The Study of Metalinguistic Constructs in Second Language Acquisition Research

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Part II
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Metalinguistics, which refers to linguistic or cognitive activities bearing on language (Gombert, 1993), is commonly associated with constructs such as knowledge, ability, reflection and awareness. The study of these various metalinguistic constructs (e.g. metalinguistic knowledge, metalinguistic reflection) has become increasingly popular in the field of second language acquisition (SLA), and there seems to be a general assumption that they play positive roles in SLA. Although this assumption is validated in some studies, a quick review of the literature reveals the great diversity of contexts and ways in which these constructs have been examined over the past 30 years or so, making general conclusions about their impact on SLA difficult to draw.

Our chapter serves as an overview of the research conducted so far, by providing a synthesis of what was done and an outline of future research perspectives. First, we focus on the ways metalinguistic constructs have been defined in SLA in order to establish a common ground to describe the research conducted. Second, we present an overview of SLA metalinguistic research, which allows us to highlight general results and to formulate future research perspectives.

Definition of Metalinguistic Constructs

The term ‘metalinguistic’ is defined differently according to the field in which it is used (i.e. linguistics and cognitive psychology) (Gombert, 1996). For linguists, it refers to the uses of language to talk about language (Gombert, 1996: 41). This perspective was originally expressed by Jakobson (1960), who discussed the metalinguistic function of language as those instances in which speakers focus on language itself in order to verify whether they use the same code. Likewise, Rey-Debove (1978) notes that: “It is generally accepted that language has a ‘metalinguistic function’, in other words, that language is sometimes used for talking about language”1 (p. 1). This natural self-referential property of language is what Lyons (1995) calls ‘reflexivity’. From this perspective, linguists have been mainly interested in studying the formal characteristics of language that are specific to this metalinguistic function. For cognitive psychologists, on the other hand, metalinguistic activities correspond to...
a subfield of metacognition that is concerned with language and its use (Gombert, 1992: 13; Gombert, 1996: 41), and encompasses any reflection about language as well as conscious control and intentional planning activities that individuals experience (e.g. consciously adding an affix to a word to create another one, as in ‘house’ and ‘housing’). As will be seen in the following presentation, both these conceptions are found in the various definitions of the metalinguistic constructs investigated in SLA research.

**Metalinguistic Knowledge**

*Metalinguistic knowledge* is one of the most common metalinguistic constructs examined in SLA and is typically equated with explicit knowledge of language. For instance, Alderson, Clapham and Steel (1997) simply define it as “knowledge about language” (p. 95) and Hu (2002) as “explicit and verbalizable knowledge about L2 grammar” (p. 348). More encompassing definitions are those of Elder (2009) and Roehr (2008), who refer to Ellis’s definition of explicit knowledge:

> the declarative and often anomalous knowledge of the phonological, lexical, grammatical, pragmatic, and sociocritical features of an L2 together with the meta-language for labeling this knowledge. It is held consciously and is learnable and verbalizable.

_Ellis, 2004: 244–245_

According to Bialystok (2001), this view of metalinguistic knowledge as explicit knowledge oversimplifies the concept, since knowledge of language must be something more than “linguistic knowledge that has been made explicit” (2001: 123). She claims that the distinction between explicit and metalinguistic knowledge has to do with the degree of generality of the mental representation of the language system. If those mental representations are the structure of a particular language, then we are dealing with explicit knowledge. However, according to her, metalinguistic knowledge is knowledge of abstract principles of linguistic structure (e.g. canonical word order), a type of knowledge more general and broader than knowledge related to linguistic structures of a specific language. In Bialystok’s words, “metalinguistic knowledge is the explicit representation of abstract aspects of linguistic structure that become accessible through knowledge of a particular language” (2001: 124). Despite Bialystok’s arguments, it seems to be a common practice in SLA to use explicit knowledge and metalinguistic knowledge as synonymous.

**Metalinguistic Awareness**

In SLA, *metalinguistic awareness* has been defined in relation to the concept of attention on language. This view is found in Bialystok’s work according to which metalinguistic awareness occurs when “attention is actively focused on the domain of knowledge that describes the explicit properties of language” (2001: 127). A similar definition is adopted by Bouffard and Sarkar (2008) who talk about attention to explicit knowledge of language. Defined as such, metalinguistic awareness is a state.

