word *immigrated*. This is then incorporated into Enna's follow-up utterance.

Excerpt 29

> E: Also das erste is immigrated. [*So, the first is immigrated.*] (mispronounces)
>
> A: **immigrated**. (correcting)
>
> E: **immigrated** (repeating correctly), was habe ich dann alien alien [*what do I have here next?*] (saying while writing)...

Explanation

Pairs frequently engaged in explanations, concerning linguistic features, the task objective or the task content. Research has shown that the process of giving and receiving an explanation is beneficial because it prompts a learner to a clarification and reorganization of her/his knowledge improving thus her/his understanding (Webb, 1989; Webb & Mastergoerge, 2003a). In fact, explanations play a crucial role in peer assistance (Webb & Mastergoerge, 2003a). The next excerpt (30) provides an example of an explanation related to the task objective. Surprisingly, both learners use English (L2) to explain the objective of the task. After they have jointly clarified the objective of the task, Enna (younger learner) attempts to form the first sentence, which is followed by a justification of her linguistic choice. We can see that when engaged in the process of explaining, learners may clarify or reorganize the material in their own minds. They may think about the salient features of the task or a linguistic problem. As Cooper (1999 as cited in Webb & Mastergoerge, 2003a, p.76) argued, this process may serve them as an essential component of developing problem solving strategies and for developing a metacognitive awareness of what they do and do not understand.

Excerpt 30

> A: We must make the next... (translating into English!)
>
> E: Task?
>
> E: Read the sentence about the comic and tell the story. Jaden tells the gang ... (reading the example)
>
> A: Ok.

E: Also. [*So*] **we must do this story and then we must... do this comic and then we must tell the story.**

E: Jaden tald ne told (self-correction) **weil wir müssen Vergangenheit machen oder?** [*because we have to use past, right?*]

Suggestion

According to Wells (1999), a suggestion is a move which draws the other member of the pair into the decision making process. However, unlike a request or a question, which require a response, a suggestion may expect it but does not require it (Storch, 2001, p.231). Suggestions found in the data usually took the form of a statement uttered with a rising intonation. Such statements were generally followed by a question tag, or a phatic expression with rising intonation. They were mostly answered by a simple confirmation ("yeah"), repetition or disconfirmation ("no"), sometimes followed by a counter-suggestion (Storch, 2001, p.165). In the next example (excerpt 31), the younger member Sara suggests to her elder partner Emilia the past verb form "had", which is then accepted by Emilia. Sara is also praised for her suggestion. It can be said that Sara's suggestion attracted Emilia's attention on form, invited her further participation, and elicited her feedback, thus helping to maintain both learners' ongoing interest in the task. As such, it mediated both learners' mental activity in their social interaction (McCormack & Donato, 2000).

Excerpt 31

34 E: But Jaden explained that he… that he… that he…

35 S: **had?**

36 E: Yes, yes, great.

Other-repetitions

Other-repetitions involved repetitions of other's utterances. As mentioned in section 3.6., repetitions are one of the most frequent forms of peer assistance mentioned in the literature (Davin & Donato, 2013; DiCamilla & Antón, 1997; Ohta, 2005). The first excerpt (32) shows a typical example of an other-repetition found in the data: While working on the Text-reconstruction task, Alena (8th grade) and Enna (7th grade) are attempting to replace the lexical chunk *hundreds of dollars* with another lexical chunk. Alena's other-repetition seems to fulfil the function of thinking about or evaluating

Enna's suggestion. It may also serve Alena to confirm her own understanding of the lexical chunk. It can also be said that other-repetitions thus helps to create both students' shared understanding.

Excerpt 32

> A: So they couldn't spend hundreds of dollars
>
> E: Wo steht das? [*Where is it?*]... a lot of money?
>
> A: **A lot of money**…

The second example (excerpt 33) of an other-repetition seems to fulfil the same function as the previous one, namely confirming understanding. However, in contrast to the first example, other-repetition involves a modification as Alena other-repeats incorrectly; and an expansion as she adds to Enna's original utterance. This corresponds to DiCamilla and Antón's notion that other-repetition helps to create a cognitive space in which learners think and generate more language (1997, p.627-628).

Excerpt 33

> A: Later in a cafe Jaden felt (reading)
>
> E: guilty (pronounces right)
>
> A: **guilty** (pronounces incorrectly) but his lovely girl wasn't too impressed.

Teacher-like assistance

Pairs who formed expert-novice relationship resorted to 'teacher-like assistance'. Teacher-like assistance is in the literature referred to as continuers, active listening, and checking partner's understanding (Foster & Ohta, 2005; Gagné & Parks, 2013). Another feature of teacher-like assistance may also be that the peer-as-teacher already knows the information.

As shown in the next excerpt (34), Leni, the elder member of the dyad is encouraged by her younger but more proficient partner Lilliana to read the task objective. Lilliana checks her understanding of the task. Leni replies, and is praised by Lilliana who, sounding as a teacher, adds a translation of what Leni omitted.

Excerpt 34

Li: Leni… (inviting Leni to a joint pursuit of the task)

Le: Also jetzt haben wir die erste Aufgabe gemacht und jetzt machen wir die nächste. Die lese ich jetzt mal vor. [*So we have done the first task and now we're going to do the next one. I'm going to read it.*] What makes a person friend for you? What qualities are important? (reading the questions in the task)

Li: Was heist das Leni? [*What does this mean Le?*] (checking understanding, sounding as a teacher).

Le: Na ja was ein Freund für dich ausmacht. (translating the previous line into German)

Li: Genau! [*Exactly!*] (sounding as a teacher) Was ist für dich wichtig? (adding omitted translation)

7.2 In-depth analysis

In the previous section I have shown, and briefly commented on examples of assistance found in the data. In this section, based on in-depth analysis, I will illustrate the ways and the extent of assistance provided among M-A peers in more depth. In order to do so, the analysis is complemented with the following measures: occurrence of LREs per turn, the number of LREs resolved, and LRE initiation, LRE response and LRE resolution within pairs. In addition to the description of assistance, the analysis also demonstrates whether students' use of the targeted structures resulted in increased independence. In-depth analysis was conducted in order to gain a better understanding of language learning processes, and in particular to gain insight into the phenomenon of peer assistance and the particular processes underlying peer learning in relation to assistance provided among peers.

The results of the analysis will be grouped along patterns of interaction formed by pairs. I will begin by a description of how assistance was provided by learners who formed a collaborative pattern of interaction.

7.2.1 Collaborative pattern

Pair 10

Alena (8th grade, high proficiency) and Enna (7th grade, high proficiency)

The interaction between Alena and Enna was matched to the collaborative pattern of interaction. Alena and Enna are highly motivated, highly proficient, and autonomous learners of English who rely on teacher's help only when necessary. They work together on various assignments, including subjects other than English. Excerpt 29 provides an example of a co-construction, which was a common feature of assistance provided in collaborative patterns of interaction. As mentioned above, co-construction refers to a joint creation of an utterance or of a sentence, which is above each individual learner's level (collective scaffolding, Donato, 1994). As shown in excerpt 35, during the pre-task grammatical exercise learners are attempting to transform the sentence *Chloe answer that she doesn't like wasting her time* into *Chloe answered that she didn't like wasting her time*.

Excerpt 35

1 E: Next...Chloe answer...Also ich lese ersmal den Text vor, ok? [*I am going to read the sentence, is that ok?*]

2 E: Chloe answer that she doesn't like... Chloe answer...

3 A: Eh, past...!

4 E: Ok. I think it's answered. And you?

5 A: Yes

6 E: Yeah Chloe answered that she doesn't like...She don't...

7 A: doesn't

8 E: doesn't kann man doch auch ins Vergangenheit...ach didn't? [*doesn't can also be transformed into past... oh didn't?*]

9 E: Ok. Please read. Chloe answered that she didn't like wasting time. ...Ok. Next. Sandy calls Jaden and say that the gang needs him (reading). Sandy eh was? [*Sandy oh what?*]

10 A, E: Sandy called (overlap)

Enna, the younger learner takes the initiative. She begins to read but then probably notices that it would be more polite to ask Alena's permission (turn 1). The permission seems to be given non-verbally by a nod. Enna is then thinking about the appropriate

verb form (turn 2) but provides the non-target-like *answer* (turn 2). Alena reminds her to use past tense (turn 3) which prompts Enna to provide the target form (turn 4). Enna seeks Alena's confirmation (turn 4) which is given to her (turn 5). In the next turn (6), when asked by Enna whether the correct form is *don't* or *doesn't,* Alena fails to give the correct simple past form (turn 7), although she was the one to suggest past tense in the line above (turn 3). However, despite providing the non-target form, Enna suggests that *doesn't* must also be transformed into the past tense, and provides the right solution (turn 8). This can be classified as assisted performance (Ohta, 2001; Tharp & Gallimore, 1991) because Enna's right solution can be linked back to Alena's suggestion in line 3. After provided the target-like *didn't*, and having repeated the target-like sentence, Enna takes the initiative and introduces the next sentence, inviting Alena to the joint pursuit of the task (turn 9). Overall, this excerpt exemplifies that such co-constructions are likely to contain suggestions, sharing of ideas, reciprocal feedback as they are marked with learners' high willingness to engage with each other's contributions. What is more, as both learners are pooling their linguistic resources in order to construct a sentence, which is beyond each individual's linguistic abilities, they experiment with new ideas, examine their assumptions, and take risks (Damon & Phelps, 1989). It seems that Enna, who is working with a slightly more proficient Alena, is willing to explore new language, does not worry about making mistakes, and the difficulties that she has, seem to be challenging rather than intimidating (Damon & Phelps, 1989). Interestingly, she is the one who takes the initiative, and it seems that by taking risks, experimenting with language, and making suggestions, she actively engages Alena in problem solving, thus largely contributing to the creation, and maintenance of intersubjectivity.

The relatively high level of mutual assistance is also indicated by a high ratio of LREs turns per conversational turns. Across four tasks, out of 359 conversational turns, 267 turns were LRE turns. Interestingly, it was Enna, the younger learner, who produced more turns (191) compared with 163 of Alena, and initiated the higher number of LREs (40 vs. 9). However, Alena correctly resolved 26 out of 48 LREs. Enna also requested help much more often than Alena (55/12) and made more suggestions (29/13). However, Alena was the one who other-corrected more often (18/8). Another indication of mutual help provided among these learners is a high occurrence of co-constructions (27) across four tasks, during which learners pooled their linguistic resources in order to construct

a sentence, or arrive at appropriate lexical item or chunk. Another indication of mutual support is a high frequency of assisted performance as shown in the example above.

The mutual assistance also seemed to have contributed to Enna's increased independence of using backshifting of tenses target-like. As shown in the excerpt (35) above, Alena's assistance was necessary in order for Enna to produce a target-like sentence. Alena's reminder to Enna to use past tense (turn 3), and the following exchange with Alena helped Enna to produce the target-like *Chloe answered that she didn't like wasting time* (9). Immediately after (turn 10), without Alena's previous assistance, Enna (simultaneously with Alena) transforms *Sandy calls Jaden* into *Sandy called*. As the task proceeds, Enna becomes more independent in using backshifting although not all sentences are target-like. For example, *Jaden explains that he has to stay* is transformed into *Jaden explained that he has to stayed*. This is not opposed by Alena as she probably does not know either. Although Enna failed to transform one of the verbs *has to* into past tense, she seems to be moving toward target-like use.

Later, during the comic writing task, Enna spontaneously produces sentences containing backshifting, although even this time, some are inaccurate. Alena's role during the writing part seems to be limited to completing Enna's begun utterances or to other-correct her non-target like use (excerpt 36).

Excerpt 36

    E: Also Jaden told the gang that he has a date.

    A: that he had a date (correcting)

On a written individual post-task activity, Enna accurately used backshifting, and her answers to all questions related to the Comic were target-like. For example:

    Why did Jaden have to leave?

    Jaden had to leave because he had a date with Chloe.

On another individual written post-task activity, which required learners to use back-shifting in contexts other than Comic, though Enna was able to use back-shifting, her use tended to be non-target-like. Out of eight sentences, only three were target-like. For example:

    First of all, she asked me how old I was. (target-like use)

Then she added that I must worked 8pm-4pm. (non target-like use)

On the classroom achievement test which took place two weeks after students engaged in the Comic writing task, and which contained the exactly same writing task; but individually, Enna was able to produce sentences containing reported speech with back-shifting of the tenses. She produced two target-like and two non target-like sentences containing this grammatical feature. For example:

Jaden told his gang that he had a date. (target-like)
Jaden told her that he haven't time. (non-target-like)

Based on this evidence, it can be said that Enna has become increasingly independent in using back-shifting of tenses. However, her performance includes some level of regression, and may still not be capable of using this feature correctly in a broader range of contexts. Enna is on her way to master this feature, and needs additional practice (Ohta, 2000).

Pair 9
Lenka (8ᵗʰ grade, average proficiency) and Lucy (7ᵗʰ grade, average proficiency)

The next example of how assistance was provided among learners who formed a collaborative pattern of interaction comes from an interaction between Lenka (8ᵗʰ grader) and Lucy (7ᵗʰ grader), average achievers whose relationship can be characterized as acquaintances rather than friends. Despite their average level of proficiency, both are highly motivated learners of English, who work hard, and display a high degree of autonomy. The next example (excerpt 37) comes from the Text-reconstruction task. It provides another example of a co-construction, in which they are looking for the right word to complete the sentence *When Rico first <u>immigrated from</u> the US to Mexico, he felt like an alien.*

Excerpt 37
1. Le: Ok. When Rico first dadada to the US to Mexico, he feeled like dadada... Wenn Rico das erstemal... von Mexico....laughter (seems to be pretending that she has understood)...

2. Lu: Na ja, irgendwie, ...vieleicht hinzieht oder so? [*Well, somehow,...maybe he moves or something?*]

3. Le: Na dann würde ja *immigrated* passen. [*Well, then immigrated would fit.*]

4. Lu: Hm. (agrees)

5. Le: Wenn Rico first immigrated to the US from Mexico, he felt like (reading)... Also ich würde schon mal immigrate. [*So, I would say immigrate.*]

6. Lu: Also soll ich das schon mal hinschreiben? [*So, shall write it down?*]

7. Le: Ja. [*Yes*]

The interaction begins with Lenka attempting to complete the first sentence by translating it in L1 first (turn 1). This prompts Lucy to make a suggestion in L1 (turn 2), which then enables Lenka to complete the right word (turn 3). Lucy agrees (turn 4) and Lenka reads the target sentence in order to confirm her understanding, and expresses her intention to opt for the word *immigrated* (turn 5). Lucy, who took the role of the scribe, asks Lenka's approval to write the sentence down (turn 6), and Lenka agrees (turn 7). Similarly to the interaction between Alena and Enna, Lenka and Lucy are also willing to engage with each other's contributions, and accept each other's perspective. It seems that because of this willingness to do so, they succeed in co-constructing the target sentence while pooling their linguistic resources (Donato, 1994). In other words, each learner contributes to the joint resolution of the problem. In addition to this, the use of L1 has an important function, namely to make the task content more comprehensible (turn 2) and to preserve a joint completion of the task. The excerpt also exemplifies that it was the elder learner Lenka, who would typically initiate an episode, which was then completed by her younger partner Lucy. Lenka tended to agree with Lucy's completions. At other time, Lenka elaborated on Lucy's suggestions, which tended to contribute to joint resolutions of problems. The mutuality of assistance can be also seen in the high number of LREs produced (48) on four tasks. In addition to LREs, their interactions displayed a high occurrence of co-constructions (25), and suggestions (69). Although Lenka spoke more (251 vs. 197 conversational turns), she requested assistance more often (47 vs. 17). It seems that Lenka, despite her attempts to lead the task, had to often request assistance from her partner, because she seemed to lack the necessary linguistic expertise. She was not absolutely certain about her ideas and solutions, and had to rely on Lucy, whose suggestions seemed to have helped to resolve

many linguistic problems. However, it has to be mentioned that only 24 out of 48 (50%) LREs were resolved correctly, and 12 out of 48 (25%) LREs were left unresolved. This seems to indicate that the tasks were above their linguistic level. On the other hand, despite the relatively high ratio of unresolved LREs, both learners supported one another, and succeeded in completing difficult tasks, which were above their level. The next excerpt (38) showing their interaction on a grammatical exercise, illustrates this.

Excerpt 38

    4 Le: (reading the explanations and examples of phrasal verbs)

    5 Lu: keine Ahnung. [*no idea.*]

    6 Le: (goes on reading the task)...Ich habe kein Wort verstanden. [*I have not understood a word.*]

    7 Lu: Ich auch ne. [*I haven't either.*]

    8 Le: Keine Ahnung was sind die phrasal verbs? [*No idea, what are phrasal verbs?*]

    9 Lu: Na ja, sollen wir vielleicht wie hier… blow up und explode irgendwie Wörter die da passen könnten oder die es irgendwie beschreiben oder so? [*Well, we should maybe her…blow up and explode, somehow the words that can be matched or describe them or something?*]

    10 Le: Ja. Also. Bei send back ist vielleicht return? [Y*es, so send back maybe goes with return?*]

    11 Lu: Hm. (agrees)

    12 Le: Break up also abbrechen... continue was ist denn das? [*break up so abbrechen…continue, what is that?*]

    13 Lu: Keine Ahnung. Weiter. [*No idea, next one.*]

    14 Le: Go away?

    15 Lu: Hm.

    16 Le: Come back ist vielleicht return noch. [*Come back is maybe return.*]

This exercise was related to phrasal verbs, which pose great difficulty to L2 learners of English. Learners were asked to match given phrasal verbs to verbs with a similar meaning. As the following excerpt reveals, both learners signal non-understanding of the exercise (turns 5-7), including the concept of phrasal verbs. In line 9 Lucy suggests,

using the example of *blow up* and *explode* that some verbs could be matched. Lucy's suggestion prompts Lenka to come up with a number of suggestions (turns 10, 12, 14). In fact, most of Lenka's suggestions are marked with rising intonation, which seems to point to her willingness to engage Lucy in the joint pursuit. Lenka's last suggestion (turn 16) is correct, and from this line onward, both learners engage in fifty minutes long collaborative work, which is marked with mutual help. Although both learners understood neither the exercise, nor the concept of phrasal verbs at the beginning, their mutual support seemed to have been crucial to overcome the initial difficulties by working out the objective of the exercise, and to complete all three parts of the exercise. However, it has to be said that the analysis of the written grammar exercise revealed that nearly thirty per cent of all phrasal verbs were non-target like. In other words, both learners are at the beginning of their learning of phrasal verbs.

Similarly, with regards to their interaction on the Comic task, the analysis has shown no evidence of increased independence of the use of the back-shifting of tenses because this pair not only did not complete the pre-task grammatical exercise but also avoided using the target language; namely reported speech with back-shifting of the tenses, during the main Comic writing task. On the individual post-task activity, only one of Lucy's answers was target-like. On the classroom achievement test which contained the same Comic writing task, Lucy produced mainly sentences containing direct speech. Only one sentence contained the targeted reported speech, which was, however, not target-like.

> *Jaden says, "No sorry, I haven't got time right now".* (indirect speech)
> *Jaden says the gang that he has a date.* (reported speech)

This case also shows that the way students approach a task at hand may vary considerably, and may have profound impact on their use of the targeted linguistic feature.

