
Materials in the Classroom Ecology

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Though there is an extensive literature on materials in language teaching, little if any of it examines the relationship between materials such as textbooks and the totality of the classroom experience. The present study makes use of the concept of classroom ecology (Tudor, 2001; van Lier, 1996) to explore the interrelationships among materials and other crucial elements in an advanced ESL grammar class offered in the Intensive English Program of an American university. We focus in particular on the ways in which the textbook—Azar's (2002) *Understanding and using English grammar*—constituted the de facto curriculum of the course, and how it provided structure for the majority of the classroom interaction. Finally, we speculate on the relationship between the materials and language learning in this classroom. We argue that the framework of ecology, with its emphasis on affordances and emergence, provides a compelling lens through which to study the ways in which materials are actually deployed in classrooms, and how teachers and students conceive of the work being done there.

Keywords: materials; textbook; classroom ecology; language pedagogy; classroom discourse; grammar teaching

CLASSROOM MATERIALS ARE AN INTEGRAL part of second language classrooms. Teachers everywhere rely, often heavily, on textbooks, workbooks, reference materials, and other kinds of materials as sources of linguistic input, explanations of language, and opportunities for students to practice new or previously learned language. Beyond this, materials perform numerous other functions, from organizers of learning to conveyers of ideology.

Given the centrality of materials in a very wide range of language teaching situations, it is somewhat surprising that there has not been more empirical classroom-based research on the role(s) that materials play in the totality of processes of language teaching and learning that comprises classroom interaction. The present article reports on a study of this relationship in one ESL classroom, and has implications for the

teaching of other languages. Specifically, we locate the materials used in an ESL grammar class within the *classroom ecology* (Tudor, 2001; van Lier, 1996): that is, the totality of participants, relationships, structures, objects, and processes that together constitute the shared experience of classroom language teaching and learning.

Adapting a definition from Johnston (2007), we conceive of materials as any artifacts that prompt the learning and use of language in the language classroom. This deliberately broad definition is intended to encompass a wide potential range of artifacts, including pictures, realia, and virtual artifacts such as Web sites and computer programs. In the majority of classrooms around the world, the core materials will be printed matter (published textbooks and workbooks and secondary printed matter such as teacher-prepared worksheets). Textbooks in particular play a major role in classroom life; one such widely used book—Azar's (2002) *Understanding and using English grammar*—appears in the present study.

Of course, pedagogical materials have been studied by researchers. We begin by reviewing the existing literature on language teaching

materials. We then outline our understanding of the classroom ecology, and set out the conceptual framework we will employ in the present study, before moving on to describe the study itself.

MATERIALS IN LANGUAGE TEACHING

Paradoxically, while materials are a key player in most classrooms, they are frequently overlooked in classroom-based research. As a simple example, in Bailey and Nunan's (1996) *Voices from the language classroom*, an edited volume of classroom-based studies, while the index contains no fewer than 39 references to "materials" dispersed throughout the book, no single chapter takes materials as its primary focus. This is not to say that there is no research on second language materials but rather that the large literature on materials includes very few classroom-based studies. The following review will survey key findings from the broader literature on second language materials, and then focus on the few classroom-based studies that have examined materials in use in actual language classrooms.

The general literature on second language materials falls into two broad areas: content analyses of materials in isolation from the processes and interactions of the classroom, and publications on materials development, design, and evaluation. As for the former, Harwood (2002) discusses the challenges of incorporating findings from linguistic research into second language materials through the example of vocabulary and grammar learning. Harwood concludes that implementing such linguistic findings in the form of materials that are useful and acceptable to teachers and students is a major challenge that has not been addressed by such research. (For examples of content analyses, see e.g. Crossley et al., 2007; Jeffries, 1985; Wong, 2002 [English]; Etienne & Sax, 2009; Herschensohn, 1993; McCool, 1994; O'Connor di Vito, 1992 [French]; Tschirner, 1996 [German]; Aski, 2005 [Italian]; Glisan & Drescher, 1993; Ramirez & Hall, 1990; Wiczorek, 1992 [Spanish]; Azimova & Johnston, 2012; Rifkin, 1998; Sharda-kova & Pavlenko, 2004 [Russian].)

Regarding materials development, design, and evaluation, a major conclusion that has been drawn from this literature is that no single set of criteria for second language materials is universally appropriate for all classroom contexts (see Harwood, 2010; Johnson, 2003; Littlejohn & Windeat, 1988; McDonough & Shaw, 2003; McGrath, 2002; Tomlinson, 2008, 2011, 2012; Tomlinson & Masuhara, 2010). Thus, local teach-

ers and publishers should play a crucial role in the production of culturally appropriate materials (Harwood, 2010; Tomlinson & Masuhara, 2010; Zacharias, 2005). Moreover, "it would certainly inform the materials development process if we knew more about what teachers actually do with the materials they are given to use" (Tomlinson, 2012, p. 157). Harwood (2010) asserts that qualitative classroom-based research on second language materials is "the key" to advancing this area of applied linguistics research (p. 18).

Yet only two classroom-based studies that we are aware of, Canagarajah (1993) and Yakhontova (2001), focus squarely on the general pedagogical use of second language materials in actual classrooms. Both authors examined the use of global ELT textbooks in non-Western contexts (see also Dendrinos, 1992; Gray, 2010a, 2010b). Canagarajah (1993) found that the communicative pedagogy of the Western ELT textbook used in his classroom was resisted by Tamil learners in Sri Lanka, who showed greater enthusiasm for grammar-focused activities. Yakhontova (2001) found that while Ukrainian learners reacted positively overall to novel language-learning goals and methods used in an American textbook, they responded negatively to the lack of familiar cultural references. Thus, both researchers conclude that such use of materials devalues local teachers and the knowledge they bring to the classroom, and induces "cultural estrangement" as students fail to engage with the alien cultures represented in the materials (Canagarajah, 1993, p. 615).

A small number of additional studies have begun to provide initial understanding into how second language materials are used in actual classrooms, yet most do not focus on classroom use of materials as the primary object of interest. Some acquisitional research has focused on reading instruction in particular and conceptualizes second language materials as a source of linguistic input (Elley, 1991; Maxim, 2002).

In more pedagogically oriented classroom research, one prominent relationship is that between materials and the curriculum. Tsui's (2003) research on the knowledge base of teachers suggests that, while less experienced teachers tend to rely more heavily on a core textbook as a curricular guide or even crutch in their day-to-day teaching, more experienced teachers differentiate among materials, the curriculum, and instruction. More knowledgeable teachers tend to be more selective in their use of published materials, including textbooks, and draw upon a richer variety of material resources.

Some teachers rely on the textbook as an instructional script (Tomlinson, 2012), and in many classrooms the textbook is *the* primary authority (Dendrinos, 1992), often at the expense of the knowledge and power more rightly attributed to the teacher (see Allwright, 1981; Bailey & Nunan, 1996; Harrison, 1996; Shaw, 1996). In other instances, materials also act as malleable pedagogic tools that fulfill a range of instructional functions. English teachers in Hong Kong reported in a survey that they critically used the textbook as a resource rather than slavishly teaching by the text (Richards & Mahoney, 1996).

In a classroom-based study on teaching styles, Katz (1996) describes ways that materials are actually used in four teachers' language classrooms, and finds that teachers call upon these instructional tools to "guide . . . [students] through the day's lesson" (p. 71), "provide information and procedures" for other course materials (p. 77), act as "samples" which inform student creations, "explain and illustrate" (p. 79) and also "capture students' interest in" the content (p. 82). Also, Katz finds inconsistencies between prescribed versus actual uses of materials in classrooms according to the different teachers' pedagogical needs and goals.

