

Review of child SLA: Examining theories and research

Abstract

Within the field of SLA, there has been much less research undertaken with children than with adults, yet the two cohorts are quite distinct in characteristics and in their learning processes. This article provides a review of child SLA research, particularly the research with a pedagogical focus. We describe a series of studies, including those informed by different theoretical perspectives (interactionist and socio-cultural), in different instructional settings (i.e. second language, foreign language, immersion, CLIL contexts), and using different research methodologies (longitudinal, case study, experimental, naturalistic). We begin by highlighting the importance of age as a factor in SLA research, presenting studies that have focused on the differences existing between younger and older learners. We also consider interventions that can support language learning – including form-focused instruction and the use of tasks. We finish by presenting a proposed change in the way that research with children is conducted.

Introduction

Although second language acquisition (SLA) research has mostly focused on adults, in recent times there has been a small, but growing body of research on adolescent and child second language (L2) learners (e.g. Enever, Moon, & Raman, 2009; Muñoz, 2006; Nikolov, Mihaljević Djigunović, Mattheoudakis, Lundberg, & Flanagan, 2007; Philp, Oliver, & Mackey, 2008). Even so, it is still “relatively rare to find reviews and overviews of SLA that deal specifically with child SLA” (Philp et al., 2008, p. 3). This article is an attempt to address this issue.

One key premise of this review is that child SLA differs significantly from adult SLA, having its own questions and issues (see Paradis, 2007, p. 387). This rationale is clearly

illuminated by Mackey and Gass (2005), following Thompson and Jackson (1998), when they claimed that “second language research must keep in mind that children cannot be treated just like adult research subjects. Because their capabilities, perspectives, and needs are different, children approach the research context uniquely and encounter a different constellation of research risks and benefits from their participation (p. 223)”.

Although research on adults has dominated the field, one early SLA paper to appear was that by Dulay and Burt (1974), in which the researchers examined the acquisition order of L2 morphemes by 60 Spanish-speaking and 55 Chinese-speaking children. Other L2 child-focused studies followed: Wong Fillmore (1976) examined the strategies of kindergarten children as they learned English naturalistically; Ellis (1984) qualitatively examined the use of formulaic expression by young immigrant children; Sato (1984) followed two Vietnamese boys, aged 10 and 12, as they acquired English; Swain’s (1985) work on comprehensible output was undertaken in schools that implemented an immersion approach; and in 1988, Chaudron detailed work on classroom interactions. In 1993, a seminal text appeared written by Lightbown and Spada entitled “How Languages are Learned” – a great deal of which was exemplified using data from child L2 learners. With a few notable exceptions (some described below), in the period that followed, the type of investigations undertaken with children generally focused on constructs that had already been investigated in adult SLA. In more recent times, however, child SLA researchers are expanding their focus and examining aspects unique to younger learners and to the contexts in which they learn language. In addition, these researchers are also challenging the way research is done with this cohort. Pinter and colleagues (Pinter, 2014; Pinter, Kuchah, & Smith, 2013; Pinter & Zandian, 2014), for example, suggest doing research with children, rather than on children, that is, taking into consideration children’s perspectives and opinions.

Although there have been studies that documented naturalistic L2 (e.g. Day & Shapson, 1991; Ellis & Heimbach, 1997; Sato, 1984) and bilingual acquisition by children (Nicholas & Lightbown, 2008; Schwartz, 2004; Unsworth, 2005), including accounts of the processes inherent in child SLA (Ito, 1997; Iwasaki, 2008; Pienemann, 1998), an examination of the literature shows that most research undertaken with child L2 learners concerns classroom learning or laboratory-based studies that have direct application to pedagogy. Therefore, a particular focus of the current review is child SLA research that has been undertaken in different instructional settings and for different types of learners, where the findings have direct implications for classroom teaching. Specifically, we will present research on child SLA carried out in second language (SL) (e.g. English as Second Language (ESL)), and foreign language (FL) (e.g. English as Foreign Language (EFL)) settings, including research carried out in immersion and/or Content and Language Integrated Learning (CLIL) classrooms. We will outline examples of research undertaken in these different contexts, highlighting the importance of not generalizing claims across all settings. While reviewing this research we will also consider different approaches that have been shown to benefit child SLA, such as form-focused instruction (FFI) and the use of tasks. Finally, we will consider how children can become co-researchers (Pinter et al., 2013). We have chosen exemplar studies to represent the various theoretical perspectives and different empirical approaches that have been used in this body of research. First, however, we begin this review by exploring the issue of age – a factor that is of considerable significance to SLA generally, and an important component of child L2 research.

Age and child SLA

Fueled in part by debate about when it is best to begin learning a language, age is a factor that has played a significant role in child SLA research (see García Mayo & García

Lecumberri, 2003). Using evidence based on the Critical Period Hypothesis (Lenneberg, 1967) – notably emerging from first language (L1) studies - and then drawing on L2 ultimate attainment (UA) research (Abrahamsson & Hyltenstam, 2008; Muñoz, 2014a), researchers have claimed that the younger learners begin, the higher the attainment they will achieve in their L2. However, more recently, some caution has been expressed in this regard. DeKeyser (2013) and Muñoz (2014a), for instance, suggest that there is a need to assess the potential benefits of learning a foreign language at an early age. From a pedagogical perspective, there is also a need to investigate how best to teach these young learners and what conditions are facilitative of their learning. This is because it is not sufficient to apply the findings from the extensive body of adult SLA research and use it as the basis for child directed instruction (Oliver, 2002).