7.2.2 Expert/novice

Having described assistance within two collaborative pairs, I will now turn to a description of expert/novice pairs engaged; to varying extent, in forms of assistance which according to research (Davin & Donato, 2013) resemble to those used by teachers. It is therefore referred here as teacher-like assistance, which as mentioned

above included continuers, back-chanelling, active listening, and checking partner's understanding. Surprisingly, teacher-like assistance was not used predominantly by the elder learner of the pair but in the case of one pair, also by the younger one. The next two excerpts (39, 40) will illustrate this.

Pair 6

Lilliana (7th grade, high proficiency) and Leni (8th grade, average proficiency)

In this interaction on the Text-reconstruction task, it is surprisingly the younger but more proficient learner, Lilliana, who assists her elder but less proficient partner, Leni. Lilliana clearly plays the role of an expert.

Excerpt 39

128 Le: After that I decided that it was dangerous to be a director. (reading and completing the sentence with the word *director*)

129 Li: Hm. (praising, and giving a sign to continue)

130 Le: than to be a policeman so I became a detective (reading and completing

131 Li: Hast du die Geschichte verstanden? [*Did you understand the story?*] (checking understanding)

132 Le: Na… [*Well…*] (Leni is not sounding certain)

133 Li: Oder wenigstens die Endung oder so? [*Or at least the ending?*] (checking understanding)

134 Le: No. das der Vater getötet wurde. [*Well, that the father was killed.*]

135 Li: Hm. (praising)

136 Li: Und dann? [*And then?*] (inviting to continue, checking understanding)

137 Le: silence

138 Li: denkt [*thinks*]

139 Le: denkt er nach [*thinks about*]

140 Li: Ok, und dann hat er was beschlossen? [*Ok, and then he decided on what?*] (inviting to continue, checking understanding)

141 Le: etwas gefährliches [*something dangerous*]

142 Li: yes! (praising)

As seen in the next example (excerpt 39), Lilliana leads Lena throughout the task and offers a variety of assistance, which is sensitive to the difficulties her partner is experiencing. For example, she frequently encourages Leni to complete her utterances (turns 136, 138), and patiently waits for her to do so. Lilliana often checks her understanding of the text (turns 131, 133, 140), as well as her understanding of grammar, or vocabulary (turn 140). She mainly uses L1 to achieve this (turns 131, 133, 136, 139). What is more, Leni not only receives assistance when she directly asks for it but also when she doesn't (turn 131). Importantly, Lilliana does not merely provide Leni with correct answers but allows her first read the text (turn 128), and to work out the answers on her own (turn 130). Importantly, she often praises Leni for her contributions (turns 129, 135, 142).

However, it has to be said that the extent as well as ways of Lilliana's assistance seemed to have slightly varied across tasks and could have been related to the linguistic demands of the task at hand. The next excerpt (40) provides an example of Lilliana's and Leni's interaction on an exercise, which aimed at practise of phrasal verbs, and which seemed to have been linguistically more demanding not only for Leni but also for Lilliana. This exercise required them to match phrasal verbs to verbs with the similar meaning.

Excerpt 40

25 Li: put off...

26 Li: come back zurückomenn, keine Ahnung [*no idea*]

27 Le: arrive? (suggesting)

28 Li: arrive ist eigentlich ankommen [*arrive is actually ankommen*] (explaining)

29 Le: ankommen

30 Li: put off ist ausziehen [*putt of is ausziehen*] (explaining)

31 Le: put up oder so? [*put up or so?*] (suggesting but not sounding sure)

32 Li: get up

33 Le: vielleicht…? (inaudible but sounds as if Leni is trying to suggest something)

34 Li: get up ist eigentlich auch aufstehen...rise...rise and sunrise… Sonnenaufgang aufstehen [*get up is actually also aufstehen,…rise…rise and sunrise…sunrise get up*] (explaining)

35 Le: aufstehen no. (get up, yes.)

Although Lilliana further provides explanations (turns 28, 34) in response to Leni's questions (turns 27, 31), Lilliana seems to take much more initiative in completing linguistic problems on her own than in the interaction described above. It seems that her linguistic resources were now necessary to complete the exercise which was above Leni's level, and could therefore not provide assistance in such an extent than in the task mentioned above. Also, in terms of assistance, she relied more on other-corrections and explanations rather than on providing her partner with time to continue, marking necessary linguistic features for her or checking her understanding. However, even here we can see a high occurrence of Leni's suggestions (turns 27, 31, 33), which indicates a high level of mutuality and a joint orientation to the task, which in my view largely contributed to the successful completion of the exercise, which was linguistically demanding for both learners. This example suggests that the linguistic demands of the task might have an impact on ways and the extent of assistance given and received among both learners.

Overall, these two excerpts show that Lilliana is willing to assist her friend. Furthermore, she is able to assist Leni at the right level. She has the ability to explain language in ways familiar to her partner. Although she lacks the adult expertise, Lilliana is able to draw out Leni's attention and participation. It seems that she succeeds because Leni is not shy, and is very interested in the task, and in learning the language. It is very likely that being closer in knowledge and status than the adult teacher, Leni may feel freer to express her opinions, ask questions, and risk speculations, which contributes to the liveliness, and "mutuality" of the discourse. Damon and Phelps (1989, p.11) refer to such a discourse as *peer tutoring*. They explain that although such tutoring is low on equality it can be very high on mutuality. The variation in mutuality is, however, related to the tutor's interpersonal skill and training as well as to the tutee's receptiveness to learning (Damon & Phelps, 1989, p.11). It can be said that Lilliana shows all three aspects, interpersonal skills, training and receptiveness to Leni's learning. I would like to argue that in their interactions over time, she greatly contributed to Leni's learning by providing her assistance in a variety of aspects. She provided Leni with explanations concerning grammar or vocabulary which helped Leni to resolve linguistic problems. Lilliana corrected Leni only when necessary, thus affording her with opportunities to think about language, and to reflect on her own language use. Importantly, it seems that

Leni's frequent use of questions, and suggestions stimulated Lilliana's willingness to provide her with assistance, and thus to establishment and maintenance of intersubjectivity, without which assistance, and therefore the learner's development, may be hindered (Antón & DiCamilla, 1999). As Antón and DiCamilla (1999, p.240-241) explain, asking questions implies that "interlocutors operate on the cognitive plane with ideas and on the social plane as they actively engage another in solving a problem." They further explain that "to suggest or to propose that X is the case is to offer X for the listener's consideration and thereby invite the listener's active participation in the task" (p.240-241). It seems that Leni's questioning and suggesting did invite Lilliana's active participation in the task, and also encouraged her to help her less proficient partner. In fact, Leni was slightly more active speaking than her partner, taking 226 conversational turns compare to Lilliana's 224 across four tasks. Moreover, a high extent of assistance provided between these two pairs is also indicated by a high LRE turns/conversational turns ratio accounting for 370 vs. 447. Leni's active participation also greatly contributed to the fact that 48 out of 53 LREs were resolved correctly, although it was Lilliana who initiated and resolved the majority of them.

In relation to the evidence of increased independence of use of the targeted linguistic structure, the analysis of the Comic task shows that Leni has become increasingly independent in using back-shifting of the tenses. As shown in the next example (excerpt 41) from their interaction at the beginning of the pre-task, Lilliana helped Leni to understand the objective of the task, and explaining her the example sentence:

Excerpt 41

    2 Li: Yes, so now the next example. Jaden tells Chloe that he is sorry.

    3 Le: And now I am going to write Jaden told Chloe that he was sorry.

Later in the task (excerpt 42), Leni produces another non target-like sentence. Lilliana first indicates that the sentence is wrong (turn 12), and when Leni is not able to discover her mistake (turn 13), she provides a more explicit feedback (turn 14). However, Leni still does not seem to understand (turn 15), which prompts Lilliana to show her an example in the textbook, and to compare Leni's non-target like use with the target-like use as shown in the textbook (turn 18). In fact, in the next turn, Leni independently produces a target-like sentence without Lilliana's help (turn 20).

Excerpt 42

11 Le: Also jetzt die Vergangenheit. [*And now in the past!*] Sandy called Jaden and said that the gang needs him.

12 Li: No!

13 Le: Oh Was habe ich den falsch? [*What did I do wrong?*]

14 Li: Na ja needs ist doch keine Vergangenheit, oder;? [*Well, needs is not past, is it?*]

15 Le: Da steht aber diese ganze Sätze dass man sie in die Vergangenheit umsetzen. [*But it says that we should tranform the sentences into past tense*] (explaining)

16 Li: Wir holen ein Buch. [*We will get a book.*]

17 Le: Das ist schon richtig. [*That is already correct.*] (The example in the book shows: Sandy called jaden and said that the gang needed him.)

18 Le: Na siehst du das gibt es nicht. [*You see, it is not there.*] (pointing to the difference between non target-like use *need* and the target-like use needed as shown in the text-book).

19 Li: But Jaden explains that he has to stay (reading). Lena du bist daran! [*It is your turn Leni!*]

20 Le: But Jaden explained ed daran [*add ed*] that he had to stay.

Later in the task, Leni independently produced more target-like sentences. For example:

Sandy told others that the mural looked great.

On the post-task independent exercise, Leni's use of the back-shifting of the tenses tended to be target-like, although she still had some difficulties to use back-shifting in different context. On the classroom achievement test, Leni often used reported speech, and her use of back-shifting tended to be target-like.

Sandy phoned Jaden because the gang needed him (post-task exercise)

She wanted to know which school I went (post-task exercise)

Half an hour later Sandy phoned Jaden and said that they needed help. (classroom achievement test).

Pair 5

Lea (9th grade, high proficiency) and Jess (8th grade, average proficiency)

Another example of teacher-like assistance comes from an interaction between Lea (9th grade) and Jess (8th grade) on the Text-reconstruction task. As the example (excerpt 45) shows, they are attempting to complete the sentence *Rico was good…* with an appropriate word.

Excerpt 43

14 J: But Rico was was was was....

15 L: What do you think? (inviting J to complete the sentence)

16 J: hm.. thinking..Warte..[*wait*] hm. (thinking)...inaudible

17 L: He was really good at? (inviting J. to complete the sentence)

18 J: science

19 L: Ja, wahrscheinlich. [*Yes, maybe*] ..at space (laughter)....Er war gut im Weltraum. Ich bin gut im Weltraum. [*He was good at space. I am good at space*]... laughter

The excerpt begins with Jess reading the sentence. Her self-repetition of *was* (turn 14) indicates that she is looking for the right word to fill in. Lea's question *What do you think* (turn 15) indicates that Jess is provided with the time and space to work out the solution by herself. Although Jess is not able to arrive at the solution (turn 16), she is given another opportunity by Lea (turn 17). Jess completes the sentences with the target-like *science* (turn 18). It seems that it was through Lea's verbalization of *He was really good at?* that Jessie was able to complete the sentence. Lea then plays with the language by completing the sentence with the word *space* (turn 19). This playing with words accompanied with laughter is a sign of a joint orientation to the task, and of creating of intersubjectivity, necessary for effective assistance to take place. Importantly, this interaction provides another example of teacher-like assistance, which is indicated by the will of the elder expert to help the younger partner.

The quantitative analysis of forms of assistance provided within the pair also reveals that assistance was provided to a greater extent in one direction, by Lea to Jess. For example, across four tasks, Lea provided 15 explanations while Jess did none. Also, in contrast to the example of Leni and Lilliana, the expert partner Lea took more turns than her novice partner Jess (195 vs. 161), and initiated and resolved the majority of LREs.

Lea initiated 25 out of 35 LREs across four tasks, and resolved 25 out of 29 correctly resolved LREs. In other words, the extent of mutual assistance within this pair seemed to be smaller than it was the case in the interaction between Lilliana and Leni interaction. In other words, the extent of assistance provided within the expert/novice pair may vary across pairs in spite of the similar nature of assistance provided by the expert learner.

When looking at evidence of Jess's increased independence in the use of back-shifting of tenses on the Comic task, the analysis reveals that during the Comic task, Jess's utterances containing the target structure were mere other-repetitions of those Lea's.

Excerpt 44

    L: Sandy told the others that the mural looked great.

    J: Sandy told the others that the mural looked great (repeating)

    L: genau! [*exactly*]

However, Jess showed some understanding of the use of the target structure because she was able to explain the tense use, and to produce a target-like completion of a sentence begun by Lea.

Excerpt 45

    L: Ok.Ok. Chloe answered that she doesn't like. Ne wait! [No, wait!]

    J: wir berichten also statt doesn't kommt didn't... (inaudible) [*We are reporting so instead of doesn't comes didn't.*]

However, it can be said that although Jess has understood the concept of back-shifting in the reported speech, her use of the target structure still requires additional practice. In fact, the analysis of the post-task exercises (below), and of the classroom achievement test has shown that although she frequently uses reported speech with back-shifting of the tenses, her use tends to be non target-like.

    Sandy did phoned Jaden, because, the gang needed him. (post-task exercise)

    Later they told me that they was 150 workers. (post-task exercise)

    But suddenly Jaden sayd that he had a date forgotted and he must go. (achievement test)

However, the interaction with Lea seemed to have laid a very good foundation, on which she can build on her way towards mastery of the use of this linguistic feature.

7.2.3 Dominant/dominant pattern

I would now like to turn to a description of the nature of support within dominant/dominant pattern of interaction.

Pair 1

Lara (9th grader, high proficiency) and Ella (8th grader, high proficiency)

The next example (excerpt 46) provides an example of assistance provided within *dominant/dominant* pattern of interaction. Lara and Ella are attempting to change the clause *Jaden thinks that it is no good letting the gang down* into past simple.

Excerpt 46

29 L: Jaden thinks that it is no good letting the gang down. Ok. Guck mal bitte wie das geschrieben wird... thought, die Vergangenheit von think. [*Please, have a look at the spelling of thought, the past simple oft think*].Weiss ich nämlich noch ne…[*I don't know this one, yet…*]

30 E*:* t-h-o-u-g-h-t.

31 L: thought that it was no good*…* (speaking while writing)

32 E: letting the gang down geht das so? [*Is it ok like this?*]

33 L: letting the gang down… Ja einfach so lassen… [*Yes, just leave it the way it is.*]

Lara reads the sentence aloud, and asks Ella to find the correct spelling for the past simple form *thought* in the dictionary. Ella provides the correct spelling (turn 30) and Lara continues transforming the sentence (31 turn). Ella completes Lara's utterance (turn 32), but because she is not sure about her completion, she requests confirmation from Lara (turn 32). Lara instructs her to leave it as it is without providing an explanation (turn 33). Although no explicit explanation for the language choice is provided, this F-LRE is correctly resolved.

The excerpt below (47) shows an interaction later in the task. Both learners are attempting to produce a sentence *Chloe asked Jaden if he wanted to go with her to the movies*.

Excerpt 47

154 L: Wie heissten die da? Chloe? [*What's the name of that girl?*] (impolite tone)

155 E: asked Chloe he can

156 L: looked

157 E: the movie next Saturday... (while L. is writing)

158 L: Chloe asked Jaden if he can…?

159 E: Nene, Jaden asked Chloe [*No*]

160 L: ne, ne, ne [*No, no, no!*] (impolitely and resolutely rejects Elli's suggestion)… When Jaden and Chloe left, Chloe said she wanted to go.

161 E: Und der fragt ja über *Saturday*. [*And he is asking about Saturday.*]

162 L: Nein, *the movies*! Sie hat gefragt wenn sie den Film lieber nächsten Sontag. [*No, the movies! She asked if they could watch the film next Sunday.*]

163 E: Ich wollte jetzt schreiben. [*I wanted to write it down.*]

164 L: Also [*So.*] if he can go L: went, go went … he can ist doch egal! [*Does not make any difference!*] (impolite tone)

165 L: asked Jaden if he can…if he can went to the movies … Oh Leute seid doch mal ruhig! [Oh people be quite for god's sake!] (telling other students to be quite)

166 E: *to a movie* oder? [*right?*]

167 L: Chloe asked if he can go to the movies with her.

168 E: with him oder? [*right?*]

169 L: nein, wenn Chloe gefragt hat dann with her! [*No, if Chloe asked, then with her!*] (ridiculing)

170 E: Ach so ja ich habe gedacht… [*Oh, I see. I thought…*]

171 L: Chloe fragt [*Chloe asks*]

172 E: na ja ich habe gedacht...[*Oh, yes, I thought…*]

As shown in the excerpt, they are working together to complete the task, and their attention is clearly on the task. However, it appears that none of the learners, Lara in

particular, is willing to engage with each other's contributions. What is more, assistance is not explicitly requested, nor explicitly offered. Learners assist one another mainly via other-corrections or counter-suggestions (turns 159, 160, 162, 169). Counter-suggestions and other-corrections are in the form of a statement, containing no signs of willingness to know the partner's perspective. What is more, justification of any of the learner's linguistic choices is not requested despite a clear disagreement. In addition to this, Lara's other-corrections are expressed in impolite tone, and often seem to ridicule Ella's suggestion (turns 160, 169). In fact, in this interaction it is only Ella who asks questions, indicating some effort to engage the other partner into the joint completion of the task. In contrast to this, Lara's question (turn 154) does not seek to engage Ella in the task but sounds more as a command given to her 'secretary'; in order to provide her a word that she needs.

Overall, there is very little of assistance provided by Lara to her younger partner across all tasks and exercises. Lara's assistance was predominantly in the form of other-corrections. She corrected Ella 26 times compared to Ella's 10 corrections. Although Lara provided 25 explanations, these were merely justifications of her thinking rather than showing an intention to explain to Ella something that she did not know yet. Interestingly, Ella produced a much higher number of suggestions (53 vs. 14) which may indicate her willingness to collaborate with Lara. What is more, Ella triggered the majority of LREs (36 out of 57). Surprising is also a similar number of other-repetitions. However, Lara's repetitions did not seem to function to encourage her partner to continue or to distribute help (Ohta, 2005) but rather to confirm her own understanding of a problem or to signal an error to Ella. Both excerpts suggest that despite working together on the task, this pair lacks a shared perspective on the task, which according to Antón and DiCamilla (1999, p.240) may preclude of what they call a "construction of a social space", which would facilitate a more successful completion of the task. Moreover, the excerpts reveal that the level of intersubjectivity, which according to sociocultural theory is a presupposition for successful assistance to occur, is low. Or put it yet in another way, the low level of intersubjectivity in the *dominant/dominant* pattern of interaction seems to hinder mutual assistance on the task. However, a surprising finding is that despite the low level of intersubjectivity, and non-collaborative nature of this interaction, learners produced 57 LREs, engaged in 49 co-constructions, and had a relatively high LRE turn/conversational turn ratio (381 vs. 501). This seems to be attributed to their high English proficiency. However, given that this pair formed a non-

collaborative pattern of interaction, yet produced a high number in LRES, co-constructions, and had a high LRE turn/conversational turn ratio, which are figures associated with high mutuality and high equality, seems to indicate that the outcomes of patterns of interaction for these pre-adolescent learners might be more complex than Storch (2001a) and others (e.g., Watanabe & Swain, 2007) suggest.