Individual teachers' and students' complex personal characteristics also influence their responses to second language materials. For example, teachers' beliefs about student abilities and the importance of institutional exams (Lee & Bathmaker, 2007) or about how the target culture should be represented (Gray, 2000) influence how they report using textbooks in class. Yet much of this previous research on materials and teachers' personal characteristics is questionnaire-based rather than classroom-based; in other words, it offers insights into what teachers report doing, rather than what they actually do in the classroom on a daily basis.

One exception is Sunderland et al. (2001), who found in a study of English, French, and German classes that teacher talk about gender "cannot be predicted from . . . textbook" representations of gender (p. 252). Another is Zacharias (2005), who compared 100 Indonesian EFL teachers' beliefs about the value of locally versus internationally produced materials, as reported in questionnaires, with their actual classroom practices. Classroom observation of these teachers showed that their teaching practices were not completely consistent with their beliefs. Moreover, students' personal responses to materials also play an important role in the way that the life of the

classroom unfolds. Van Lier (1988) noted that when textbooks are dull, students may respond playfully with side topics that stray from the main order of business (also see Butzkamm, 1980; Sullivan, 2000). These studies confirm that classroom-based research is crucial to understanding how materials are actually used.

Several overarching points can be made from the existing literature on language teaching materials and their use in language classrooms. First, as the global spread of the literature indicates, the use of textbooks is extremely widespread; it might even be said to be an almost ubiquitous feature of language classrooms. Second, all language teaching materials carry some kind of ideological charge. Third, materials always and everywhere interact with other elements of classroom life. Fourth, and perhaps most important for the present study, the role of materials is multiple and complex. Materials are used, whether deliberately or not, to provide structure and content for learning activities, to organize curriculum, and to frame (more or less questionable) classroom ideologies, among many other roles.

Yet the preceding literature has certain limitations. Above all, few of these studies show in detail how books are actually deployed in the classroom. It is still the case that, as Ghosn (2003) points out, "[r]esearch into what teachers and students actually do with the language teaching textbook has been scarce at best" (p. 292). We lack an understanding of the relationship between materials and other important components of the classroom experience, including language learning, curriculum, and perhaps most crucially of all, classroom discourse. Because of this, it is difficult to see the impact of materials (for better or for worse) in actual classrooms with actual students and teachers. Language classrooms are notoriously complex places (Tudor, 2001). None of the literature reviewed above fully reflects this complexity, or attempts to locate materials within the totality of experience in the classroom; nor does any of it offer a conceptual framework that could capture this relationship. It is to such a potential framework that we now turn.

THE CLASSROOM ECOLOGY

The present study examined the relationship between a textbook and the class in which it was used. If we were to truly keep an open mind about the place of the textbook in the language classroom we studied, we needed a framework that could capture the richness and complexity of classroom life. Such a framework was provided by

the notion of the *classroom ecology*. Our central question in this study was: What role(s) does the textbook play in the ecology of this language classroom?

In using the concept of ecology, we were following numerous other educational researchers who over the last decades have proposed seeing the educational experience in ecological terms (e.g., Blocher, 1974; Bronfenbrenner, 1976; Doyle, 1977; Hamilton, 1983; Tudor, 2001; van Lier, 1996, 1997, 2004): That is, they conceive of educational settings like classrooms as constituting systems akin to biological ecosystems, and propose that research focus on the relationships among the various elements present in the classroom environment. Above all, we follow van Lier (2004) in believing that “the ecological approach provides an alternative to traditional ways of doing educational theory, research and practice” (p. 20). Conceptualizing the classroom as an ecosystem allowed us to ask the central question posed above in terms of the relationships between the textbook and other elements of the context: the human players (learners, teacher); forms of interaction, notably classroom discourse; organizing forces such as the curriculum; and so on.

We commenced the analysis with a broad interest in the kinds of relationships outlined above. As the analysis proceeded, we understood the importance of systematizing our thinking about the various elements of the classroom. We compiled the following list, and used it to further organize our ongoing analysis. The list is by no means exhaustive, but we believe it captures the major elements whose interaction is central in the ecology of the language classroom: The classroom ecology focuses on relationships between and among *participants*, *processes*, *structures*, and *artifacts*.

The first element, *participants*, includes the individual people who participate in and shape the day-to-day classroom experience: the students and teacher(s). Next, *processes* consist of systematic series of actions or activities that take place in a directed manner or towards some end, such as learning, teaching, and classroom discourse. The third element, *structures*, refers to relatively stable organizational forces within the life of a classroom, including the curriculum, power, and classroom discourse. The final element, *artifacts*, refers to entities from the physical world that have a significant presence in the life of the classroom, for example, materials.

This list is to be regarded as provisional and subject to refinement—it is merely a first attempt

to capture the major components that make up the totality of classroom experience. In some cases it seems possible to classify elements in more than one way, as is the case here with classroom discourse, which can be seen as both a process (something that by definition develops through time) and a structure, in the sense of well-documented patterns such as the IRE (Initiation–Response–Evaluation) pattern attested in a great many classrooms. Nevertheless, such a framework gives us at least a starting point in thinking about exactly what interacts with what (and whom) in the classroom ecology.

Our main focus of interest is relationships among these elements, especially those involving the materials. For this reason, we will also draw on the notion of *affordances* and the related concept of *emergence* (van Lier, 2004). The former is defined as “relations of possibility between animals and their environment” (Neisser, 1987, p. 21, cited in van Lier, 2004, p. 91) or as “actionable properties between the world and an actor” (Norman, 2004, para. 2; also see Gibson, 1977, 1979). In the context of language learning, van Lier (2004) describes *affordances* as “relationships that provide a ‘match’ between something in the environment . . . and the learner” (p. 96) or “what is available to the person to do something with” (p. 91). Furthermore, affordances are conceptualized as the potential starting point of the meaning-making process; this meaning-making process is an “active relationship” that involves engagement between the learner and the environment (van Lier, 2004, p. 92). Finally, affordances may either enable or constrain language learning.

As well as capturing the interrelatedness of classroom life, an ecological approach, along with the notion of affordances, also acknowledges the complex nature of causality (see also Larsen–Freeman & Cameron, 2008). This is reflected in the concept of *emergence*, which refers to “a reorganization of simple elements into a more complex system” (van Lier, 2004, p. 82). Thus, “results of events and activities may be dramatically different” from the basic elements involved therein “and may not be reducible to” those basic elements (p. 82). As van Lier (1997) explains in the context of language acquisition, “evidence of learning . . . cannot be based on the establishment of causal (or correlational) links between something in the input and something in the output” (p. 786). Rather than seeking linear causal relationships, we were interested in exploring possibilities (e.g., affordances) that are either opened up or shut off by the various ways in which

the textbook takes part in the life of the classroom.

In the present article, the term *classroom ecology* is taken to refer to the totality of interrelations between elements in the language classroom. By looking at the classroom as a system, we aim to include not just the idealized processes of language learning, but the many and varied processes and relationships that, deliberately or incidentally, become part of the “modus vivendi” (Tudor, 2001, p. 44) of the classroom. By looking at an *actual* classroom, we aim to flesh out the idea of the classroom ecology by seeing how relationships develop between actual participants, artifacts, structures, and processes.

Above all, we are attracted to the notion of ecology because it presents a vision of the classroom as a complex, interlocking set of elements and relationships in which any one element can only be understood in the light of its interactions with other elements. Specifically, we argue that, in the case of language teaching materials in the context of actual teaching, it is the use of materials by teachers and students and their impact on other classroom elements, such as curriculum and classroom discourse, that is of greatest interest. Rather than studying pedagogical materials in isolation, we suggest that the more important goal is to understand how those materials function in the complex web of relationships that constitutes an actual classroom.

