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Afterword: SFL, theoretical pluralism and content and language integration at the levels of curriculum, pedagogy and assessment

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ABSTRACT

This article is an afterword to the special issue on social-semiotic and systemic functional approaches to content and language-integrated learning in bilingual/multilingual education. It provides a conceptual overview of the contributions of each of the six articles. It highlights the theoretical pluralism which allows SFL to be combined with a range of other perspectives from applied linguistics and education, to throw light on content and language integration across a wide range of bilingual/multilingual education settings. In particular, the afterword focuses on how SFL and other compatible perspectives allow for a deeper understanding of content and language integration in three educational domains: curriculum, pedagogy and assessment. The afterword also highlights the potential of the use of SFL as a key part of the knowledge base for teachers in bilingual/multilingual education programmes, and suggests ways in which the findings from the studies can be incorporated in teacher education and professional development at each of the levels of curriculum, pedagogy and assessment.

The six articles in this special issue all show convincingly how Systemic Functional Linguistics (SFL) can throw light on a range of key issues relating to the integration of content, language and literacy across disciplines in all kinds of bilingual/multilingual education contexts. The power of SFL can be seen in the wide range of educational contexts covered in the studies, the theoretical pluralism with which it can be combined with other disciplinary perspectives to analyse educational practices, the different dimensions of education it can be applied to (curriculum, pedagogy, assessment), and its potential for providing powerful frameworks for teacher education and professional development. In what follows, I will discuss the contributions of the six papers according to these four dimensions.

The six studies in the special issue cover a wide range of educational contexts which have in the common the pedagogical imperative to combine, or integrate, the learning of academic content with the development of language skills, whether in a second or foreign language or in the first language. The educational contexts include the teaching of emergent to advanced bilingual students (EABs) in mainstream schools in the US, primary and secondary students in a European CLIL context (Spain), secondary students in an English-medium instruction context (Hong Kong), and tertiary students in a university foreign language programme in the US. The studies cover the stages of education from grade 1 through grades 6 and 8, to advanced college-level students. This variety of educational contexts and levels throws into relief the power of SFL to illuminate fundamental issues relating to the integration of content and language across a wide range of settings. It highlights the point that whatever the variations of sociolinguistic, linguistic and educational context, or different labelling of programme types, the settings in which academic content and language pedagogy are

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combined have more in common than that which divides them (Cenoz, Genesee, and Gorter 2014; Dalton-Puffer et al. 2014; Morton and Llinares 2017).

While all of the studies use at least one of the many conceptual and analytic tools of SFL to examine their phenomena of interest, none uses these tools on their own. All of the studies combine SFL with other frameworks from language and education studies, thus highlighting the benefits of what Tyler and Ortega (2018) describe as 'theoretical pluralism'. As they argue, 'Seeking the integration of two or more theories results in more sophisticated understandings of the nature of language, how it is learned, and ultimately how it may be more successfully taught' (316). Thus, the studies combine SFL with, among others, student-oriented assessment (SOA), cognitive discourse functions (CDFs), English for specific purposes (ESP), Legitimation Code Theory (LCT), and interactional scaffolding. Within SFL, a wide range of tools is also used, including genre-based pedagogy (the Teaching and Learning Cycle, or TLC), appraisal theory, verbal process types, the power trio (power words, power grammar and power composition), register (particularly field and tenor), clause types and clause expansion, the metafunctions (especially ideational and interpersonal), and coupling. This rich array of conceptual tools from within SFL, combined with a range of theoretical perspectives from other disciplines, allows the studies to produce insights into how educators face the challenge of integrating content and language learning across a wide range of contexts and levels.