Furthermore, the micro-analysis also reveals that Ella has become increasingly independent in using backshift of tenses in the reported speech, the linguistic feature targeted by the task, although as in previous cases, this process is marked with instances of regression. During the pre-task (grammar exercise) Ella and Lara engaged in an F-LRE concerning the backshift of tenses. As shown in excerpt 48, Ella proposes a non-target like *has* (turn 25), which is explicitly corrected by Lara (turn 26), although Lara does not provide the target-like form. In a few turns later, Ella completes Lara's utterance *But Jaden explained that* with a target-like *had to stay* (turn 31).

Excerpt 48

22 E: But Jaden explained

23 L: But Jaden explained

24 L: that he has to stay. But…

25 E: lass mal das **has** so oder? [*let's leave **has** there, ok?*)

26 L: ne ne ne [*no, no, no, had!*]

[...]

30 L: But Jaden explained…

31 E: that he had to stay

Later in the task (turn 68), Ella corrects Lara's non-target like *have to* with the target-like *had to*, showing increasingly higher understanding of the target structure.

Excerpt 49

68 L: Jaden have to go to his date

69 E: had to go to his date

The analysis of individual post-task exercises and of the achievement test shows that Ella frequently used the targeted structure, and that her use has become increasingly target-like.

Chloe was angry because Jaden was late. (post-task exercise)

First of all, she asked me how old I was. (post-task exercise)

Later she told me that they had 150 workers. (post-task exercise)

Jaden explained that he had to stay. (achievement test)

So although the low level of intersubjectivity seemed to have hindered a more successful assistance on tasks, both learners were willing 'to get the task done', and seemed to have benefited from their interaction. Perhaps surprisingly, despite being Ella's best friend, Lara, seemed to have a very little concern about helping her younger partner.

7.2.4 Expert/passive pattern

Having illustrated how assistance was given among learners who formed a dominant/dominant pattern of interaction, I will now turn to the last case which shows how students of expert/passive pattern assisted one another. The section related to patterns of interaction indicated that despite Riki's willingness to engage Lyn's participation, Lyn's participation remained limited, showing very little understanding of the task and its content. As I showed above (excerpt 22, see also below as excerpt 50), their interaction on a grammatical exercise, which was assigned in order to deepen students' knowledge and use of *present perfect*. In this exercise students were asked to decide whether the temporal words are related to *present perfect* or *past simple*.

Excerpt 50

1 R: Also... die erste Aufgabe, was ist schon abgeschlossen und was ist noch nicht abgeschlossen. [*So, the first exercise is, what is finished and what is not finished, yet.*]

2 L: Ok

3 R: Also [*So*] two days ago? (checking understanding, inviting to continue)

4 L: Ist noch nicht abgeschlossen [*Is not finished, yet*]

5 R: Two days ago (stress on *ago*) ago… war [*was*]… (checking understanding inviting to continue)

6 L: Waren also es ist abgeschlossen [*was so it is finished*]

7 R: Also ja...always? abgeschlossen oder nicht? [*So, ok. always, finished or not?*] (checking understanding, inviting to continue)

8 L: Abgeschlossen [*finished*] (only guessing)

9 R: Always abgeschlossen? [*always finished?*]   (checking understanding, inviting to continue)

10 L: Nein. [No] (guessing, is not giving a reason)

11 R: This year also dieses Jahr [*so this year*] (translating for her)...liegt es in der Vergangenheit? [*is it in the past?*]

12 L: Nicht abgeschlossen. [*Not finished.*]

The excerpt shows that Riki assists Lyn by providing explanations (turn 1), by inviting her to produce an utterance (turns 3, 5, 7, 9), by providing implicit feedback via rising intonation, which indicates that Riki's utterance may not be correct (turn 9), and by translating the target words into L1 with the follow-up question (turn 11). However, Riki's replies are merely limited to short replies, or guesses without any reasoning for her choices (turns 4, 8, 10, 12). The only exception is seen in turn six, where she provides some reasoning for her choice.

I have pointed out above that despite the 'expert' student's willingness to engage the 'novice' in the task, the interaction can be hindered if the proficiency gap between both learners is too large. In a similar vein, as indicated in the excerpt 50, low proficiency learners may not benefit from assistance provided to them by a more proficient partner, as their low linguistic resources may hinder discussions about linguistic problems at hand. Riki and Lyn's interactions seem to reflect the limitations of peer interaction, for peers cannot often provide the expert scaffolding the teacher might, matching the specific needs of the student.

The analysis of the Comic task, of the post-task exercises, and of the achievement test reveals no evidence of the use of back-shifting of the tenses. In other words, Lyn's interaction with Riki and Riki's ongoing assistance did not seem to contribute to Lyn's target-like use. One possible explanation is that the tasks and exercises were simply above Lyn's linguistic level.

7.3 Findings of the quantitative analysis

The previous section has shown in detail how and to what extent assistance was provided within pairs across tasks and exercises. It has also shown evidence of increased independence of use of the targeted structure. Using quantitative analysis, this section

attempts to show the distribution of forms of assistance across and within all pairs. The aim of this section is not to draw any causal relationships between phenomena because the pairs worked in different conditions but merely to complement the qualitative analysis which illustrated in more depth the forms of assistance, and its extent found across three patterns of interaction identified in the data. In other words, this section merely aims to provide a picture of the overall distribution of features of assistance which are relevant in order to address the RQ2. These also include the number of LREs, the ratio of LRE turns per conversational turns, and the distribution of initiation of, response to and resolution of LREs within pairs. The results are based on the quantitative analysis of four tasks and exercises, the Comic, the Text-reconstruction, *Looking for help* and grammatical exercises (section 4.6.1). These tasks were selected because the recordings from these four tasks were available from nearly all pairs and because they seemed to have provided a representative picture of the whole data set as the students carried out the tasks at the beginning, in the middle and towards the end of the unit of work. The quantitative analysis of the Comic task includes only the Comic writing part as it represents the main sequence of the task. I will begin by requests for assistance.

Distribution of requests for assistance across pairs

The next Table (7) shows the three kinds of distribution of requests for assistance (whether for information, confirmation, or explanation) across pairs and four tasks.

Table 7

Number of requests for assistance across pairs and two tasks

Pair	Pattern of interaction	RI	RC	RE	Total
Emilia9/Stella7	exp/nov	69	51	10	130
John9/Will7	exp/nov	5	4	3	12
Leni8/Lilliana7	exp/nov	15	18	7	40

		RI	RC	RE	
Lea9/Jess8	exp/nov	19	12	3	34
Gussi8/Jossi7	Collab	23	22	18	63
Lenka8/Lucy7	Collab	34	13	11	58
Irena8/Sara7	Collab	33	6	6	45
Alena8/Enna7	Collab	45	17	5	47
Riki8/Lyn7	exp/pass	3	0	0	3
Lara9/Ella8	dom/dom	29	14	16	59
N		275	157	79	511
Percentage		54%	31%	15%	100%
M		27.5	15.7	7.9	51.1
Range		3-69	0-51	0-18	3-130

RI – request for information, RC - request for confirmation, RE- request for explanation

The Table above suggests that learners relied mostly on requests for information (*What means fortführen?*) accounting for 54% of all requests, with the average score (M) being 27.5 but ranging from 3 to 69 per pair across four tasks. Requests for confirmation (*Did you say has to or had to?*) accounted for 31%, and requests for explanation (*Can you tell me what are we supposed to do here, please?*) for 15% of all requests. The Table also reveals that while nine out of ten pairs requested help mainly via request for information, only one pair relied mostly on request for confirmation. Request for explanation was not the main way of asking for help by any pair. The Table also demonstrates that even learners in the dominant/dominant pair frequently requested assistance. However, this is mainly because many of these instances were requests in an impolite and instructional tone (*Look up the simple past form for need!*).

7.3.1 Distribution of assistance provision across pairs

Having shown the general tendency of assistance requests across pairs, I will now illustrate the distribution of assistance provision across the same pairs and tasks. The results reported in Table 8 show the distribution of above mentioned forms of assistance across pairs.

Table 8

Distribution of assistance provision across pairs/across tasks

Pair	PI	RP	CC	SUG	EXP	OR	OC	TLA
Emilia9/Stella 7	exp/nov	A/A	39	79	43	56	76	6
John9/Will7	exp/nov	H/H	22	10	9	5	7	4
Lilliana7/Leni8	exp/nov	H/A	31	51	29	32	13	46
Lea9/Jess8	exp/nov	H/A	20	40	15	9	7	11
Gussi8/Jossi7	collab	H/H	22	24	12	29	30	0
Lenka8/Lucy7	collab	A/A	25	69	26	13	8	0
Irena8/Sara7	collab	A/A	13	29	17	10	15	0
Alena8/Enna7	collab	H/H	27	42	22	34	26	0
Riki8/Lyn7	exp/pass	A/L	1	12	5	0	1	16
Lara9/Ella8	dom/dom	H/H	49	67	30	13	36	0
N			249	423	208	201	219	83
Percentage			18%	31%	15%	15%	16%	6%
M			24.9	42.3	20.8	20.1	21.9	8.3
Range			1-49	10-79	5-43	0-56	1-76	0-46

PI- pattern of interaction, RP- relative proficiency, CC – co-construction/completion, SUG – suggestion, EXP – explanation, OR- other-repetition, OC – other-corrections, TLA – Teacher-like assistance

The Table shows that suggestions were the most common form of assistance, accounting for 31% of the main forms of assistance found in the data. In fact, seven out of ten pairs relied predominantly on suggestions. As mentioned in the literature review section, suggestions are important semiotic tools which mediate mental activity, and can be used to encourage partner's participation, to sustain her/his interest in the task, to draw partner's attention on certain language items, to elicit feedback or to approve or

disapprove one's assumptions concerning language. Therefore, a high proportion of suggestions in the data imply that interactions were rich on such instances, which seems to be beneficial to learning. Suggestions were followed by co-constructions (18%), other-corrections (16%) and explanations and other-repetitions, accounting each for 15%. The Table also shows that with the exception of other-repetitions and teacher-like assistance, all forms of assistance were used to a certain extent by all pairs. We can see that with the exception of other-repetitions and teacher-like assistance, all pairs provided assistance using the following forms of assistance: suggestion, co-construction, explanation, and other-correction. In fact, nine out of ten pairs relied on these forms of assistance. Within five pairs which formed either the expert-novice or expert/passive pattern of interaction, assistance was provided in ways which is often seen in teacher-learner interactions. These were grouped in the category teacher-like assistance and included checking partner's understanding, continuers and active listening. Five pairs engaged in teacher-like assistance, two pairs relied greatly on it but across pairs it accounted only for 6%. All five pairs that engaged in teacher-like assistance formed expert/novice or expert/passive patterns of interaction. Within four of the five pairs it was the elder student who provided assistance to the younger partner. Within one pair it was the younger learner Lilliana who provided teacher-like assistance to her elder/novice partner. In contrast to the bidirectional assistance in the form of other-corrections, explanations, other-repetitions and suggestions, this form of assistance was uni-directional, flowing in one direction, from the more proficient to the less proficient partner.

Rather unexpectedly, within expert-novice and expert-passive pairs assistance was provided using co-constructions, which is a typical form of assistance for the collaborative pattern of interaction (Donato, 1994; Foster & Ohta, 2005). One possible explanation is that the 'expert' learner of the pair may have lacked the necessary knowledge to produce the target language and had to rely on her/his partner's linguistic resources to the problem solution.

7.3.2 Distribution of requests for assistance within pairs
The next Table (9) illustrates the distribution of requests for assistance within pairs across four tasks.

Table 9

Distribution of requests for assistance within pairs/ across tasks

Student/grade	Pattern of interaction	RP	RI	RC	RE	Total
Emilia (9)	exp/nov	A	29	30	2	59
Stella (7)		A	40	21	8	69
John (9)	exp/nov	H	2	0	0	2
Will (7)		H	3	4	3	10
Lilliana (7)	exp/nov	H	7	13	6	26
Leni (8)		A	8	5	1	14
Leo (9)	exp/nov	H	6	8	0	14
Jess (8)		A	13	4	3	20
Gussi (8)	collab	H	16	15	9	40
Jossi (7)		H	6	7	9	22
Lenka (8)	collab	A	27	6	8	41
Lucy (7)		A	7	7	3	17
Irena (8)	collab	A	11	0	3	14
Sara (7)		A	22	6	3	31
Alena (8)	collab	H	6	1	5	12
Enna (7)		H	39	16	0	55
Riki (8)	exp/pass	A	1	0	0	1
Lyn (7)		L	2	0	0	2
Lara (9)	dom/dom	H	18	9	8	35
Ella (8)		H	11	5	8	24
Elder			123	82	41	246
Younger			151	75	38	264

RI – request for information, RC – request for confirmation, RE – request for explanation , RP – relative proficiency, BLUE- Elder learners, GREEN – younger learners

As anticipated, the younger learners requested assistance from their elder partners more often than their elder partners from them. However, contrary to the expectations, assistance was frequently requested by elder learners. Interestingly, within four out of ten pairs, the elder learners requested assistance more often than their younger partners. Within other six pairs assistance was requested more often by younger learners. As the Table above reveals, there are also differences across patterns of interactions. As had been anticipated, within expert/novice and expert/passive pairs, help was requested more often by the novice or passive learners. However, within pairs that formed equal patterns of interaction such as collaborative or dominant/dominant, in the case of three out of five pairs, assistance was requested more often by the elder partner. This suggests that it was not necessarily the elder or the more proficient member of the pair who possessed the needed knowledge to resolve the problem at hand. In a similar vein, the linguistic problem may have been resolved only with mutual support throughout the task. As a result, none of the group members within these pairs necessarily directed the flow of assistance but assistance was requested and distributed among the peers themselves.

7.3.3 Distribution of assistance provision within pairs

The previous section has illustrated the distribution of forms of assistance across pairs. I will now show how provision of assistance was distributed within pairs (Table 10 below).

Table 10

Distribution of assistance within pairs across tasks

Student/grade	Pattern of interaction	Relative Proficiency	SUG	EXP	OR	OC	TLA
Emilia (9)	exp/nov	A	38	32	35	48	6
Stella (7)		A	41	11	21	28	0
John (9)	exp/nov	H	3	8	0	7	4
Will (7)		H	7	1	5	0	0
Lilliana (7)	exp/nov	H	39	0	27	0	0
Leni (8)		A	12	29	5	13	46
Leo (9)	exp/nov	H	18	15	1	5	11
Jess (8)		A	22	0	8	2	0
Gussi (8)	collab	H	10	6	12	17	0
Jossi (7)		H	14	6	17	13	0
Lenka (8)	collab	A	37	10	10	5	0
Lucy (7)		A	32	16	3	3	0
Irena (8)	collab	A	11	14	2	8	0
Sara (7)		A	18	3	8	7	0
Alena (8)	collab	H	13	18	15	18	0
Enna (7)		H	29	4	19	8	0
Riki (8)	exp/pass	A	10	5	0	1	16
Lyn (7)		L	2	0	0	0	0
Lara (9)	dom/dom	H	14	25	6	26	0
Ella (8)		H	53	5	7	10	0

SUG – suggestion, EXP – explanation, OR- other-repetition, OC – other-corrections, TLA – Teacher-like assistance

BLUE- Elder learners, GREEN – younger learners

As the Table above shows, all 20 learners provided assistance, although one student's (Lyn) degree of assistance was minimal. The Table also reveals that the younger students frequently provided assistance to their elder partners. In other words, assistance did not flow predominantly in the direction from the elder to the younger but in both directions. When looking across patterns of interaction, the Table shows that within expert/novice pairs, the novice learners produced more suggestions and other-repetitions than their expert partners. Moreover, as had been anticipated, their expert partners produced more other-corrections, explanations and teacher-like assistance. The high number of suggestions produced by the younger or novice learners may suggest that the younger/novice partners played an important role in their interactions by encouraging their expert/elder partners' participation, by sustaining their interest in the task, or by directing their attention to certain language items. One possible explanation for the higher occurrence of other-repetitions on the part of the younger or novice students is that their interactions with their elder or expert partners allowed them to think about the language produced by their elder/expert partner. It may also mean that the elder/expert students allowed their younger partners to establish a shared understanding of the language or the task at hand.

Within collaborative pairs, assistance flowed in both directions, and the extent of specific ways of assistance differed across and within pairs. However, also within collaborative pairs, it was the younger learners who engaged more often in suggestions while their elder partners corrected them more frequently.

It has to be said that the Table does not contain instances of co-constructions (see Table 8) as these imply assistance flowing in both-direction, and are therefore not included here.

7.3.4 Language Related Episodes (LREs)

It has been also pointed out above that LREs were the most common episodes engaged in by learners during the four tasks. Moreover, because research has shown that LREs are episodes during which assistance is sought, provided and received as learners are debating linguistic issues (focus on form), the occurrence of LREs may be suggestive of the extent of assistance provided. As such, the occurrence of LREs may be indicative of the scope of learning opportunities afforded by assistance provided. In particular, it is the extent of individual learners' initiation of LREs, response to LREs, and their resolution that may be connotative of the degree of assistance provided within pairs.

Table 11

Occurrence of LREs/ TREs/ CREs across tasks

Pair	Pattern of interaction	RP	LRE	TRE	CRE
Emilia9/Stella7	exp/nov	A/A	64	15	10
John9/Will7	exp/nov	H/H	9	4	12
Lilliana 7/Leni8	exp/nov	H/A	53	7	9
Lea9/Jess8	exp/nov	H/A	35	8	22
Gussi8/Jossi7	collab	H/H	60	12	15
Lenka8/Lucy7	collab	A/A	48	8	8
Irena8/Sara7	collab	A/A	30	12	7
Alena8/Enna7	Collab	H/H	53	9	8
Riki8/Lyn7	exp/pass	A/L	24	4	8
Lara9/Ella8	dom/dom	H/H	57	9	14
N			433	88	107
M			43.3	8.8	10.7
Range			9-64	4-15	8-22

RP – relative proficiency, LRE – Language Related Episode, TRE – Task Related Episode, CRE – Content Related Episode

Table 11 above demonstrates the occurrence of LREs within the individual interactions, and its comparison to other episodes engaged by pairs. It shows that across four tasks learners engaged in 433 LREs (Language related episodes), in 88 TREs (Task related episodes) and in 107 CREs (Content related episodes). When looking at the distribution of episodes across pairs, 9 out of 10 pairs engaged in more LREs than in TREs and CREs. In other words, the majority of pairs discussed linguistic forms elicited by the tasks more frequently than the aspects of the tasks and of the task content. The Table also indicates that the majority of pairs tended to discuss the content of the task

(CREs) more than the aspects of the task (TREs). In other words, they could have been more concerned about the content of the task rather than about the task and about how to approach it. Another possible explanation is that these pairs were able to work out the goal of the tasks relatively easily, and could invest their resources towards the content of the task and the language it elicits.

It has to be, however, noted that there were differences in distribution of LREs and CREs across tasks and exercises, which is to be mainly attributed to the nature of the tasks, whether they elicited linguistic forms or not. For example, while the Comic, Text-reconstruction and grammatical exercises elicited a high number of LREs, the Looking for Help task elicited only very few LREs but generated a relatively high occurrence of CREs. The Table also reveals great variations in the LREs produced across pairs ranging from 9 to 64, the average score (M) 43. 3 and the median being 48. The Table also shows that even pairs that formed expert/passive and dominant/dominant pattern of interaction often engaged in LREs. They also produced TREs and CREs.

