Introduction

Cognition, 'the process of thought', is central to understanding and describing the nature of human beings. Cognition involves, in one way or another, language –the vehicle human beings use for communicating with each other. Research on knowledge and knowledge acquisition has gained prominence in the 20th century and has also entered the field of language acquisition in the second half of this same century. SLA is no doubt a most popular discipline in applied linguistics and has proved to be a most efficient trigger of research on language, how it is acquired and stored in our minds. Moreover, Cognitive Linguistics has broadened its scope and benefits from studies on the brain; Neurolinguistics and Psycholinguistics contribute significantly to knowledge in general and linguistic knowledge in particular, especially with new insights into how it is generated in the brain, how it is acquired or learnt and how it is activated within the neural system. As a result, the field of language acquisition and learning has gained momentum and has been revitalized, an influence that has definitely been felt in language teaching. Its bearing on language teaching is obvious.

Until recently, speculation and personal intuitions had prevailed in the study of language. In a similar vein, the discipline of learning and teaching languages ran parallel to these trends and was also more descriptive, analytical and intuitive than empirical. However, the situation is now changing. Experimental research on the role and function of the mind when we acquire the mother tongue, or when adults learn an L2, is difficult and proceeds rather slowly, due to the complexity and the intricacies proper to our brains. Discovering or identifying the details of how our neural system works when acquiring and storing knowledge is far from being transparent and straightforward. We still lack the adequate tools to analyse how the neural system achieves what we generically call 'knowledge' or the path biologically designed to arrive at it.

Still, Psycholinguistics and even Neurolinguistics have achieved remarkable success in describing specific processes of language acquisition, and brain studies have initiated a new era with the help of more sophisticated and powerful tools of analysis. Research on the function and role of some parts of the brain –regarding the physical location of specific knowledge, interneuron connections, their potential in the building of knowledge and/or logical and abstract processes– and a better understanding of the physical base of linguistic skills have shed some light on the construction of knowledge inside our minds. The assumption is that a better understanding of the process of knowledge building will also allow for a better understanding of language acquisition and learning, be it the native language or the second or third language.

It should be borne in mind that teaching practice and materials, as detected in classrooms and as they appear in textbooks, bring with and impose a particular sequence of tasks and events, which may or may not run in parallel with the expected sequence of processes in knowledge and language acquisition. SLA theories and proposals have heavily relied on top-down operations, from theoretically conceived grammars (even Universal Grammar) to practical grammars for L1 and L2 learners. But language acquisition and learning, like any other learning process based on cognition, is probably better understood if it is analysed as a bottom-up exemplar- and usage-based process.

The learning process must be accommodated within a much broader framework, which should necessarily include the genetically conditioned infrastructure supporting linguistic ability, as well as the way people interact with others, or with the world around them, or how human beings build symbolic knowledge and link language to concepts and things in the world. It is of particular interest for praxis to analyse the relationships and interconnections between general patterns of knowledge acquisition and language learning through the analysis of the action schemes that underlie language teaching practice and materials. Ultimately, the mismatch between general knowledge acquisition patterns and specific patterns of language learning will contribute to introduce unnecessary difficulties in the process of learning. Studies on the process of learning from a cognitive, psycholinguistic and neurolinguistic perspective, if contrasted against the practical work of daily teaching/learning, may be extremely useful for practitioners involved in language pedagogy and for the teaching praxis itself.

This monograph issue addresses specific topics related to cognitive processes underlying language acquisition, and certainly relevant to practical teaching. The main goal is to join together SLA research with FLT practice and research. We believe that both disciplines –SLA and FLT– have too often worked separately. If SLA findings strive to

maximize learning and if language classrooms are the settings where many (if not most) adult and young adult learners learn a second/foreign language, it follows that research on the pedagogical adaptations of SLA findings should be systematically undertaken so that they can finally be implemented in normal language teaching practice.

In the first article of this issue, **Bill VanPatten** brings into focus the complex nature of language, which derives from the complexity of its components and the way they interact with each other. He claims that language should be viewed as the result of at least two distinct components, mental representation and skill. The mental representation underlies the linguistic output of the speaker and contains all the formal features of the language; it is acquired mainly through input and Universal Grammar mechanisms. Skill is taken as the 'intersection of speed and accuracy'. Skill in language develops by using the language, as skills do in real life. It develops depending on the tasks people are engaged in. It is not the result of mechanical behavior, but rather the result of being engaged in something at which somebody wants to be skilled. VanPatten's claims have a direct bearing on language teaching: If grammar, for example, is not a skill but a mental representation, it cannot be acquired in the same way skills are acquired. Skills for their part cannot be directly taught either, but they can be promoted with certain classroom activities. Both components of language, however, may evolve and develop following the learners' experience in being exposed to the language along with various teaching endeavors.

Working Memory is a key device in knowledge acquisition, and therefore in language acquisition. **Gilabert and Muñoz** face the challenge of investigating the role of working memory capacity in L2 attainment and performance. They define working memory as the "*mental space* where cognitive processes occur in a coordinated manner", its function being 'temporarily storing information for further processing". Within this framework, the authors measure the working memory of 59 intermediate/advanced learners in an EFL context by means of a reading span task and correlate it with their oral production. The results reveal that there is no correlation between working memory and overall attainment, but a moderate to high correlation is revealed in some specific areas of linguistic performance.