Oliver's claim emerged from her work on child interaction which was initially based on Long's interactionist perspective (1983). In 1998, she undertook a large scale study to examine the way children ($n=192$) worked interactionally in different types of dyads (non-native speakers (NNS)-NNS, native speakers (NS)-NNS, NS-NS) to complete one-way and two-way language tasks. Using Long's (1983) categories, she explored if and then how children negotiated for meaning, the strategies that they used, and compared these to the interactions of adult learners (taken from Long 1983). She found that, like adults, children do negotiate for meaning during interaction, using a wide range of strategies (e.g. clarification requests, confirmation checks, comprehension checks and repetitions). However, she found proportional differences - lower for children than for adults - especially in the use of comprehension checks. She also found fewer strategies were used the more proficient the dyads were (i.e., NNS-NNS > NNS-NS > NS-NS).

In 1996, Long introduced an updated version of the Interaction hypothesis. The foundation of this hypothesis is that learners require not only positive evidence – data about

what is possible in the target language (TL) (e.g. input), but also negative evidence – information about what is not possible or acceptable in the language being learned. This may take a variety of forms and maybe provided pre-emptively, such as through teaching grammar rules, or reactively in the form of negative feedback (NF) (e.g. explicit correction, recasts, negotiation, metalinguistic comment, etc.). Given the importance of Long's work, it is not surprising that quite a considerable proportion of child SLA research is situated within the interactionist paradigm. Some of this research focused on the role of NF - children receiving and using feedback, and then developing their L2 as a consequence (e.g. Mackey & Oliver, 2002; Mackey & Silver, 2005; Mackey, Kanganas, & Oliver, 2007; Oliver, 1995, 1998, 2000, 2002, 2009; Oliver & Grote, 2010; Oliver & Mackey, 2003). For others, the goal was to determine which type of NF was more useful (e.g. Bouffard & Sarkar, 2008; Choi & Li, 2012; Lyster, 2004; Lyster & Mori, 2006; Lyster & Ranta, 1997; Tedick & Young, 2016). Another line of research investigated age differences in interaction, including the provision and use of NF (e.g. Azkarai & Imaz Agirre, 2016; García Mayo & Lázaro Ibarrola, 2015; Mackey & Philp, 1998; Mackey & Oliver, 2002; Mackey, Oliver, & Leeman, 2003; Pinter, 2006).

One example of this research is a quasi-experimental study by Mackey et al. (2003), which compared adults and children in classroom and pair work. As well as showing that differences exist according to age and context, this study provided empirical support for the use of pair work in classrooms by demonstrating that even child learners are able to provide the type of feedback that leads to improved language production. Similar studies, such as that by Pinter (2006), were undertaken in EFL laboratory settings. Like Mackey et al. (2003), Pinter (2006) found that children and adults differed in the strategies they used to complete the various tasks and suggested that the children's interactions were facilitative of L2 acquisition (i.e. containing opportunities for comprehensible input, output and feedback).

In terms of the utility of NF for children, one early experimental study was undertaken by Mackey and Oliver (2002). They explored the effects of NF on ESL children's interlanguage development when working in adult-child dyads (representing the type of interaction that might occur between a teacher and student). Replicating the work of Mackey and Philp (1998) they used Pienneman's (1998) stages to measure the children's acquisition of question forms in a pre-test, post-test and delayed post-test design. Twenty-two low level proficiency ESL learners (8-12 years old) worked with adult peers and completed different communicative tasks over a period of five weeks. Eleven children received implicit feedback on their production (e.g. recasts and negotiation), while the other 11 children (control group) did not – being given responses that merely continued the conversation. Their findings showed that NF led to greater language development and, further, in children such development appeared to be more rapid than occurs in adults (taken from Mackey & Philp, 1998). When this study was replicated by Mackey and Silver (2005), but with a slightly younger cohort - ESL Chinese children (aged 6-9) - the same findings emerged.

Child SLA studies have included participants with a range of ages, however, the literature tends to treat child L2 learners in a monolithic way. Yet it has been shown that just as differences exist between adults and children, so do differences between younger and older child learners. Age differences for children have been found in interaction studies (e.g. in ESL settings: Oliver, 1998, 2002; 2009; in EFL settings: Azkarai & García Mayo, 2016; Azkarai & Imaz Agirre, 2016; Butler & Zeng, 2014, 2015; García Mayo & Lázaro Ibarrola, 2015), particularly in relation to task use (e.g. in ESL settings: Oliver, 1995, 1998, 2002; in EFL settings: Azkarai & Imaz Agirre, 2016) and task repetition (e.g. in ESL settings: Mackey et al., 2007; in EFL settings: Azkarai & García Mayo, 2016; García Mayo & Imaz Agirre, 2016).

Differences have also been found in the L2 UA of younger and older child L2 learners based on longitudinal studies (e.g. Jia & Fuse, 2007; Muñoz, 2014a; Ojima, Matsuba-Kurita, Nakamura, Hoshino, & Hagiwara, 2011; Snow & Hoefnagel-Höhle, 1978). For example, Jia and Aaronson (2003) conducted a study over three years in an ESL setting with six Chinese L1 children (ages 5-9) and four adolescents (12-16). The researchers noted that the differences in UA (younger achieving higher), may be accounted for by the language preferences of the two groups which emerged over time. While the younger children switched their preference to English in the first year, the older learners maintained a preference for Chinese even after three years. However, contrary results have been found in FL settings for children who began L2 learning at different ages (see García Mayo & García Lecumberri, 2003; Muñoz, 2006a). These studies have shown that after the same hours of instruction, learners who started learning a language later showed advantages over those learners who started learning the foreign language at an earlier age (see Myles & Mitchell, 2012; Muñoz, 2006a, 2006b; Nikolov & Mihaljević Djigunović, 2006, 2011; Unsworth, de Bot, Persson, & Prins, 2012). The amount of input and opportunities to practice the TL in FL settings may also account for these differences (Muñoz, 2008, 2014a). Hence some scholars suggest that it is quality of the input, rather than the starting age, that has a more significant impact on L2 acquisition for young learners (Muñoz, 2014b). The nature of the different settings for child SLA is explored in greater detail in the following section.