The power of this theoretical pluralism can perhaps best be seen by identifying the different dimensions of the educational process that it can throw light on. Following Bernstein (1977), education can be seen as comprising the three 'message systems' of curriculum, pedagogy and evaluation. Curriculum relates to what is considered to be valid knowledge, pedagogy is concerned with how that knowledge is transmitted, and evaluation (more generally referred to as 'assessment' in current terminology) seeks to determine what is a valid realisation of the knowledge by the learner. The key issues concerning content and language integration are pertinent to each of these systems. Thus, at the level of curriculum, it is important to determine what kind of content is selected as valid knowledge, whether and how language is explicitly identified as legitimate content, and how the content and language can be organised to develop the requisite knowledge, skills and dispositions in the learners. In terms of pedagogy, the main foci are the instructional techniques and activities and interactions in the classroom through which teachers seek to ensure that students have access to the academic content and the language through which it is construed. Evaluation, or assessment, raises a host of complex issues relating to the extent to which the validity of students' realisations of content knowledge is affected by their proficiency with the languages and literacies through which the knowledge is communicated. At this level, the analytic focus is on students' productions and how they provide evidence of cognitive and linguistic learning and development, along with expected dispositions.

In each of the six studies, usually one of the message systems is in the foreground, while the other two are in the background, whether explicitly mentioned or implicitly relevant. In most of the studies, the foregrounded educational dimension is also the one for which SFL tools are used, while, for others, this dimension is analysed using a different theoretical framework, and SFL is applied to one of the other dimensions. The role which SFL plays can also vary, as in some of the studies it is a pedagogical tool (e.g. used for organising the curriculum or as the basis of a specific pedagogical approach, such as the genre-based Teaching and Learning Cycle), while in others its main use is as a tool for analysing the textual products of the educational process, such as students' oral or written production. The studies demonstrate the flexibility of combining theoretical pluralism (SFL plus another disciplinary perspective), different uses and roles of SFL, a range of tools from within SFL, and a varying focus on the different educational dimensions of curriculum, pedagogy and assessment. A brief analysis of each of the studies along these dimensions will show the productivity of this approach.

Achugar and Tardio's paper combines two main tools from SFL, genre and appraisal theory, with two other conceptual frameworks, content-based instruction in foreign language learning and

student-oriented assessment (SOA). The main focus is on students' production, which relates to the level of assessment, as the study aims to document college-level students' learning throughout a semester based on their written production. However, the curriculum dimension is very much alive in this study, as the students' development of cultural and historical understanding, dispositions (empathy with people living in other times and cultures), and linguistic and literacy skills (writing the genre film review) is seen in the light of having participated in a genre-based curriculum which highlighted the integration of language and literacy skills and history content. Here, SFL has both a pedagogic role, with the notion of genre being applied at the curriculum level, and an analytic function, with the tools of lexical choice and density, grammatical intricacy and appraisal used to analyse the students' productions.

Oliveira, Jones and Smith combine a focus on two message systems, curriculum and pedagogy, using SFL-based genre pedagogy (the Teaching and Learning Cycle – TLC) along with the non-SFL construct of interactional scaffolding (Hammond and Gibbons 2005). The context of the study is emergent to advanced bilingual students (EABs) in a first grade English Language Arts (ELA) class in mainstream (non-CLIL) education in the US. SFL is used at the curriculum level, as the researchers designed English language arts (ELA) content-and-language-integrated units based on the TLC, while interactional scaffolding is used to analyse the moves made by the teacher at different phases in the TLC to engage students and support their understanding of language across genres. SFL thus plays a pedagogical role in this study, as it provides the basis for the planning and sequencing of the units. The study shows how combining the use of SFL tools to design curriculum with tools from a different framework to analyse teacher-student scaffolding interaction can have repercussions for the third message system of assessment. That is, the combination of a broad focus on the organisational structure of relevant genres, combined with appropriate scaffolding moves, can bring young learners to an understanding of how the genres are organised in order to achieve their social purposes, and how specific lexical choices enable them to do this.