METHOD

Context and Participants

This classroom-based study investigated the role of materials in an intermediate ESL grammar class in an Intensive English Program at a large public university in the Midwest of the United States. The class is rather typical of its kind and the course textbook, Azar’s (2002) *Understanding and using English grammar*, is “among the most widely used ELT textbooks in the field . . . used by millions of English language learners in almost every corner of the globe” (Panferov, 2007). This advanced level grammar class met fifty minutes a day, five days a week, for seven weeks. The purpose of the class was to promote students’ ability to use and recognize grammatical structures, and was one part of their broader program of study, which included other content- and skill-based classes. While the course employed a grammar book, rather than investigating grammar teaching per se we focused more broadly on the use of the textbook in the classroom.

Informed consent was obtained for all participants in the study, who are referred to here with self-selected pseudonyms. John, the teacher, was a native speaker of English with many years of teaching experience, although this was his first time teaching this particular grammar course. Of the 18 students in the class, nine were male and nine female. Most were in their twenties, although they ranged in age from 19–44; all had spent less than one year in the United States studying English. Eleven different nationalities were represented. The students’ first languages included Korean (7), Spanish (2), Turkish (2), Portuguese (2), Farsi (1), Japanese (1), Mongolian (1), Thai (1) and Vietnamese (1).

Data collection

Data collection began on the first day of class and ended on the last day, and included several types of qualitative data: (a) approximately 14 hours of observation and recordings of classroom discourse, (b) two one-hour, semistructured interviews with the teacher, (c) two focus group interviews with 7 and 8 students per group,¹ (d) detailed field notes from twice-weekly observations throughout the seven weeks of class, and (e) artifacts from the class. The artifacts are of course of particular interest, given the focus of the article. The artifacts we examined consisted of the textbook (Azar, 2002), syllabus, attendance records for the entire term, the teacher’s grade book for the entire term, the teacher’s “Daily Plans,” which included a list of preplanned activities for each day, 4 graded quizzes and 4 graded tests, students’ graded daily homework, and all documents from the course website, including materials, assignments, and emails. Classes, interviews, and focus groups were recorded on a digital recorder and transcribed according to standard discourse analytic conventions (cf. Jefferson, 2004; see Appendix A).

Analysis

Given that this study proposes a new conceptual paradigm and was largely exploratory in nature, it seemed appropriate to avoid imposing a rigid theoretical framework. Rather, we used the notion of classroom ecology, and the list of elements given above, to shape key questions that a close qualitative analysis should address. (Note that in our questions, the term *materials* applies primarily to the textbook, which was by far the most prominent of the materials employed in this classroom.) These questions were as follows:

1. How were the materials used in this classroom? In particular, what were the significant relationships between the materials and other elements of the classroom ecology?
2. What was the nature of these relationships? What affordances did the materials offer?

In conducting the analysis, triangulation among the various data sources was used to strengthen findings. Emergent conclusions were shaped by iterative comparisons among findings based on discourse data, observations recorded in field notes, evidence from classroom artifacts, and participants' emic perspectives (focus group and interview data).

Aside from the primarily qualitative analysis, a rough quantitative analysis of the discourse was conducted in order to identify the proportion of turns-at-talk (Schegloff, 2007) in classroom discourse that was elicited by the materials. After transcribing the 13 hours of classroom discourse recorded for this study,² we analyzed each turn-at-talk impressionistically, focusing on the relationship between the turn and the materials in order to determine if the turn was prompted, either directly or indirectly, by the materials. If the turn included vocabulary borrowed verbatim from the text or a prescribed response elicited by the text, we considered it to be directly prompted by the materials. If the turn was not quite as obviously related to the materials but included topics originating in the text, we considered it to be indirectly prompted by the materials. Both types of turns were coded as "prompted by materials." Turns that were not prompted by the materials were coded as such.³

We emphasize at this point that all findings are tentative and provisional and that this study as a whole is intended to stimulate discussion rather than reach fixed or firm conclusions.

RESULTS

The analysis revealed that when observed in action, materials play various roles and enter into several relationships that are crucial in the classroom ecology (see also Katz, 1996). The affordances provided by the materials go far beyond those set out by the authors of the book, or even those consciously planned by the teacher. For example, the textbook did far more in the totality of the classroom ecology than merely prompt students to complete activities aloud or in writing, "introduce . . . grammatical structures" and elicit discussion and questions from the students (John, Interview, July 10, 2008). Other,

perhaps unintended, roles of the textbook as it is actually used within the classroom ecology were the focus of the current study.

In response to the first research question, we observed three elements in the classroom ecology in which materials play a central role: the curriculum, classroom discourse, and language learning. We found that the life of the classroom systematically unfolded around these three central ecological elements, and the relationship of each to the materials selected for the class was highly significant.

Each of these three elements played a distinct yet crucial role in the life of the classroom. Curriculum refers to the sequence and content of learning planned for the course (White, 1988), is a central structure in the ecology of any classroom, and is determined by the broader educational institution in which the classroom is situated. Classroom discourse, as indicated previously, can be conceptualized as both a structure and a process; in both senses it lies "at the center of what happens in the classroom" (Bloome et al., 2005, p. xvi). These two relationships, between (a) the materials and the curriculum and (b) the materials and discourse, both offered crucial affordances for language learning in the classroom under investigation. Learning, while it clearly is the most central element and process of all, is also the hardest to define; below we will speculate on the relationship between language learning and the materials deployed in John's classroom. Each of the following three results sections further explores how the materials were actually used in the classroom and, in response to our second research question, examines the nature of these three significant ecological relationships.

Materials as Curriculum

The first and most straightforward role of materials in the classroom under consideration here was that of organizer of planned content. In a word, in John's class the book served as the de facto curriculum, as has been observed by researchers in a number of different contexts (de Castell, 1990; Harrison & Wilson, 1981, as cited in Kouega, 2003; Singapore Wala, 2003). Classroom observations, student perceptions of the textbook as expressed during focus groups, and artifacts such as the syllabus, the instructor's daily lesson plans, regular homework, tests, and quizzes all indicated that the book played the role of curriculum. John articulated this view of the curriculum on the first day of class as he went over

the syllabus with his students, defining the purpose of the course as completion of “chapters seventeen, eighteen, nineteen, and twenty” (Class, June 27, 2008).

This practice of *materials as curriculum* had a number of ecological consequences. *Progress* and *success* in the class were defined as “moving through the materials” and completing the tests and quizzes provided in the book. Because the curriculum of the class was conceived as being constituted by (part of) a book, the curriculum itself and the learners’ progress through it were overwhelmingly seen as a linear movement. John himself described the curriculum as having to “just cover—cover these chapters basically.” Of the book he said, “It doesn’t push them too fast” and “I like the way it’s paced.” The book was seen as setting the tempo of learning as well as the sequence: “I stuck pretty much to the rhythm that the book had set up,” “you can pretty well plod along just from one [textbook exercise] to another as you need” (Interviews, July 10 & August 6, 2008). Students were sensitive to this practice too, saying, “textbook [is] like the only one guide” (Hugo, Focus group, July 22, 2008), and “we will cover these chapters” (Karim, Focus group, July 22, 2008).

