Critical SFL Praxis Among Teacher Candidates: Using Systemic Functional Linguistics in K-12 Teacher Education

Luciana C. de Oliveira and Mary A. Avalos

Abstract Drawing on examples of how two teacher educators have developed a critical SFL approach to teacher education, this chapter discusses specific principles of critical SFL to guide analysis of texts in the content areas and planning instruction that integrates these principles. It shows how we have prepared elementary and secondary teachers to use CSFL to plan instruction for culturally and linguistically diverse students, especially English language learners. The chapter concludes by providing some reflections on this process and a few guidelines for teacher educators to integrate this approach into teacher education programs.

Keywords Critical systemic functional linguistics • Principles of CSFL • English Language learners • K-12 Teacher education • Elementary teachers • Secondary teachers • Planning instruction

1 Introduction

During a time when the number of immigrants are increasing (Migration Policy Institute 2015), teacher educators have developed critical language pedagogies based on systemic functional linguistics (SFL) to support teacher candidates' move beyond deficit views of immigrant students and prepare them to focus on critical issues for this student population (e.g. Harman and Simmons 2014). This approach promotes teachers' appropriation of a "critical SFL praxis" that they can use in their own classrooms to support students in learning and challenging academic discourses. A critical SFL approach is important for all teachers, including non-specialist mainstream content area teachers, because it provides them with adaptive expertise (Darling-Hammond 2006) to teach culturally and linguistically diverse students, including emergent bilinguals (EBs) (Lucas and Grinberg 2008). Research shows that teacher education programs need to be more systematic in explicitly

L.C. de Oliveira (✉) • M.A. Avalos
University of Miami, Miami, FL, USA
e-mail: ludeoliveira@miami.edu; mavalos@miami.edu

addressing linguistic diversity by thoughtfully integrating linguistic and cultural knowledge across courses, rather than using an add-on approach through which additional courses are added to the curriculum (Athanases and de Oliveira 2011; Bunch 2013; Galguera 2011; Lucas and Grinberg 2008).

This chapter presents examples of how two teacher educators developed a critical SFL approach to elementary and secondary teacher education to support teaching and learning of culturally and linguistically diverse students. We show how we have integrated this approach to teach teachers to analyze the discourse of different content areas, explore the shifts between everyday and academic registers and plan lessons that address language and content. Importantly, the emphasis is on validating the cultural and linguistic resources of students while also supporting their access to grade-level disciplinary literacies, and on uncovering the hidden assumptions and cultural values in the curriculum (see Avalos et al. 2015; de Oliveira and Schleppegrell 2015). We discuss specific principles of critical SFL that supports analysis of texts in the content areas and planning instruction that integrates these principles. We conclude by providing some reflections on this process and a few guidelines for teacher educators to integrate this approach into teacher education programs.

2 Theoretical Framework

Subject matter in schools is constructed in language that differs in significant ways from the language we use to interact with each other in daily life (de Oliveira and Schleppegrell 2015; Schleppegrell 2004). The classroom is a key place to offer opportunities to learn how language participates in constructing knowledge in different subject areas, especially for students without opportunities to develop this language outside of school. When learning in schools, students are simultaneously learning subject matter and the language that construes it. Teachers, therefore, must have a dual focus on planning for content learning and also providing students with access to the language of content texts. This is a tall order for many teachers, who may need support in seeing the role of language in disciplinary learning. In order to meet the challenges of this reality, teachers are advised to adopt pedagogical approaches that foreground the role of language in learning, including critical language awareness (Carpenter et al. 2015). Critical language awareness approaches, for example, emphasize how linguistic practices shape and are shaped by social relationships of power and highlight language as a significant aspect in learning content while drawing on discourses of power (Achugar and Carpenter, Chap. 5, this volume; Gee 2002; MacDonald and Molle 2015).

As the previous chapters illustrate, critical language pedagogies based on systemic functional linguistics (SFL) support teachers in focusing on socio cultural issues most pertinent for immigrant students (Harman and Simmons 2014; Khote, Chap. 8, this volume) and to accomplish disciplinary learning goals (Carpenter et al. 2015). A critical SFL approach draws on what Halliday (1993) describes as the

three forms of language learning in school: *learning language* – first language or second language development, *learning through language* – learning content through language, and *learning about language* -learning about how language is used through the use of a metalanguage. *Learning about language* is often neglected in schooling (de Oliveira and Schleppegrell 2015) but is a key aspect of critical SFL, as it requires teachers to develop their own conscious knowledge of the power of using language in different ways. In addition, it requires teachers to develop a *metalanguage*, a language to talk about language, so they can discuss how knowledge is constructed in language in their content areas.