However, because pairs approached tasks in different ways, and thus needed a different amount of time to complete the tasks, simply counting the number of LREs may not reveal the actual extent of engagement with LREs, indicating the extent of mutual assistance. Therefore, I counted the conversational turns produced by all pairs, and the number of LRE turns within these conversational turns. And because research has shown that LREs are episodes during which assistance is sought, provided and received as learners are debating linguistic issues (focus on form), the number of LRE turns in relation to overall conversational turns can reveal the extent of assistance provided among learners. Table 12 below demonstrates the LRE turn/conversational turn ratio.

Table 12

Ratio LRE turns/conversational turns across tasks

Pair	Pattern of interaction	RP	LRE turn/conv turn	Ratio
Emilia9/Stella7	exp/nov	A/A	575/728	0.79
John9/Will7	exp/nov	H/H	61/162	0.37
Lilliana 7/Leni8	exp/nov	H/A	370/447	0.83

Lea9/Jess8	exp/nov	H/A	218/356	0.61
Gussi8/Jossi7	Collab	H/H	241/380	0.63
Lenka8/Lucy7	Collab	A/A	300/453	0.66
Irena8/Sara7	Collab	A/A	203/292	0.69
Alena8/Enna7	Collab	H/H	267/359	0.74
Riki8/Lyn7	exp/pass	A/L	77/120	0.64
Lara9/Ella8	dom/dom	H/H	381/501	0.76

RP – relative proficiency

It shows that with the exception of John/Will, pairs frequently engaged in LREs, which suggests that a productive mutual support among these learners took place (see also Alegria de la Colina & Garcia, 2007), despite the differences in age and language abilities.

In order to further illustrate the distribution of assistance during learners' interactions, the figure 1 and Table 13 show to what extent individual learners within each pair initiated LREs, responded to LREs and resolved LREs. In other words, the following figures were taken into account: LRE initiation, LRE response and LRE resolution. These figures can provide an important insight on individual learners' roles in their interactions (Moranski & Toth, 2013; Fernández Dobao, 2012).

Figure 1 O*verall distribution of LRE initiation/LRE response/LRE resolution between younger (Y) and elder (E) learners.*
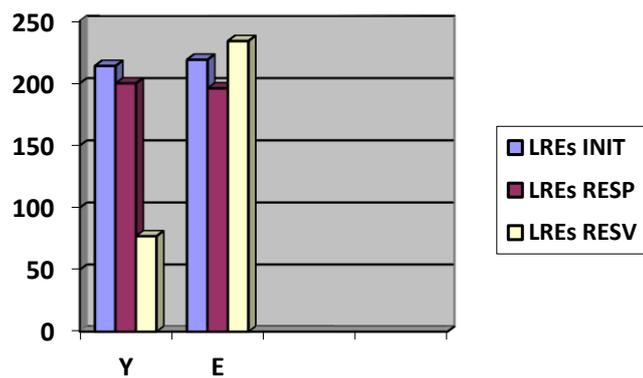
Table 13 reveals that the distribution of LREs initiation and response was nearly equal between younger and elder learners. However, elder learners resolved higher number of LREs.

Table 13

Distribution of LRE initiation/LRE response/LRE resolution within pairs/across tasks

Student/grade	Pattern of interaction	RP	INIT	RESP	RES
Emilia (9)		A	31	33	35
	exp/nov				
Stella (7)		A	33	31	19
John (9)		H	2	7	5
	exp/nov				
Will (7)		H	7	2	1
Lilliana (7)		A	33	19	47
	exp/nov				
Leni (8)		A	20	30	1
Leo (9)		H	25	10	25
	exp/nov				
Jess (8)		A	10	23	4
Gussi (8)		H	33	24	29
	Collab				
Jossi (7)		H	28	31	23
Lenka (8)		A	33	15	11
	Collab				
Lucy (7)		A	15	32	6
Irena (8)		A	10	20	17
	Collab				
Sara (7)		A	23	10	4
Alena (8)		H	9	35	26
	Collab				
Enna (7)		H	40	7	12
Riki (8)		A	22	2	15
	exp/pass				
Lyn (7)		L	2	21	1
Lara (9)		H	21	31	24
	dom/dom				
Ella (8)		H	36	13	6

INIT -Initiation, RESP -response, RES – resolution

Table 13 shows that within five out of ten pairs, younger learners initiated more LREs than their elder learners and responded to more. Within the other five pairs, the results were reversed. Furthermore, while initiation of and response to LREs was evenly distributed among younger and elder learners, the role of the LRE resolver was typically

taken by the elder partner within the group. In fact, nine out of ten elder resolved more LREs than their younger partners. When looking across patterns of interaction, within equal patterns of interaction such as collaborative and dominant/dominant, the distribution of initiation of and response to LREs varied within pairs. However, the elder learners in these pairs resolved more LREs than their younger partners. The same results can be found within expert/novice pairs. Within the pair Leni/Lilliana, the younger but more proficient Lilliana resolved nearly all LREs. It also needs to be said that the role of the initiator, responder and resolver tended to be same across all tasks.

To sum up, the most common pattern was that an LRE was initiated and responded by either the younger or the elder learner but was resolved by the elder or the expert learner. One possible explanation is that the younger learners tended to take much initiative and active lead in the tasks as they initiated a high number of LREs. However, they did not seem to be always capable of resolving the linguistic problem at hand, and their elder partners had to either point them to the right direction toward resolving the problem, or resolve it themselves. Such help coming from the elder partners seemed to have balanced both partners' contributions. Watanabe (2008) reports similar results in her study of peer interaction between L2 learners of different proficiency levels. In her study, the less proficient members tended to actively lead the task but it was the more proficient partner who provided the crucial assistance which led to a problem resolution.

Finally, Figure 2 and Table 14 indicate how many LREs were correctly resolved, incorrectly resolved, or left unresolved.

Figure 2

Total number of correctly (COR) /incorrectly (INC) /unresolved (UNR) LREs
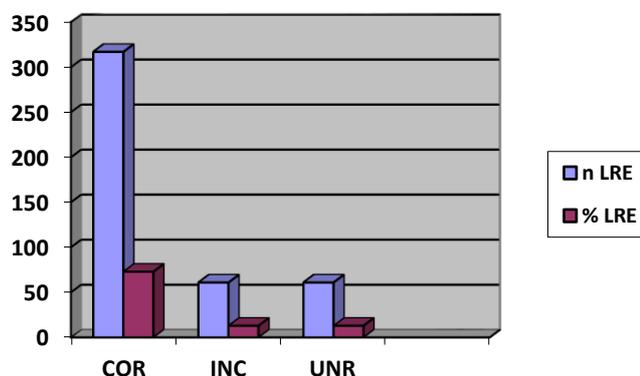
As shown in Figure 2, 73% of LREs were resolved correctly, 13% were resolved incorrectly, and 13% were left unresolved.

Table 14

Correctly resolved/Incorrectly resolved/unresolved LREs across pairs

Pair	Pattern of interaction	RP	COR	INC	UNR
Emilia9/Stella7	exp/nov	A/A	72%	19%	9%
John9/Will7	exp/nov	H/H	67%	11%	22%
Lilliana 7/Leni8	exp/nov	H/A	91%	5%	4%
Lea9/Jess8	exp/nov	H/A	83%	0%	17%
Gussi8/Jossi7	Collab	H/H	83%	3%	13%
Lenka8/Lucy7	Collab	A/A	50%	25%	25%
Irena8/Sara7	Collab	A/A	63%	17%	20%
Alena8/Enna7	Collab	H/H	75%	8%	
Riki8/Lyn7	exp/pass	A/L	67%	33%	0%
Lara9/Ella8	dom/dom	H/H	58%	25%	18%
N			317	58	58

155

Percentage	73	13	13
M	31.7	5.8	5.8
Range	6-64	0-14	0-12

RP – relative proficiency, COR – correctly resolved LREs, INC- incorrectly resolved LREs, UNR – unresolved LREs

As shown in Table 14, LREs tended to be resolved correctly across pairs and tasks and all pairs resolved 50% or more LREs correctly with the range being (6-64, i.e. 50% to 91%). However, most pairs left a number of LREs unresolved (range from 0-12, i.e. 0% to 25%) or resolved incorrectly (range 0-12, i.e. 0% to 33%).

7.4 Summary and discussion

This research question investigated the ways and the extent of assistance found among M-A pairs. This question was explored both through qualitative and quantitative data analysis. The in-depth analysis, described along the four patterns of interactions found in the RQ1, has shown some of the typical forms of assistance that M-A pairs used in order to complete their classroom tasks and exercises. The quantitative analysis has illustrated distribution of assistance across and within pairs and tasks.

The analysis has shown that M-A peers requested assistance mainly via requests for information (*What means fortführen?*), followed by requests for confirmation (Did you say *has to* or *had to*?), and requests for explanation (*Can you tell me what are we supposed to do here, please?*). The analysis has also shown that the most common ways of assistance were suggestions, followed by co-constructions, other-corrections, explanations, and other-repetitions. Five out of ten pairs assisted one another in ways similar to teacher-learner assistance. These were termed teacher-like assistance (*What does this mean Le?* [sounding as a teacher]). The analysis has also shown that although the forms and the extent to which peers provide assistance to one another vary across and within pairs, there are similarities across some pairs, which might be related to patterns of interaction. For example, despite the fact that all pairs who were either collaborative or dominant/dominant were composed of learners of varying ages and proficiencies, the flow of assistance went in both directions, back and forth between the

younger and elder partner. In fact, the younger learners provided crucial assistance. One possible explanation is that none of the learners within a pair was able to complete the task individually, and had to rely on his/her partner's linguistic assistance. We have seen that typical features of assistance provided within collaborative pairs were co-constructions. Donato (1994), in his study of adult learners, referred to this form of assistance as collective scaffolding. The findings also resonate with Ohta's (2000, 2001) study of adult learners who showed that peers are simultaneously novices and experts. In a similar vein, Webb and Mastergoerge (2003a) explain that "peer groups will not consist of only experts and novices, nor will they usually consist of peers with equal competence. Rather, groups will contain a range of competence and a variety of unique capabilities and areas of expertise" (p.76). Indeed, one possible explanation is that the proficiency differences between members of these pairs were not as substantial as between members of expert/novice pairs, which might have made assistance accessible to both of them, and the problem solving endeavour easier. We have seen that assistance within collaborative pairs was often requested, suggestions were frequently made, and explanations provided. However, explanations were mainly brief. Partners' utterances were often other-repeated, and incorporated into further utterances. Other-corrections were explicit and abrupt, and some involved reasoning. What is more, in contrast to the dominant/dominant pair, students within the collaborative pairs seemed to have been more willing to help one another, and to share each other's perspectives. The analysis has also shown that the collaborative pairs were able to complete tasks, which were above each individual's level. With the exception of the pair Lenka/Lucy, which resolved only a half of LREs, they were able to resolve the majority of encountered linguistic problems. The collaborative work of these pairs may be explained in the theory of Piaget, who claimed that peer interaction may facilitate learning only when peers cooperate as equals because only as equals do "they exercise mutual control over the interaction, and share each other's point of view" (as cited in Webb & Mastergorge, 2003, p.76, see also Lourenço, 2012). In other words, Piaget's theory values social relationships among equal peers, and suggests that equal relationship among peers may be more conducive to learning of both partners (Lourenço, 2012; Piaget, 1932).

The analysis has also shown that in the case of five pairs the flow was mainly from the 'expert' to the 'novice'. As in the case of collaborative pairs, assistance within these pairs was given via suggestions, co-constructions, explanations, and other-corrections. However, typical ways of assistance were those which are observable in teacher-learner

interactions. These include checking partner's understanding, backchanneling, active listening or continuers. Interestingly, the 'expert' in these interactions was not necessarily the elder member of the pair as the case of Lilliana and Leni has shown. We have seen that 'experts' were able to provide help in ways similar to those used by teachers. Their help enabled their younger or less proficient partners to participate and contribute to tasks, which were above their level. Most importantly, the "expert's" intention to help her/his younger partner was clearly visible in their interactions. I would like to argue that it was this intention to help, together with the fact that help was accepted and appreciated by their partners that were crucial for the assistance to be effective. The interactive work within the expert/novice pairs can be explained from the Vygotkian perspective. Vygotskian theory (1978) and researchers from the Vygotskian perspective have accentuated unequal social relationships based on authority such as parents, teachers or more knowledgeable peers, being the sources of development and learning. It follows that Vygotskian perspective is more apt to explain provision of assistance within expert/novice interactions of M-A pairs as it implies that only the more knowledgeable and skilful learners are able to assist the novice at the right level, and provide effective assistance (Vygotsky, 1981). This is because they have the ability to explain concepts in ways familiar to their partner (Brown & Palinscar, 1989; Vygotsky, 1981; Webb & Mastegoerge, 2003b, p.76). Damon and Phelps (1989) referred to this kind of interaction as peer tutoring.

With regards to the potential of M-A peer interactions to promote increased independence of the target-like use, the results of the analysis vary among learners. With the exception of Lyn, students showed some degree of increased independence in the use of the target structure. Three students (Enna, Jossi, Ella) have become capable of using back-shifting in the reported speech in a nearly target-like manner. Three students (Leni, Jess, Sara) have come to use back-shifting in the reported speech increasingly, but their use tends to be non target-like, and requires further practise. In the case of two students (Lucy and Lyn), there was little or no evidence of increased independent use of the targeted structure. However, I do not claim that the linguistic features are acquired once and for all, or that learners are capable of using this feature independently, and correctly in a broader range of contexts. I argue that they are on their way to master it and that its mastery will require additional practice (Ohta, 2000). I do expect that learners' performance will include regression which is argued to be a natural phenomenon of the developmental processes (Lantolf & Aljafreh, 1995; Ohta, 2000).

In the case of Lyn, a lack of evidence can be attributed to the fact that the task and the targeted structure seemed to have been above her linguistic level. In fact, Riki and Lyn's case suggests that large gaps in proficiency may hinder interaction, and learning. Using pre-test/post-test design, future studies could investigate to what extent interactions between M-A pairs are likely to generate learning outcomes for low proficiency learners.

Lenka and Lucy's case has shown that students do not necessarily do what the task requires them to do, and this can impact their use of the targeted linguistic feature. Lucy and her partner Lenka did not use the targeted structure during their task work, which had an impact on Lucy's use of the structure on the post-task exercises and the classroom test.

With regards to the analysis, it also needs to be mentioned that because some pairs did not complete all three phases of the Comic task, their interactions were too short in order to assess evidence for an increased target-like use.

Furthermore, the analysis of LREs has shown that while younger learners tended to initiate and respond to an equal number of LREs as their elder partners, it was their elder peers who resolved the majority of them. In other words, despite taking an active lead in the task, the younger learners still needed their elder peers' assistance in order to resolve LREs. As such, both seemed to have contributed to the resolutions of linguistic problems at hand (Watanabe, 2008).

Important findings were revealed by the analysis of interactions between Lara and Ella, which were classified as dominant/dominant. The analysis has shown that despite the low to moderate level of mutuality, and therefore non-collaborative nature of this interaction, learners frequently produced LREs, engaged in many co-constructions, and had a relatively high LRE turn/conversational turn ratio. This suggests that non-collaborative attitudes and patterns of behaviour may not necessarily imply low occurrence of co-constructions and LREs. In other words, non-collaborative attitudes and patterns of behaviour may not necessarily mean limited opportunities for learning. This is important as it contradicts Storch's (2001a) claims that only patterns of interaction characterized by high mutuality and high equality are conducive to learning. The analysis of this pair indicates that the relationship between patterns of interaction and learning outcomes for these pre-adolescent learners might be more complex than Storch (2001a) and others (e.g., Watanabe & Swain, 2007) suggest. In fact, more

research is needed to verify the extent to which peer interaction in general reflects mutuality and equality.

Finally, the analysis suggests that although there are similarities in ways of assistance, which might be related to patterns of interaction, the patterns of interactions do not determine the kind of assistance provided among M-A peers in this study. We have seen that only learners within unequal pairs such as expert/novice and expert/passive pattern of interaction assisted one another in ways similar to teacher-learner interactions. However, assistance within these unequal pairs was also provided in ways similar to learners within collaborative and dominant/dominant pairs. As in the case of equal pairs, assistance within unequal pairs was given via suggestions, co-constructions, explanations, and other-corrections. What is more, within expert-novice interactions language and knowledge about language seemed to have been co-constructed by both parties, although the role of the expert was clear in these interactions. Furthermore, there seems to be little difference between the nature of assistance given within collaborative and dominant/dominant patterns of interactions. Interestingly, learners within dominant/dominant pattern engaged in many co-constructions, which according to Storch (2001a), is a way of assistance typical for a collaborative pattern. To sum up, the findings suggest that patterns of interaction do not determine the ways in which learners assist one another. However, this is not to say that the relationship formed by both partners has no impact on the extent and quality of assistance provided. On the contrary, the findings suggest that rather than age, the relationship between learners is one of the crucial factors mediating the extent and quality of assistance (see also Storch, 2001a, Watanabe & Swain, 2007).

8.   FINDINGS AND DISCUSSION FOR RESEARCH QUESTION THREE

This chapter provides findings related to research question three, which investigated learners' perceptions of their collaborative work over a unit of work. The insights into learners' perceptions insights were gained during interviews conducted after the unit of work which lasted for ten weeks. Learners worked in pairs, with the same partner over an array of classroom tasks. The interviews were analysed for (1) o*verall perceptions about the pair interactions* (2) *perceptions towards the degree of contribution, and* (3) *perceived learning outcomes* (Watanabe, 2008). Similarly to RQ2, the findings related to RQ3 are discussed along patterns of interaction (RQ1). I begin by a description of how students who formed the collaborative pattern of interaction perceived their work.

8.1 Collaborative pattern

The analysis of patterns of interaction (RQ1) found that four pairs formed the collaborative pattern of interaction. Overall, all eight students expressed a positive attitude towards their interactions. For example, Alena (grade 8) and Enna (grade 7) underlined the importance of a good relationship between them, their partner's ability to explain things and ability to offer help.

> *Excerpt 51*
>> A: Das wir uns gut verstehen und dass wir uns Sachen gegenseitig einfach gut erklären können oder dass wir uns gegenseitig helfen. [*That we understand each other well, that we can explain things well to one another and that we help each other*.] (Interview with Alena)

As revealed in excerpt 52 below, similarly, Lenka (grade 8) and Lucy (grade 7) expressed a positive attitude. They felt comfortable working together because they understand each other well, and their language abilities are high.

> *Excerpt 52*
>> L: Also eigentlich war alles gut, weil Lenka kann ja gut Englisch und ich verstehe mich auch gut mit Lenka und ja also... [*So actually everything was good, because Lenka is good at English, and we get along well, and so…*]

(Interview with Lucy)

Irena's (grade 8) words were similar (excerpt 53 below). She said that pair work in general is better than individual work because it enables a confirmation of whether one's solution is correct or not, because when one works individually, one is left with his/her linguistic resources.