Furthermore, in several instances the book was seen as a point of reference to determine what was or was not a good use of class time—in other words, it was treated as an *arbiter of validity*. John referred to materials from sources other than the book as “extracurricular.” While he said that he felt free to “deviate from . . . the so-called party line” by adapting the textbook and using supplementary materials, he described this practice as a “pretext” (Interview, July 10, 2008). Terms such as “extracurricular,” “deviate,” and “pretext” strongly suggest a sense of semilegitimacy about the supplementary materials, implying the textbook alone constitutes the legitimate curriculum of the class. This was also reflected in the assessment artifacts. The classroom and focus group data indicate that the Azar-based quizzes and tests had a strong bearing on the learning goals, which further increased the importance of the materials in the classroom ecology.

Lastly, one interesting observation concerns perceived agency and the interrelationship among the participants, materials, and curriculum. In our earlier outline of the classroom ecology we classified materials such as textbooks as artifacts, thus portraying them effectively as inanimate objects. However, in the eyes of the participants in this classroom, the materials were sometimes portrayed as if they were, or repre-

sented, human participants with a will and a purpose. At several points, John talked about the textbook with an oblique reference to its unspecified author, as “they”: “When they talk about cause and effect, I want you to think of some examples” (Class, June 27, 2008); “They want you to complete these sentences using ‘even though’ or ‘because’” (Class, June 30, 2008); “Oh, they’re making us change these expressions” (Class, July 17, 2008). Interestingly, at another point in the same class he said: “I, they want you to restate the sentences” (Class, July 17, 2008); his hesitation and change of pronoun suggests a conscious sense of the textbook as an actor with an agency of its own, one that can want students to do things and even make them do them (see also Ghosn, 2003). In this sense, the book embodied a third party participant by proxy, suggesting that agents removed from the classroom defined the curricular structure of the course as it unfolded.

These data suggest that the relationship among the book, curriculum, and participants (present or otherwise) gave these materials unique power within the classroom ecology. Furthermore, while the phenomenon of *textbook as curriculum* has been observed before in many diverse contexts, it is important to note that this Azar text is not necessarily a textbook per se.⁴ Rather, Azar is a grammar reference and exercise book, and the fact that it nonetheless played the role of curriculum in this course makes the phenomenon of *materials as curriculum* particularly salient. In the discussion section we will consider the notion of *materials as curriculum* more critically, asking what the consequences might be for classroom interaction and learning. For the moment, we note the major ecological role of materials in structuring the way the content and process of teaching and learning are conceived by the participants in John’s classroom.

Materials and Classroom Discourse

The relationship between materials and classroom discourse was crucial to understanding the “modus vivendi” of the classroom, to use Tudor’s (2001, p. 44) terminology. In the classroom examined in the present study, the textbook influenced a substantial amount of student and teacher language: In the data that we transcribed and coded, 83% of the classroom discourse was related to the materials. We were interested in ascertaining how the materials enabled or constrained classroom language use, so our analysis focused on the qualitative dimensions of the materials–discourse relationship.

Classroom discourse has three dimensions, according to van Lier (1988): what the talk is about, what is being done through the talk, and how it is done. The respective terms we use here for these dimensions of classroom discourse are: *topic*, *type*, and *organization of discourse*. The first, *topic*, refers to the propositional content or a “single issue or set of related issues” that is sustained over a stretch of talk (p. 148). *Type* refers to the genre or category of talk as it relates to the purpose of the discourse. In John’s class, the materials engaged participants in the following *types of discourse* (some of which appear in Extract 1, 2, and 4): production of and experimentation with prescribed target forms, metalinguistic discussions and inquiries about lexical items, morphosyntax, and pragmatics of language in the materials, conversations unrelated to grammar but prompted by themes presented in the materials (e.g. travel, relationships, family), teacher explanations of language presented in the materials, and recitations and guided readings of the materials in the case of play scripts (supplementary materials). *Organization of discourse* refers to (a) its structural features, (b) the manner in which it is constructed and controlled by students, teachers, or both, and (c) the quality and quantity of talk.

The data suggested that these three features of classroom discourse were strongly influenced by the materials. The differing affordances offered by different kinds of materials, and hence participants’ responses to them, often gave rise to important differences in classroom discourse. Each of the following samples of materials sheds light on the relationship between materials and classroom discourse, in terms of *topic*, *type*, and *organization of discourse*. While each of these dimensions is at play during talk, one may be more prominent than the others at any given moment (van Lier, 1988, p. 149). The samples of materials below include a fill-in-the-blank activity and a combine-the-sentences activity. The first sample of materials (Passage 1) is a fill-in-the-blank activity from Azar (2002, p., 364), which elicited the classroom discourse shown in Extract 1. (Bolded text in the classroom discourse extracts represents language originating in the materials [see Appendix A].)

PASSAGE 1. Fill-in-the-blank activity

Using **EVEN THOUGH**. (Chart 17-3)

Directions: Complete the sentences by using either **even though** or **because**.

1. Tim’s in good shape physically even though he doesn’t get much exercise.

2. Larry’s in good shape physically because he gets a lot of exercise.

3. I put on my sunglasses _____ it was a dark, cloudy day.

4. I put on my sunglasses _____ the sun was bright.

5. _____ Maria has a job, she doesn’t make enough money to support her four children.

6. _____ Anna has a job, she is able to make rent and provide food for her family.

7. Susan didn’t learn Spanish _____ she lived in Mexico for a year.

EXTRACT 1. Discourse prompted by Passage 1

1. John: . . . okay so number four was
 2. ((Male student)): **because**
 3. John: What about number five?
 4. Class: **even though**
 5. John: **even though** – un hunh – how about number six?
 6. Class: **because**
 7. John: because. - seven?
 8. Class: **even though** (1)
- (Class, June 30, 2008)

The *type of discourse* that emerged from this activity included the elicitation and production of prescribed target forms (lines 1–8). The *topics of discourse* included the grammatical concept of connectives and issues that can be paraphrased as “what is the answer to these written prompts” and “where are we on this page.” With respect to the *organization of discourse* elicited by this activity, important characteristics of the discourse in Extract 1 included its lack of complexity and low quantity of student language. In general, the classroom discourse followed the predictable, teacher-controlled IRE (Initiation–Response–Evaluation) pattern that has been widely attested in the literature (e.g., Bellack et al., 1966; Mehan, 1979; Nassaji & Wells, 2000).

Importantly, the meaningfulness of the interaction was questionable, since the substantive content of the materials and discourse related neither to the students’ lives nor to events, issues, individuals, or places referencing the real world. The only interactional move realized by the students was reacting to the teacher’s prompts by providing a predetermined response. The lack of student-controlled turns or uptakes also suggests that students’ agency is limited in the co-construction of the discourse. The quality and quantity of interactional moves performed by the teacher were

also restricted. Short teacher utterances (lines 3 and 5) elicited prescribed, one or two word responses from students (lines 2, 4, 6, 8), offered unelaborated feedback in the form of repetition of the target forms, and deictically referenced the enumerations of questions in the physical text of the materials (“[question] number four,” “number five,” “number six,” “[number] seven”).

In ecological terms, the affordances offered by the materials in Passage 1 were so constraining that, much like the textbook activity itself, the student and teacher language was essentially fill-in-the-blank discourse. There were several other examples of this kind of impoverished discourse arising from activities similar to Passage 1, including other fill-in-the-blank or correct-the-errors type activities in particular. John did not spend much class time on such activities, but when he did, they afforded language use similar to that of Extract 1.

While Passage 1 is a fill-in-the-blank exercise, the second sample activity, Passage 2, directs students to “combine the two sentences” by “making a modifying phrase.” The relationship between Passage 2 and Extract 2 is representative of the materials–discourse relationship for similar

activities from Azar (2002, p. 378) that appear throughout the data.