Other researchers talk more specifically about the ‘ability’ to focus attention on language. This is the case of Jessner (2008) who defines metalinguistic awareness as “the
ability to focus on linguistic form and to switch focus between form and meaning” (p. 277) and Dillon (2009) who uses Thomas’ (1988) words: “an individual’s ability to focus attention on language as an object in and of itself, to reflect upon language, and to evaluate it” (Thomas, 1988: 531, cited in Dillon, 2009: 186). Likewise, Reder et al. (2013) define metalinguistic awareness as “the speaker’s ability to distance himself from the content of speech in order to pay attention to the structural features of language and to the language’s properties as an object” (p. 687).

Metalinguistic awareness has also been commonly defined as the individual’s ability to manipulate linguistic features (e.g. Cheung et al., 2010) and in a less frequent manner as the conscious knowledge of formal aspects of language (Renou, 2001), a definition that is closely related to those of metalinguistic knowledge presented above.

**Metalinguistic Reflection and Activity**

*Metalinguistic reflection* refers to any conscious and intentional act of reflection about language (Gombert, 1992) and implies, according to Berthoud (1982), taking distance from language. It “[...] must be distinguished from purely linguistic behavior, that is the production and interpretation of utterances” (Berthoud, 1982: 151). This is so since reflecting about language arguably “requires flexible and manipulable linguistic representations” (Karmiloff-Smith, 1992: 32), that are accessible to consciousness, whereas spontaneous linguistic production and interpretation mainly relies on implicit, intuitive knowledge. Thus metalinguistic reflection is considered by some (e.g. Richelle, 1971; Berthoud, 1982; Bonnet and Tamine-Gardes, 1984) as the observable product of language awareness. In SLA, Simard and her colleagues (Simard, 2004a, 2004b, 2004c; Simard, French and Fortier, 2007; Simard and French, 2011; Simard, Guénette and Bergeron, 2015) define it following Gombert (1996) as “any conscious act of reflection about language, including learners’ planning of how they will process it linguistically” (Simard et al., 2007: 510). Other definitions of metalinguistic reflection seem to place more emphasis on the idea of “attention to language”. For example, Griggs (1997) defines it as a focus on language production and control of existing knowledge.

Relatedly, the term *metalinguistic activity* is also often defined as reflection about language. For instance, Camps and Milian (2000) define it as “the cognitive process in which individuals reflect about language” (p. 104). Likewise, Gutiérrez (2008) defines it as a cognitive process in which attentional resources are focused on language. These authors note that metalinguistic activity can take place on the social plane in instances such as when learners are writing collaboratively and they focus their joint attention on language aspects.

**Metalinguistic Ability**

*Metalinguistic ability* corresponds to “the ability to make language (at its different levels: phoneme, word, syntactic and pragmatic) opaque and attend to them in and for themselves” (Cazden, 1976: 603) and for Bialystok (2001), it refers to “the capacity to use knowledge about language as opposed to the capacity to use language” (p. 124). Although linguists have mainly focused on the metalinguistic function of language, as noted earlier, the idea of a metalinguistic ability remains implicit in the work of linguists such as Jakobson (1960) and Rey-Debove (1978). Benveniste (1974) is one of the first linguists to discuss more explicitly the capacity that speakers have to take language
as an object: “the possibility that we have to place ourselves above language, to isolate ourselves from it, to contemplate it, at the same time as we use it in our reasoning and our observations” (pp. 228–229).

Unlike metalinguistic knowledge, which can be developed throughout a lifetime, the ability to reflect about language is a natural process that seems to be about complete around the age of 11 and 12 and seems to be associated with the onset of literacy (see Gombert, 1992 and Karmiloff-Smith, 1992 for more detail on metalinguistic development). Furthermore, as Ranta (2002) points out, there are individual differences with respect to metalinguistic ability and its rate of development and ultimate attainment (e.g. Gleitman and Gleitman, 1970).

Some researchers add further detail to the construct of metalinguistic ability and see it as corresponding more specifically to the capacity to intentionally manipulate language units. Thus, it is understood by some as “the individual’s ability to consider the different linguistic units (phonemes, syllables, words, sentences, text) as object of analysis” (Armand, 2000: 470) and it involves the ability “to monitor and plan their own methods of linguistic processing (in both comprehension and production)” (Gombert, 1992: 13). These researchers also emphasize the importance of distinguishing metalinguistic ability from the use of language to refer to itself; that is, metalanguage (Gombert, 1993; Armand, 2000).