Critical SFL draws on systemic functional linguistics as a framework for analyzing how particular language choices construct the meanings within a text and how social contexts influence textual realizations (de Oliveira and Schleppegrell 2015; Halliday and Mathiessen 2004). SFL offers a pedagogical tool for teachers to analyze with students the network of lexico grammatical choices in a text that realize ideational, interpersonal and textual meanings. Through development of a metalanguage, in other words, students learn to read and write through the language and in the language of grade-appropriate curricular materials (Schleppegrell 2013).

3   Principles of Critical SFL to Guide Analysis and Planning

The critical SFL (CSFL) approach we developed in our teacher education courses is informed by SFL-informed projects conducted in Australia over the past several decades (e.g. Christie and Derewianka 2008; Derewianka 1991; Martin and Rose 2007; Rose and Martin 2012). Our approach adopts a similar perspective to these SFL linguists on language and content teaching and learning, but adapts it to the U.S. context by adding a focus on critical language pedagogies that emphasize how linguistic practices shape and are shaped by social relationships of power. This section shows the principles that inform our work.

Principle 1: Language and Content Cannot Be Separated
Content cannot be separated from the language used to express it. This enables us to recognize in research and teaching how disciplinary learning in school is dependent on language. Language is not the only means through which learning occurs, but it is certainly the most important element of learning, as *learning language* and *learning through language* occur simultaneously (Halliday 1993).

Principle 2: Disciplinary Knowledge and Information Is Condensed Through Complex Clause Structures, Different from Students' Everyday Language
Academic language constructs disciplinary knowledge in complex clause structures. Academic language, or the "language that stands in contrast to the everyday informal speech that students use outside the classroom environment" (Bailey and Butler 2002, p. 7) is difficult for all students; however, children are at different places in acquiring academic language, depending on how their home literacy practices align with school-based literacies (Cazden 1988; Heath 1983). The kind of

language students learn at school is different from ordinary language for communicative purposes (Schleppegrell 2004). In order for teacher and students to understand how disciplinary knowledge is constructed through academic language, they must know how to identify and use these complex clause structures. For example, academic language used to represent and teach subject matter dissociates actors from actions with the construction of "things" through the use of nominalization, a resource used in many academic and scientific genres (Halliday and Martin 1993; Martin 1993; Schleppegrell 2004; Unsworth 1999). Nominalization refers to the expression as a noun or nominal group of what would in everyday language be presented as a verb, an adjective, or a conjunction. Such grammatical metaphors are typical of academic discourse.

Principle 3: Developing a Meaning-Based Metalanguage Enables Teachers to Recognize How Meanings Are Construed in Different Content Areas and How Power Is Expressed in Language

When teachers develop specific ways to talk about the interconnection of content and language with students, both groups can engage in analyzing the ways language is powerful in constructing knowledge and discussing how they can also participate in that construction (de Athanases and de Oliveira 2011; de Oliveira and Schleppegrell 2015). For example, Mr. Delgado, a history teacher in our project, used a graphic to help his students understand meronomy (Fig. 2), or *how introductory paragraphs generally begin with more global ideas, but narrow in scope across the following sentences to a specific thesis statement*. Meronomy, once visualized, described, and modeled with a mentor text, became the classroom term used to refer to this text structure, which was much more succinct and efficient than using its definition (in italics above). This also enables teachers to encourage a reflective attitude on the part of students and to help them recognize how language choices create meanings of different kinds, and the power of different choices (see also Harman, Chap. 1, this volume). Mr. Delgado also developed a chart for synonymy (Fig. 3), which supported students' use of synonyms while writing and helped them understand the importance of varying vocabulary to reduce repetition. By providing engaging activities that enable EBs to interact and build on their language resources, additional language resources are created via socialization into a community of learners around academic texts (Schleppegrell 2013). Thus, teachers can focus on how concepts are presented and developed, and give students tools for learning from other texts.

Principle 4: A Genre-Based Approach to Writing Instruction Provides Guidance Through Interaction in the Context of Shared Experience