Excerpt 53

> I: Ja, weil man fühlt sich dann noch irgendwie in den Sachen, die man macht sicherer, wenn der andere so...bedenkt oder das selber heraus hat und ja man nicht so wenn man alleine ist. Dann ist man sich dann ja unsicher, aber mit so einem Partner kriegt man so die Bestätigung, dass was man macht ganz in Ordnung und richtig ist. [*Yes, because I feel somehow inside of the things, I feel more certain when the other thinks about it or has the same. And one is not so alone..., because then one is unsure, but with a partner, one gets a confirmation that what one is doing is in order and is correct.*] (Interview with Irena)

In terms of perception of contribution to their interactive work, all learners answered that their contribution was equal, and that assistance was provided by both partners. For example, Alena (grade 8) and Enna (grade 7) indicated equal contribution as well as mutual assistance.

Excerpt 54

> E: Wir haben es zusammengemacht. Beide. [*We did it together. Both.*] (Interview with Enna)
> A: Wir haben uns gegenseitig geholfen. [*We helped one another.*] (Interview with Alena)

Both learners of the pair Lenka (grade 8)-Lullu (grade 7) answered in a similar vein, suggesting equal contribution and mutual assistance.

Excerpt 55

Le: Das ist eine Frage, die man nicht glaube ich gerne antwortet, aber ich weiß nicht, da haben beide selbe beigetragen. So ich würde jetzt nicht sagen, dass die eine mehr gemacht hat oder weniger. [*This is the kind of question which one does not like to answer, but I don't know, both contributed equally. So I wouldn't say that one did more than the other.*] (Interview with Lenka)

Lu: Wir haben einfach beide so gleich viel zu machen und zu schaffen und das irgendwie. [*We both simply have to do and complete the same amount of work, and somehow.*] (Interview with Lucy)

Lenka also pointed out that they helped each other from the very beginning. Interestingly, Lenka also expressed her positive perceptions towards pair work as such; as a space which affords mutual help to occur, and gaps in knowledge to be filled.

Excerpt 56

L: So, wir haben uns immer zusammengesetzt, uns gemeinsam die Aufgaben angeguckt und dann Stück für Stück die durchgearbeitet. Und eigentlich ist es ziemlich gut, weil man sich gegenseitig so helfen kann, weil wenn einer etwas nicht weiß dann weiß es vielleicht der andere und dann ergänzt man sich sozusagen. Und das ist dann ziemlich praktisch. [*So, we always sat down together, looked through our tasks, and then worked through them step by step. Actually, it is relatively good, because one can help the other, because if one does not know, the other knows it, and one completes the other. And that is relatively practical.*] (Interview with Lenka)

Interestingly, Lenka acknowledged that her younger partner Lucy's help was sometimes necessary as Lenka did not possess the necessary knowledge. In addition to this, she perceived helping one another to be the enjoyable aspect of pair work which distinguishes it from individual work.

Excerpt 57

Le: Doch ich fand das schon ziemlich gut, weil es gab also Sachen, die ich teilweise nicht wusste, wo die Lucy mir dann geholfen hat und das war doch eigentlich das weil Partnerarbeit mehr Spaß macht als alleine. [*Indeed, I thought it was quite good, because there were things, which I did not know*

all, with which Lucy helped me, and that is actually the reason why pair work is more fun than alone.] (Interview with Lenka)

In terms of perceived learning outcomes, learners of collaborative pairs expressed positive attitudes. For example, Enna (grade 7) said that she benefited from interacting with Alena that she learned to understand the vocabulary, texts, and in fact the language in general. She replied as follows:

Excerpt 58

E: Na ja, Wörter zu verstehen, halt generell die Sprache irgendwie, auch Texte zu verstehen so dass es Sinn ergibt. Ja. [*Well yes, to understand words, the language in general, somehow to understand the texts so it makes sense.*] (Interview with Enna)

Also Lenka (8) and Lucy (7) indicated that they learned from their pair work. Lucy said that she learned how to pronounce words because Lenka read them repeatedly.

Excerpt 59

Lu: No vielleicht wie man manche Wörter richtig ausspricht und ... sie hat sie noch mal gelesen und so und dann konnte ich ja es selber so. [*Well, maybe how to pronounce certain words correctly and …She would read them once more and then I could do it myself.*] (Interview with Lucy)

Similarly to Lenka and Lucy, the collaborative pair Irena (grade 8) and Sara (grade 7) perceived benefits in the realm of learning new vocabulary. They indicated that their pair work allowed them to practise, and to consolidate language, which had been introduced by the teacher. Jossi (grade 7) and Gussi (grade 8) reported that they benefited from giving as well as from providing explanations. Jossi (grade 7) mentioned that he understood his partner's Gussi's (8) explanations well as they were matched to his level. Lenka (grade 8) also pointed out that she benefited from explanations given to her younger partner Lucy (grade 7). Lenka also thinks that she generally benefits from providing explanations to others as it leads to consolidation of her already existing knowledge. She also benefits from receiving explanations from another peer as they complement the teacher's explanations, and as such lead to a deeper understanding. She

also said that she enjoys giving explanations.

Excerpt 60

> Le: Eigentlich schon, weil ich festige das ja selber. Also für mich dann nochmal wenn ich ihr das erkläre und dann wiederhole ich das noch einmal so für mich. Da denke ich schon, dass man da selber noch ein bisschen lernt. Also wenn ich jetzt bloß einmal von dir gehört hab und es mir von anderen sagen lasse, dann geht das besser. Ja, ich finde das schon jemanden anderen etwas erklären macht es mir schon Spaß, ja.[*Actually yes, because I can consolidate it myself. And for me then once more when I explain it to her, and then I can revise it once more for myself. I believe that one can learn from it. So when I hear it from you (referring to the teacher) only once, and when I let others explain it to me, that is better. Yes, I do enjoy explaining things to others.*] (Interview with Lenka)

Some students also reported that individual learners brought to their interactions different skills, which helped to complement the other partner's gaps. For example, Irena (grade 8) mentioned that while she knew the grammatical forms, her partner Sara (7) knew the vocabulary.

Excerpt 61

> I: Was ich ne weiss weiss sie, was sie ne weiss weiss ich. Sie wusste die Wörter, wie sie auf Englisch heissen aber ich wusste die korekte grammatische Formen.[*What I don't know, she knows. She knew the words, what they mean in English but I knew the correct grammatical words.*] (Interview with Irena)

Similarly, Gussi (grade 8) and Jossi (grade 7) perceived that one of the learning outcomes was that they could fill each other's gaps in knowledge. Such comments can be also found in Watanabe's (2008) study. Watanabe (2008) pointed out that such comments are reminiscent of Ohta's (2001) assertion that learners have weaknesses and strengths which may sometimes be complementary (p. 625). Finally, some learners of the collaborative pairs mentioned that they learned how to collaborate better in order to support one another.

Excerpt 62

> I: Auf jedem Fall bessere Zusammenarbeit so dass man sich halt gegenseitig unterstützt immer so und dass man wenn man Fragen hat gleich zu dem anderen kommen kann und ja...[*Certainly a better collaborative work so that we can always support each other and that when we have questions we can always ask the other and yes...*] (Interview with Irena)

Overall, the comments of learners who formed the collaborative pattern of interaction underlined not only linguistic but also social aspects of their interaction such as their relationship, helping one another and complementing each other's weaknesses. In other words, their the students' comments and their interactions suggest the importance of both the cognitive and the social dimensions of interaction, and their positive comments about their interaction support recent sociocultural research that claims that interaction is a cognitive and social activity, which mediates L2 learning (Swain, 2000; Watanabe, 2008).

8.2 Expert/novice pattern

Having discussed perceptions of students in collaborative pairs, I will now report insights gained from interviews with students from expert/novice pairs. Similarly to collaborative pairs, they all demonstrated a positive attitude. For example, John (grade 9) and Will (grade 7) reported that they enjoyed their interactions. In fact, both learners mentioned that their pair work was not different to working with same age classmates.

Excerpt 63

> J: Also, für mich war es genauso wie wenn ich mit Martin und Henrik zusammenarbeite. [So, for me, it was exactly the same as when I work together with Martin and Henrik.] (Interview with John)
> W: *Es ist ganz normal, wie wenn ich mit dem George arbeite. [It is quite normal, as when I work with George.*] (Interview with Will)

Also Lea (grade 9) and Jessie (grade 8) enjoyed their pair work. Jessie valued working with her elder partner as it provided her with opportunities to request assistance from someone who has some experience, without having immediately to ask the teacher

for help.

Excerpt 64

> J: Na ja, wenn man alleine arbeitet, dann rennt man gleich zum Lehrer, wenn man was nicht versteht. Wenn man zusammen arbeitet, und da eine älter ist, und mehr Erfahrung hat, kann man ja auch den Mitschüler fragen. [*When you work alone, you always run to the teacher if you don't understand something. When you work together with someone, and one is elder, and has more experience, you can also ask your classmate*.] (Interview with Jessie)

Both, Leni (grade 8) and Lilliana (grade 7) expressed a positive attitude about their collaborative work. Leni responded that she greatly valued collaborative work with her younger but more proficient partner Lilliana. Leni also expressed a positive attitude to pair work as such, and to its benefits for learning. Leni stated that she received much help from Lilliana, and that she learned a lot from her.

Excerpt 65

> Le: Ok, Ich fand die Partnerarbeit gut, mit der Lilliana. Die ist ja so eine Englischspezialistin, oder so, und die hat mir halt viel geholfen, bei den Aufgaben und so. Und ich habe auch viel von ihr gelernt, sag's mal so. [*Yes, I thought that the pair work with Lilliana was good; she is an English specialist, or something, and she helped me a lot with the tasks, and so. And I have learned a lot from her. Let's put it this way*.] (Interview with Leni)

In terms of how they perceived each other's contribution to their work, the responses of expert/novice pairs did not differ from those of collaborative pairs. This is rather surprising as a higher degree of contribution on the part of the expert learner was anticipated. For example, John (9) and Will (7) mentioned that their contributions were equal, and that they helped one another. Also Lea (9) and Jess (8) said that they contributed equally, and that help was given and received by both. For example, Jess mentioned that suggestions and other forms of help were made by both of them.

Excerpt 66

> J. Wir haben ja gegenseitig Vorschläge gemacht, wie man z.B. die Geschichte

schreiben kann, und uns dann auch gegenseitig geholfen bei Vokabeln oder so. [*We made suggestions to one another, for example how we can write a story, and then we helped one another with vocabulary or something*.] (Interview with Jessie)

Also Lea's words indicate a shared orientation to their work and mutual assistance. Her comments reflect their interaction on a grammatical exercise, which required them to transform sentences using phrasal verbs, and put them in the right order. She said that although they took turns in writing, they translated the sentences, and put them in the correct order together.

Excerpt 67

> L: Also das waren jetzt diese Aufgaben, wo wir dann so dieses Grammatikarbeitsblatt hatten und wir sollten diese Sätze umformen...haben wir uns gegenseitig so ein bissl geholfen aber es war halt immer bloss eine daran, die den Satz aufgeschrieben hat, also wir haben es abwechselnd aufgeschrieben, aber wir haben beide zusammen versucht das zu übersetzen und in die richtige Rheinfolge zu bringen.[*So there were now these tasks, by which we had this grammar worksheet and we had to transform the sentences...we helped one another a little, and we took turns, so only one of us wrote the sentence down, so we took turns in writing, but we both tried to translate them and put them in the right order.*] (Interview with Lea)

Like Lea and Jess, Leni and Lilliana acknowledged that they contributed equally to their work. Lilliana mentioned that she only helped when Leni did not know how to progress. Lilliana's words actually reflect what is evident from the audio-recordings, namely that she provided help only when it was necessary, and that her contribution to their work was that she provided the necessary space for Leni to think about and use language, test her hypothesis, to receive grammar explanations, and to answer her questions (excerpts 40, 41 above). Leni's words also indicate that discussions took place when their opinions differed. This also indicates a joint orientation to their work, willingness to share their ideas and a high degree of intersubjectivity established by them.

Excerpt 68

> Li: Ich habe nur geholfen wenn sie nicht wusste was sie machen soll. [*I only helped when she did not know what to do*.]
>
> Le: Wenn ich nicht weiß welches Wort da was es bedeutet, da hat sie mir geholfen, oder so. Oder wir haben dann über ein Thema diskutiert, so zu sagen, wo ich eine andere Meinung hatte und die Lilliana eine andere Meinung hatte…Und so, dann haben wir uns so ausgetauscht. [*She helped me when I didn't know the meaning of a word. Or we discussed a topic, so to say, on which we had a different opinion…Then, we exchanged ideas*.] (Interview with Lilliana and Leni)

With regards to perceived learning benefits, responses differed within the expert/novice pairs. For example, Leni (8), the elder but novice learner perceived great learning outcomes. She said that she considerably improved her English skills such as speaking skills as she was fully concentrated on English, worked intensively, and spoke only English during pair work.

Excerpt 69

> Le: Ich finde ich habe ganz viel gelernt im Englisch, ich fühle ich habe mich richtig viel verbessert irgendwie durch diese Partnerarbeit auch so, dass man sich einfach konzentriert einfach nur Englisch zu machen, …die ganze Zeit, intensiv und alles so, also das fand ich echt gut…Und ich finde ich habe mich verbessert im Sprechen halt weil ich die ganze Zeit intensiv einfach nur Englisch gesprochen hab. [*I think that I have learned a lot of English, and I feel that I have somehow improved a lot thank to this pair work, that one can simply stay focused on learning English,\the whole time, intensively and everything so I really liked it. I also think that I have improved my speaking because I spoke English intensively only English the whole time*.] (Interview with Leni)

However, her expert partner Lilliana did not seem to perceive any learning outcomes resulting from their pair work. In fact, she did not mention any.

Excerpt 70

Li: Na ja, was habe ich davon gelernt?...(laughter as if there was only little that she could learn)...weiss ich ne. [*Well, what I have I learned…I don't know.*]

However, in response to my question whether she likes pair work, she underlined the benefits of pair work as such, as it allows for speaking practice, for discussing language issues, and for finding answers without necessarily asking the teacher. Lilliana's words imply that in addition to the language practice, pair work may afford learners with opportunities to engage in discussions about language, and to resolve linguistic problems. In other words, her words suggest that their pair work promoted collaborative dialogue (Swain, 2000), namely a dialogue during which learners are engaged in resolving linguistic problems.

Excerpt 71

Li: dass man sich nicht nur mit dir unterhalten kann sondern auch dann mit dem Partner...und dass man da wenn man Fragen hat nie mehr zu dir kommen muss auch dann ja mit dem Partner darüber diskutieren kann und schon Antwort findet. [*That one does not have to talk only with you (referring to the teacher), and that when one has questions one does not have to come to you but one can discuss it with the partner and can already find the answer.*] (Interview with Lilliana)

Similarly to Lilliana, John (grade 9) did not report any particular perceived learning outcomes from his interaction with Will (grade 7). On the other hand, his younger partner Will (7) indicated that their pair work resulted in better understanding.

Excerpt 72

J: Weiss ich ne. [*I don't know.*]

W: Ich hab mehr verstanden... ja... [*I understood more…yes.*] (Interview with John and Will)

However, both learners said that they value pair work as such as it affords them with opportunities to share thoughts.

Excerpt 73

W: Wenn man eine Aufgabe macht, da gibt es zwei verschiedene Meinungen und da kann man, wenn man das andere denkt, also sicherer ist...also zwei andere Meinungen sind... Wenn du alleine bist, hast du bloß eine Meinung und denkst du, dass sie dann richtig ist. [*When you do a task, there are usually two different opinions, and it is therefore possible to be more sure…so two opinions are more certain ….When you are alone, you only have one opinion, and you think that you are right.*] (Interview with Will)

Similarly to John (excerpt 74), Lea's (grade 9) perception of learning outcomes seemed to be limited (excerpt 76). She only mentioned she learned a few words which her partner Jess (grade 8) knew.

Excerpt 74

L: Also manchmal konnte Jesie auch Wörter, die ich nicht kenne, also, wenn sie sich die Vokabeln schon angesehen hat und hab sie bisher noch nicht gemacht dann...aber sonnst... [*Yes, sometimes Jess knew words, which I don't know, so if she had already looked through the vocabulary, and I haven't done that, yet, then…But apart from this...*] (Interview with Lea)

Conversely, for her partner Jess (8), their joint work seemed to have led to a much deeper understanding of English language, which had not been the case before her interactive work with Lea.

Excerpt 75

J: 5 Jahre kein Englisch kapiert. Schließlich kapiere ich. [*For five years I didn't understand English. Finally, I get it.*] (Interview with Jess)

Similarly to Jess, Sarah, the younger learner in the pair Essi (9) - Sarah (7) perceived that she learned a lot from the work with her partner, in particular vocabulary, pronunciation and grammar. Sarah also appreciated that she was provided opportunities to speak English, and that she was corrected when she made a mistake.

Excerpt 76

S: Also ich habe jetzt viel gelernt davon. Also neue Vokabeln und bissl

Grammatik. Wir haben auch gesprochen. Die Emilia hat das mit mir so gemacht, wenn ich etwas gesagt habe, hat sie mich korigiert und das war auch gut so. [*So I have learned a lot from it. New words and a bit grammar. We also talked. Emilia did it so that when I said something, she corrected me and that was good so.*] (Interview with Sarah)

However, it seems that Sarah's elder partner Emilia perceived the learning outcomes to be related merely to the content of the study plan rather than to the interactive work with Sarah itself.

Excerpt 77

E: Na, ja, nur ja, was zum Fachplan, so die ganze Vokabeln, die wir halt lernen sollten und ja...das was wir mit den ganzen Blätter da geübt haben und so. [*Yes, things fort he study plan, all these words, that we had to learn, the stuff that we practiced and so on.*] (Interview with Emilia)

Overall, expert/novice pairs perceived their interactive work as enjoyable. They viewed each other's contributions to be equal despite differing age and proficiencies. With regards to perceived learning outcomes, however, their perceptions differed within their pairs. While three of the elder and/or expert partners perceived learning benefits, two felt that they did not learn much from their interactions. Their younger and/or novice partners (n=4), however, seemed to have perceived great learning benefits. For example, Jess, Will and Leni viewed that they gained a greater understanding of the language because their 'expert' partners provided them with additional explanations of linguistic features which could not be understood solely from teacher's explanations. Among other perceived learning benefits were also improved language skills (Leni) as pair work may provide the younger/novice partner with additional opportunities to practice the target language, which students may lack during teacher-led lessons. Overall, it seems that none of the younger/novices of these pairs felt intimidated when working with his/her expert partner. What is more, they seemed to have been able to connect with their peers, which made it possible to ask and receive crucial help, and to gain a deeper understanding of language and more confidence (see also Watanabe, 2008, p.625). As for the expert learners, despite their positive attitudes towards their pair work, their perceptions of learning outcomes differed as some did perceive some

learning benefits and some did not. This is certainly an important pedagogical issue as the pedagogical concept of M-A classrooms is based on the notion that the elder learners benefit from teaching their younger partners.

8.3 Expert/passive pattern

Only one expert/passive pair was identified in the data. In comparison to the collaborative and expert/novice pairs, attitudes of both learners in this pair ranged from mixed to negative. For example, Riki (grade 8), the elder partner of Lyn (grade 7) expressed her preference for working with someone better at English than Lyn. She felt that together they could not complete the tasks, and that their interactions could not produce any learning outcomes. It can be said that Riki only confirmed what was obvious from the audio-recordings. Lyn acknowledged that she finds English difficult and that the tasks she worked on with Riki were too difficult for her.