**Metalanguage**

In SLA studies, *metalanguage* refers to the linguistic expressions used for talking about language (Berry, 2005). Expressions such as noun phrase, direct object, or verb conjugation, which are typically found in linguistics textbooks or in language learning methods, are often referred to as *technical metalanguage*. Some technical terms, such as ‘subject’ or ‘verb’, are more common among individuals who, unlike linguists or language teachers, are not directly involved in the study of language, than other technical terms such as ‘ergative verb’ or ‘relative clause’. Importantly, although technical metalanguage is often necessary to explain language rules, name linguistic categories and describe relations between those categories, it is not an essential element of metalinguistic constructs such as knowledge or ability, since, for example, it is possible to explain language rules by resorting to non-technical metalanguage (Tunmer and Herriman, 1984: 12).

More recently, the use of the terms metalanguage or metatalk has been broadened to include any talk about language (e.g. Berry, 2005; Fortune, 2005); that is, the discursive activity that has language as its topic, even if the terms used do not directly refer to language. In this sense, these terms are related to folk linguistics, which focuses on the knowledge of and comment about language by non-linguists (see Preston, this volume, and also Niedzielski and Preston, 2003).

**Synthesis**

Prevalent features in each definition of the metalinguistic constructs presented above can be identified. First, metalinguistic knowledge often refers to the explicit, conscious representations of language, whereas metalinguistic ability has to do with the capacity to consciously manipulate linguistic elements. While both metalinguistic awareness and metalinguistic reflection (and activity) seem to deal with attention to language,
the former has to do with the individual’s ability to attend to linguistic elements and the latter to the cognitive processes involved in actually doing so. Interestingly, some authors’ definitions of metalinguistic awareness include the term ‘ability’ (e.g. Dillon, 2009; Jessner, 2008; Reder, Marec-Breton, Gombert and Demont, 2013), which would seemingly be more akin to metalinguistic ability. Instead, rather than the ability to focus on language, metalinguistic ability has been commonly defined as the individual’s ability to manipulate linguistic elements, a definition that has also been used to refer to metalinguistic awareness (e.g. Cheung et al., 2010). Finally, metalanguage, in the sense of talk about language, is the actual manifestation of those processes.

Given the commonalities in their definitions, it is not surprising that the metalinguistic constructs examined in SLA studies have often been operationalized in a similar manner and measured using similar instruments, as will be seen in what follows.

**Overview of the Metalinguistic Research in SLA**

Studies on metalinguistic constructs conducted in SLA over the past 30 years can be categorized into three groups according to their main research objective. In the first and larger group, researchers mainly investigated the relationship between metalinguistic constructs and learning success, whether related to a language skill, language proficiency in general or academic success. The second group of studies aimed at describing the nature and use of the metalinguistic constructs investigated. Finally, in the last group of studies, researchers looked at the development of metalinguistic constructs either as a result of a single treatment or over time. Within each group, we present the studies according to the metalinguistic construct examined.

**Correlational Studies**

Most correlational studies presented in this section investigated metalinguistic knowledge operationalized through explicit knowledge tasks such as error identification, correction and explanation tasks, and most of them found positive correlations between the metalinguistic constructs and language aspects examined.

One of the earliest correlational studies is Sorace (1985), who examined the relationship between oral production and metalinguistic knowledge, measured using a grammaticality judgement task and an identification, correction and explanation of error task, and found a positive correlation between both variables. Some years later, Alderson et al. (1997) examined how metalinguistic knowledge and language aptitude relate to language competency. They operationalized metalinguistic knowledge as identification of speech parts, and correction and explanation of errors. While identification of speech parts and rule verbalizations were weakly related to second language (L2) proficiency, the error correction section was significantly correlated to grammar, reading and writing, but not to listening. Elder et al. (1997) used the same tests of metalinguistic knowledge as Alderson et al. (1997), but they reported their results as a combined score. Their findings showed moderate to weak correlations between metalinguistic knowledge and L2 achievement. Elder and Manwaring (2004) measured metalinguistic knowledge through similar tests to those in Alderson et al. (1997) and Elder et al. (1997) to examine its predictive power in L2 learning success for groups of students who had received different types of instruction. Their results revealed that the explicit instruction groups demonstrated higher levels of metalinguistic knowledge
than the communicative groups. Moreover, while only one of the two communicative
groups showed a strong correlation between metalinguistic knowledge and the reading
and writing section of the L2 achievement tests, metalinguistic knowledge correlated
strongly with all the sections in those tests (listening and speaking, and reading and
writing) for the explicit groups, although the correlations were stronger for reading and
writing than for listening and speaking. Finally, in all instances in which metalinguistic
knowledge tasks significantly correlated with L2 learning success, the error correction
part obtained the highest correlation coefficients.