The notion of *guidance through interaction in the context of shared experience* (de Oliveira and Lan 2014; Rose and Martin 2012) based on an SFL genre-based approach is the driving force behind a "Teaching-Learning Cycle" (Martin and Rose 2005; Rothery 1996; Fig. 1). As discussed in previous chapters, the TLC can be recursive and repeated as students become more familiar with specific genres. The notion of building field at all phases is key. Building field refers to students' development of their knowledge of the content and context of particular texts. Students
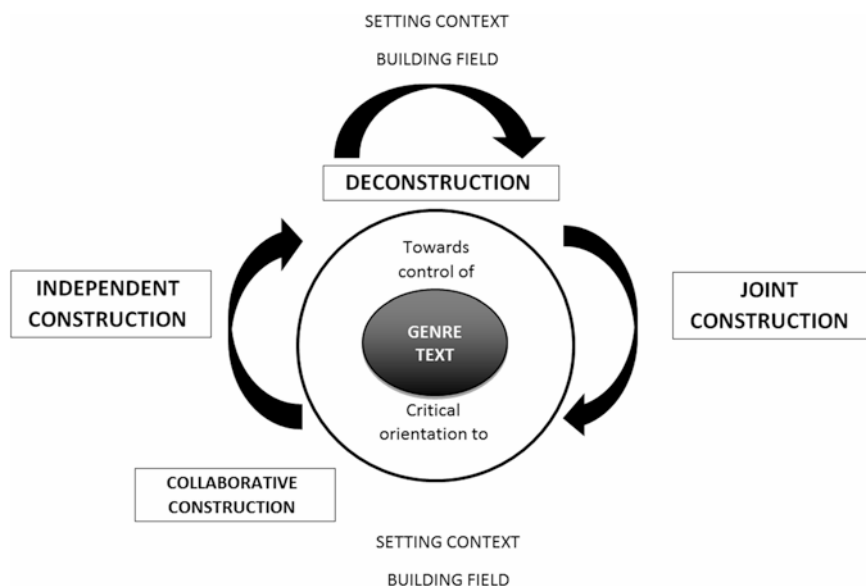
Fig. 1 Teaching/Learning cycle (Based on Martin and Rose 2005, p. 252; Rothery 1996, p. 103)

also build a critical orientation to text by not just learning about the genre but by being critical of its usage. Whichever phase is introduced first, the teaching-learning cycle aims to provide students with teacher interaction, guidance, and support as they go through these three phases.

Principle 5: Disciplinary practicEs of Subject Areas Guide Instruction

Different disciplines present unique challenges to students and teachers, and much of the challenge is semiotic (Avalos et al. 2015; de Oliveira 2013; Moschkovich 2010; Schleppegrell 2007). For instance, at the secondary level, history and other areas of the social studies are presented in textbooks and primary source documents in dense and abstract language. To learn history, students have to be able to read difficult texts, engage in discussion of complex issues, and write in ways that present their judgments and perspectives at the same time they report on what they have learned. Students need to be able not only to understand sequences of events and the roles historical participants played in those events, but also to recognize the authorial interpretation, which is an integral part of all historical reporting (de Oliveira 2010). One way to engage students with texts and social studies content is to use a disciplinary approach to teaching (Wineburg 1999); however, a disciplinary approach to teaching history requires critical thinking and reasoning (Massey 2015). In particular, a disciplinary approach asks students to use sourcing (evaluating the source's author or creator as credible or not credible), contextualizing (situating the source or document in time and place), and corroboration (systematically reviewing the sources to be sure they agree), which are important disciplinary skills for

learning history. Although typically these tasks are difficult for EBs, teachers may use SFL to understand and explicitly teach how language is used to make meaning in history and social studies texts, as well as to provide meaningful writing instruction when using the Teaching/Learning Cycle (Rothery 1996; Martin and Rose 2005). Doing so will ultimately provide the semiotic support needed to prepare and support EBs in sourcing, contextualizing, and corroborating.

3.1   The Principles in Action: An Example from Social Studies

We now use examples from a graduate level Social Studies Methods course for secondary teachers who are pursuing a Master's degree in education to show how these principles have guided our work in teacher education. The focus for the course is the teaching and learning of literacies for social studies, while simultaneously focusing on social studies content knowledge. This example comes from Mary Avalos' collaboration with a co-instructor whose courses focus on social studies methods; both instructors are responsible for teaching social studies methods and they spend time planning each session together to incorporate literacy instruction within the teaching of the content, grounded in a disciplinary approach (Massey 2015; Wineburg 1999). This dual focus represents the principle that language and content are inseparable, which is reiterated throughout the course (Principle 1). The Master's program also includes a secondary reading course that utilizes applied linguistics, with SFL highlighted as a tool to assist with close reading in all subject areas.

Enrolled in both courses during the same semester, in-service teachers learn about SFL (i.e., functions of grammar, text structures, language features that make texts complex) and how to analyze texts in the reading course; in the Social Studies Methods course, they learn methods to assist them with applying SFL constructs to their teaching practice. In the reading course, teachers learn how to identify language features that make texts complex, specifically grammatical metaphor (e.g., nominalizations), elaboration, and Theme/New progression, and how these language features make academic language different from everyday language. In the Social Studies methods course, these SFL constructs are used to analyze disciplinary texts. In both courses, teachers are developing a meaning-based metalanguage that enables them to recognize disciplinary meanings in texts, and to identify relationships of power expressed through language (Principle 3). The metalanguage that the teachers subsequently develop with their students may or may not be the same as the SFL technical terms used in their graduate classes, but what is important is that EBs are given a metalanguage to talk about language (de Oliveira and Schleppegrell 2015; Schleppegrell 2013). This meta awareness of language organization and features empowers them to discuss and understand how meaning is created in academic texts.

