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Referential communication in bilingual Catalan-Spanish children with Specific Language Impairment

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Abstract   The aim of the present study was to analyse the quality of messages produced by Catalan-Spanish children with Specific Language Impairment (SLI) during a referential communication task, as compared to age-matched controls at 8 years of age. Children described ten objects arranged in a picture, being some of them ambiguous. Verbal exchanges were transcribed and coded in CHAT format. Results showed that children with SLI produced fewer initial and final correct messages than their age-matched controls and adults used the same type of communicative regulations with both groups. Furthermore, morphosyntactic level assessed at age 7 did not predict the number of correct messages in the referential communication task one year later. We believe that the key difficulty in this task for children with SLI might not be exclusively linguistic and involves the analysis of the communicative context, the ability to extract the relevant information and to consider the adults' perspectives in order to allow them do the task correctly.

Comunicación referencial en niños bilingües del catalán-español con Trastorno Específico del Lenguaje

Resumen   El objetivo del presente trabajo fue analizar la calidad de los mensajes producidos por niños bilingües con Trastorno Específico del Lenguaje (TEL), hablantes de catalán y español, en una tarea de comunicación referencial, en comparación con niños controles de la misma edad a los 8 años de edad. La tarea de los niños consistía en describir la colocación de diversos objetos de un dibujo, algunos de ellos ambiguos, a un adulto que no veía la imagen. Los intercambios verbales fueron transcritos y codificados en formato CHAT. Los resultados mostraron que los niños con TEL producían menos mensajes correctos iniciales y finales que sus controles de edad. Los adultos utilizaron el mismo tipo y cantidad de mensajes para regular la comunicación con ambos grupos. Por otra parte, el nivel morfosintáctico a la edad de 7 años no predijo

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el número correcto de los mensajes en la tarea de comunicación referencial un año después. Creemos que la principal dificultad en esta tarea para los niños con TEL no es exclusivamente lingüística, e implica el análisis del contexto comunicativo, la capacidad de extraer la información relevante y considerar la perspectiva del adulto con el fin de hacer la tarea correctamente.

The aim of this study was to know the adequacy of communicative productions and responses to adult regulations of bilingual Spanish-Catalan children with Specific Language Impairment (SLI) during a referential communication task. Our work is framed within the hypothesis of the limited processing capacity proposed by Leonard (1998). The substantial delay in language acquisition in children with SLI is not related to the factors that usually explain problems in language learning, such as hearing impairment, low IQ, detectable neurological damage, or partner-emotional problems (American Pshyciatric Association, 2013; Leonard, 1998). Besides these common underlying factors, crosslinguistic studies (see Leonard, 2014) have shown that specific characteristics of linguistic profiles of children with SLI vary according to the specificities of a particular language. Among all of the above deficits, pragmatics is one of the least studied components in children with SLI, especially in bilingual populations. Nevertheless, a great international interest has become evident in recent years on this particular topic (Andrés-Roqueta, Clemente-Estevan, & Flores-Buils, 2012; Osman, Shohdi, & Aziz, 2011) because learning to communicate correctly is a key factor for appropriate social interaction and normal cognitive development (Yingling, 2004).

In this vein, difficulties in communication can lead to poor social relations and difficulties in both learning and cognition (Pickles, St. Clair, & Conti-Ramsden, 2013). In order to communicate correctly, linguistic, cognitive and social skills are necessary to be an effective speaker and/or listener. These skills include the ability to analyse the referent to be described in the communicative context, to take into consideration other's perspectives, to adapt language according to feedback, and to interpret non-literal information. Thus, communicative competence is defined as the ability to communicate in a personally effective and socially appropriate manner in a particular context (Trenholm & Jensen, 1992).

One of the components of the communicative competence involves the referential function that is used in numerous educational settings. Experimental studies in pragmatics have found that the interlocutors' sharing of a physical environment affects referential communication. For instance, keeping the goal of the task can help listeners disambiguate referring expressions in interactive games (Hanna & Tanenhaus, 2004). This can also affect language production, as when speakers tell stories to interlocutors who either share a picture of the story with the speaker, or rely entirely on the speaker's narrative. In this case, speakers tend to specify atypical objects more often than when these objects are visible to both interlocutors (Lockridge & Brennan, 2002).

For example, referential abilities might be needed when the child has to describe his/her drawing to the teacher. Following Haslett (1984), the referential communication function refers to the exchange of information related to particular referents. In this sense, the task of the speaker is to transfer information to the listener to allow the identification of a particular referent in a particular context. In order to explore referential communication, experimental settings involve tasks with several referents that must be identified and placed, and only verbal contact is possible given that a blank screen blocks the visual contact between the experimenter and the child. In referential communication tasks, object attributes, such as color and shape, tend to be used redundantly. Specifically, shape and object requests require the listener to visually identify the object in the physical environment as part of the pragmatic process of reference assignment. Therefore, research conducted using object attributes might be relevant for pragmatic models of referential communication (Rubio-Fernández, 2016).

To perform a correct referential communication task, task analysis, role taking and task evaluation are core processes that need to be carried out (Dickson, 1980). In this sense, task analysis demands to understand the communicative setting and to identify a particular referent in order to disentangle what makes it different from the others. Role taking is the ability of the speaker to consider other's perspectives and to adapt the conveyed message considering these perspectives. Final, task evaluation is the ability of the speaker to evaluate the quality of the communicative exchange, which is particularly important when assessing the effectiveness of the final transmitted message. All these skills develop during early childhood and are considered to be acquired by age 7-8 (Rosenberg, 1993).

Most previous studies on referential communication have attempted to explain the possible causes and consequences of ineffective communication in different groups of participants (Matthews, Butcher, Lieven, & Tomasello, 2012). Furthermore, experimental research in pragmatics has shown that participants are prone to use adjectives in a redundant manner in referential communication tasks (Koolen, Goudbeek, & Krahmer, 2013).

To date, previous studies on referential communication in children with SLI have shed contradictory results (Bishop & Adams, 1991; Johnston & Smith, 1989; Johnston, Smith, & Box, 1997; Reuterskiöld-Wagner, Nettelbladt, & Sahlén, 2001). In this vein, some studies have not shown a difference between SLI groups and typically developing children, in terms of communicating relevant information (Johnston et al., 1997; Reuterskiöld-Wagner et al., 2001). However, other works have shown children with SLI to present lower communicative effectiveness as compared to controls when it comes to the selection of relevant information (Bishop & Adams, 1991; Johnston & Smith, 1989; Meline & Brackin, 1987). Despite these contradictory results, studies agree in reporting certain subtle dissimilarities between children with SLI and controls (Bishop & Adams, 1990; Bishop & Ad-