Frances Boettinger, Junghye Park and Ivor Timmis approach the problem of fossilization through three introspective case studies, "focused on a specific aspect of the subjects' second language use which they perceived to be fossilised". Their goal is to find out whether specific fossilization (in three domains: grammar, vocabulary and pronunciation) may be efficiently combated through the application of cognitive strategies. The treatment was applied autonomously and the authors claim that their approach 'has the potential to lead to defossilisation'. Moreover –they further claim– this is a most effective way to develop

metacognitive knowledge and strategies, key ingredients in language learning in general, and a prerequisite for efficient autonomous defossilisation.

'What is the influence that instruction may have on the cognitive processes involved in speech act production?' This is the question addressed by **Eva Alcón and Josep Guzmán** in their contribution to this issue. The study involved 92 students in the Degree in Translation at Universitat Jaume I and focused on refusals. Scenes from the series *Stargate* were controlled looking for speech act types and social distance. Specific awareness-raising questions were provided –and later evaluated and analysed– while the learners read the transcript of sequences they had previously watched. The results in the pre- and post-test revealed that differences before and after instruction were significant in the fields under analysis. This makes it possible to conclude that instruction plays a significant role in the cognitive changes detected and it does make a difference in drawing the attention of learners towards pragmatic issues –specifically, in relation to the speech act of refusals. Consequently, the study seems to confirm that awareness-raising is a suitable approach to the teaching of pragmatics.

The contribution by **Charles Mark Mueller** deals with the 'Effects of Explicit Instruction on Incidental Noticing of Metaphorical Word Sequences during a Subsequent Reading Task'. The question of explicit and implicit learning and its role in SLA are brought again into the limelight through two experiments on the short-term effects of explicit instruction related to noticing. Mueller takes Schmidt's definition of noticing (Schmidt, 2001: 18) as a basis for his research ('detection within focal attention accompanied by awareness', which implies a certain degree of control but not necessarily metalinguistic understanding). Two groups served the purpose of the experiment: a group of 36 non-native speakers of English (most of them Chinese) received explicit instruction on specific items; a second group of 24 college students received explicit instruction that included self-referential and non-self-referential writing prompts. The results confirmed that explicit instruction had a significant effect on noticing in both cases. Self-referential prompts resulted in more verbose responses to the writing task.

SLA research must have a bearing on language teaching. Consequently, language teaching materials must reflect whether key issues in SLA are also taken into account or not, and to what extent. The degree of explicitness and/or implicitness promoted, triggered or favoured by teaching materials (through the activities designed) is no doubt one of those key issues. In order to measure the presence/absence of those elements we need reliable measuring tools. This is the problem **Raquel Criado Sánchez, Aquilino Sánchez and Pascual Cantos'** article addresses. Since explicitness and implicitness are complex

constructs, they elaborated a tool which allowed for the identification and measurement of both components within a continuum ranging from 0 to 10. In each activity they validated the tool and applied it to three sample units of three widely used ELT textbooks. The application of this tool allows for the identification of explicitness and implicitness in teaching materials. The resulting figures may therefore constitute a reliable reference for deciding on the adequacy of specific teaching materials for reaching the goals they aimed at regarding any one of those constructs.

The processes of *noticing* and *uptake* are at the centre of the contribution on L2 written corrective feedback by **María Santos, Sonia López-Serrano and Rosa M. Manchón**. The article follows recent research (cf. Bitchener 2008; Bitchener & Knoch, 2008; Ellis et al 2008; Sheen, 2007, 2010) on what Manchón (in a publication in press) has called 'feedback-for-acquisition' (rather than the traditional 'feedback-for-accuracy'), and it also represents a further attempt to make writing more central in SLA with its focus on the writing-to-learn dimension of L2 writing. The study, which is part of a wider programme of research on the learning potential of writing currently under way at the University of Murcia, analyses the effects of two types of direct corrective feedback (error correction and reformulation) on the written output produced by 8 secondary school EFL learners. Santos *et al.* operationalise noticing in terms of the number of corrections detected, and uptake as the type and number of revisions incorporated in the revised version of the text produced by the participants. Their results confirm previous research in the field and reveal that corrective feedback (CF) exerts a positive effect on both noticing and uptake, with an advantage of error correction over reformulation as far as uptake was concerned. Moreover, the analyses conducted reveals the existence of individual differences in the way EFL learners processed and made use of CF.

Finally, **Robert DeKeyser's** article also takes up the issue of the role of practice in L2. After quoting Krashen's statement in the 80s ('Learning does not become acquisition') and other similar statements more recently, DeKeyser vindicates the 'commonsensical' role of practice in language learning and teaching and concludes that there is still a role for practice, defined as "specific activities in the second language engaged in systematically, deliberately, with the goal of developing knowledge of and skills in the second language" (DeKeyser, 2007a, p. 8). Practice, states the author, is not to be understood only in the 'drill and kill' mode proper of the Audiolingual method; it should also take meaning into account, so that practice may collaborate in the development of procedural "and eventually largely automatized knowledge". Input and explicit teaching of form are needed, but extensive

practice is also often required to consolidate and proceduralize form-meaning associations needed for linguistic production and comprehension. Practice, then –quoting Lightbown, 2000, p. 443– "does not make perfect," but "it is necessary", (…) "communicative practice (…) is not sufficient to lead learners to a high degree of fluency and accuracy in all aspects of second language acquisition", but [...] "the role of practice is clearly beneficial and even essential". Practice is multi-faceted though and needs to be adapted to the learners' needs and idiosyncrasies, as well as adequately distributed in time. Language skills need practice, as any other skill does.

Overall, we hope that this monograph will contribute to shed some light on the feasible and definitively essential hand-to-hand collaboration among complementary fields of knowledge and various related disciplines, and more specifically between SLA and FLT. We definitively believe this collaboration will dominate all future research in Applied Linguistics.

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