Excerpt 78

> L: Ich weiss dann einfach nicht weiter und... inaudible... das ist dann schwierig für mich. [*I don't know how to move on then and ...that is difficult for me.*] (Interview with Lyn)

In response to the question regarding the nature of their collaborative work, Riki answered as follows.

Excerpt 79

> R: Es ging eigentlich. Es ist ja immer so...Lyn kann noch weniger Englisch als ich und hab's ja schon schwer manchmal...es ist manchmal blöd dann wenn wir zusammenarbeiten. Dann kommt nicht weit raus, kommt man nicht weiter. [*It was ok, actually. It is always like that…Lyn can do even less than me and it is already hard for me…It is then sometimes stupid when we work together. Then, nothing comes out, and it is impossible to move forward.*] (Interview with Riki)

Riki also pointed out that although she tries to help Lyn, such as by providing her with explanations, Lyn does not seem to benefit from her help. Consequently, Riki has

to complete the tasks on her own.

Excerpt 80

> R: Na ja es ist schwer dann. Es ist schwer für beide, weil ich erkläre's dann der Lyn und die Lyn kann das trotzdem nicht, deswegen mache ich (stress is on *Ich*, expressing that she must then do the extra work but exact words are inaudible) [*Well, it is difficult then. It is difficult for both, because I explain it then to Lyn, and she cannot do it anyway, that is why I do it.*] (Interview with Riki)

Lyn actually acknowledged that Riki was the one who mainly contributed to the tasks but she stated that she (Lyn) also participated by expressing her opinion, and that she did her best.

Excerpt 81

> L: Na, eher die Riki. Also ich habe da meine Meinung auch abgegeben aber am meisten hat das Riki abgegeben, hat gesagt und so... aber ich hab mein Bestes halt gegeben. [*Well, rather Riki. Well I also gave my opinion, but mostly did Riki, she talked ...but I did my best.*] (Interview with Lyn)

With regards to the perceived benefits, their attitudes were also mixed. Similarly to the 'novice' learners within expert/novice pairs, Lyn perceived some benefits. She mentioned learning of new vocabulary, their pronunciation and a better understanding of how to approach tasks. Lyn also expressed her preference to work with an elder partner such as Riki because she can learn something that she is still not capable of.

Excerpt 82

> L: Von den jenigen lernt man ja dann noch immer etwas dazu was man selber jetzt noch nicht so kann, lernt man halt ja von den Grösseren halt. [*From them (the elder) one can learn something more what one cannot do yet, one simply learns from the elder ones.*] (Interview with Lyn)

Conversely, her partner Riki did not seem to perceive any benefits. Riki said that she would prefer to work with someone she can rely on as she felt frustrated about putting

too much effort to explaining things, which were not understood by her partner anyway.

Excerpt 83

> R: Hm. Dass ich mich darauf verlassen kann dass er dann auch etwas macht und dass er auch am Ende etwas kann...dass man dann am Ende nicht alleine da steht und ja dann versteht dein partner was er überhaupt machen sollte...Ja das ist dann blöd. [*Hm. That I can rely that she/he'll do something, and that she/he will be able to do something at the end...and that one is not left alone there, and your partner does not understand at all what she/she should do...That is then stupid.*] (Interview with Riki)

Overall, in line with other studies that examined students' perceptions (Kim & McDonough, 2008; Watanabe & Swain, 2007; Watanabe, 2008), the case of Lyn and Riki suggests that younger and low proficiency learners may feel intimidated when interacting with their elder and more proficient partners. Similar to Kim & Donough study, Lyn's low proficiency did not seem to allow her to interact with Riki, despite her ongoing support. This case also suggests that even the elder and more proficient learner may feel frustrated when her younger and less proficient partner is not able to cope with the linguistic demands of a task, despite being provided with assistance. This is an important pedagogical issue that needs to be considered by teachers of M-A classrooms.

8.4 Dominant/dominant pattern

Pair Lara (grade 9) and Ella (grade 8) was the only pair to be identified as dominant/dominant. Learners of this pair expressed a somewhat mixed attitude about their interactions. Although both learners responded that they enjoyed working together, they also mentioned aspects that they disliked. For example, Lara disliked that she had to wait for Ella. Ella expressed some difficulty to cope with Lara's dominant behaviour when working together on tasks. In spite of this, neither of them expressed a preference for working with another student. In fact, both learners liked their pair work. Ella liked it because they often exchanged opinions. This statement, however, needs to be taken with caution, because the qualitative analysis of their pair talk suggests that Lara did not seek an opinion exchange, but merely imposed her opinions on Ella.

Excerpt 84

E: Also, mir hat's gefallen…Also wir tauschen oft unsere Meinung auf, das finde ich an der Partnerarbeit gut. Na und die Zusammenarbeit ist einfach gut, hat mir gefallen. Na ja... Also Laura nimmt alles in die Hand, und da muss man schon auch gucken, dass man noch etwas sagen kann, aber das klappt eigentlich auch. Das ist nicht so…[*Well, I liked it…We actually often exchange our opinions. That is what I like about the pair work. And our collaborative work is simply good, I liked it. ..Well, Lara takes everything in her hand, and actually one needs to make sure that one can say something. But it works actually. That is not so…*]. (Interview with Ella)

Although Ella expressed her dislike with Lara's dominance, she admitted that when working with other same-age or younger learners, she tends to dominate the task herself. In other words, her behaviour seems to resemble that of Lara during such interactions. It has to be mentioned that Lara and Ella have been friends for many years, and that Lara is someone Ella often works with, whom she respects, and is often inspired by. Therefore, it is likely that because Ella had to take on a passive role every time she worked with Lara, she could have simply imitated Lara's behaviour, and played Lara's role when interacting with other less proficient learners. Another explanation is that the perceptions of the other partner's proficiency impact on how one interacts (Watanabe, 2008). In other words, Ella's perceptions of her same-age or younger classmates being less proficient made her interact with them in a more dominant way, an exact same way that Lara interacted with her.

Excerpt 85

E: Ja, ich denke, wenn ich mit Lisa und Enna (her same-age classmates) zusammenarbeite, dominiere ich halt mehr und will mehr machen, weil besonders Lisa im Englisch braucht ein bisschen länger für die Aufgaben. [*Yes, I think that when I work with Enna and Lisa, I dominate simply and want to do more, because especially Lisa needs longer for her English tasks.*] (Interview with Ella)

However, the way Ella interacts with others seems to be influenced by her immediate feelings and emotions, which may be triggered by her perceptions of the importance of the task at hand.

Excerpt 86

> E: Und wenn ich nicht so viel Geduld gerade habe, da übergehe ich sie manchmal ja auch. [*When I have not so much patience, I ignore her sometimes, too.*] (Interview with Ella)

With regards to the degree of contribution, Lara said that she contributed to the tasks more, and that she is the one who helped Ella in English more than Ella helped her. Ella acknowledged that Lara generally contributed more to the tasks. Moreover, when help was needed, Lara asked the teacher while Ella asked Lara first before asking the teacher. This corresponds with the insights gained from the analysis of the transcripts, namely that Lara seldom requested an explanation from Ella. Lara requested assistance predominantly via requests for information, and the qualitative analysis showed that she tended 'to use' Ella to look up words for her, while she took the lead in the task.

Excerpt 87

> E: Wenn ich nicht weiss, ich frage Lara [*When I don't know I ask Lara*] (Interview with Ella)
> L: Wenn ich nicht weiss ich frage den Lehrer [*If I don't know anything I go ask teacher.*] (Interview with Lara)

With regards to perceived learning outcomes, Lara did not state any but Ella responded that the interactions with Lara helped her to understand better, and to reflect on her learning. They allowed her to see the gap between what she understands now, and what she does not. In this respect, their perceptions seem to resemble to those of expert/novice as Ella clearly sees Lara as a more knowledgeable partner from whom she learned.

Excerpt 88

> E: Na ja, also ich denke ich habe noch mehr verstanden…Ja, ich denke schon, dass es auch noch mal für mich so eine Reflexion war, was ich verstanden

habe. [*Well, I think that I have understood more…Yes, I do think that this* (work with Lara) *was a reflection of what I have understood.*] (Interview with Ella)

Lara and Ella's interaction suggests that a younger and less proficient learner may feel intimidated by her elder and more proficient partner who takes over and dominates the task (Kim & McDonough, 2008; Watanabe & Swain, 2007; Watanabe, 2008). However, in contrast to expert/passive pair, the relative high proficiency of the younger partner may allow her to interact with her elder and more proficient partner and contribute to the interaction. What is more, the younger partner may enjoy such interactions and perceive learning benefits.

8.5 Summary and discussion

We have seen that the greater majority of the participants expressed a positive attitude towards their interactions with their elder or younger partners. They felt comfortable interacting with each other, and even expressed a preference to work together in the future regardless of their age differences. In fact, some learners (n=20) mentioned that they did not perceive any differences when working with same age or cross age peer. One possible explanation is that since the first grade of primary school they have always been members of M-A classrooms, and therefore working with a cross age partner is a part of every school day. Furthermore, in line with the previous research, learners valued working with a partner who was willing to share ideas with them (Watanabe, 2008). Three participants, however, demonstrated a mixed, and even a negative attitude. This is despite the fact that they interacted with self-selected partners who were either their best friends or acquaintances. Such attitudes seem to have been related to a variety of factors such as dominance of the interlocutor (Lara/Ella), vast proficiency differences (Riki/Lyn) or the difficulty of the tasks (Lyn). The case of Lara and Ella's corresponds to findings of other studies, which explored students' perceptions (Kim & McDonough, 2008; Watanabe & Swain, 2007; Watanabe, 2008). For example, Kim and McDonough (2008) reported that some learners mentioned after the tasks that they felt intimidated by their more proficient partner who took over and dominated the task. However, in contrast with Kim & Donough study, Ella's relative high proficiency seemed to have allowed her to interact with Lara.

With regards to learners' perceptions of the degree of their contribution to the work, most of the learners perceived that they equally contributed to the tasks. This included students who formed the expert/novice relationship. This is a rather surprising finding as the expert learner was anticipated to contribute to a greater degree. Moreover, with the exception of Lyn, all learners pointed out that help was provided by both partners instead of just one. The majority of learners said "we helped each other".

In terms of learning outcomes, responses varied across patterns of interaction formed as well as within expert/novice pairs. While the collaborative pairs and 'novice' learners in expert/novice pairs reported perceived learning outcomes, 'expert' learners perceived little or no learning outcomes. Similarly, the elder learner in the dominant/dominant pair, Lara, did not report any perceived learning outcomes. It seems that only younger/novice learners perceived their interactions as beneficial. Perceived learning outcomes within collaborative pairs and novice learners within expert/novice pairs involved a variety of aspects including learning how to pronounce words correctly, acquisition of new vocabulary, understanding of new grammar as well as improved speaking, writing, reading and translation skills. Learners also pointed out that their pair work allowed them to practice the target language. Interestingly, some said that their pair-work was beneficial because they were able to fill in each other's gaps, and to arrive at a correct solution. In other words, both learners brought different but necessary skills to their interactions which allowed them to resolve problems that they may not have been able to resolve individually. This resonates with Ohta's (2001) claim that learners sometimes complement their weaknesses and strengths.

We have seen that most participants expressed a positive attitude towards their interaction with cross-age partners. It seems that as in Watanabe's (2008) study, participants' perceptions can to some extent be related to the patterns of interaction built among them. For example, pairs who formed expert/novice or collaborative patterns seemed to have had generally positive attitudes, and found the interactive work enjoyable. On the other hand, learners of dominant/dominant and expert/passive pairs expressed some negative characteristics of their interactions. For example, Lyn (passive) expressed rather negative attitudes which seemed to have been linked to her inability to cope with the difficult tasks. Riki was frustrated because despite her ongoing support, Lyn could not benefit due to her lack of English abilities.

The interviews have also revealed other insights. Students expressed a positive attitude to collaborative tasks such as the Text reconstruction or the Comic task, which

involve speaking and writing. This is in line with the existing research (Fernández Dobao, 2012; Fernández Dobao & Blum, 2013; Kim & McDonough, 2008; Nassaji & Jun Tian, 2010; Shedadeh, 2011; Storch, 2005; Watanabe, 2008; Watanabe & Swain, 2007). The majority of peers expressed a preference to working in pairs rather than individually. Some younger students mentioned that some tasks, which were assigned as a part of this unit, were too difficult for them. This is an important pedagogical issue because a task must be selected in order to suit various learners' needs, interests and abilities of a particular M-A classroom. Some students also mentioned that the extra-curricular events, which often took place, and which very often involved same-age students hindered their cross-age interactive work as their partners were not present. This is also an important issue which must be taken into consideration when creating study plans in M-A classrooms.

9. CONCLUSIONS AND IMPLICATIONS

This chapter first addresses some limitations of the study. It then provides a summary of the major findings of the study, and discusses pedagogical implications. Finally, it considers directions for future research.

9.1 Limitations of the study

There are several limitations of the study. While the study aimed to describe the naturally occurring peer interactions within the mixed-age (M-A) classrooms, it is likely that students' behaviour was influenced by the fact that I was their teacher. For example, knowing that I would listen to their recordings could have impacted on how they interacted on tasks. Furthermore, the fact that the participants were mostly female (16 out of 20) obscures a genuine picture of M-A classroom interactions including both genders. The reason for this imbalance is that some male students, who had agreed to participate in the study, withdrew from it during the study, when they had fully realized what they were expected to do. In addition to this, the small number of participants, and the fact that some interactions could not be included in the analysis due to attrition or illnesses, does impact on the validity of the quantitative analysis.

Another limitation of the current study is that it did not empirically evaluate L2 learning and development as a result of M-A pair work. It merely explored the evidence of learners' increased independence of use of the targeted features throughout one task.

Moreover, in order to gain insights into learners' feelings, emotions and thoughts during pair work, applying stimulated recall (Gass & Mackey, 2000) could have contributed to a richer understanding of participants' views with regards to their own thinking processes and behaviour during interactions. These could have been missed from interviews alone, which were conducted after the unit of work. Finally, despite the ecological validity of the classroom-based approach, the generalizability and interpretation of the results to other M-A contexts is limited.

9.2 Summary of findings

The overarching goal of this study was to bridge the gap in our knowledge with regards to peer-interactions among learners in M-A foreign language classrooms, and to lay the foundations for future research of peer interactions among M-A second language learners. This study contributes to the existing body of general education research about M-A peer-interactions (Kuhl et al. 2013; Little, 2001; Veenman, 1995) as it explored patterns of interaction, assistance and perceptions of M-A pairs in M-A classrooms. Furthermore, because M-A pairs in this study were simultaneously mixed-proficiency pairs, this study also adds to the existing research of L2 mixed-proficiency settings (Gagné & Parks, 2013; Kim & McDonough, 2008; Ohta, 2000, 2001; Watanabe, 2008; Watanabe & Swain, 2007) by providing a more detailed picture of peer assistance among learners of differing proficiencies and by exploring patterns of interaction and peer perceptions. Moreover, by exploring pair-work within a naturalistic M-A English as a foreign language classrooms, this study also contributes to the existing body of studies in foreign language (FL) classrooms (Davin & Donato, 2013; McDonough, 2004; Moranski & Toth, 2016, in press; Philp & Tognini, 2009; Philp, Walter & Basturkmen, 2010; Toth, Wagner & Moranski, 2013; Williams, 2001). It also contributes to the body of research that explored younger learners or children (Qin, 2008; Philp, Oliver & Mackey; 2006). In addition to this, the study is unusual as it explored patterns of interaction among younger learners, adding thus to the body of research which explored patterns of interaction in mainly adult learning contexts (Storch, 2001a; Storch & Aldosari, 2012). Finally, this study was unique as it investigated peer perceptions of their interactions on tasks over a longer period of time. As such, it contributes to the existing research, which examined peers' perceptions of task-based interactions (Fernández Dobao, 2012; Fernández Dobao & Blum, 2013; Kim & McDonough, 2008; Nassaji & Jun Tian, 2010; Shedadeh, 2011; Watanabe, 2008; Watanabe & Swain, 2007).

With regards to the first research question what patterns of interaction can be found among secondary school mixed-age pairs, the results show that patterns of interaction identified by Storch (2001a) among adult learners were also found in the current study which investigated secondary school learners. However, not all interactions matched Storch's framework, as one pattern of interaction was named expert/passive (Watanabe, 2008; Watanabe & Swain, 2007). The most common patterns of interaction were the

collaborative and the expert/novice. The fact that half the pairs formed an equal pattern of interaction is an interesting finding because it suggests that learners of differing ages and proficiencies can engage in interactions characterised by equality and mutuality. Furthermore, because research (Storch, 2001a; Storch & Aldosari, 2012; Watanabe & Swain, 2007) has claimed that expert/novice and collaborative patterns of interaction are conducive to learning, it follows that eight out of ten pairs formed a relationship which is likely to promote learning, such as by creating opportunities for language practice or focus on language use.

The data also suggests that proficiency may be a factor influencing how peers interact with one another, and the pattern of interaction they form. In fact, pairs composed of learners with larger proficiency gaps formed either expert/novice or expert/passive patterns, while pairs composed of learners whose proficiencies differed slightly, formed collaborative or dominant/dominant pattern of interactions. However, given the small size of the data set, further research is required to verify this.

Similar to Storch's (2001a), and Watanabe's (2008) research findings, this study suggests that proficiency differences, although important, may not be the decisive aspect which impacts on the nature of peer assistance. It has to be, however, noted that the goal of the study was not to create any causal relationships between proficiency and patterns of interaction. What is more, proficiency was not assessed by a standardized proficiency test, and therefore any conclusions regarding the relationship between proficiency and patterns of interaction must be taken with caution.

Moreover, the cases of Lara/Ella and Riki/Lyn have shown that the patterns of interaction may not only depend on students' relationship, but also on factors their perceptions of their partner's L2 proficiency (Watanabe, 2008), and the linguistic demands of the task. One explanation for Lara's (grade 9) dominant behaviour may be related to her perception of Ella's (grade 8) proficiency to be lower than hers. Another explanation may be related to the roles assigned within their pair work as research has shown that the effectiveness of pair/group work may depend as on the roles assigned (Samuda & Bygate, 2008; Willis & Willis, 2007). In fact, Lara always took on the role of a scribe which may also have contributed to her dominant behaviour.

The analysis has also revealed that interactions may contain traces of more than one pattern of interaction within the same interaction. They may also vary depending on the linguistic demands of the task at hand.

Finally, the analysis of patterns of interaction has confirmed the importance of taking students' relationships into account when investigating pair work, and its contribution to learning. In particular, analyzing patterns of interaction from the point of view of their quality of engagement in terms of equality and mutuality (Damon & Phelps, 1989) has proved to be useful to understand the role of relationship in peer interaction. However, this study shows that Storch's definitions of mutuality and equality and their operationalization in the form the associated traits may be too simplistic to determine the complex nature of interactions among pre-adolescent learners in this study. The findings also suggest the importance of supporting learners' social interaction with one another so that they learn to engage with one another in ways that are conducive to learning.