PASSAGE 2. Combine the sentences

Modifying adverbial phrases. (Charts 18-3 and 18-4)

Directions: Combine the two sentences, making a modifying phrase out of the first sentence if possible.

1. The children had nothing to do. They were bored.
→ *Having nothing to do, the children were bored.*
2. I heard that Nadia was in the hospital. I called her family to find out what was wrong.
3. We slowly approached the door to the hospital. The nurse stepped out to greet us.
...
9. I am a married man. I have many responsibilities.
...
13. I recognized his face, but I had forgotten his name. I just smiled and said, Hi.

EXTRACT 2. Discourse prompted by Passage 2, Number 13

1. John: . . . (*reads from the book*) **“I recognize this face but had forgotten his name. - I just smiled and said hi:”** (2) (*Hugo raises his hand*) *yes*
- 2.
3. Hugo: **Having forgotten his name - but recognizing his face. - I just smile and said hi.**
- 4.
5. John: ↑*whew* (1) **Having recognized his face - but (1) having forgot his name - I just smiled and said - hi: .**
- 6.
7. Karim: how about this way? - **recognizing his face but forgetting his name - I just smiled and said hi.**
- 8.
9. John: okay
10. Antonia: ((another one)) (*laughing*)
11. John: ↑*yes* - ↑*another one* - okay
12. Antonia: **Recognizing his face but - having forgotten his name?**
13. John: ah ha ha (*laughing*) - **Recognizing his face but having forgotten his name - that's fine. *that's good***
- 14.
15. Giovanni: I mean - may I use? (1) the same (1) uh verb tense - in the (1) *second phrase?* - I mean - after the comma? - but I (1) but **I have forgot** (1) I mean may I use - **I recognized his face (1) uh - but I had forgotten his name?** (3)
- 16.
- 17.
- 18.
19. John: I'm not sur:e - if you're asking - the tense of the verb?
20. Giovanni: yeah - in the second ((??))
21. John: ***I smiled and said hi:***
22. Giovanni: no no. I'm sorry. - the second - uh - clause. (2) **but I had forgotten**
23. John: oh you want to say - **recognizing his face - but - I had forgotten?**
24. Giovanni: *yeah*
25. John: no - that's not possible - why? (6) these two - are parallel parts of the sentence so they have to be um - *they* have to have - similar structures - uh - especially if they're going to be joined. (4) have you uh (1) have you found yourself in a situation like this before?
- 26.
- 27.
- 28.
29. Antonia: yeah
30. John: what do you do?
31. A few students: (*offer unintelligible answers*)

32. John: hello there – how are you doing? (*laughing as he acts out greeting*
 33. *someone abashedly; a female student laughs quietly throughout John's*
 34. *turn*) – and then what do you do? What if the person calls you by name? –
 35. ↑oh - Anto↑nia – how nice to ↑see you
 36. Antonia: (*giggles*) good morning
 37. Class: (*quiet laughter*)
 38. John: (*laughingly*) so how do you – uh – how do you – escape from all the
 39. embarrassment? *((???)*) – I just ho:pe that person goes away: (*class*
 40. *laughs quietly*) – no? – what do you – what's a good way to pa- handing
 41. this *situation*?=
 42. Karim: =Actually – the first day I came to [this state] this happened to me. – uh -
 43. **I saw a friend – uh – and I recognized his face but I forgot his name.** –
 44. He called me by name – **and** - I was – uh – kind of (1) I don't know. –
 45. because – actually – what kind of friend I am ((that he)) ((??)) remembers
 46. my: name but **I had forgotten his name.** – and – then - I didn't ask him
 47. that. – and – we greeted and then –uh – afterwar-wards I started thinking
 48. about him - thinking and thinking =
 49. John: =um hm
 50. Karim: **and I** – (*sigh*) – I remember **his name**.
 51. John: oh you-finally you gave yourself time to remember
 52. Karim: =yeah
 (Class, July 14, 2008)

Considering the *organization of the discourse*, the combine-the-sentence activity in Passage 2 elicited more student-initiated talk and a greater quantity and quality of language than in the fill-in-the-blank example of Passage 1. In Extract 2 the students provided a variety of complete sentences and multiphrase responses as they creatively experimented with a range of morphosyntactic structures (lines 3–4, 7–8, 12, 15–18, 42–48). Karim's personalized borrowing of the language of the text (42–50) demonstrated the richest and most creative use of language in this passage, both in terms of grammar and vocabulary. The various students' utterances in Extract 2 were longer, more complex, and more numerous. Furthermore, the same question elicited various *types of discourse*: the production of target forms (lines 1–22), a metalinguistic discussion about the materials (lines 15–27), and Karim's personal narrative (lines 42–52). Karim's response, it should be noted, was prompted by the teacher (lines 27–41).

The striking differences between the discourse in Extract 1 and that in Extract 2 further illustrate the significance of the relationship between the materials and the classroom discourse. These data indicate that the open-ended activities afforded richer language use opportunities than the closed-ended activities. Nonetheless, while the language of Extract 2 was more creative and varied than the language of Extract 1, the *topics* and structures of the discourse, particularly in lines 1–27 of Extract 2, were still guided and perhaps even constrained by the materials. Students only used clauses arising from the materials, and the originality of their language

was restricted to variability in the order of clauses and verbal aspect.

Furthermore, comparison between these excerpts suggest that richer language use arose when the affordances offered by the materials provided learners with opportunities to relate them to their own lives and experiences, or allowed them to bring their specific language learning concerns to the table. Importantly, the digression from the activity in lines 27–52—which is personally meaningful for Karim—is not the *type of discourse* that the activity purports to elicit. This unpredictable, emergent dimension of the materials–discourse relationship is in fact an inevitable feature of the classroom ecology, which we elaborate on in the next section.

Materials and Language Learning

In the popular imagination, materials such as textbooks are precisely what we learn from. In this view, information goes from the textbook into the learner's brain in a straightforward and direct manner. The ecological aspects of language learning are not captured by this transmission model (see Harris, 1996; Reddy, 1979). Indeed, many practicing teachers know that this is not how learning happens even in content-rich subjects, let alone a skill-oriented subject such as language. Clearly, whatever materials are doing in the classroom, they are not simply sources of content for learners to ingest (as has been suggested by socioculturally oriented models of language learning [see Lantolf & Thorne, 2006; Slimani, 2001]).

If we agree that this is not in fact how materials function in real classrooms, we are left with the central question: How *do* they function? This study was not designed as an investigation into language acquisition, nor are our data able to support claims about it. Nevertheless, the conceptual framework of the classroom ecology raises important questions about language learning and teaching, and the data of the study point towards interesting possible responses.

Van Lier (1997, 2004) cautions against any straightforward, mechanistic account of language learning in his call for an ecological approach:

An ecological perspective on language learning is . . . a conception of the learning environment as a complex adaptive system, of the mind as the totality of relationships between a developing person and the surrounding world, and of learning as the result of meaningful activity in an accessible environment. The language observed in a sociolinguistic (or semiotic) ecology is not seen as input directed at the learner for the purposes of intake and eventual output, but rather as potential affordances, that is, as signs that acquire meaning and relevance as a result of purposeful activity and participation by the learner and the perceptual, cognitive, and emotional engagement that such activity stimulates. (van Lier, 1997, p. 783)

In fact, the teacher in the class being studied expressed a similar idea when asked “where the new knowledge comes from”:

John: That’s a good question—uh. (2) I think it’s coming from the discussions and the students in playing with the, with the sentences [. . .] I’m not, I’m not certain that it really gave some of them new knowledge—but the ones who were sitting and listening and who eventually were coming in to participate, I think that their level would have been slightly enhanced by that . . . I would guess [they] were getting it from earlier—they may have been getting it from all their classes (Interview, August 6, 2008).