Different instructional settings and types of learners

Language learning opportunities in different instructional settings are distinct and thus it is difficult to generalize findings from one setting to another (Azkarai & Oliver, 2016; García Mayo & Lázaro Ibarrola, 2015). Of particular concern for child researchers is the difference between SL and FL contexts. Unlike SL learners who have access to the TL

outside the classroom, learners in most FL settings only receive between two or five hours of instruction in the TL per week (García Mayo & García Lecumberri, 2003; Muñoz, 2006b).

Although the internet now offers a wide array of access to input (visual and aural) in the TL (Lewis, 2004), it is not clear to what extent FL learners are taking advantage of this resource, how beneficial it is for children in particular and whether without opportunities to produce meaningful output it can compensate for a lack of ‘outside the classroom’ TL environment.

Over the years a variety of strategies, approaches and language programs (Edelenbos, Johnstone, & Kubanek, 2006) have been implemented to enhance L2 learning, and especially to counteract the paucity of opportunities for FL learners. These have included Content Based Instruction, theme-based language teaching (Brinton, 2003; Stoller, 2008), and CLIL (Coyle, 2007; Dalton-Puffer, 2011). The latter is the umbrella term that is now often adopted.

Growing in popularity world-wide, CLIL began to emerge, especially in Europe, in the 1990s. Dalton-Puffer (2011, p. 183) describes CLIL as “an educational approach where curricular content is taught through the medium of a foreign language, typically to students participating in some form of mainstream education at the primary, secondary, or tertiary level”.

CLIL learners usually receive more hours of instruction in the TL than mainstream learners and they are purported to receive input that is more meaningful, resulting in improved TL proficiency (Coyle, 2007). In addition, Nikolov (2016) claims that CLIL programs allow learners to assess themselves, an opportunity that Muñoz (2007) states is particularly important for children, when coupled with self-correction. Thus this methodology is seen as “an alternative that could overcome the deficiencies in previous language models” (Muñoz, 2007, p. 17).

As more schools implement CLIL, research undertaken in this setting has begun to emerge. For example, research has been undertaken by Azkarai and Imaz Agirre (2016) and by García Mayo and Lázaro Ibarrola (2015) with primary EFL school children of different

ages in Spain (4th vs 6th graders, and 3rd vs 5th graders respectively). They demonstrated that the type of interaction the learners engaged in varied according to instructional setting (CLIL vs mainstream). However, whereas Azkarai and Imaz Agirre found CLIL learners produced fewer negotiation strategies than mainstream learners, García Mayo and Lázaro Ibarrola (2015) found the opposite. They also found CLIL learners used their L1 to a lesser extent than mainstream learners. Azkarai and Imaz Agirre (2016) argued that the difference between their study and García Mayo and Lázaro Ibarrola's (2015) could be due to the fact that in their study they considered two tasks, whereas García Mayo and Lázaro Ibarrola (2015) only considered one.

Another type of pedagogy making a substantial contribution to child SLA research, perhaps beyond all others, is immersion (for example, studies by Harley, 1998; Lightbown & Spada 1990; Lightbown, Halter, White, & Horst 2002; Lyster, 1998, 2001; Lyster & Ranta 1997; Tarone & Swain, 1995; White, Spada, Lightbown, & Ranta 1991). Like CLIL, the objective of immersion programs is proficiency in the L2. However, while CLIL programs are relatively recent, immersion programs are well established (see Lasagabaster & Sierra, 2010). Unlike CLIL, in immersion settings, it is usually a local language that is taught, and the teachers are often bilingual, while in CLIL settings this is not always the case. In addition, the starting age in immersion settings is usually early than for CLIL.

A large amount of research in immersion settings has concerned the types of input and feedback that maximise opportunities for L2 development (e.g. Bouffard & Sarkar, 2008; Lyster, 2004; Lyster & Ranta, 1997). For instance, Tedick and Young (2016) examined the response to form-focused instruction on past-tense/aspects in Spanish (preterit and imperfect), in a two-way immersion setting involving students who had English as their home language and Spanish as a minority language, and learners who had Spanish as their home language. The participants in this study were 5th graders (10-11 years old) and the data included pre

form-focused and post form-focused instruction, as shown in the two excerpts below, in seven lessons. Their findings showed that these learners developed their metalinguistic awareness and produced more target-like language with post form-focused instruction.

Example 1: Pre-form-focused instruction

1. Anna: *Aprendió que Frida pintó un muro muy grande y también que us:, use colores de como sentía.* [She (instead of I) learned that Frida painted a very large wall and also that she uses (used?) colors of how she felt.]
2. Julio: *Aprendí que ella pintaba las paredes y ella pinta que siente?* [I learned that she painted walls and she paints what she feels?]

Tedick and Young (2016, p. 798)

Example 2: Post-form-focused instruction

1. Theresa: *Microondas.* [Microwave.]
2. T: *¿Qué hizo? Necesito un verbo porque pregunté, ‘¿Qué hizo?’ y me dijiste, ‘Microondas’. Pero necesito un verbo. ¿Qué hizo el señor?* [What did he do? I need a verb because I asked you, ‘What did he do?’ and you answered, ‘Microwave’. But I need a verb. What did the, the man do?]
3. Theresa: *El señor inventó-* [The man invented-].

Tedick and Young (2016, p. 796).

Even within immersion settings, different contexts have been considered. For example, Lyster and Mori (2006) analysed the patterns of interactional feedback, uptake, and repairs in French and Japanese for immersion learners in 4th and 5th grades. They found that the French students produced more errors than the Japanese learners and that the majority of

these errors were followed by feedback to a similar extent in the two settings. However, there was a greater level of uptake by the Japanese than the French learners. Recasts were the most common feedback type, especially in the Japanese immersion setting, and these led to uptake and repair more than prompts or explicit correction, while in the French immersion prompts were more advantageous.

Clearly, there is a need to consider the characteristics of the learners and the instructional context. While most of this research in SL and FL settings has been informed by interactionism, this is not always the case. In the following section we outline child SLA research undertaken from a socio-cultural perspective.