The paper by Lo, Lin and Liu has its main focus at the level of pedagogy. It combines a range of tools from SFL (the power trio of words, grammar and composition, lexical density, grammatical intricacy and verbal processes) with a framework from the sociology of education – Legitimation Code Theory (LCT) to examine scaffolding and knowledge building in teacher-student classroom interaction in a Hong Kong secondary EMI context. In this study, then, the SFL and non-SFL conceptual tools are applied at the same level or message system. LCT, with its concept of 'semantic waves', shows how knowledge is unpacked, repackaged and built up cumulatively over time, while the SFL tools allow for fine-grained analyses of the linguistic meaning-making resources used by participants in achieving the educational aims. Deploying these tools allows the researchers to show how students, particularly less advantaged ones, can be scaffolded into powerful knowledge, by being equipped with the resources to succeed in high-stakes assessments. Thus, the study, while mainly focusing on the pedagogy level, has significant implications for the third message system, assessment.

Three of the papers combine SFL with Dalton-Puffer's (2013) construct of Cognitive Discourse Function (CDF), as well as the use of a corpus-based methodology to provide a clear focus on students' productions. Dalton-Puffer and Evnitskaya combine tools from SFL (process types, participants and attributes) with Dalton-Puffer's (2013) theoretical construct of Cognitive Discourse Function (CDF) and Trimble's (1985) ESP work on classifications to explore how students in a CLIL programme develop the ability to categorise, classify, compare and contrast facts, objects, phenomena, abstract ideas and concepts. In this study, the different educational dimensions and theoretical perspectives are aligned, in that all the analytic tools (those from SFL, CDFs and ESP) are applied to the one message system – the assessment of students' productions in terms of their cognitive and linguistic development. The power of the approach is shown in how it is able to achieve a better understanding of how students realise cognitive and linguistic functions across different knowledge fields (science and history) and, importantly, across languages (English and Spanish).

Nashaat-Sobhy and Llinares analyse CLIL students' linguistic realisations of the cognitive discourse function of definition, in both L1 and L2, at different grade levels (6 and 8) and across two sub-fields of

the subject history, in the context of a Spanish CLIL programme. They combine SFL tools (field, genre, identifying clauses and their specifying features, clause expansion through exemplification, classification, circumstances) with the non-SFL constructs of CDFs, Trimble's (1985) ESP work on classifying definition types, and Cummins' (1979) concept of linguistic interdependency. This study is another example of alignment between the message system focused on (production/assessment), and the tools used for analysis, as both SFL and non-SFL frameworks are used to examine the students' linguistic realisations. This study highlights the role of the SFL concept of field, as it may be that differences in students' realisations of definitions at the two grade levels had more to do with the different sub-fields of history they worked on (social actors and historical periods) than their development over time of resources to make more informative definitions.

Whittaker and McCabe focus on students' realisations of the cognitive discourse function of evaluation in three subjects (natural science, history and art) in the transition from primary (grade 6) to secondary (grade 8) education in a Spanish CLIL programme. From SFL, the study uses appraisal theory, the ideational and interpersonal metafunctions, and the register variables of field and tenor. They also use Martin's (2010) notion of 'coupling', to show how students combine meanings from different metafunctions (ideational and interpersonal) and appraisal systems (ATTITUDE and ENGAGEMENT) in their evaluations. By combining the SFL analyses with the use of Cognitive Discourse Functions (CDFs), they link evaluation as an educational objective with the students' linguistic realisations of the function. The analyses show how students use the ideational metafunction to choose the targets of their evaluations, 'coupling' this with choices from the interpersonal metafunction to justify their evaluations. The study throws light on how students in a CLIL programme develop disciplinarity, as seen in their ability to evaluate phenomena from their respective fields of study while justifying the evaluations in more disciplinarily appropriate and mature ways.