In the Social Studies Methods course, teachers become familiar with the Teaching and Learning Cycle and use it to plan a lesson that incorporates a focus on SFL metalanguage and lexico grammatical features (e.g. nominalization) to support stu-

dents in gaining disciplinary understanding through interactive conversations and shared experiences (Principle 4; see also Brisk and Ossa Parra, Chap. 7, this volume). When they are working on their curricular design through use of the TLC, Mary works closely with the teachers as they develop learning objectives related to building the field or knowledge of content, deconstruction, co-construction and independent construction of text, as well as selection of mentor texts and assessment criteria. Disciplinary practices, such as sourcing, contextualizing, and corroboration, are required practices within the lesson plan (Principle 5). Teachers are required to implement the lesson (i.e., carry out and teach the lesson plan) in at least one period with students, and share a five-minute video clip of their teaching with the class. Among other things, they are also required to submit masked student work samples at varying levels of proficiency (i.e., students above, at, or below grade level expectations) and write an extensive reflection on the lesson to identify how or if the lesson met all of the students' needs, and what might be done differently in the future to improve the lesson and better meet their students' learning needs.

An excerpt from a focal teacher's lesson is used in this section to illustrate how teachers enact and incorporate SFL in their social studies planning; specifically, in this instance, to teach students how to write introductory paragraphs for an essay assignment in a 9th grade history classroom. At the time Mr. Elias Delgado (pseudonym) enrolled in the methods course, he was a second-year teacher with a temporary state teaching certificate in the area of secondary social studies. Mr. Delgado taught in a large, urban Title I high school with 91% of students qualifying for the federal free/reduced lunch program. The high school serves high numbers of English learners (63%) that contribute to a culturally diverse student body of primarily Haitian immigrants with a growing Hispanic population; it is known locally to be a challenging teaching context. Despite these challenges, Mr. Delgado was very dedicated to his students and the teaching profession. In class, a great deal of time was spent discussing how best to make connections with students in such challenging contexts, not only to engage them with learning the content, but also to improve their academic literacies. The focal lesson (outlined in Table 1) was spread over three 90-min periods in two classes (periods 1 and 3), following a block schedule.

The next sections of the chapter will focus on Mr. Delgado's lesson's Day Three: Deconstruction and Co-Construction of Essay Introduction. When Mary conferred with Mr. Delgado during the lesson planning stage, he mentioned that his students had many difficulties with writing, including repetitive word usage. He also noted that students showed limited use of connectives across their texts. Therefore, Mr. Delgado decided to focus on the following three types of elaboration in text structure: meronymy (a constituent part of or a member of something), synonymy (alternative wording), and text connectives (transitional words and phrases that connect and relate sentences and paragraphs) in his explicit writing instruction.

Table 1 Overview of Mr. Delgado's History Lesson

Problem to be investigated?	
What were the underlying causes of World War I?	
Content standards	
Analyze the causes of World war I including the formation of European alliances and the roles of imperialism, nationalism, and militarism.	
Mentor text	
WWI and its underlying causes	
Reading and writing standards	
Reading	*Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.*
Writing	*Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.*
How will you engage your students with the topic?	
Students will be given seven strips of paper with reasons that nations go to war. They must list them in order of importance based on their opinion. The strips will have the following printed on them: Money/wealth; ideologies (i.e., democracy, communism); land (i.e., competition for additional land or to reclaim land lost previously); personal grudges (i.e., assassinations); religion (i.e., Christianity, Islam); military; other: _____.	
Teacher will facilitate a discussion by asking groups to share their order of the reasons listed, including any "other" that were discussed.	
Day one: Building the field	
The teacher provided document based questions (the DBQ project©) with corresponding documents entitled, "what was the underlying cause of World war I?"and monitored each group, assisting as needed to complete the assigned DBQs. Mr. Delgado worked about 25 min with each group, but more time was spent with the students needing support.	
Day two: Assessing understanding and pre-writing	
With teacher assistance to define each reason, students completed a graphic organizer to identify the reasons for WWI, according to the DBQs completed during day one.	
Day three: Deconstruction and co-construction of essay introduction	
Teacher read the introduction of the mentor text, "WWI and its Underlying Causes" to deconstruct the structure and content of the paragraph. A visual was provided to help students understand meronomy as applied to the structure of an introductory paragraph (Fig. 2).	
Students were then asked to identify other information that could be added to the introduction from their previous days' discussions to provide more information for the reader.	
Teacher and students co-constructed additions to the introduction based on the brainstorming.	
Teacher provided a table to list ways of saying specific words or phrases differently (synonymy and connectives) to assist students with varying language across the text (Fig. 3). With student input, teacher added to the table. Additional changes were made to the co-constructed introduction to model the use of synonymy and connectives when revising texts.	
Students began writing their essay's introductory paragraphs independently.	