In her 2008 study, Roehr found a positive correlation between metalinguistic knowl-
edge, measured through identification of speech parts, and through error correction
and explanation, and L2 proficiency, measured through grammatical and vocabulary
knowledge. As in Elder and Manwaring (2004), the correlations were stronger for the
error correction part than for the other metalinguistic measures. Similar results were
obtained by Roehr and Gánem-Gutiérrez (2009a), who measured metalinguistic knowl-
edge as a combined score on an error correction and description/explanation task. The
authors reported that performance on this metalinguistic task was positively correlated
to self-reported use of metalinguistic knowledge in a form-focused task (fill in the gaps
and multiple choice), and to performance on this task. Correa (2011) looked at the
relationship between general metalinguistic knowledge in English and Spanish and
mastery of the Spanish subjunctive. She measured metalinguistic knowledge through
identification of speech parts and through a grammaticality judgement test in which
participants had to identify, correct and explain errors. Her results showed that meta-
linguistic knowledge was correlated positively to an accurate use of the subjunctive in
four form-focused tasks. Finally, Gutiérrez (2013a) examined metalinguistic knowledge
as verbalization of rules and as knowledge of technical terms and its relationship to L2
proficiency. The results showed a strong correlation between metalinguistic knowledge
and a proficiency test that included listening, reading, writing and grammar sections,
but not with oral proficiency.

Metalinguistic knowledge has also been shown to relate to aspects other than L2
proficiency. For example, Morris (2003) found a positive correlation between metalin-
guistic knowledge, measured through an error correction and explanation task, and
academic performance in a grammar course and a methodology course that were part
of a teacher-training programme. Using similar tests to Roehr’s (2008), Roehr and
Gánem-Gutiérrez (2009b) investigated the relationship between university learners’
metalinguistic knowledge, language aptitude, L1 working memory and L2 working
memory in order to determine which variables predict the learners’ level of metalinguis-
tic knowledge. Two general conclusions were drawn from their results: 1) the length of
exposure to form-focused instruction was a strong predictor of the quality and quantity
of learners’ metalinguistic knowledge, and 2) metalinguistic knowledge is a different
construct from language-learning aptitude and working memory. Finally, Ziętek and
Roehr (2011) explored the relationship between metalinguistic knowledge, measured
as correction and description/explanation of errors, and cognitive styles, and observed
a correlation between the results on their metalinguistic knowledge test and the holist
learning style.

Other correlational studies investigating constructs such as metalinguistic aware-
ness and metalinguistic ability also found positive correlations between the variables
studied. For instance, Masny (1987), in her study on metalinguistic awareness, found
that the ability to recognize grammatical sentences was related to language aptitude
(sp. grammatical sensitivity), phonetic coding ability, and reading competence, and that the ability to recognize ungrammatical sentences and to correct errors was related to global L2 proficiency, measured through a cloze test, and L2 classroom achievement (i.e. the course grade). Renou (2001) measured metalinguistic awareness using an identification, correction and explanation of errors task, and observed a positive correlation between metalinguistic awareness and global L2 language competency for the participants who had received explicit instruction but not for the communicative group. Interestingly, when the proficiency scores were analysed separately, neither group showed a significant correlation between metalinguistic awareness and listening and reading comprehension. However, both groups showed a positive correlation with the section that targeted vocabulary, grammar and structures, although the correlations were stronger for the explicit group. Golonka (2006) found that those learners who were more metalinguistically aware (i.e. those who paid more attention to form and who self-corrected more) in an oral proficiency interview before a study abroad experience demonstrated higher L2 gains in oral proficiency after the immersive experience. Similarly, Ammar, Lightbown and Spada (2010) also found a positive correlation between the participants’ metalinguistic awareness, measured as their ability to explain differences between the L1 and L2 regarding question formation, and their accuracy in judging the grammaticality of questions and in forming questions using scrambled words.