Research question two examined to what extent and in what ways learners organized in these pairs provide assistance to each other during classroom pair collaborative tasks. The results concerning the ways of learners' assistance to one another was to some extent consistent with the types of assistance identified in previous research (Davin & Donato, 2013; Foster & Ohta, 2005; Gagné & Parks, 2013; Ohta, 2000, 2001). Assistance was requested mainly via request for information, which was followed by request for confirmation and requests for explanation. The most common ways of providing assistance were suggestions, other-repetitions, other-corrections, explanations, and co-constructions. Such forms of requesting and providing assistance are similar to assistance reported by studies of adult learners (Davin & Donato, 2013; DiCamilla & Antón, 1997; McCormic & Donato, 2000; Ohta 2001; 2005). In addition to this, three pairs assisted one another in ways found in teacher-learner assistance, which was named teacher-like assistance. Five pairs, which were classified as expert/novice provided assistance to one another in ways that are typical for teacher-learner assistance. These included forms of assistance such as partner's understanding, back-channelling, active listening or continuers. In other words, the 'expert' learners within these pairs, who were not necessarily the elder learners often checked their partner's understanding, waited for their partner to complete an utterance, or encouraged him/her to speak. Importantly, in comparison to collaborative and dominant/dominant pairs the 'expert' students showed willingness to help their 'novice' partners. I argued that it was this intention to help that seemed to have been decisive for assistance to be effective. In addition to this, this help was highly accepted and appreciated by the 'novice' partners. Damon and Phelps (1989) called this form of

assistance peer tutoring. In terms of theory, Vygotskian framework can be used to explain assistance provided within expert/novice pairs because the theory holds that the less knowledgeable and skilful learner can be assisted at the right level only by a more knowledgeable partner (Vygotsky, 1981).

The data also shows evidence of collective scaffolding (Donato, 1994). We have seen that despite age and proficiency differences, students within collaborative and dominant/dominant patterns provided assistance to one another, i.e. the flow of assistance went back and forth between the younger and the elder partner. In fact, the younger learners often provided crucial assistance. It seems that students within collaborative and dominant/dominant patterns had to rely on the other partner's linguistic resources in order to complete tasks because some tasks were above their individual level. In other words, they were simultaneously experts and novices (Ohta, 2001). One possible explanation for the evidence of collective scaffolding is that proficiency differences within collaborative and dominant/dominant pairs were not as large as in the case of expert/novice or expert/passive. This form of assistance can be explained in the theory of Piaget who claimed that it is beneficial for learning when peers interact as equals because they mutually control their interaction, and share each other's perspective (Piaget, 1932; 1985; Damon & Phelps, 1989). Cooperative interactions between equals are characterized by speaking at a level that they both understand, by challenging each other, by attempts to reconcile contradictions, and by taking feedback from one another seriously (Damon & Phelps, 1989; Webb & Mastergoerge, 2003a). This equality is important for learning because a cognitive conflict arises when learners are challenged by concepts that do not fit with their current understanding and beliefs. As such, the cognitive conflict can be the catalyst for change (Piaget, 1932; 1985).

Research question two also explored to what extent M-A peer interactions may contribute to increased independence of the target-like use. The micro-analysis of the Comic task, which focused on the younger /novice learners only, revealed that two learners showed either no or little evidence of increased independence in the use of the target structure. Six learners gained increased independence of target-like use, but the level of independence varied among them. Three of these students have become capable of using the target structure with increasing independence but their use was predominantly non target-like, and requires further practise.

Researchers, who have used the sociocultural framework have often measured learning outcomes either by examining pair work for instances of correct resolutions of lexical or grammatical LREs (Kim & McDonough, 2008, 2011; Watanabe, 2008; Watanabe & Swain, 2007) or by applying tailored post-tests to investigate whether knowledge of the specific LREs which students engaged in the pair work was retained (Watanabe & Swain, 2007). In this study students' interactions were analysed for LREs because LREs not only represent important opportunities for learning but are also an indicator of a high degree of assistance. When engaged with LREs, students discuss language, and assist one another in order to solve linguistic problems. The analysis for the occurrence of LREs has shown that the majority of pairs frequently engaged with LREs, which indicates a high extent of assistance. However, it must be acknowledged that most tasks and exercises used do by its own nature elicit focus on form, and trigger more deliberations about form than other tasks (Alegria de la Colina & García Mayo, 2007; Fernández Dobao, 2012; Nassaji & Jun Tian, 2010).

The analysis of LREs in terms of their initiation, response and resolution has revealed that while both, younger/novice and elder/expert learners tended to initiate LREs, the elder/expert partners resolved most of them. In other words, despite taking active lead in the task, the younger learners still needed their elder peers' assistance in order to resolve LREs. As such, both seemed to have contributed to the resolutions of linguistic problems at hand (Watanabe, 2008). However, the analysis has also shown that while the majority of LREs were correctly resolved, a relatively high proportion of them remained either unresolved or incorrectly resolved. This suggests that we should not assume that the elder or higher ability students will as a matter of fact assist their younger or lower ability peers in a way that a teacher does, and that no additional teacher's assistance is required. The results of the analysis merely imply that elder/expert learners may be capable of providing help for their younger/novice partners in order to complete a task, or to solve a linguistic problem, which may even be above both learners' level. As in Ohta's (2000) study of adult learners, some young adolescent learners in the current study were able to wait for their younger partners to finish their utterances, prompt them to do so, or to assist one another through co-constructions. Nonetheless, it seems that they would have benefited from teacher's assistance, which in turn could have led to more accurate resolutions of LREs and to an increased independence of target-like use.

Overall, the analysis of assistance provided among M-A peers was of two different kinds, which can be identified as such from the view of the theory of Piaget and from the Vygotkian theory. The analysis has shown that while sociocultural theory can be applied to explain the assistance within unequal patterns of interaction such as expert/novice, the theory of Piaget, which underlines the importance of equality and mutuality, seems to be more apt to explain how learners within equal patterns assist one another. Furthermore, the findings seem to suggest that age is not a crucial factor in the extent and quality of assistance provided among M-A peers but appear to only play a limited part as a background context. However, rather than age, the relationship between learners seemed to have been one of the major factors mediating the extent and quality of assistance, as it afforded learners for creating intersubjectivity, i.e. space for sharing aspects of the given situation, allowing thus for a collaborative definition of a goal of the task and for a collaborative undertaking of the task at hand (Antón & DiCamilla, 1999; Wertsch, 1985).

Moreover, we have seen that although the forms of assistance and their extent varied across and within pairs, there were similarities across some pairs, which may be related to patterns of interaction. However, the analysis has shown that patterns of interaction established among pairs do not determine the ways and the extent of assistance provided.

An important finding of this study is that non-collaborative attitudes and patterns of behaviour may not necessarily imply limited opportunities for learning. We have seen that pairs may challenge one another in the form of disagreements which may even be uttered in an argumentative tone (e.g., *No, he has forgotten it!*). What is more, such disagreements may remain unresolved. According to Storch (2001a), this is a sign of low mutuality and therefore lack of collaboration. However, my research has shown that despite unresolved disagreements, or even arguments, learners may still enjoy their interaction, they may spend long time on task, they may even produce many co-constructions and frequently engage in LREs. This is important as it contrasts with Storch's (2001a) findings that collaborative nature of peer interaction is a necessary condition for L2 learning. It suggests that learning may not only occur in collaboration but also in interaction around disagreements, which do not have to be necessarily resolved (see also Philp, 2016).

Finally, it seems that the nature of peer interaction and assistance among pairs in this study was mediated by the context and the nature of learning at the alternative school

which they attend. In fact most learners in this study have known each other for a long period of time, and have had many opportunities to learn together and do assignments together. It also seems that having being taught according to the principles of learner autonomy afforded some students with abilities to grapple with tasks and language which were above their level.

The third research question investigated learners' perceptions of their collaborative work over a unit of work. Interviews were conducted, and students were asked about their overall perceptions of their work, their perceptions of the degree of their contribution to the work, and about perceived learning benefits. I have gained the following insights from the interviews. The vast majority of students expressed a positive attitude towards their interactions with their cross-age partners. Moreover, they did not seem to perceive any differences to working with the same-age partner, nor did they express any preferences to work with the same-age partner. In other words, working with an elder or younger partner did not seem to make any difference to them. I have argued above that this is likely because they have been exposed to cross-age pair or group work since the first grade. The attributes valued were mainly willingness to share ideas, and the ability, and willingness to provide assistance. Not all learners, however, expressed a positive attitude, which is a rather surprising finding as each learner was allowed to select a partner. One student expressed a negative attitude, and two students mixed attitudes. The reasons for such perceptions could be attributed to factors such as dominance of the interlocutor (Lara/Ella), vast proficiency differences (Riki/Lyn) or the difficulty of the tasks (Lyn). This is in line with results of other studies that investigated perceptions of learners of mixed-proficiencies (Kim & McDonough, 2008; Watanabe & Swain, 2007). Most students perceived their contributions to the work to be equal. This is a rather surprising finding because I had assumed that students would perceive the contributions of the elder/expert students to be higher than of the younger/novice students. As the analysis of their interactions has shown, most of the younger/novice students did in fact greatly contributed to the pair work, and most of them provided valuable assistance. With regards to perceived learning outcomes, students' perceptions differed across pairs. Students of the collaborative pairs perceived their pair work to be mutually beneficial. Within expert/novice pairs, all 'novice' and some 'expert' students reported learning benefits. The elder students of the expert/passive and dominant/dominant pairs did not seem to perceive any learning

benefits, while their younger partners did report some. Perceived learning benefits involved various language areas such as pronunciation, learning of new vocabulary, understanding grammar, or improved speaking skills. Some students perceived the benefits of their pair work because it allowed them to complement each other's gaps in knowledge. This also resonates with the analysis of interactions because some pairs and the collaborative in particular, tended to complement their weaknesses and strengths. In addition to this and in line with previous research (Storch, 2005; Shedadeh, 2011; Watabe & Swain, 2007, Watanabe, 2008; Kim & McDonough, 2008; Dobao, 2012, Nassaji & Jun Tian, 2010), all students expressed a positive attitude towards pair work as such, and to collaborative tasks such as the Text reconstruction or the Comic task, which are tasks that combine speaking and writing.

Finally, the exploration of students' perceptions is advocated by sociocultural theory as it underlines the role of social interaction in learning, and each individual student's agency during classroom learning (van Lier, 2000). Therefore, using interviews to learn about students' relationships and emotions may shed more light on what occurs during interactions, and their impact on the nature of interaction and learning. For example, the case of Lara/Ella has shown that perceiving a partner as a novice with lower abilities may lead to dominant behaviour by the elder/more proficient learner. It can also lead to the younger/less proficient learner taking a rather passive role (Watanabe, 2008; Watanabe & Swain, 2007). Overall, however, the exploration of M-A students' perceptions suggests that rather than perceptions of differing ages and proficiencies, it is the relationship between both students, which seemed to have greatly contributed to positive perceptions of their interactions, and to students' engagement with each other's contributions, thus affecting opportunities for learning. However, we have seen that although all students within collaborative and expert/novice pairs enjoyed their interaction, not all expert students perceived learning benefits. What is more, learners within the dominant/dominant pattern enjoyed their interactions and perceived learning benefits. Therefore, although there are some similarities across pairs, a relationship between patterns of interaction as defined by Storch (2001a) and learners' perceptions does not seem to be clear-cut for the participants in this study. Finally, the current study has emphasised the importance to learn about learners' perceptions, attitudes or feelings about the interactions they experienced, and contributed to the body of research which has done so (Fernández Dobao, 2012; Kim & McDonough, 2008; Nassaji & Jun Tian, 2010; Shedadeh, 2011; Storch, 2005; Watanabe, 2008; Watanabe & Swain, 2007).

9.3 Pedagogical implications

Organizing students into small groups or pairs is a frequently used method in many language classrooms in order to provide them with more practice in using the L2 (Philp et al., 2014). Pair and group work are supported by main theories of second language learning and by research findings (Philp et al., 2014). However, because learners' age and proficiencies are extremely heterogeneous in many M-A classrooms, and very low and very high proficiency learners share the same classroom, organizing learners into pairs or groups composed of mixed-age and simultaneously mixed-proficiency learners is one of the main concerns for many teachers of these classrooms. Teachers usually face the dilemma as to whether they should build groups of similar or different ages/proficiencies. The educational research suggests that the latter is usually the case as teachers tend to assume that the higher ability students will assist their lower ability peers (Webb et al. 1992). Also, in the field of second language pedagogy, some researchers such as McCafferty (2006) have argued for the teachers to compose groups of learners of different rather than similar proficiency. The data of the present study suggests that although some younger/novice learners may benefit from their peers' help, the very low proficiency learners in particular may not benefit. We have seen on Lyn and Riki's case, if the proficiency difference within a pair is too large, not even the collaborative nature of interaction characterized by the willingness of the more proficient learner to offer and engage with each other's ideas, and to actively involve the low proficient learner (Storch, 2001a), may be supportive in L2 learning for both learners. This is in contrast to Storch's (2001a), Storch and Aldosari (2010) and Watanabe and Swain's (2007) research findings from adult student contexts. Moreover, Lyn and Riki's case has shown that not even the collaborative nature of a task may promote collaborative work if it contains language which is above individual learner's level. This seems to be in line with Lee's (2008) claims that novices may not be cognitively ready to simultaneously pay attention to the meaning and the form. Lyn and Riki's case also provides some support for Leeser's (2004) concerns with regards to low proficiency learners actually benefiting from being assisted by high proficiency learners due to the lack of developmental readiness of low proficiency learners to discuss some linguistic problems. Watanabe and Swain (2007) suggest that it may be very difficult for the 'novice' in the expert/novice pair with a large proficiency

difference to internalize all the language and information originating from the more proficient expert peers.

Therefore, the question arises how can we ensure that learners of all age groups and proficiencies benefit? Based on this research, I argue that organizing learners of differing ages/proficiencies should be flexible, and should take into account the language elicited by the task, its relative difficulty, and the goal of the task. For example, if the focus is on grammatical forms, the younger/novice may benefit by being paired with elder/expert learner, who will have greater experience with the language item; given that the proficiency gap is not too large, and that the pattern of collaboration is likely going to be expert/novice or collaborative. Conversely, it is likely that pairing younger/novice with another younger/novice learner would hinder resolution of grammatical LREs. Homogenous pairing in terms of age and proficiency may lead to successful resolutions of grammatical LREs; provided students are likely to form the collaborative pattern of interaction (Leeser, 2004). If the focus of the task is on lexis, several options are possible as the younger/novice learners may be more likely successful in resolving lexical problems than grammatical ones. This is in line with Williams' (1999) claims that proficiency differences may not be such an issue for tasks that focus mainly on lexis, provided that the input, complexity and difficulty of the lexis is not too far beyond the reach of the low proficiency student (Williams, 1999). However, even here will the optimal pairing most likely depend on the pattern of interaction established (Leeser, 2004). Furthermore, Storch and Aldosari (2010) suggest that if the goal of the activity is to develop fluency, the optimal pairing for low proficiency learner is with a fellow low proficiency learner. In a similar vein, fellow novices in the M-A classroom may be an optimal pairing when the goal of the activity is fluency.

We have seen on Lyn's case that proficiency is a factor that needs to be taken into consideration by the teacher. It can be said that if the novice learner is not at a level developmentally ready to learn the language elicited by the task at hand or to internalize the language of his/her partner, it is very likely that without the teacher's intervention, their interaction will not form a pattern conducive to learning. It is also likely that the expert learner will dominate the interaction or complete the task alone. The teacher's task is then to closely monitor heterogeneous pairs or groups so that the expert learner will not leave out his novice partner from the interaction (Kowal & Swain, 1994), and "do the work for them" (Ellis; 2003, p. 268). Kim and McDonough (2008) stressed the

importance of paying attention to pair dynamics in class, and to allowing or encouraging learners to change partners if dominant/dominant pattern prevails. It may otherwise happen, as Ellis (2003, p.268) puts it that "their interactions will result in less negotiations of meaning, in pidginized use and less attention to form in the case of the weaker ones and in concomitant interlanguage fossilization." Prabhu (as cited in Ellis 2003, p. 268) adds that "it can also be the case that the weaker students might find it more humiliating to make mistakes in front of their peers than in front of the teacher." Prabhu's point is certainly worth considering as the threat of losing face is reminiscent of Lyn's case. Conversely, although I understand Ellis' and Prabhu's concerns, research conducted in M-A classrooms (Little, 2001; Kuhl et al. 2013; Thurn, 2011; Veenman, 1995) suggests that M-A classrooms are cooperative classrooms settings, where the rivalry between peers, though existent, is smaller than in same-age classrooms as the differences among peers are known in advance, and are accepted. Moreover, such concerns can also be resolved if the teachers would make students continually aware of the benefits of M-A learning, whose main pillar is peer assistance. For example, Kim and McDonough (2008) recommend engaging students in discussions about the benefits of pair/group work before assigning them to work in pairs or groups. In addition to this, it would be beneficial for M-A peer interactions if teachers themselves implemented strategies needed in order to engage in effective collaboration, such as negotiating behavior, scaffolding etc., or if they occasionally provided training of these strategies to their students. This could affect how learners approach the tasks (Samuda & Bygate, 2008, p. 244). Indeed, some research has shown that the quality of help provided among learners may be related to the quality of help provided by the teacher to the learners (Davin & Donato, 2013). Davin and Donato (2013, p.7) suggest that in such circumstances, "peer assistance might occur more naturally than in classes where teachers do not regularly provide graduated assistance to students." The quality of teacher's assistance is even more important in M-A classrooms, where the differences in terms of language proficiency among learners are large.

As this study is closely linked to tasks, another important pedagogical issue is related to the use of tasks. I believe that one of the most important concerns in M-A classrooms is how tasks/activities might best challenge the elder students within a group/pair, while avoiding that learning content is too far beyond the reach of the novice student. Are there any types of tasks which may respond to various proficiencies within a group-pair? How can such tasks be implemented? For example, map tasks as well as jigsaw

or spot-the difference tasks are 'one-way' tasks that require that specific information is communicated to the other learner who does not have it. Such tasks may be useful in M-A peer interactions because the younger/novice learner is required to communicate the information to the elder/expert learner in order to complete the task (Samuda & Bygate, 2008). As a result, more negotiation of meaning and turn taking than on a two-way or a dialogic task may take place (Leeser 2004). Furthermore, in order to avoid the dominance of the elder/expert learner, each student of the pair may be given a responsibility for his/her contribution to the completion of the task. For example, each student may be given a set role to perform (Ellis, 2003). Willis and Willis (2007, p. 164) suggest to nominate one student as the *writer/secretary/reporter* for a pair or group, recording in writing what was discussed or agreed. In a group of four, the more advanced student could be a leader/chairperson responsible for making sure everyone has a chance to talk (p. 167). Willis and Willis also recommend two ways for grouping students. The first way is that the weaker ones can be paired with the strong ones, "so the weak learner is supported and the stronger one learns through helping." The other way is "to put strong ones together and let them get on by themselves," while the teacher spends more time with the weak ones (p. 225). Willis and Willis (2007, p.226) claim that "weaker learners on their own together have more chance to speak out, and often gain confidence by being able to help another person." Finally, when setting up group work, the roles should be distributed so "students get practice at skills they are less good at, with support of the group and so that 'the best students do not dominate" (p.226).