3.1.1 Deconstruction and Co-construction of Essay Introduction

Mr. Delgado began day three's lesson by providing a visual for an introductory paragraph's text structure using meronymy to illustrate the whole-to-part focus, as illustrated in Fig. 2 below. Using the projected visual, he engaged students in a discussion about the essay introduction and what they noticed about its structure. The visual he created helped students see that the introductory paragraph began with a broad focus on the topic to "hook" the reader's interest and provide some overarching background knowledge, and eventually narrowed down the focus of the paragraph to a thesis statement. The thesis statement specifically addressed the exact content of the essay, which for this assignment was to identify two underlying causes of World War I. He then projected part of a mentor text's introductory paragraph and read it aloud with his students, having them identify the sentences that provided the "hook," background information, and thesis statement. Continuing on, Mr. Delgado stated that they were going to revise the introduction to improve it. He introduced synonymy to help students understand the reason for including other ways of saying World War I in the introduction. A table was created to brainstorm and list synonyms for key technical vocabulary related to the topic (see Fig. 2 below).

Under Mr. Delgado's guidance, the class provided input to revise the projected introduction, including inserting ways of saying World War I, and adding important
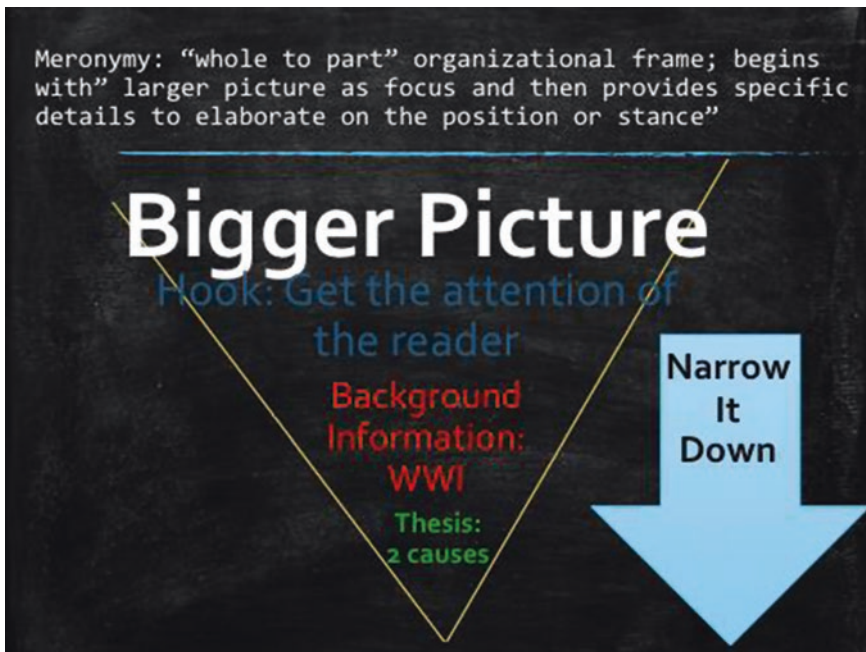

Fig. 2 Visual for meronomy to illustrate structure of introductory paragraph

World War I	Countries	Imperialism	The underlying cause	For Example,	This shows…
WWI	Nation	Colonization	The main cause	According to	This illustrates
The Great War	*Motherland*	Colonialism	The major reason	As shown in	Therefore
The War to End All Wars	*Colonies*	*Domination*	The essential reason	Document __ shows	As a result,
World War One			The primary cause	For instance,	For that reason,
The First Global War				As illustrated in document	This exemplifies
The First Major War				Also,	
The First World War					10

Fig. 3 Synonymy and connectives table

but missing background information about the war based on what they read during days one and two (i.e., dates, number of soldiers killed and injured, assassination of Archduke Franz Ferdinand). Alternative connectives were also listed to give students a variety of ways to connect ideas across the paragraph (Fig. 3). The synonymy and text connectives served to reduce the repetitiveness of the introductory paragraph. Once the projected text had been revised, Mr. Delgado asked the students to write their own essay introductions independently, referring to the visual for meronomy as a reminder to begin broadly and narrow down to their thesis statement. He also referred them to the synonymy and connectives table as a resource for varying their language choices.

3.1.2   Teacher Reflection and Student Response

Mr. Delgado's reflection on the written lesson demonstrates the affordances and challenges of using his adapted approach of the Teaching/Learning Cycle (Martin and Rose 2005; Rothery 1996). He reflected how he had never seen his students so engaged with a writing assignment. Typically, his students were "inhibited" and "not responsive to writing" during history class because he felt as if they had trouble "translating their ideas to paper." Mr. Delgado also wrote in his reflection that the co-construction of text "allowed them to see and experience how an introduction

should be written." Additionally, the co-construction served to "review important information about World War I" so that students got right to work and "felt more confident about their own writing." Moreover, the lesson "gave them [the students] the confidence to continue writing" without "second-guessing themselves…practicing with me allowed them to write better introductions." Further, "by completing the introduction, students had a start on the outline for the rest of their paper" and better understood what content needed to be included in their essay.