The teacher identified student–student interactions, classroom discussions, and his explanations as important sources of knowledge, but also acknowledged the complexity of the situation as he said, “Somehow, though, I don’t, I never felt that that was [. . .] where they would get some of their knowledge.”

From an ecological approach, what is the relationship between materials such as textbooks and the processes of language learning in the classroom? Affordances are crucial to the process

of language learning (van Lier, 2004); materials, as a central component of the environment in the class under investigation, were a key source of affordances, as illustrated in the previous two sections on curriculum and classroom discourse. Generally speaking, when artifacts (e.g., textbooks) are used by participants for specific activities (e.g., language learning and teaching), they have intended affordances that designers have in mind when they create them. (Norman [2004] discusses these in terms of designers’ concern for future users’ “perceived affordances” [para. 3] of an artifact). Yet once an artifact such as a textbook leaves the hands of its designer(s) and is actually used in the world, it often provides affordances that were not intended or perhaps even imagined by the designer. In the current study we examined the unintended language learning affordances of the textbook as it was actually used in a classroom.

In some cases, it could be argued that the materials offered language learning affordances as they were intended to: They encouraged learners to use the target forms in speaking and writing. This was the case for the assessments, which consisted of written homework, quizzes, and tests from Azar. In these assessments, student language consisted of directed responses to the exercises, as illustrated in the following sample set.

PASSAGE 3: Homework activity

Using UNLESS. (Chart 17-8)

Directions: Make sentences with the same meaning by using *unless*.

...

4. If I don’t get some film, I won’t be able to take pictures when Ann and Rob get here.

(Azar, 2002, p. 370)

EXTRACT 3: Student written response prompted by Passage 3

4. Unless I get some film, I won’t be able to take pictures when Ann and Rob get here.

(Michi’s homework, July 3, 2008)

PASSAGE 4: Corresponding response from answer key

4. Unless I get some film, I won’t be able to take pictures when Ann and Rob get here.

(Azar, 2002, p. 56 Answer Key)

The student response (Extract 3) and corresponding Azar answer key response (Passage 4) show that this part of the materials (Passage 3) was used for language learning as the designers intended.⁵ It could similarly be argued that in Extracts 1 and 2, the materials offered the intended affordances, and Extract 2 also afforded an opportunity for Karim's personally meaningful response (lines 42–52). Nonetheless, it is important to point out that Extract 2 and one other extract were the only two cases in classroom discourse data where the textbook both engaged participants in apparently meaningful interaction *and* afforded the intended language use.

In many more cases of classroom interaction, it was quite clear that the relationship of the materials to language learning was more complex, and that the materials more often than not provided emergent rather than intended affor-

dances for language learning and use. Examples of emergent affordances appear in Extract 4, which resulted from an item in the combine-the-sentences activity (Passage 2, number 9) that read: "I am a married man. I have many responsibilities."

In this Extract, participants' discourse was clearly prompted by the materials, but unlike the previous extracts the affordances for language learning here seem quite different from those intended by the book designers. First of all, while Extract 4 (lines 1–7) began to unfold according to the directions of the combine-the-sentences activity (Passage 2), the target forms and phrases elicited by the book were barely used by the learners throughout the rest of this extract. This could be considered a constraint of this part of the materials, or more precisely a constraint of the relationship between materials and participants. Yet the lively exchange in lines 8–35 suggests that

EXTRACT 4. Discourse prompted by Passage 2, Number 9

1. John: ". . . **I'm a married man. – I have many responsibilities.**" (*aside*) – but
 2. I can't understand this.
 3. Hugo: yeah
 4. John: Hugo – are you **a married man?**
 5. Hugo: yeah
 6. John: ↑ah – you can understand then. – let's hear it from you.
 7. Hugo: **Being a married man – I have many responsibilities.** (1)
 8. John: for example?
 9. Class: (*laughter*)
 10. Hugo: take care of my children.
 11. John: taking care of your children – ah. – yes.
 12. Giovanni: being faithful
 13. John: being faithful
 14. A few students: (*repeat the word "faithful" in chorus*)
 15. Hugo: to my wife
 16. John: to your uh - ↑ah
 17. A few students: (*quiet laughter*)
 18. John: being faithful to your wife – ((?))
 19. Lisa: don't try to flirt (*shoots Giovanni a suspecting look*)
 20. John: Don't try to flirt
 21. Hugo: Don't try
 22. Lisa: Don't try
 23. Antonia: Don't try – don't do.
 24. Several students: (*talking at once repeating various forms of "don't try to flirt"*)
 25. Hugo: what if a girl – flirts with me.
 26. John: what if a girl flirts with him? – he says – what should he do?
 27. ???: ((??))
 28. John: he should walk away –
 29. Students: ((????))
 30. John: or should he become angry – don't flirt with me (*in a mockingly menacing voice with his fist clenched*)
 31. Lisa: (*laughs*)
 32. John: I'm calling my wife – on his cell phone.
 33. Lisa: (*laughs*)
 34. John: (*laughs*) okay – um. – (*reverts to a serious tone*) how about number ten?
- (Class, July 14, 2008)

the materials did afford opportunities for language learning: They opened the possibility for interaction and discourse that was shaped in an emergent way by the individual participants. Their unique identities and previous experiences inside and outside the classroom were central to this process.

John and Hugo, who are both fathers and husbands, began the exchange by discussing the latter's familial responsibilities and life outside the classroom (line 8). Hugo, a Venezuelan man in his thirties, had mentioned his family life to his classmates and teacher in previous classes, sometimes telling humorous anecdotes about his young children. A few other students participated through their laughter (line 17) in John and Hugo's discussion. Lisa, a Vietnamese woman in her late teens, then added an additional layer of meaning to the excerpt through her utterance and glance towards Giovanni, a gregarious young Angolan man of 19 (line 19). A salient feature of the interpersonal dynamics of this class was Giovanni's tendency to flirt with young female students, including Lisa.

Recalling van Lier's (2004) description of the process by which affordances prompt meaning-making, as Extract 4 develops, the affordance offered by the materials (Passage 2, number 9) "fuels perception and activity, and brings about meanings—further affordances and signs, and further higher-level activity" (p. 96) among the participants (Extract 4). Through her utterance and glance (line 19), Lisa related the materials' reference to a man's marital responsibilities (Passage 2, number 9) and Hugo's response about his faithfulness to his wife (Extract 4, lines 13–15) to the interpersonal relationships that had formed in class, namely Giovanni's flirtations with his female classmates. Thus the joking, which continued in lines 20–35, demonstrated a complex interaction between multiple elements of the ecology: materials, discourse, and interpersonal relationships among the participants.

In this regard, it appears from our data that one crucial element lies in the *interaction* between the materials themselves and the learners. This seems to occur when connections can be made between the content of the materials and the students' lives, as illustrated in Extracts 2 and 4. Such connections were often facilitated by the teacher, as can be seen by John's questions in lines 4, 6, and 8 (Extract 4).

The book afforded opportunities for lively interaction, and unintended opportunities for language learning emerged from this interaction. An example relates to the gerundive phrases in

lines 10–12, which include John's use of corrective feedback. Another potential example is the contextualized use of the lexical items "flirt" or "faithful," which might have provided a vocabulary learning opportunity for students participating in the talk or listening in. These specific examples of potential learning opportunities are speculative. Yet the interaction here created meaningful opportunities for language use in the immediate environment, which opened up the possibility for learning if these affordances were relevant to the learners' linguistic development. These characteristics—relationships, possibility, opportunity, immediacy, interaction, and relevance—are at the heart of language learning affordances (cf. van Lier, 2004).