Socio-cultural perspective and child SLA research

Early research of this type began with the work of Swain and colleagues (Swain, 1998; Swain & Lapkin, 1998) when they investigated the collaborative dialogue of 8th grade French immersion students in Canada. This line of research was expanded by Storch (2002) who examined the patterns of interaction, particularly the role of the interlocutors, in adult settings. Research with children has only recently begun to appear. Butler and Zeng (2014, 2015), for example, explored the patterns of interaction, interactional characteristics, such as turn-taking or topic development, and self-evaluations of Chinese EFL learners in 4th and 6th grades in task-based interaction. They found that 4th graders showed less engagement, and that their patterns of interaction were not stable across tasks. They also had more difficulties when completing the tasks, as shown by the larger number of questions they raised. In contrast the 6th graders interacted with a high degree of mutuality (i.e. collaborative patterns), showed greater engagement with extended topic sequences and used different functional types of utterances. Interestingly, they rated their proficiency in their L2 (English) lower than did the 4th graders.

Other SLA research undertaken within the socio-cultural approach is that concerned with the role of L1 in L2 development. Beginning with the work of Antón and DiCamilla (1998) and Swain and Lapkin (2000) who investigated adults and adolescents, respectively, in recent times, this work has been extended to children. For example, Tognini and Oliver (2012) examined the use of L1 (i.e. English) of school children learning Italian and French in Australia. García Mayo and Lázaro Ibarrola (2015) also explored the use of L1 and found that CLIL learners in 3rd and 5th grades used less L1 than mainstream learners.

In a more comprehensive study, Azkarai and García Mayo (2016) explored the use and functions the L1 served in child EFL task repetition. Forty-two Spanish EFL learners (9-10 years old) participated in their study which involved a spot-the-differences task. They found that the children used their L1 in less than 36% of their interactions and did so for a variety of purposes: clarification requests, confirmation checks, to indicate lack of knowledge, as phatics, repetitions, metacognitive talk, borrowings and to appeal for help. Upon task repetition, the L1 use decreased and the functions the L1 served varied. This investigation also contributes to a growing body of research about task repetition. Other examples of such studies are provided below.

Task repetition

Based on task repetition research undertaken with adults, Bygate (2001) has claimed that this pedagogic strategy promotes learners' complexity, accuracy and fluency (CAF). Repeating a task makes it more familiar and benefits L2 learners because, "they have more processing space available for formulating the language needed to express their ideas" (Ellis, 2003, p. 246). It helps L2 learners to conceptualize what they want to say and choose the appropriate way to formulate it (Ellis, 2016).

Similar benefits of task repetition have also been reported for children working in different instructional settings. In ESL settings, Mackey et al. (2007) explored the effects of task familiarity with ESL 7-8 year olds and found that learners who were not familiar with the content and procedure of the task generated more NoM strategies, and provided more corrective feedback; but when learners were familiar with the task, the opportunities to use feedback were more frequent.

EFL research on task repetition with child learners is more extensive and there are a range of findings. Pinter (2007) found that with repetition participants were able to complete the task more effectively and their fluency increased. Shintani (2012) found that learners' comprehension increased and task completion was achieved more easily upon repetition. The children also learned more targeted words, negotiated for meaning more often, seemingly gained more enjoyment (through play) and were more motivated. The use of L1 also decreased with repetition.

The relationship between task repetition and CAF for child EFL has been explored in other EFL studies. Sample and Michel (2014) found that the six 9 year-old learners ($M=9.5$) in their study increased their fluency upon task repetition. However, they reported mixed findings for complexity and accuracy, although by the third repetition the young learners appeared to pay more attention to the CAF in their production. Moreover their cooperation, motivation, confidence, and negotiation increased over time. With a larger cohort of Spanish EFL CLIL learners - 54 participants aged 8-9 years and 66 participants aged 9-10 years, García Mayo, Imaz Agirre and Azkarai (forthcoming) found that procedural task repetition (i.e. same procedure, different content) improved learners' fluency and accuracy whereas exact repetition (i.e. same procedure and content) resulted in a decrease of lexical richness and complexity.

It is evident that child SLA research is wide ranging, exploring different learners and contexts in a variety of ways. However, in this decade, criticism of such research has emerged because of the way it is conducted – specifically being done on children (Pinter et al., 2013) and not with children. Thus involving children as active participants in research has emerged as a recent trend. This is described next.

Children as researchers

Recently, Pinter (2014) claimed it necessary for children to be part of research, that they should have a more active role in it, and propose that researchers should consider children as co-researchers (Pinter, 2014, p. 169). Pinter et al. (2013) claim that in the majority of English language teaching research children are seen as “objects” of interests by the researchers rather than “subjects” who might lead to new ways of working with children. Even for studies that focus on other languages (Muñoz, 2014b), there is a dearth of studies that consider children’s perspectives. However, there have been some that do reflect the position of Pinter (2014) (e.g. Alderson, 2008; Alerby & Kostenius, 2011; Coppock, 2010; Kellett, 2010; Roberts, 2008; Woodhead & Faulkner, 2008).

Even so, there are different perceptions about whether this approach is feasible or even desirable. Some do not consider children cognitively competent to make decisions or, at the very least, to contribute to research or give opinions about issues that could affect them (Holland, Renold, Ross, & Hillman, 2010; Kellett, 2010). Adding a further complication to this is the flexibility with which young children approach “truth” (Oliver, 2009) raising questions about whether or not they can be believed. In addition, it can be a long process to build the necessary rapport with children required to obtain “trustworthy” data (Pinter & Zandian, 2015), although other researchers have shown that children are able to be rational participants (Hyder, 2002; Lansdown, 2002). Nonetheless, there is considerable variation

between children, resulting in some children participating with more enthusiasm than others (Pinter, 2014), drawing into question the generalizability of the research. Finally, the ethical issues surrounding children as participants are fraught, especially procedurally. For example, children are considered vulnerable by some research ethic councils (Pinter, 2014, p. 169). There is also the moral dilemma of children not having the same rights as adults, particularly in relation to issues of consent. Namely, it is adults who control and judge if children can be participants in research (Christensen & Prout, 2002; Skelton, 2008).