There were also many challenges that Mr. Delgado wrote about in his reflections, including the overwhelming impact of school testing and some tragic events that took place at the school during the curricular module. Testing had just ended so students were exhausted, and two students who attended the school had been killed as a result of violence in separate incidents, creating an "altered mood" school-wide. He also noted limited time to edit students' introductions as another large obstacle. While many of the students were able to complete the essay, their language was at times inappropriate for the genre. As Mr. Delgado wrote, "they [the students] used colloquial language, which is something they struggle with. I would have liked to spend more time on…diction and word choice by deconstructing and co-constructing a student sample." Another challenge noted was the students' difficulty with determining how much information was enough to include in the introduction. The students wanted to include too many little details rather than the big ideas in their introductions; however, Mr. Delgado acknowledged that with more explicit instruction using mentor texts and successful writing experiences, his students would learn how to determine relevant information to include. Finally, while the students were very engaged with writing their introductions, those who usually struggled became less engaged as they continued on to the subsequent paragraphs. Mr. Delgado hypothesized that it was because the class did not participate in any co-construction of body paragraphs or conclusions. To address this, in the future he would like to co-construct an entire essay, paragraph by paragraph, gradually releasing students to write independently as they learned more about the structure and language needed to communicate in certain genres.

A few days after the lesson, Mr. Delgado individually asked a few of his students what they thought about co-constructing the introduction and using that approach to learn about writing in history. The three students overwhelmingly agreed that they benefitted from the details provided by Mr. Delgado about writing an introduction—the process was "broken down" for them so that it was clear what should go into an introduction, and "it was explained more than in other classes." It was "easy to understand" and "we knew what to write"; "You [teacher] gave us a picture in our heads." Students also commented that they learned how the introduction sets up the rest of the paper. One student helped other students in his group with their introductions and commented, "It [the process] got easier as I helped more students." All of them said they would like to have more instruction using co-construction before writing. Mr. Delgado stated he might change the lesson by working with smaller groups of students to co-construct the introduction so that more would participate and provide input, and he would also be able to guide them, as needed with language choice in a smaller group. He also mentioned it was

not easy to make a decision about what genre or SFL feature to use in this intro-
ductory lesson for his students—there were other features (i.e., Theme/Rheme)
that he would like to teach.

4 Reflections and Guidelines for Teacher Educators to Integrate Critical SFL

As teacher educators, we believe it important to integrate a critical SFL approach
into our undergraduate and graduate courses and engage pre-service and in-service
teachers as well as future teacher educators in analysis of language features that
make disciplinary content difficult for students, especially English language learn-
ers. The principles we developed, described in this chapter, provided ways to make
the approach more accessible to teachers.

Based on years of reflection on teacher uptake of critical SFL in our teaching
graduate methods courses, we have developed a few guidelines. First, even though
the approach is modeled and taught during our graduate courses just as the teachers'
students may experience the lesson, we have found that teachers need plenty of time
before becoming comfortable using CSFL in their own classrooms. In our experi-
ence, teachers and teacher education students can become overwhelmed with the
intricacies of SFL theory; it helps to teach practical applications separately, yet in
close communication with the CSFL theory-oriented instructor, so that theory and
practice can be addressed in tandem. Our task as CSFL researchers and teacher
educators is to continue to reflect on the best sequencing of teaching and learning
expectations across courses to assist our students in learning the approach and its
applications. Importantly, more research is needed on the depth of knowledge
needed by teachers to make CSFL an effective approach for EBs' second language
literacy learning (for some discussion on this, see Daniello 2014; Gebhard and
Harman 2011; de Oliveira and Schleppegrell 2015; Hodgson-Drysdale 2016). In
addition, if a course focuses on SFL as a discourse analytic framework, it helps if
educators discuss what a critical lens adds to the framework and to examine how
CSFL can be used as a pedagogical approach in K-12 classrooms. The metalan-
guage that teachers are able to develop for talking about language choices in texts
plays a key role in this process. While this involves developing a certain degree of
technicality, when teachers move beyond their first resistance to the complexity of
the theory and see their own students' ability to take on that technicality, teachers
are empowered to learn more and therefore do more in their classrooms.