The same type of results was obtained in studies investigating relationships between metalinguistic ability and L2 development. It should be noted that researchers who investigate such ability and those who investigate awareness about specific language aspects (e.g. phonological awareness, syntactic awareness) resort to the same types of measurement instruments. In addition, these studies are mainly conducted among children. For instance, Armand (2000) found that both metasemantic (distinguishing signifier from signified) and metaphonological ability (naming, comparing and suppressing phonemes) correlated with and predicted lower-level processes (decoding and word recognition) in L2 reading skills among children. However, similar results were not observed with metasyntactic ability (measured through repetition, judgement and correction of grammatical and ungrammatical sentences) and L2 reading skills. A few years later, Lefrançois and Armand (2003) found that metasyntactic ability played an important role in high-level processes of L2 reading (sentence comprehension and text comprehension). Likewise, metaphonological ability also appeared to correlate with oral proficiency. Chiappe and colleagues conducted a series of studies on the relationship between phonological awareness (measured with phoneme deletion, substitution, recognition tasks), syntactic awareness (measured with an oral cloze, i.e. completing a sentence with the best word) and reading skills among non-native speaking children. For instance, Chiappe, Siegel and Gottardo (2002) investigated whether the same type of relationships between reading skills measures and a series of other measures including phonological awareness and syntactic awareness would be observed between native and non-native children. Their results revealed that phonological awareness was a good predictor of reading skills for all children. In McBride-Chang et al. (2006), different aspects of kindergarten children’s phonological awareness (measured through syllable and phoneme onset deletion) correlated with L1 vocabulary knowledge and L2 vocabulary knowledge, whereas morphological awareness (measured as item identification and word construction) only correlated with L1 vocabulary knowledge. Similarly, Cheung et al. (2010) examined the correlations among speech perception, phonological and morphological awareness, reading, and vocabulary in L1 and L2,
and found that children’s morphological awareness predicted reading and vocabulary in both languages but that phonological awareness only played a role in the L2. Along these lines, Simard and colleagues (Simard, Fortier and Foucambert, 2013; Simard, Foucambert and Labelle, 2013, 2014) looked at the relationship between metasyntactic ability (measured through repetition of ungrammatical sentences and a replication task) and reading comprehension among native and non-native children. Overall, their results indicate a significant contribution of metasyntactic ability to reading comprehension among both native and non-native children.

Finally, Jackson (2014) looked at the relationship between language aptitude, working memory capacity, language experience and metalinguistic awareness. Metalinguistic awareness was measured through a questionnaire eliciting verbalizations about language. The analyses only revealed one positive correlation between working memory (measured through a visuo-spatial working memory task) and metalinguistic awareness.

Contrary to the correlational studies presented above, some investigating metalinguistic reflection did not yield positive correlations. This is the case of Simard et al. (2007) and Simard and French (2011) who found no correlation between the participants’ metalinguistic reflections, observed through elicited verbalizations in a diary, and grammatical and lexical knowledge. Comparable results were obtained in Suzuki and Itagaki (2007) who also examined metalinguistic reflections using L2 learners’ written reflections and L2 proficiency. However, when metalinguistic reflection is operationalized as self-repairs, it appears to be correlated with improved oral language production (e.g. Griggs, 1997, 1998).

Descriptive Studies

As in the first group of studies reported above, an important number of descriptive metalinguistic studies (i.e. studies looking at the nature and use of the metalinguistic construct under investigation) have examined metalinguistic knowledge.

For instance, Butler (2002) investigated the type of metalinguistic knowledge involved in the use of English articles and whether the participants’ metalinguistic knowledge varied according to their proficiency level. The participants’ verbalizations revealed qualitative differences among proficiency levels regarding metalinguistic knowledge about articles, with the higher-level learners displaying more sophisticated representations about the article system. Hu (2002) examined the psychological factors that mediate metalinguistic knowledge in SLA through the use of verbalization of rules. The results revealed that factors such as attention to form constrained the usefulness of metalinguistic knowledge in L2 performance. He also found that learners with higher levels of metalinguistic knowledge performed better on spontaneous writing tasks.

Using retrospective verbal reports, Roehr (2006) looked at the way L2 learners used their metalinguistic knowledge in a form-focused task. Her results revealed varying levels of complexity of reported metalinguistic knowledge. Furthermore, although Roehr observed an overall co-occurrence of metalinguistic knowledge and consistently successful performance on that task, she concluded that this type of representation may be useful in some circumstances but not in others. Using rule verbalizations about several English structures, Hu (2011) found that learners who had received large amounts of explicit grammar instruction had developed high levels of metalinguistic knowledge about those structures and also that they “had a productive knowledge of a large number of metalingual terms” (p. 74). Metalinguistic knowledge and knowledge
Metalinguistic Constructs

Knowledge of metalanguage as technical terms was also investigated by Berry (2009) and Erlam, Philp and Elder (2009). These studies looked at the knowledge of metalinguistic terminology of English and Education majors, respectively, in non-Anglophone countries, and they found relatively low levels of knowledge of technical terms with great variability among participants. Similar results were found by Alderson et al. (1997) and by Gutiérrez (2013a).