Despite this mine field of complexities, Pinter et al. (2013) claim children can be engaged as active researchers, helping to identify the gaps that exist between children's and adults' points of view with respect to good (language) teaching. They can provide a different perspective and so "it is essential that children take a similarly active research role in SLA because they ask different questions, have different concerns, and see the world in different ways when compared with adults" (Pinter, 2014, p. 180). Therefore, children have the potential to provide very valuable insights for contexts such as bilingual and multilingual classrooms (Cameron, 2001; Pinter et al., 2013).

An example of study that considered children's perspectives is an early, longitudinal study (over 8 years) by Nikolov (1999). She examined the attitudes and motivation of three groups of EFL Hungarian learners aged 6-14 years. Using a questionnaire, she assessed learners' changing attitudes towards their learning situation and their motivation for foreign language learning. She found that learners' showed a positive attitude towards their learning context, the activities and the tasks. She also found that with age, motivation increased, but engagement and learning did not, suggesting that "children will choose to pay attention to, engage and persist in learning tasks only if they find them worth the trouble" (Nikolov, 1999, p. 53).

In a more recent study using an interview approach, Muñoz (2014b) examined primary school children's (ages 8-9 and 11-12) views about themselves as learners, the learning processes in which they engage when learning a FL, and the potential favorable conditions for their learning. The findings indicated that children adjust their views and differentiate themselves from others as they grow older and gain experience as school learners. When Muñoz compared the answers of the two groups of learners, she found that self-regulation also developed with age. She found that initially, children learned English by collecting words, but by the end of primary school they also considered form-focused activities beneficial for language learning. Based on this, Muñoz concluded that children are capable of reflecting on their own development.

Conclusion

This review has outlined a number of studies exemplifying the various facets of child SLA research, particularly those which may have implications for the language classroom. One key factor is the contribution of age and the associated differences in cognitive and social development (Muñoz, 2014a; Philp et al., 2008). Together, these differences impact both the route and ultimate attainment of L2 learners, although the quality of the input and interactions may counterbalance the advantage of age, at least in FL settings. We have also shown differences exist not only between adults and children, but also children of different ages.

The research we presented was carried out in a variety of ways, through longitudinal studies, case studies, experimental studies and naturalistic studies and undertaken in a range of instructional settings. It has been informed by a variety of theoretical positions, although we presented argument showing that interactional perspective (Long, 1983, 1996) has been strongly influential, and recent work has been underpinned by a socio-cultural (Vygotsky, 1978) view.

Early SLA included child research, yet over time, much of it became based on constructs emerging from adult research. Of considerable concern is that findings emanating from adult studies have been applied to children and used to inform pedagogy without appropriate consideration of age differences. A more contemporary view is that child L2 learners are unique and engage in language learning process in ways that are distinct from their older counterparts. Further, in the past, younger learners were disenfranchised in the research process, but more recently, calls have been made for them to be included as active participants. There remains much more research to be done in the field of child SLA, especially research that engage children as co-researchers (Pinter, 2014).

References

- Abrahamsson, N., & Hyltenstam, K (2008). The robustness of aptitude effects in near-native second language acquisition. *Studies in Second Language Acquisition*, 30(4), 481-509.
- Alderson, P. (2008). Children as researchers: participation rights and research methods. In P. Christensen, & A. James (Eds.), *Research with children: Perspectives and practices* (pp. 276-290). London: Routledge.
- Alerby, E., & Kostenius, C. (2011). Damned taxi cab - how silent communication in questionnaires can be understood and used to give voice to children's experiences. *International Journal of Research and Method in Education*, 34(2), 117-30.
- Antón, M., & DiCamilla, F. (1998). Socio-cognitive functions of L1 collaborative interaction in the L2 classroom. *Canadian Modern Language Review*, 54, 314-342.
- Azkarai, A., & Imaz Agirre, A. (2016). Negotiation of meaning strategies in child EFL mainstream and CLIL settings. *TESOL Quarterly*, 50(4), 844-870.
- Azkarai, A., & García Mayo, M.P. (2016). Task repetition effects on L1 use in EFL child task-based interaction. *Language Teaching Research*.

- Azkarai, A., & Oliver, R. (2016). Negative feedback on task repetition: ESL vs. EFL child settings. *The Language Learning Journal*.
- Bouffard, L.A., & Sarkar, M. (2008). Training 8-year-old French immersion students in metalinguistic analysis: An innovation in form-focused pedagogy. *Language Awareness, 17*(1), 3-24.
- Brinton, D. (2003). Content-based instruction. In D. Nunan (Ed.), *Practical English language teaching* (pp. 199-224). New York: McGraw Hill.
- Butler, Y.G., & Zeng, W. (2014). Young foreign language learners' interactions during task-based paired assessments. *Language Assessment Quarterly, 11*, 45-75.
- Butler, Y.G., & Zeng, W. (2015). Young foreign language learners' interactional development in task based paired assessment in their first and foreign languages: a case of English learners in China. *Education 3-13, 44*(3), 292-321.
- Bygate, M. (2001). Effects of task repetition on the structure and control of oral language. In M. Bygate, P. Skehan, & M. Swain (Eds.), *Task-based learning: Language teaching, learning, and assessment* (pp. 23-48). London: Longman.
- Cameron, L. (2001). *Teaching languages to young learners*. Cambridge: CUP.
- Chaudron, C. (1988). *Second language classrooms*. New York: Cambridge University Press.
- Choi, S.Y., & Li, S. (2012). Corrective feedback and learner uptake in a child ESOL classroom. *RELC Journal, 43*(3), 331-351.
- Christensen, P., & Prout, A. (2002). Working with ethical symmetry in social research with children. *Childhood, 9*(4), 477-97.
- Coppock, K. (2010). Children as peer researchers: reflections on a journey of mutual discovery. *Children and Society, 25*(6), 435-46.