All of the studies in the special issue have profound implications for teacher education and professional development for teachers whose task is to ensure both academic content learning and language development (in first and additional languages). Recent studies in CLIL and content-based language education have highlighted the need for teachers charged with both these tasks to acquire a special type of knowledge for teaching. Troyan, Cammarata, and Martel (2017) refer to this as 'Integration pedagogical content knowledge (PCK)', while Morton (2018) proposes the construct 'Language knowledge for content teaching (LKCT)'. Both these conceptualizations highlight the need for teachers who teach in CLIL or other content-based language education contexts to not only have a high level of personal proficiency in the language(s) of instruction, but to have a deep knowledge of how the genres used in their subjects work, and a wide repertoire of strategies to integrate focus on language forms with the subject-specific meanings that they express.

The papers in this special issue thus have implications for how SFL and the other compatible approaches can contribute to the development of the kind of knowledge teachers need to implement content and language integration. At the broad level of curriculum planning, SFL-based tools such as integrated content and language units based on genre theory can be jointly planned with teachers, in professional development workshops and collaborations in designing materials, as suggested by Achugar and Tardio. However, as they point out, for this to happen, more resources and institutional support need to be provided. Oliveira, Jones and Smith highlight the fact that various approaches to integrating content and language have been implemented, all aimed at providing teachers with 'the foundational knowledge and skills that they need' (in this issue) to address this complex task. In their study, they show how the SFL genre-based Teaching-Learning Cycle can be used as a pedagogical tool to achieve this aim.

At the level of more specific pedagogical tools, Lo, Lin and Liu suggest that the unpacking and repacking strategies they describe, and the notion of semantic profiles, can facilitate CLIL teachers' professional development by being used as 'as a meta-language and visualisation tool to engage CLIL teachers in critical reflection on CLIL classroom strategies' (in this issue). Nashaat-Sobhy and Llinares argue that their work on definitions highlights 'the need to train teachers on how to help students to formulate definitions regardless of the language of instruction but taking into account

differences across fields' (in this issue). They suggest that, because the field and sub-field appear to play a significant role in how definitions are produced by students, training for teachers may best be organised according to disciplinary areas and fields within them. Whittaker and McCabe recommend applying the results of their study of the cognitive discourse function of evaluation to teacher education. They suggest that it can be used in discussion sessions and workshops and can bring 'the key meaning-making resources of the language of school subjects to consciousness – from implicit to explicit knowledge – in a short time' (in this issue). Dalton-Puffer and Evnitskaya's combination of a conceptual map of the CDF CLASSIFY/COMPARE and SFL analytical tools add to the frameworks which make 'the internal conceptual and semantic structures of curricular topics tangible to teachers' (in this issue). By allowing teachers to map subject-specific competences onto language competences, such a framework can help to avoid mismatches between students' cognitive development and their linguistic proficiency.

The papers in this special issue contribute to and build on the endeavour to provide more solid foundations for content and language integration in theory and practice by using linguistics that sets semiotic practices firmly in their social contexts. As Ortega and Byrnes (2008) point out, an SFL-based description of language 'captures language as a probabilistic and dynamic resource that enables its users to linguistically signal their construal of social contexts' (291). The language practices and the contexts are mutually constitutive: the context shapes the language used, and the language used shapes the context. Thus, in an academic or schooling context, it makes no sense to analyse the communicative or meaning-making practices (both at the discourse-semantic and lexico-grammatical levels) without taking into account the specific learning contexts which these practices construe. The range of SFL tools deployed in the studies in this special issue, in combination with other perspectives using a theoretical pluralism, contribute to a greater understanding of content and language integration at the levels of curriculum, pedagogy and assessment across a wide range of educational contexts.

Disclosure statement

Notes on contributor

Tom Morton is Beatriz Galindo Distinguished Researcher in the Department of English Studies, Universidad Autónoma de Madrid, Spain, where he is a member of the UAM-CLIL research group. His research interests include classroom interaction in content and language integrated learning (CLIL) and English-medium instruction (EMI) contexts, and teacher knowledge and identity in TESOL and bilingual education.

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