Second, planning the lessons one-on-one with the teachers using a flexible but
structured framework has proven to make a difference with how successful the lesson
is in the classroom. A good amount of time, for example, was spent with Mr. Delgado
in creating a plan that could be implemented in a "failing" school with strict "instruc-
tional focus calendars" where content coverage often trumps depth of instruction.
Spending multiple days on the same content objectives is typically frowned upon in

Mr. Delgado's school and district, even though there are literacy standards and objectives for content area classrooms. Providing space for the teacher educator to have a one-to-one lesson planning session with Mr. Delgado to review students' writing samples helped to tease out instructional needs and propose possible approaches to using the structured framework and follow the teaching/learning cycle. We propose a similar pattern for teacher education instructors who plan to implement CSFL in their classes.

It is also important to remember that flexibility with how teachers actually implement CSFL is highly important as teachers will apply the theory differently, depending on the school context and especially when there is little teacher autonomy in classrooms. Mr. Delgado focused on deconstructing and co-constructing the essay introduction rather than the entire mentor text. This turned out to be a wise choice as it kept him and his students from becoming overwhelmed, while at the same time developed his understanding of teaching content and writing in a new and different way. Our approach to working with teachers, therefore, helps them see how a lesson would work out in practice and scaffolds the process for them. In planning to implement CSFL in teacher education, we suggest a similar approach so teachers know possible ways to best sequence their activities.

Overall, our intent in this chapter was to provide examples of how SFL theory and practice can be incorporated into teacher education so that multilingual learners and their teachers can develop a shared linguistic fund of knowledge that supports them in analyzing, appropriating, and at times challenging the disciplinary knowledge domains.

References

Athanases, S. Z., & de Oliveira, L. C. (2011). Toward program-wide coherence in preparing teachers to teach and advocate for English language learners. In T. Lucas (Ed.), *Teacher preparation for linguistically diverse classrooms: A resource for teacher educators* (pp. 195–215). New York: Routledge.

Avalos, M. A., Medina, E., & Secada, W. (2015). Planning for instruction: Increasing multilingual learners' access to algebraic word problems and visual graphics. In A. Bright, H. Hansen-Thomas, & L. C. de Oliveira (Eds.), *The common Core state standards in mathematics and English language learners: High school* (pp. 5–28). Alexandria: TESOL Press.

Bailey, A. L., & Butler, F. A. (2002). An evidentiary framework for operationalizing academic language for broad application to K-12 education: A design document. In *Center for the Study of evaluation, National Center for Research on Evaluation, Standards, and Student Testing*. Los Angeles: Graduate School of Education & Information Studies, University of California.

Bunch, G. C. (2013). Pedagogical language knowledge: Preparing mainstream teachers for English learners in the new standards era. *Review of Research in Education, 37*, 298-341. doi: 10.3102/0091732X12461772

Carpenter, B., Achugar, M., Walter, D., Earhart, M. (2015). Developing teachers' critical language awareness: A case study of guided participation. *Linguistics and Education, 32*, 82-97. doi:10.1016/j.linged.2015.03.016

Cazden, C. B. (1988). *Classroom discourse: The language of teaching and learning*. Portsmouth: Heinemann.

Christie, F., & Derewianka, B. (2008). *School discourse: Learning to write across the years of schooling*. London: Continuum.

Daniello, F. (2014). Elementary grade teachers using systemic functional linguistics to inform genre-based writing instruction. In L. C. de Oliveira & J. Iddings (Eds.), *Genre pedagogy across the curriculum: Theory and application in U.S. classrooms and contexts* (pp. 40–54). Bristol: Equinox Publishing.

Darling-Hammond, L. (2006). Constructing 21st-century teacher education. *Journal of Teacher Education, 57*(3), 300–314.

de Oliveira, L. C. (2010). Nouns in history: Packaging information, expanding explanations, and structuring reasoning. *The History Teacher, 43*(2), 191–203.

de Oliveira, L. C. (2013). The language demands of word problems for English language learners. In S. Celedón-Pattichis & N. Ramirez (Eds.), *Beyond good teaching: Advancing mathematics education for ELLs* (pp. 195–205). Reston: National Council of Teachers of Mathematics.

de Oliveira, L. C., & Lan, S. W. (2014). Writing science in an upper elementary classroom: A genre-based approach to teaching English language learners. *Journal of Second Language Writing, 25*(1), 23–39.

de Oliveira, L. C., & Schleppegrell, M. J. (2015). *Focus on grammar and meaning*. Oxford: Oxford University Press.

Derewianka, B. (1991). *Exploring how texts work*. Sydney: Primary English Teaching Association.

Galguera, T. (2011). Participant structures as professional learning tasks and the development of pedagogical language knowledge among preservice teachers. *Teacher Education Quarterly, 38*, 85–106.

Gebhard, M., & Harman, R. (2011). Reconsidering genre theory in K-12 schools: A response to school reforms in the United States. *Journal of Second Language Writing, 20*, 45–55.

Gee, J. (2002). Literacies, identities and discourses. In M. J. Schleppegrell & M. C. Colombi (Eds.), *Developing advanced literacy in first and second languages: Meaning with power* (pp. 159–175). Mahwah: Erlbaum.