Other studies looked at learners’ metalanguage as ‘talk about language’ or ‘metatalk’. In that regard, Gutiérrez (2008) examined metalinguistic activity types through spontaneous verbalizations during collaborative writing, and observed that the majority of instances constituted ‘covert metalinguistic activity’; that is, talk in which attention to language could not be directly observed. Likewise, Fortune and Thorp (2001) found that only about 30% of the language related episodes (LREs) in their data contained metalinguage. Similar results were observed in Fortune (2013) who found that about 25% of the LREs from higher-level learners did not contain metalanguage, and that an additional 60% of episodes contained “no linguistic terminology, no grammar rules or explanations of the meanings of items” (p. 182). Gutiérrez (2011) hypothesized that learners likely resorted to metalinguistic knowledge representations in such covert metalinguistic activity, which he confirmed in Gutiérrez (2013b). Close to 80% of verbalizations obtained through elicited verbalization reflected metalinguistic knowledge of language. He concluded that the absence of metatalk could not be interpreted as an absence of reflection about language or absence of knowledge of language. Other important findings of these studies are that most talk about language had to do with lexical aspects and that such talk about language is often useful when solving linguistic problems. Research on LREs has, for the most part, reported similar findings (see Storch, 2011, for a review).

Other aspects of metalanguage have also been examined. For instance, Lee (2011) explored the types of feedback that L2 learners gave to each other through online postings. She found that the US students resorted to metalinguistic explanations to help their Spanish counterparts understand sophisticated lexical items and grammatical structures, whereas the Spanish students resorted to reformulations.

Finally, some studies examined awareness of language aspects. This is the case of Chiappe and Siegel (1999) who observed that although phonological awareness (phoneme manipulation tasks) did not discriminate between poor and good readers among non-native speaking children, syntactic awareness (oral cloze) did. Reder et al. (2013) investigated the metalinguistic awareness of L2 young learners of German compared with that of monolinguals. An L2 learning advantage was observed on dimensions distinguishing the two languages (i.e. compounds, morphology and syntax) but not on shared affixes, morphological and phonological dimensions.

Developmental Studies

One of the earliest studies that looked at the development of metalinguistic constructs is White and Ranta (2002), who found that metalinguistic instruction about the possessive determiners ‘his’ and ‘her’ not only led to gains on a metalinguistic task but also on an oral production one. The findings in Gámem-Gutiérrez and Harun (2011) showed that Concept-Based Instruction about tense-aspect marking in English led to deeper understanding of these concepts, and that verbalizations in think-aloud protocols and collaborative dialogue played an important role as a mediatinal tool. In a study
similar to White and Ranta (2002), Serrano (2011) investigated whether metalinguistic instruction about ‘his’ and ‘her’ had any effect on the learners’ performance on an error correction task and on an oral production task, on the one hand, and on the development of metalinguistic knowledge measured as the learners’ verbalizations in relation to the error correction task. Contrary to the studies mentioned above, the results indicated no significant differences between the metalinguistic instruction group and the control group. However, as in many previous studies, a positive correlation between learners’ metalinguistic knowledge and their performance on both tasks was observed. Erlam (2013) also examined the effect that two types of instruction, input-based and output-based, have on L2 learners’ metalinguistic knowledge of the indefinite article, measured using error identification and correction tasks in a grammaticality judgement test and verbalizations in a metalinguistic knowledge test. While both groups showed significant gains between pre-test and post-tests, there were significant differences between both groups after treatment. Thus, Erlam concluded that type of instruction makes a difference in terms of the development of metalinguistic knowledge.

Besides the studies that investigated metalinguistic knowledge, a number of studies looked at the development of other metalinguistic constructs. For instance, Simard (2004a) looked at L2 learners’ metalinguistic reflection using verbalizations over a five-month period. According to the results obtained, the participants’ metalinguistic reflection capacity did not increase over time. Roehr (2010) examined the development of proficiency and use of metalinguistic tools over time and observed an increase in both cases. Finally, Hirrata-Edds (2011) studied the effect of learning an L2 on the development of metalinguistic skills, which were defined in terms of higher levels of attentional control (see Bialystok, 2001). No difference was found on most metalinguistic tasks between the participants who were exposed to an L2 and those who were not.