We have seen that implementation of collaborative tasks and exercises did not necessarily ensure that all students participated to an expected outcome (Ohta, 2000). Ohta cautions that participant roles are more complex to be able to predict the impact of aspects of task design (see also Samuda & Bygate 2008). In line with Ohta (2000, p.76), and based on the insights gained in the current study, I would like to argue that whether both learners are able to create their own language learning activity, whether they are engage with each other's contributions, and whether the elder/expert learner is willing to assist the younger/novice learner's performance are of great importance for the quality of M-A pair work. Therefore, in addition to the task design, it is important to observe the actual implementation of the task, i.e. the learner's activity during task implementation (Ohta, 2000, p.76). Although there is certainly the need for the classroom teacher to adjust the task complexity to the learners' proficiencies, the need to closely monitor what learners of various proficiencies actually do with classroom

tasks, and how their activity relates to their language development, is of primary importance. However, it is important for research on task design to consider how task implementation may best be done to foster equal participation and learning for both elder/expert and younger/novice learners in M-A context.

I would also like to mention that the fact that students were asked to record their own interactions could have enhanced their reflection of their language use. Asking students to record their own interactions, and/or reflect on them could be incorporated into pedagogical practices in M-A classrooms. Moreover, the interviews conducted after the last unit of work seemed to have provided students with a valuable opportunity to reflect on their own interactions. It seems that students gained valuable insights about their own beliefs and thoughts concerning pair work, and its benefits for their learning.

Finally, data in the present study, involving young adolescent learners, suggests that M-A peers may be capable of providing help for their younger/novice partners in order to complete a task, or to solve a linguistic problem, which may be above both learners' level. This is in line with the findings from studies involving adult students (Ohta, 2000; 2001). This study also provides evidence that assistance during M-A peer interactions does not come as a matter of course from the elder (more knowledgeable) to the younger (less knowledgeable) but that may flow in both directions (Donato, 1994). Based on these findings, I argue that there is pedagogical value for elder or more proficient student to be paired with younger or less proficient student because they can assist one another in order to complete classrooms tasks assigned to them by the teacher. However, the presence of the teacher to monitor interactions of young adolescent learners; in particular of pairs composed of low proficient learners in order to provide them with necessary assistance is crucial.

9.4 Future directions

The main goal of the current study was to gain understanding concerning peer-interactions among learners in M-A foreign language secondary school classrooms, and to lay the foundations for future research. This study also contributes to the existing research of L2 mixed-proficiency settings by exploring patterns of interaction, assistance and perceptions of M-A pairs, which were simultaneously mixed-proficiency pairs. In addition to this, it adds to the body of research that investigated peer perceptions over their collaborative work over a longer period of time.

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The current study focused on the nature of M-A peer interactions. Building on this work, future research could compare the nature of peer interactions across different ages and contexts. In order to gain understanding of the differences between same-age and M-A interactions on classroom tasks, studies could explore differences in the nature of interactions between same-age and M-A pairs.

The current study focused on the investigation of the evidence of learners' increased independence of use of the targeted features throughout one task. Building on this study, future studies could investigate the potential of the M-A peer interactions to foster second language development. For example, researchers working from the cognitive perspective, interested in the connections between M-A peer interaction and second language development, could measure learning outcomes using a pre-test, and post-test design.

Furthermore, although various tasks and exercises were applied in this study, the majority of them, such as the Text reconstruction task could be described as 'pedagogic tasks' in SLA studies. Therefore, it would be worthwhile to apply 'real world tasks' which would mirror the kind of activities that students engage in not only in classrooms but also in real-world settings.

This study has only focused on interactions among peers. This is, however, not to relativize the role of the teacher as a mediator of knowledge in a language classroom, and his/her role in monitoring and guiding peer interactions. And because teacher's talk clearly influences the pace, the behaviour and the direction of the interactions, future studies could explore M-A pair work over cycles of teacher fronted and related pair work tasks. In other words, studies exploring how M-A pair work complements teacher-fronted sessions are needed. Such investigations would enrich our understanding about the complex and situated nature of learning (van Lier 2004; see also Batstone & Philp, 2013).

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APPENDICES

Appendix A

Interview questions (original in German)

1. Tell me about pair work with ….. What is it like working with him/her? How did you feel during pair work?
2. Tell me more. What was it like working with your partner for the unit of work?
3. Do you think the pair work went well? Why? Why not?
4. How do you think it worked?
5. How do you work together – is one of you the boss?
6. Did you help one another? How?
7. What do you like about working with your partner?
8. Anything you dont like?
9. What kinds of things did you learn from pair work? What about in terms of English? What else? Anything else?
10. Did you like the activities? What did you like about them? Why not?
11. How did you contribute to the pair work?
12. How do you think your partner contributed?
13. Who do you think contributed more?
14. Would you prefer to work individually?
15. Would you prefer to do the task with a same age (same grade) partner? Why? Why not?
16. Do you think that you benefit from learning with older/younger partner? If so, how? If not, why not?
17. What is important for you when choosing a partner for your English assignment?
18. Who do you ask when you need help?

Comic task 1a

Appendix C

Comic task 1b

Appendix D

Comic task procedure

Table

Comic task procedure

1. Read the comic. **(pre-task, pair/group work)**
2. Rewrite the following sentences about the comic. **(pre-task, pair/group work)** Example: *Jaden tells the gang that he has a date.* *Jaden told the gang that he had a date*
3. Write the comic as a story and read your story to the class. **(task, pair/group work)**
4. Read the comic again and answer the questions. **(post-task, individual work/next lesson)** Example: Why did Jaden have to leave? *Jaden had to leave because he had a date.*
5. Complete the sentences. Example: First of all, she asked me how old *I was*. **(post-task, individual work/next lesson)**

Example of students' writing on the Comic task

The mural - disaster

On a Saturday afternoon, Jaden and his gang started with the work on a mural, that they had planed bevor. Miggie said to Zach that the blue color a great idea was. Than Jaden told, that he had a date and must go.

Later in a café Jaden felt quilty, but Chloé wasn't too impressed. Jaden came to late and Chloé answered that she didn't liked wasting time. Half an hour later, Sandy calls Jaden and sayed that the gang needs him. But Jaden explained that they had to stay. After that the gang was realy mad at Jaden and destroyed the mural. Jaden thought that it is not good to letting the gang down, so he fixed the mural and worked hours to maked it finish. Sandy saw it and told the others that the mural looks great.

After the competition Sandy met Jaden and Chloé. Sandy said that Jaden and she should do a mural together.

Appendix F

Text-reconstruction task

5 Cloze text: The new boy (→ p. 39/ex. 1)

a) *Read the text and complete it. Use the words from the boxes.*

When Rico first (1) to the US from Mexico, he felt like (2). He couldn't speak very much (3) and his clothes were different from the (4) which the other kids wore to school. His parents didn't have (5) money so they couldn't spend (6) of dollars on smart clothes for their son. Some of the kids laughed at him. But Rico was (7), more intelligent than many of the other kids in his school. He was really good at (8) and he often helped other kids who didn't know how to do the (9) in class. Then he entered a (10) competition and he won first prize. He had to design and make an alien. The (11) at NASA invited Rico and his class to Florida. They spent a day in a 'space' school there. It was great fun! After they got home again, Rico was one of the most popular (12) in the school. He never felt like an alien again.

immigrated   kids

experiments

an alien   Science

ones   English

a lot of   intelligent

hundreds

'space'   scientists

b) *Rewrite the text about Rico. Use different words for the numbers.*

Start like this: When Rico first **came** to the US from Mexico, he felt like **a stranger**.
He couldn't ... .

Appendix G

Looking for help task 1A

Streetwise

LOOKING FOR HELP?   ASK AGONY AUNT or UNCLE!

Agony Aunt

Profile   Chat   Faves   Forum

You're desperate and need help?

Click on one of our photos to send an e-mail. We will answer you in a personal e-mail and put other teenagers' replies online (in BOYZNGIRLZ ZONE) within 24 hours.

One word of warning: Giving real names, addresses or phone numbers in your e-mail
5 can cause serious problems. Please **do not** do this! If it's urgent, call us on our StreetLine number.

Problem 78
Mon Jan 26, 4:34 AM

Dear Agony Uncle,

10 Writing about this problem isn't easy for me but I really need your help! Jeff (not his real name) and I have been best mates since we were kids. We really liked hanging out together — watching football, playing computer games — you know, the usual stuff. We did everything together and even my sis says we're like twin brothers. But all that changed when he told me he wanted to join a gang. He can't understand why I don't join it, too. I tried. I was with them one evening.
15 But, for example, bullying a single person in the street and insulting them isn't my idea of fun. They also enjoy things like stealing from kids at school and damaging public phones. Now Jeff never likes coming over to my house. He says that hanging out at his place is cooler. His parents are often not at home. So the gang meets there to boast about all the stupid things they do. I tried talking to my mate but he just got aggressive. Now they all call me a 'sissy' — which I am
20 not! I'm just not a 'gang person', that's all. But because I was there at the beginning, they think I know too much about their activities. Recently they beat up someone who sneaked on them! And to add to the problem, I feel alone and bored now that I've lost my best mate.

What should I do?!
Tom, 15

Appendix H

Looking for help task 1B

Your replies to Problem 78 (Tom, 15)

Dear Tom,
Yeah, I can see what your problem is. Sure, it's hard losing your mate. But think about
5 it the other way round: *He* has lost *you* as a friend! Now, you say you're not a gang person, but it sounds as if you think all gangs are bad. They're not! I think identifying with a group and hanging out
10 together is great! I'm in a skater gang. And my gang is my 'family'. We're streetwise but we're cool together – most of the time. And, of course, you never feel lonely. So forget Jeff, his gang and the rubbish they
15 do. I'm sure you can find new mates!
SkaterKate, 15

Hi Tom,
It sucks that your best pal's in that gang. They're like pretty off, if ya ask me! Picking
20 on people for no reason – what a lotta wannabe gangstas! You tell that mate of yours again that you're not interested. Tell him, too, you're no sneak either. But listen, man, if you get any real threats, call
25 a helpline right away. OK, you're no softy. But unless you're Superman, you can't take on a whole gang! Chill out 'n good luck,
Mista Mack, 16

Hi, there!
30 I really don't know what your problem is! Either you're a 'sissy' or you aren't. Who ever said hanging out in a gang was all roses? That's just for girlies! Real guys are more into thorns! That's the name of our
35 gang. Being in the Thornton Thorns makes me proud. We show people who we are and we just love seeing them run off scared! Remember: In a gang you're strong – alone, you're nobody. So if you're smart, you'll
40 join that gang! Keep your best mate, get more friends and stay streetwise!
Thorny Two (16) says: Go for it, Tom!

Task: To discuss peer group problems

1 Tom's problem `5, 9` (→ p. 19/ex. 6)

a) *Read Tom's letter and sum up his problem in 2–3 sentences.*

b) *Have you ever been in a situation like Tom's? What did you do?*

2 The solutions `4, 5, 9` `G6` (→ p. 19/ex. 7–8)

a) *Think: Read the replies. Write notes. What advice does each person give Tom?*

b) *Pair: Which do you think is best/worst? Why? Example: I think that SkaterKate's answer is best/ worst because she says that not all gangs … and that Tom should … . I think that is/isn't right/a good idea/… .*

c) *Share: Tell the group what you both think. Collect opinions and vote on the best and worst solutions.*

1, 12–13 **3 Let's listen: Peer pressure** `16` (→ p. 20/ex. 9)

a) *Tom decides to try again with the gang. But things get worse and he calls StreetLine. Listen to part A. Right or wrong?*
1. Tom joined the gang.
2. Tom and Jeff had to damage a phone box.
3. Tom was caught.

b) *What should Tom do? What do you think Bob will tell him?*

c) *Listen to part B. Choose the right answer. Bob said Tom should …*
1. tell the police/tell his sister.
2. tell a parent/tell a teacher.
3. hide the MP3 player/ask an adult for help.
4. call the manager/call StreetLine again.

4 Presentation: A talk show `3, 20` (→ p. 20/ex. 10)

a) *Think of a sentence about Tom's problem, e.g. 'My friend is in a gang'. Decide who can be Tom, the host, and the other guests (Jeff, Skaterkate, Mista Mack and Thorny Two).*

b) *The host introduces Tom, who explains his problem. Then other guests are introduced. The host asks the guests questions and involves the audience, who can ask questions or give solutions. Tom says what his solution is.*

thirty-five **35**

Appendix I

Grammatical exercise Phrasal verbs

phrasal verbs *Look out! I'll think it over.*

English has a large number of **phrasal verbs**, made up of a **verb** and a **small word (adverb particle)** like *at, in, on, up, down, away, out*. The adverb particles are not the same as prepositions (though some of them have the same form). Phrasal verbs are very common in an **informal** style.

1 Match the phrasal verbs with the more formal one-word verbs from the box.

arrive	awake	consider	~~continue~~	disintegrate	explode ✓	leave	postpone
return	return	~~rise~~					

blow up ...*explode*...   break up *postpone*   come back *return*...   get up *rise*...
go away *leave*...   go on *continue*   put off *disintegrate*   turn up *arrive*...
send back *return*....   think over *consider*   wake up *awake*..

Adverb particles can have various meanings. *Up* often means 'completely'.

I'll cut **up** the wood.   Let's clean **up** the house.   Fill **up** your glass.   I tore **up** her letter.

2 Look at the adverb particles in the following sentences, and choose the best meaning from the box for each one.

away	completely ✓	further	further	higher	louder	quieter	on paper
to ~~various~~ people		working	not working				

▶ Can you cut up the onions? ...*completely*......
1 He drove off. *away*............
2 Write it down. *on paper*...,
3 The heater's off. *not working*
4 Turn the radio down. *quieter*......
5 Drive on. ..*further*......

6 I've sent out the invitations. *to various people*...
7 Go on. ..*further*......
8 Prices are going up. ..*higher*........
9 Is the printer on? *working*.......
10 Who turned the music up? ...*louder*.....

3 Here are some sentences from conversations. Complete the phrasal verbs with words from the boxes.

back	off	over	up	up	up

1 He turned ..*up*...... two hours late and then expected me to fix lunch for him.
2 'Are you coming tomorrow?' 'Not sure. I'll think it *over*........ .'
3 I'm going to send these shirts ..*back*..... . They're all too big.
4 You know what they say. Never do today what you can put ..*off*....... till tomorrow.
5 It would be nice if that kid cleaned ..*up*....... his room sometimes. Just once a week would do.
6 'You wash ..*up*......... the plates and I'll dry.' 'No, I'll wash and you dry.'

bring	cut	look	pick	switch	switch	take

7 I'll ..*pick*.... you up about 8.00 and we'll go straight on to Holly's, OK?
8 OK, you can have the car, but please ..*bring*... it back in one piece.
9 'It's too hot.' 'Well, you could ..*take*..... off your coat.'
10 'What does *precipitation* mean?' 'No idea. ..*look*...... it up.'
11 When I get home I just ..*switch* off my brain and ...*switch* on the TV.
12 You can ..*cut*....... up the onions. If I do, it makes me cry.

150 VARIOUS STRUCTURES WITH VERBS

Story about a Comic
long long ago!

Once apon a time there was
a gang. They are a verxy good
team. They must bring a
mural ready. But Jaden a
mural painter said that he must
go. The team was really angry but
Jaden go away. Jaden's girlfriend
was very angry because
Jaden comes to late. 10 minuts
later Jaden came to his Girlfriend
and he told with her. Half
an hour later Sandy rang and
said they needed Jadens help.
But Jaden said he can't come.
After the call the gang were
really angry at Jaden and
damaged the mural. Jaden know
that was not right what
he do also he go to the
mural and repaired the wall
and worked on it alone
for hours. Sandy (a girl from the gang)
she that and said this
to the gang. At the competition
the gang got second prize.
The gang was really happy
about Jaden but Chloe his
Girlfriend was mad at Jaden.
After the competition Sandy
met Jaden and Chloe.
The End

20/25

Präteritum (simple past) oder Präsens (simple present)

5. C) The street gang are under pressure
and the with crime and
violence but the organized group
                                through
are what money for 'crime
                                family
D, a gang is a family for
many kids with problems.
they feel in the gang well
and they have fun

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Appendix K

Chilling-out task

Topic 2 Chilling-out time

1. Work with a picture: Sum up the situation (Who? Where? What? Why?) in photo 1.

2. Look at all the photos. What do you think about these ways of chilling out? Start a list with your favourite at the top.

3. Agree with your partner on one of the photos. Imagine you are one of the young people. Your partner interviews you. Think of three to four questions and answers. Act the interview.
(→ p. 17/ex. 1–2)

1 Messing around in the playground
2 Watching videos at home

Appendix L

Information sheet for parents and children (English translation)

Dear parents and children, I am currently enrolled in doctoral studies at Lancaster University in the UK. As part of my Doctoral studies, I will carry out a study which will contribute to a better understanding of second language learning and teaching in mixed-age classrooms like our own. This study will involve classroom observations, audio-recordings of classroom talk, interviews and pair or individual tasks with students who attend this school. I would like to carry this research out in our classroom in first term, 2013.

I would like to invite your child to participate in this study if he or she is interested. This would involve observation and audio-recording of their normal classroom work (pair and individual tasks), and two interviews with her/him about working with a partner.

The interviews aim to investigate our students' general opinions and perceptions about second language learning and teaching in mixed-age classrooms and their perceptions of their interactive work on a number of classroom tasks. The first interview will be held in two groups of four students. The second interview will be held individually. Each interview should take about half an hour and will take place during class study time. I am going to tape the session and transcribe portions of the talk. All data collected for this study (such as recordings of pair work and interviews with the teacher) will be kept in a secure place. It may be used in reporting and publication of this study but pseudonyms will be used; the name of each child and the name of the school will not be used. Your child is free to withdraw from the study at any time. At every stage, her/his name will remain confidential. Your child's participation is entirely voluntary. Her/his decision to participate or not will in no way affect grades or relationship with me, as the teacher.

Thank you for your consideration.

If you have any queries about the study, please feel free to contact myself on tomasek@hotmail.com; my course supervisor, Jenefer Philp, j.philp@lancaster.ac.uk , Ph: +44 15240 594812, Head of Department, Prof. Greg Myers: +44 1524 592454.

Signed

Tomas Kos

<div align="right">

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</div>

Appendix M

Child assent form (English translation)

Study title: **Mixed-aged pair work**

I would like to thank you for your interest in this study. If you do decide to take part, I kindly ask you to please complete this consent form; you will be given a copy of this form to keep and refer to at any time. Take time to read through the consent form carefully. I am happy to answer any questions you might have. Please make your selection by circling your answer:

- I have received sufficient information about the study and the intended use of the information collected.   YES   NO

- I understand that I am free to withdraw at any time, without having to explain my withdrawal.   YES   NO

- I understand that I will not be disadvantaged in any way regardless of whether I take part or if I do not take part.   YES   NO

- I assent to take part in this study.   YES   NO

- I understand that all data collected for this study (such as recordings of pair work and interviews with the teacher) will be kept in a secure place. It may be used in reporting and publication of this study but my name and the name of my school will not be used so that I will not be able to be identified.
                                                                                  YES   NO

Please fill in:

Name ....

Signature .... Date ....