It is at moments like these that the materials came alive—they seemed to assume a natural part in the learning experience of the classroom. Furthermore, these data suggest that meaning-making, which is a central component both of affordances and of language learning, entailed an "active relationship" (van Lier, 2004, p. 92) between the participants and the materials. Related to this question of how exactly materials afford opportunities for language learning, Extract 4 suggests that the uniqueness of the individual participants and the unpredictable nature of interaction were fundamental to the emergence of meaningful language learning opportunities.

The unpredictable nature of this relationship between the materials and participants in classroom interaction raises new sets of challenges and questions for materials research. Specifically, what dimensions of the actionable relationship between materials and learners afford language learning opportunities? How can materials most effectively and felicitously be exploited within the classroom ecology? To what degree does the content of materials actually serve as input, and how might this question be tested?

Expressed in ecological terms, we might say that the crucial issue is the relationship between two elements of the system (the materials and the learners). This reinforces the claim we made earlier, that examining materials in isolation from their use in classrooms can only ever give us an inadequate understanding. Such an idea, if confirmed elsewhere, could radically alter our view of how materials can and should be designed and used in classrooms.

DISCUSSION AND CONCLUSIONS

Near the beginning of this article we posited a set of elements and interrelationships between

them that comprise the ecology of the language classroom: participants (individuals), processes, structures, and artifacts. The preceding analysis has demonstrated some of the more important ways in which artifacts (classroom materials) function to mediate processes (classroom discourse, learning), structures (curriculum, discourse patterns), and relationships (among teacher, learners, discourse processes, and learning). We focused in particular on three principal relationships. First, we demonstrated how in the classroom under investigation the materials constituted the primary source for the organization of curriculum, including the nature and sequence of content. Second, the materials were seen to have a major influence on the organization and content of classroom discourse. Third, we suggested that the complex relationship between the materials and the unique characteristics of the language learners is critical to language learning. Thus, materials offer emergent language learning affordances as the processes and activities of the classroom unfold.

Taken as a whole, the findings discussed above suggest certain general conclusions. First, the importance of materials in this class is beyond question. The ecological significance of the book in John's classroom is immense, reaching into every major aspect of classroom life. Second, there is a noteworthy discrepancy between intended and unintended affordances of the book. The actual functions of the book extended much further than the intended functions, into the structure of the curriculum and of classroom interaction.

Third, the precise role the book played in classroom interaction was subject to considerable variation. This is clear when comparing Extract 2 to Extract 4, which differ noticeably even though both were elicited by the very same combine-the-sentence exercise from Azar (Passage 2, numbers 13 and 9, respectively). Other features of the ecology had a bearing on this materials-discourse relationship and resulted in variation in the elicited discourse. Nonetheless, it is important to note that these two extracts (2 and 4) are more similar to each other than to the fill-in-the-blank discourse from Extract 1. Thus, these examples also suggest that features intrinsic to the materials have a somewhat predictable effect on classroom discourse.

Two ecological issues surface as being particularly important. First, the materials-discourse relationship is a key dynamic of the classroom ecology. Classroom discourse was a main site where the activities of language learning and

teaching took place, and as we saw that interaction in the classroom was tightly interwoven with the language and structure of the textbook. The materials were brought to life—that is, they fully entered into ecological relationships in the classroom—precisely through the participants' engagement with them in classroom discourse. Second, while the teacher and students in the classroom were clearly the primary participants in the classroom ecology, there is a sense in which the designers of the materials could also be seen as participants by proxy. Indeed, other physically absent participants could also be detected in the ecology of this classroom, notably the program authorities responsible for curriculum and program design. Thus, the ecological model helps us to perceive both proximal and distal participants.

It is of course an open question whether these findings would be reproduced in other classrooms. It might be argued that because of the way it was set up, John's class was more than usually influenced by the textbook. However, the available research evidence and considerable anecdotal and experiential evidence gathered by both authors suggest that in many language teaching situations textbooks are a similarly powerful presence, being used (often in quasi-accidental, default ways) as organizers of curriculum and classroom interaction.

Overall, we would like to stress two points. First, the spirit of empirical research should make us curious about how textbooks are actually used in classrooms, whatever the claims of publishers, administrators, and others. We believe that the present study has offered a significant new direction for classroom-based research in language teaching in this regard. Second, the concept of classroom ecology provides a helpful and appropriate way of framing the question of the role of materials in the second language classroom. Classrooms are highly complex places; given this complexity, as van Lier (1997) argued and as this study confirmed, it is extremely difficult to identify simple, clear cause-and-effect relationships. As John's quote illustrates, although practicing teachers might suspect that language learning does not happen simply by transmission of the content of the materials to the learners, many teachers may not have an alternative model to work from.⁶ Classroom ecology offers a flexible yet principled way of understanding relationships among elements in the classroom, and thus of coming closer to an understanding of what actually happens in language classrooms.

Further research might address unanswered questions regarding (a) the relationship between various types of second language materials and classroom discourse or students' written language; (b) the relationship between materials and language learning; and (c) the relationship between second language materials and diverse forms of teacher knowledge. Given the extreme variety found in classrooms and materials around the world, it would be helpful to examine materials usage in diverse pedagogical contexts, including communicative and content-based courses, for learners of diverse proficiency levels, and of various target languages.

Regarding the pedagogical implications of this study, at the very least, it behooves teachers to be mindful of the ways in which textbooks they have selected, or which have been chosen for them, may end up being used in the kinds of ways revealed in this study—i.e., as organizers of both curriculum and classroom interaction. The important thing is for teachers to consciously choose the ways they use a textbook or other materials, rather than employing them unreflectively. However, we argue that much of the responsibility lies with program administrators. In John's classroom, the use of this particular book was part of a larger curriculum extending to several classes in the program; administrators too, then, need to think carefully, not just about which materials to select, but how these materials are likely to come to life in classrooms. The central question is: What affordances will the materials provide within the classroom ecology?

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NOTES

¹ Focus groups included only the students who were present for class the day that this procedure took place.

² While 14 hours of classroom observation and recordings were included in the study, 13 of these

hours were transcribed. The last hour of observation and recording was not transcribed because this was not a class session but rather an hour that was dedicated to the final examination.

³ Examples of turns-at-talk that were directly prompted by materials (Passage 1) appear in Extract 1. For examples of turns-at-talk that were indirectly prompted by materials (Passage 2, number 9), see Extract 4 lines 19–34. Finally, for examples of turns-at-talk that were not prompted by materials, see Appendix B.

⁴ We are grateful to a reviewer of an earlier version of this article for this point.

⁵ Research on grammar teaching (Aski, 2005; Batstone & Ellis, 2009) suggests that the lack of context and the mechanistic nature of this activity may not be ideal for grammar learning.

⁶ We are grateful to a reviewer of an earlier version of this article for this point.