Finally, some studies looked at the development of metalinguistic awareness among L2 learners. For instance, Bouffard and Sarkar (2008) found that instruction, consisting of corrective feedback and group discussions about videotaped class activities, had an impact on their participants’ metalinguistic awareness, which they measured using elicited verbalizations. Bialystok and her colleagues (e.g. Bialystok and Barac, 2012; Bialystok, Peets and Moreno, 2014; Hermanto, Moreno and Bialystok, 2012) reported on studies showing how an immersion programme impacted children’s metalinguistic awareness development. Tellier and Roehr-Brackin (2013) examined the impact of learning Esperanto as an additional language on metalinguistic awareness development. The results of their study conducted among 11 to 12-year-old English-speaking children showed no significant difference between the Esperanto group and the comparison group except on one of the 11 metalinguistic tasks, the recognition of cognates task.

**Synthesis**

Observations related to the object of the SLA metalinguistic studies, the definitions and operationalization of the constructs examined, and the study results can be made from the above presentation.

With respect to the object of study, many of the correlational studies are part of the earlier metalinguistic research. Most of the recent ones actually looked at either the nature and use of metalinguistic constructs or their development, indicating a change in research focus over time. Indeed, the initial interest in metalinguistic constructs was whether they were related to other aspects of language, most notably proficiency. While
establishing and confirming relationships between metalinguistic constructs and other language aspects is still a productive area of research, in recent years the scope of the area has broadened with the aim of gaining a deeper understanding of these constructs and of exploring whether pedagogical treatments have an effect on their development.

In terms of operationalization, metalinguistic knowledge has often been measured through identification of speech parts, identification and correction of errors, or verbalization of rules and/or linguistic knowledge. Interestingly, most of these studies used several of these measures to examine the construct, and in all the studies that used verbalizations, those verbalizations were elicited in some way. Studies investigating metalinguistic ability normally resort to grammatical tasks such as grammaticality judgements and ungrammatical sentence repetition and to what could be referred to as language manipulation tasks such as the suppression of phonemes and replication of errors. Metalinguistic reflection and metalinguistic activity seem to be mainly operationalized through verbalization data. Finally, metalinguistic awareness is operationalized using grammatical tasks such as grammaticality judgement and correction tasks, as well as verbalizations about language.

The measurement instruments used in SLA metalinguistic studies seem to tap mainly into two types of data: verbalization data and performance data. Verbalization data allow for the observation of the process of reflecting about language, which can be described as any reference to language, however explicit it may be; for example, a spontaneous exchange about language occurring naturally in learner interaction (as in studies on LREs) as well as an elicited verbalization of linguistic rules (as in a metalinguistic knowledge test). Performance data refer to any type of linguistic, grammatical and language manipulation tasks in which we measure the outcome of the problem-solving process as, for example, an error correction task. In such a task, participants demonstrate their level of metalinguistic ability by manipulating language in a given way without being asked to talk about language itself. Some measurement instruments are more specifically related to particular construct definitions than others. For instance, while metalinguistic knowledge and metalinguistic awareness are observed through verbalization and performance data, metalinguistic reflection is mainly observed through verbalization data and metalinguistic ability through performance data.

Regarding the results obtained in the reviewed studies, many reported positive correlations between metalinguistic knowledge, ability and awareness and language proficiency measured in a wide array of ways. However, no study demonstrated a relationship between metalinguistic reflection, operationalized through verbalizations about language, and L2 proficiency, whereas when metalinguistic reflection is operationalized as self-repairs, it does correlate with oral language production. Interestingly, correlations tend to be stronger between metalinguistic measures and reading, writing, grammar, and vocabulary than between metalinguistic measures and listening and speaking. These findings highlight the fact that metalinguistic constructs may play a more important role in uses of language that focus on form and/or for which time to focus on form is available. Additionally, we would argue that when L2 proficiency is measured as knowledge of grammar or vocabulary, these measures and those of metalinguistic constructs tap into the same types of representations.