- Coyle, D. (2007). Content and language integrated learning: Towards a connected research agenda for CLIL pedagogies. *International Journal of Bilingual Education and Bilingualism*, 10, 543-562.
- Dalton-Puffer, C. (2011). Content and language integrated learning: From practice to principles. *Annual Review of Applied Linguistics*, 31, 182-204.
- Day, E., & Shapson, S. (1991). Integrating formal and functional approaches to language teaching in French Immersion: An experimental study. *Language Learning*, 41, 25-58.
- DeKeyser, R. M. (2013). Age effects in second language learning: Stepping stones toward better understanding. *Language Learning*, 63(1), 52-67.
- Dulay, H., & Burt, M. (1974). A new perspective on the creative construction process in child second language acquisition. *Language Learning*, 24(2), 253-278.
- Edelenbos, P., Johnstone, R.M. & Kubanek, A. (2006). The main pedagogical principles underlying the teaching of languages to very young learners. *Languages for the children of Europe: Published Research, Good Practice and Main Principles*. Final Report of the EAC 89/04, Lot 1 Study. European Commission, Brussels: Education and Culture, Culture and Communication, Multilingualism Policy.
- Ellis, R. (1984). Formulaic speech in early classroom second language development. In J. Handscombe, R. Orem, & B. Taylor (Eds.), *On TESOL '83: The question of control* (pp. 53-65). Washington D.C.: TESOL.
- Ellis, R. (2003). *Task-based language learning and teaching*. Oxford: Oxford University Press.
- Ellis, R. (2016). Focus on form: A critical review. *Language Teaching Research*, 20(3), 405-428.
- Ellis, R. & Heimbach, R. (1997). Bugs and birds: Children's acquisition of second language vocabulary through interaction. *System*, 2, 247-259.

- Enever, J., Moon, J., & Raman, U. (Eds.) (2009). *Young Learner English Language Policy and Implementation: international Perspectives*. UK: Garnet Education.
- García Mayo, M.P., & Imaz Agirre, A. (2016). Task repetition and its impact on EFL children's negotiation of meaning strategies and pair dynamics: an exploratory study. *The Language Learning Journal*, 44(4), 451-466.
- García Mayo, M.P., & Lázaro Ibarrola, A. (2015). Do children negotiate for meaning in task-based interaction? Evidence from CLIL and EFL settings. *System*, 54, 40-54.
- García Mayo, M.P., & García Lecumberri, M.L. (2003). *Age and the Acquisition of English as a foreign language*. Clevedon: Multilingual Matters.
- García Mayo, M.P., Imaz Agirre, A. & Azkarai, A. (forthcoming). Task repetition in EFL child oral interaction. In M. Ahmadian, & M. P. García Mayo (Eds.), *Recent perspectives on task-based language learning and teaching*. Berlin: Mouton de Gruyter.
- Harley, B. (1998). Issues in designing form-focused L2 tasks for children. In C. Doughty, & J. Williams (Eds.), *Focus on form in classroom language acquisition* (pp. 156-174). Cambridge: CUP.
- Holland, S., Renold, E., Ross, N., & Hillman, A. (2010). Power, agency and participatory agendas: a critical exploration of young people's engagement in participative qualitative research. *Childhood*, 17, 360-75.
- Hyder, T. (2002). Making it happen: Young children's rights in action. In B. Franklin (Ed.), *The new handbook of children's rights: Comparative policy and practice* (pp. 311-327). London, New York: Routledge.
- Ito, S. (1997). Nenshoosha nihongo gakushuusha no koobun shuutoku: Juudanteki jiree kenkyuu. *Hokkaido Daigaku Ryuugakusei Sentaa Kiyoo*, 1, 68-82.

- Iwasaki, J. (2008). Acquiring Japanese as a second language (JSL) in a naturalistic context. In J. Philp, R. Oliver, & A. Mackey (Eds.), *Second language acquisition and the younger learner: Child's play?* (pp. 231-254). Amsterdam; Philadelphia: John Benjamins.
- Jia, G., & Aaronson, D. (2003). A longitudinal study of Chinese children and adolescents learning English in the United States. *Applied Psycholinguistics*, 24, 131-161.
- Jia, G., & Fuse, A. (2007). Acquisition of English grammatical morphology by native Mandarin-speaking children and adolescents: Age-related differences. *Journal of Speech, Language, and Hearing Research*, 50, 1280–1299.
- Kellett, M. (2010). Small shoes, big steps! Empowering children as active researchers. *American Journal of Community Psychology*, 46(1–2), 195-203.
- Lansdown, G. (2002). *Promoting children's participation in democratic decision-making*. Florence: Innocenti Research Centre, UNICEF.
- Lasagabaster, D., & Sierra, J.M. (2010). Immersion and CLIL in English: more differences than similarities. *ELT Journal*, 64(4), 367-375.
- Lenneberg, E. H. (1967). *Biological foundations of language*. New York: Wiley.
- Lewis, G. (2004). *The Internet and young learners*. Oxford: OUP.
- Lightbown, P., & Spada, N. (1990). Focus-on-form and corrective feedback in communicative language teaching: Effects on second language learning. *Studies in Second Language Acquisition*, 12(4), 429-448.
- Lightbown, P., & Spada, N. (1993). *How languages are learned*. Oxford: Oxford University Press.
- Lightbown, P., Halter, R., White, J., & Horst, M. (2002). Comprehension-based learning: The limits of “do it yourself”. *Canadian Modern Language Review*, 58(3), 427-464.
- Long, M. H. (1983). Native speaker/non-native speaker conversation and the negotiation of comprehensible input. *Applied Linguistics*, 4(2), 126-141.