Halliday, M. A. K. (1993). Towards a language-based theory of learning. *Linguistics and Education, 5*(2), 93–116.

Halliday, M. A. K., & Martin, J. R. (1993). *Writing science: Literacy and discursive power*. Pittsburgh: University of Pittsburgh Press.

Halliday, M. A. K., & Matthiessen, C. M. (2004). *An introduction to functional grammar*. London: Arnold.

Harman, R., & Simmons, A. (2014). Critical systemic functional linguistics and literary narratives in subject English: Promoting language awareness and social action among K-12 students. In L. C. de Oliveira & J. G. Iddings (Eds.), *Genre pedagogy across the curriculum: Theory and application in U.S. classrooms and contexts* (pp. 75–91). Bristol: Equinox Publishing.

Heath, S. B. (1983). *Ways with words: Language, life, and work in communities and classrooms*. New York: Cambridge University Press.

Hodgson-Drysdale, T. (2016). Teaching writing through genres and language. In L. C. de Oliveira & T. Silva (Eds.), *Second language writing in elementary classrooms: Instructional issues, content-area writing, and teacher education* (pp. 69–87). New York: Palgrave Macmillan.

Lucas, T., & Grinberg, J. (2008). Responding to linguistic reality of mainstream classrooms: Preparing all teachers to teach English language learners. In M. Cochran-Smith, S. Feiman-Nemser, D. J. McIntyre, & K. E. Demers (Eds.), *Handbook of research on teacher education: Enduring questions in changing contexts* (pp. 606–636). New York: Routledge/Taylor & Francis.

Martin, J. R. (1993). Life as a noun: Arresting the universe in science and humanities. In M. A. K. Halliday & J. R. Martin (Eds.), *Writing science: Literacy and discursive power* (pp. 221–267). Pittsburgh: University of Pittsburgh Press.

Martin, J. R., & Rose, D. (2005). Designing literacy pedagogy: Scaffolding asymmetries. In R. Hasan, C. M. I. M. Matthiessen, & J. Webster (Eds.), *Continuing discourse on language* (pp. 251–280). London: Equinox.

Martin, J. R., & Rose, D. (2007). *Working with discourse: Meaning beyond the clause* (2nd ed.). London: Continuum.

Massey, D. D. (2015). Reading history: Moving from memorizing facts to critical thinking. In K. L. Santi & D. K. Reed (Eds.), *Improving reading comprehension of middle and high school students* (pp. 19–47). New York: Springer.

MacDonald, R., & Molle, D. (2015). Creating meaning through key practices in English language arts: Integrating practice, content, language. In L. C. de Oliveira, M. Klassen, & M. Maune (Eds.), *The common Core state standards in English language arts for English language learners* (pp. 39–52). Alexandria: TESOL Press.

Migration Policy Institute (2015). *U.S. Immigrant population and share over time, 1850-present.* Retrieved from http://www.migrationpolicy.org/programs/data-hub/charts/immigrant-population-over-time?width=1000&height=850&iframe=true. Access 31 July 2015.

Moschkovich, J. N. (Ed.). (2010). *Language and mathematics education: Multiple perspectives and directions for research*. Charlotte: Information Age.

Rose, D., & Martin, J. R. (2012). *Learning to write/reading to learn: Genre, knowledge and pedagogy in the Sydney school*. London: Equinox Publishing.

Rothery, J. (1996). Making changes: Developing an educational linguistics. In R. Hasan & G. Williams (Eds.), *Literacy in society* (pp. 86–123). New York: Longman.

Schleppegrell, M. J. (2004). *The language of schooling: A functional linguistics perspective*. Mahwah: Erlbaum.

Schleppegrell, M. J. (2007). The linguistic challenges of mathematics teaching and learning. *Reading and Writing Quarterly, 23*, 139–159.

Schleppegrell, M. J. (2013). The role of metalanguage in supporting academic language development. *Language Learning, 63*(1), 153–170.

Unsworth, L. (1999). Developing critical understanding of the specialized language of school science and history texts: A functional grammatical perspective. *Journal of Adolescent & Adult Literacy, 42*(7), 508–521.

Wineburg, S. (1999). Historical thinking and other unnatural acts. *Phi Delta Kappa, 80*(7), 658–665.

Luciana C. de Oliveira , Ph.D., is Chair and Professor in the Department of Teaching and Learning in the School of Education and Human Development at the University of Miami, Florida. Her research focuses on issues related to teaching English language learners (ELLs) at the K-12 level, including the role of language in learning the content areas.

Mary A. Avalos is a Research Associate Professor in the Department of Teaching and Learning at the University of Miami, Coral Gables, FL. Her research interests include language and literacy learning for culturally and linguistically diverse K-12 students and teacher professional development.