Another interesting observation from the studies reviewed is that studies providing separate scores for measures that require judgement of sentences and/or identification and correction of errors and for measures that require verbalization of rules, tend to observe higher scores for the former than for the latter. Moreover, correlations
tend to be stronger between L2 proficiency and measures of metalinguistic constructs that rely on judgements and/or identification and correction of errors than those between L2 proficiency and measures that rely on verbalizations. This might explain the weak correlations found in the studies about metalinguistic reflection. In this regard, models of metalinguistic development, such as Gombert’s (1992) and Karmiloff-Smith’s (1992) identify different levels of explicit representations. Thus, while certain representations are only available to consciousness, others at a higher level are also available to verbalization. Similarly, Sorace (1985) notes that “verbalizations appear at the last stage of the developmental sequence” (p. 249) of metalinguistic abilities that she outlined in her study, and Ellis (2004) distinguishes between analysed explicit knowledge, which refers to the learners’ awareness of grammatical rules and features, and knowledge of metalanguage, which refers to the ability to verbalize explicit knowledge. Indeed, there is a clear distinction between having developed conscious representations about linguistic features and being able to verbalize those representations, and the former may very well exist independently of the latter (Ellis, 2004; Tunmer and Herriman, 1984).

**Conclusion: Future Research on Metalinguistic Constructs**

According to authors such as Bialystok (2001), Hinkel and Fotos (2002), Johns (2003), and Mitchell (2000), certain uses of language (e.g. writing) require metalinguistic behaviours, which are thought to generate controlled processing leading learners to pay attention to language forms (Masny, 2006). For other researchers, it is the verbalization of metalinguistic knowledge that facilitates L2 learning, by allowing learners to notice features in the input (e.g. Griggs, 2002; Mitchell, 2000; Swain, 1995; Trévise, 1994). In this view, a lack of metalinguistic behavior would considerably slow down the target language development (Vasseur and Arditty, 1996: 76).

Research so far seems to support those claims that developing explicit representations of language (metalinguistic knowledge), being able to focus one’s attention on language (metalinguistic awareness), being able to consciously manipulate language (metalinguistic ability), as well as reflecting about language (metalinguistic reflection) are beneficial for some aspects of SLA. However, there is still a need for a deeper understanding of the nature of these constructs as well as of their development in L2 learners.

Potential fruitful avenues for future research can be formulated from our synthesis of SLA metalinguistic research. First, more qualitative studies that provide rich descriptions of the nature of metalinguistic constructs, and that may constitute valuable complements to quantitative studies, should be conducted. There is also a need for studies investigating how metalinguistic constructs are related to other language aspects beyond correlations. This can be achieved by using structural equation modeling, for instance. Relatedly, there is a dire need for methodological studies investigating the impact of metalinguistic tasks on learners’ performances. For instance, grammaticality judgements and identification and correction of error tasks lead to the observation of correlations, while verbalizations do not. Secondly, future studies should further examine the effectiveness of different instructional treatments on the development of metalinguistic constructs, and their impact on L2 development. In this respect, more longitudinal studies should be conducted to verify the effect of instructional treatments. Finally, another interesting avenue would be to examine the usefulness of metalinguistic representations for specific linguistic features, in line with studies that have addressed
learning difficulty (e.g. Collins et al., 2009; DeKeyser, 2005; Ellis, 2006; Roehr and Gánem-Gutiérrez, 2009a).

This agenda of research should lead to the outline of a more thorough representation of the impact of metalinguistic constructs on SLA.

Related Topics
Metalinguistic research; second language acquisition; second language teaching

Notes
1 Our translation.
2 It should be noted that although ‘metalinguistic’ seems to be the most frequently used notion, some researchers choose not to use it and resort to other expressions to talk about ‘reflection about language’. For instance, Bange, Carol and Griggs (2000) use ‘linguistic awareness’ (conscience linguistique) which, according to them, corresponds to the self-reflective abilities and activities related to language and verbal communication, and is broader than metalinguistic. Others such as Vasseur and Arditty (1996) prefer to use the notion of ‘reflective activities’ (activités réflexives) over metalinguistic activities, which still corresponds for many to the Jakobsonian sense of language about the linguistic code, even though it now has a broader sense including discourse and communication-oriented activity. In this perspective, the term ‘reflexive’ allows the user to designate all these new meanings allocated to metalinguistic (pp. 60–61).
3 Our translation.
4 Some authors (e.g. McBride-Chang et al., 2006; Ranta, 2002) use the term metalinguistic skills as synonymous.

References