- Long, M.H. (1996). The role of the linguistic environment in second language acquisition. In W.C. Ritchie, & T.K. Bhatia (Eds.), *Handbook of Second Language Acquisition* (pp. 413-168). New York: Academic Press.
- Lyster, R. (1998). Recasts, repetition and ambiguity in L2 classroom discourse. *Studies in Second Language Acquisition*, 20, 51-81.
- Lyster, R. (2001). Negotiation of form, recasts and explicit correction in relation to error types and learner repair in immersion classrooms. *Language Learning*, 51, 265-301.
- Lyster, R. (2004). Differential effects of prompts and recasts in form-focused instruction. *Studies in Second Language Acquisition*, 26, 399-432.
- Lyster, R., & Mori, H. (2006). Interactional feedback and instructional counterbalance. *Studies in Second Language Acquisition*, 28(2), 269-300.
- Lyster, R., & Ranta, L. (1997). Corrective feedback and learner uptake: Negotiation of form in communicative classroom. *Studies in Second Language Acquisition*, 19, 37-66.
- Mackey, A., & Philp, J. (1998). Conversational interaction and second language development: Recasts, responses, and red herrings? *The Modern Language Journal*, 82, 338-356.
- Mackey, A., & Oliver, R. (2002). Interactional feedback and children's L2 development. *System*, 30, 459-477.
- Mackey, A., & Gass, S. (2005). *Second language research. Methodology and design*. Mahwah: Erlbaum.
- Mackey, A., Kanganas, A.P., & Oliver, R. (2007). Task familiarity and interactional feedback in child ESL classrooms. *TESOL Quarterly*, 41(2), 285-312.
- Mackey, A., Oliver, R., & Leeman, J. (2003). Interactional input and the incorporation of feedback: An exploration of NS-NNS and NNS-NNS adult and child dyads. *Language Learning*, 53, 35-66.

- Mackey, A., & Silver, R.E. (2005). Interactional tasks and English L2 learning by immigrant children in Singapore. *System*, 33, 239-260.
- Muñoz C. (2006a). The effects of age on foreign language learning: The BAF Project. In C. Muñoz (Ed.), *Age and the rate of foreign language learning*. (pp. 1-40) Clevedon: Multilingual Matters.
- Muñoz, C. (Ed.). (2006b). *Age and the rate of foreign language learning*. Multilingual Matters.
- Muñoz, C. (2007). Age-related differences and second language learning practice. In R.M. DeKeyser (Ed.), *Practice in a Second Language* (pp. 229-255). Cambridge: CUP.
- Muñoz, C. (2008). Symmetries and asymmetries of age effects in naturalistic and instructed L2 learning. *Applied Linguistics*, 29, 578-596.
- Muñoz, C. (2014a). Contrasting effects of starting age and input on the oral performance of foreign language learners. *Applied Linguistics*, 35(4), 463-482.
- Muñoz, C. (2014b). Exploring young learners' foreign language learning awareness. *Language Awareness*, 23(1-2), 24-40.
- Myles, F., & Mitchell, R. (2012). Learning French from ages 5, 7 and 11: An investigation into starting ages, rates and routes of learning amongst early foreign language learner. *ESRC End of Award Report RES-062-23-1545*.
- Nicholas, H., & Lightbown, P.M. (2008). Defining child second language acquisition, defining roles for L2 instruction. In J. Philp, R. Oliver, & A. Mackey (Eds.), *Second Language Acquisition and the Younger Learner: Child's play?* (pp. 27-51). Amsterdam: John Benjamins.
- Nikolov, M. (1999). 'Why do you learn English?' 'Because the teacher is short.' A study of Hungarian children's foreign language learning motivation. *Language Teaching Research*, 3(1), 33-56.

- Nikolov, M. (Ed.) (2016). *Assessing young learners of English: Global and local perspectives*. Dordrecht: Springer.
- Nikolov, M., & Mihaljević Djigunović, J. (2006). Recent research on age, second language acquisition, and early foreign language learning. *Annual Review of Applied Linguistics*, 26, 234-260.
- Nikolov, M., & Mihaljević Djigunović, J. (2011). All shades of every color: An overview of early teaching and learning of foreign languages. *Annual Review of Applied Linguistics*, 31, 95-119.
- Nikolov, M., Mihaljević Djigunović, J., Mattheoudakis, M., Lundberg, G., & Flanagan, T. (Eds.) (2007). *Teaching modern languages to young learners: teachers, curricula and materials*. Strasbourg: Council of Europe.
- Ojima, S., Matsuba-Kurita, H., Nakamura, N., Hoshino, T., & Hagiwara, H. (2011). Age and amount of exposure to a foreign language during childhood: Behavioral and ERP data on the semantic comprehension of spoken English by Japanese children. *Neuroscience Research*, 70, 197-205
- Oliver, R. (1995). Negative feedback in child NS-NNS conversation. *Studies in Second Language Acquisition*, 17, 459-481.
- Oliver, R. (1998). Negotiation of meaning in child interactions. *The Modern Language Journal*, 82(3), 372-386.
- Oliver, R. (2000). Age differences in negotiation and feedback in classroom and pairwork. *Language Learning*, 50(1), 119-151.
- Oliver, R. (2002). The patterns of negotiation for meaning in child interactions. *The Modern Language Journal*, 86(1), 97-111.
- Oliver, R. (2009). How young is too young? Investigating negotiation of meaning and corrective feedback in children aged five to seven years. In A. Mackey, & C. Polio

- (Eds.), *Multiple perspectives on interaction: Second language interaction research in honour of Sue M. Gass* (pp. 135-156). London: Routledge.
- Oliver, R., & Grote, E. (2010). The provision and uptake of different types of recasts in child and adult ESL learners: What is the role of age and context? *Australian Review of Applied Linguistics*, 33(3), 26.1-26.22.
- Oliver, R., & Mackey, A. (2003). Interactional context and feedback in child ESL classrooms. *The Modern Language Journal*, 87(4), 519-533.
- Paradis, J. (2007). Second language acquisition in childhood. In E. Hoff, & M. Shatz (Eds.), *Blackwell Handbook of Language Development* (pp. 387-406). Malden MA: Blackwell.
- Philp, J., Oliver, R., & Mackey, A. (Eds.) (2008). *Second Language acquisition and the young learner. Child's play?* Amsterdam: John Benjamins.
- Pienemann, M. (1998). *Language processing and second-language development: Processability theory*. Amsterdam: John Benjamins.
- Pinter, A. (2006). Verbal evidence of task related strategies: child versus adult interactions. *System*, 34, 615-30.
- Pinter, A. (2007). Some benefits of peer-peer interaction: 10-year-old children practising with a communication task. *Language Teaching Research*, 11, 189-207.
- Pinter, A. (2014). Child participant roles in applied linguistics research. *Applied Linguistics*, 35(2), 168-183.
- Pinter, A., & Zandian, S. (2014). 'I don't ever want to leave this room': Benefits of researching 'with' children. *ELT Journal*, 68(1), 64-74.
- Pinter, A., & Zandian, S. (2015). 'I thought it would be tiny little one phrase that we said, in a huge big pile of papers': Children's reflections on their involvement in participatory research. *Qualitative Research*, 15(2), 235-250.

- Pinter, A., Kuchah, K., & Smith, R. (2013). Researching with children. *ELT Journal*, 67(4), 484-487.
- Roberts, H. (2008). Listening to children and hearing them. In P. Christensen, & A. James (Eds.), *Research with children: Perspectives and practices* (pp. 260-275). London: Routledge.
- Sample, E., & Michel, M. (2014). An exploratory study into trade-off effects of complexity, accuracy and fluency in young learners' oral task repetition. *TESL Canada Journal*, 31, 23-46.
- Sato, C. (1984). Phonological processes in second language acquisition: another look at interlanguage syllable structure. *Language Learning*, 34(4), 43-57.
- Schwartz, B. D. (2004). Why child L2 acquisition? In J. van Kampen, & S. Baauw (Eds.), *Proceedings of GALA 2003* (pp. 47-66). Utrecht: LOT.
- Shintani, N. (2012). Repeating input-based tasks with young beginner learners. *RELC Journal*, 43(1), 39-51.
- Skelton, T. (2008). Research with children and young people: Exploring the tensions between ethics, competence and participation. *Children's Geographies*, 6(1), 21-36.
- Snow, C., & Hoefnagel- Höhle, M. (1978). The critical period for language acquisition: Evidence from second language learning. *Child Development*, 49, 1114-1128.
- Spada, N., & Lightbown, P. (1993). Instruction and the development of questions in L2 classrooms. *Studies in Second Language Acquisition*, 15(2), 205-224.
- Stoller, F. L. (2008). Content-based instruction. In N. Van Deusen-Scholl, & N. H. Hornberger (Eds.), *Encyclopaedia of Language and Education, 2nd Edition, Volume 4: Second and Foreign Language Education* (pp. 59-70).
- Storch, N. (2002). Patterns of interaction in ESL pair work. *Language Learning*, 52(1), 119-158.

- Swain, M. (1985). Communicative competence: Some roles of comprehensible input and comprehensible output in its development. In S. Gass, & C. Madden (Eds.), *Input and second language acquisition* (pp. 235-253). Rowley MA: Newbury House.
- Swain, M. (1998). Focus on form through conscious reflection. In C. Doughty, & J. Williams (Eds.), *Focus on Form in Classroom Second Language Acquisition* (pp. 64-81). Cambridge: Cambridge University Press.
- Swain, M., & Lapkin, S. (1998). Interaction and second language learning: Two adolescent French immersion students working together. *The Modern Language Journal*, 82, 320-337.
- Swain, M., & Lapkin, S. (2000). Task-based second language learning: The uses of the first language. *Language Teaching Research*, 4, 251-274.
- Tarone, E., & Swain, M. (1995). A sociolinguistic perspective on second language use in immersion classrooms. *The Modern Language Journal*, 79, 166-178.
- Tedick, D. J., & Young, A. I. (2016). Fifth grade two-way Immersion students' responses to form-focused instruction. *Applied Linguistics*, 37(6), 784-807.
- Thompson, R., & Jackson, S. (1998). Ethical dimensions of child memory research. *Applied Cognitive Psychology*, 12, 218-224.
- Tognini, R. & Oliver, R. (2012). L1 use in primary and secondary foreign language classrooms and its contribution to learning. In E. Alcón Soler, & M.P. Safont Jordá (Eds.), *Discourse and learning across L2 instructional contexts* (pp. 53-78). Amsterdam: Rodopi
- Unsworth, S. (2005). Child L1, child L2 and adult L2 acquisition: Differences and similarities. In A. Brugos, L. Micciulla, & C. E. Smith (Eds.), *Proceedings of the 28th annual Boston university conference on language development* (pp. 633-644). Somerville MA: Cascadilla.

- Unsworth, S., de Bot, K., Persson, L., & Prins, T. (2012). Foreign languages in primary school project. *Proceedings of the foreign languages in primary schools projects: presentation results FLiPP-research*. Amersfoort, 13 December 2012.
- Vygotsky, L.S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.
- White, L., Spada, N., Lightbown, P., & Ranta, L. (1991). Input enhancement and L2 question formation. *Applied Linguistics*, 12(4), 416-423.
- Wong-Fillmore, L. (1976). *The second time around: Cognitive and social strategies in second language acquisition*. Unpublished doctoral dissertation, Stanford University.
- Woodhead, M., & Faulkner, D. (2008). Subject, objects or participants? Dilemmas of psychological research with children. In P. Christensen, & A. James (Eds.), *Research with children: Perspectives and practice* (pp. 10-39). New York: Routledge.

Word count 7,730