REFERENCES

- Allwright, D. (1981). What do we want teaching materials for? *ELT Journal*, 36, 5–18.
- Aski, J. (2005). Alternatives to mechanical drills for the early stages of language practice in textbooks. *Foreign Language Annals*, 38, 333–343.
- Azar, B. (2002). *Understanding and using English grammar* (3rd ed.). Upper Saddle River, NJ: Pearson Education.
- Azimova, N., & Johnston, B. (2012). Invisibility and ownership of language: Problems of representation in Russian language textbooks. *Modern Language Journal*, 96, 337–349.
- Bailey, K., & Nunan, D. (Eds.). (1996). *Voices from the language classroom*. Cambridge: Cambridge University Press.
- Batstone, R., & Ellis, R. (2009). Principled grammar teaching. *System*, 37, 194–204.
- Bellack, A., Kliebard, H., Hyman, R., & Smith, F. (1966). *The language of the classroom*. New York: Teachers College Press.
- Blocher, D. (1974). Toward an ecology of student development. *Personnel and Guidance Journal*, 52, 360–365.
- Bloome, D., Power Carter, S., Morton Christian, B., Otto, S., & Shuart-Faris, N. (2005). *Discourse analysis and the study of classroom language and literacy events*. Mahwah, NJ: Lawrence Erlbaum.
- Bronfenbrenner, U. (1976). *The ecology of human nature: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Butzkamm, W. (1980). Verbal play and pattern practice: The comparison of a L1 learning strategy and a L2 teaching technique. In S. Felix (Ed.), *Second language development: Trends and issues* (pp. 233–248). Tübingen, Germany: Gunther Narr.

- Canagarajah, S. (1993). Critical ethnography of a Sri Lankan classroom: Ambiguities in opposition to reproduction through ESOL. *TESOL Quarterly*, 27, 601–626.
- Crossley, S., Louwse, M., McCarthy, P., & McNamara, D. (2007). A linguistic analysis of simplified and authentic texts. *Modern Language Journal*, 91, 15–30.
- de Castell, S. (1990). Teaching the textbook: Teacher/text authority and the problem of interpretation. *Linguistics and Education*, 2, 75–90.
- Dendrinos, R. (1992). *The EFL textbook and ideology*. Athens: Grivas Publications.
- Doyle, W. (1977). Learning the classroom environment: An ecological analysis. *Journal of Teacher Education*, 28, 51–55.
- Elley, W. (1991). Acquiring literacy in a second language: The effect of book-based programmes. *Language Learning*, 41, 375–411.
- Etienne, C., & Sax, K. (2009). Stylistic variation in French: Bridging the gap between research and textbooks. *Modern Language Journal*, 93, 584–606.
- Ghosn, I. (2003). Talking like texts and talking about texts: How some primary school coursebook tasks are realized in the classroom. In B. Tomlinson (Ed.), *Developing materials for language teaching* (pp. 291–305). London: Continuum.
- Gibson, J. J. (1977). The theory of affordances. In R. E. Shaw & J. Bransford (Eds.), *Perceiving, acting, and knowing* (pp. 67–82). Hillsdale, NJ: Lawrence Erlbaum.
- Gibson, J. J. (1979). *The ecological approach to visual perception*. Boston: Houghton Mifflin.
- Glisan, E., & Drescher, V. (1993). Textbook grammar: Does it reflect native speaker speech? *Modern Language Journal*, 77, 23–33.
- Gray, J. (2000). The ELT coursebook as cultural artifact: How teachers censor and adapt. *ELT Journal*, 54, 274–283.
- Gray, J. (2010a). *The construction of English: Culture, consumerism and promotion in the ELT coursebook*. Basingstoke, UK: Palgrave Macmillan.
- Gray, J. (2010b). The branding of English and the culture of the new capitalism: Representations of the world of work in English language textbooks. *Applied Linguistics*, 31, 714–773.
- Hamilton, S. (1983). Synthesis of research on the social side of schooling. *Educational Leadership*, 40, 65–72.
- Harris, R. (1996). *Signs, language, and communication: Integrational and segregational approaches*. New York/London: Routledge.
- Harrison, I. (1996). Look who's talking now: Listening to voices in curriculum renewal. In K. Bailey & D. Nunan (Eds.), *Voices from the language classroom* (pp. 283–303). Cambridge: Cambridge University Press.
- Harrison, I., & Wilson, P. (1981). *Living together: An English course for Francophone primary schools in Cameroon*. Yaounde, Cameroon: CEPER.
- Harwood, N. (2002). Taking a lexical approach to teaching: Principles and problems. *International Journal of Applied Linguistics*, 12, 139–155.
- Harwood, N. (2010). *English language teaching materials: Theory and practice*. Cambridge: Cambridge University Press.
- Herschensohn, J. (1993). Verb and adjective inflection in French. *International Review of Applied Linguistics*, 31, 97–113.
- Jefferson, J. (2004). Glossary of transcript symbols with an introduction. In G. H. Lerner (Ed.), *Conversational analysis: Studies from the first generation* (pp. 13–31). Philadelphia/Amsterdam: John Benjamins.
- Jeffries, S. (1985). English grammar terminology as an obstacle to second language learning. *Modern Language Journal*, 69, 385–390.
- Johnson, K. (2003). *Designing language teaching tasks*. Basingstoke, UK: Palgrave Macmillan.
- Johnston, B. (with Janus, L.) (2007). *Developing materials for less commonly taught languages*. Minneapolis, MN: Center for Advanced Research on Language Acquisition.
- Katz, A. (1996). Teaching style: A way to understand instruction in language classrooms. In K. Bailey & D. Nunan (Eds.), *Voices from the language classroom* (pp. 57–87). Cambridge: Cambridge University Press.
- Kouega, J. (2003). English in Francophone elementary grades in Cameroon. *Language and Education*, 17, 408–420.
- Lantolf, J., & Thorne, S. (2006). *Sociocultural theory and the genesis of second language development*. Oxford: Oxford University Press.
- Larsen-Freeman, D., & Cameron, L. (2008). *Complex systems and applied linguistics*. Oxford: Oxford University Press.
- Lee, R., & Bathmaker, A. (2007). The use of English textbooks for teaching English to “vocational” students in Singapore secondary schools: A survey of teachers' beliefs. *RELJ Journal*, 38, 350–374.
- Littlejohn, A., & Windeat, S. (1988). Beyond language learning: Perspective on materials Design. In R. K. Johnson (Ed.), *The second language classroom* (pp. 155–175). Cambridge: Cambridge University Press.
- Maxim, H. (2002). A study into the feasibility and effects of reading extended authentic discourse in the beginning German language classroom. *Modern Language Journal*, 86, 20–35.
- McCool, G. (1994). Teaching the formation of questions: Lessons from New French. *Modern Language Journal*, 78, 56–60.
- McDonough, J., & Shaw, C. (2003). *Materials and methods in ELT: A teacher's guide*. Malden, MA: Wiley-Blackwell.
- McGrath, I. (2002). *Materials evaluation and design for language teaching*. Edinburgh: Edinburgh University Press.

- Mehan, H. (1979). "What time is it, Denise?": Asking known information questions in classroom discourse. *Theory Into Practice*, 18, 285–294.
- Nassaji, H., & Wells, G. (2000). What's the use of "triadic dialogue"? An investigation of teacher–student interaction. *Applied Linguistics*, 21, 376–406.
- Neisser, U. (1987). From direct perception to conceptual structure. In U. Neisser (Ed.), *Concepts and conceptual development: Ecological and intellectual factors in categorization* (pp. 11–24). Cambridge: Cambridge University Press.
- Norman, D. (2004). Affordances and design. Retrieved March 11, 2013, from http://www.jnd.org/dn.mss/affordances_and.html
- O'Connor di Vito, N. (1992). "Present" concerns about French language teaching. *Modern Language Journal*, 76, 50–57.
- Panferov, S. (2007, March). *Teaching amid change: Perspectives from 42 years in ESL*. Introduction to plenary speech presented at the TESOL Convention, Seattle, WA. Speech retrieved June 7, 2013, from the Azar Grammar Website: <http://azargrammar.com/authorsCorner/2007Plenary.html>
- Ramirez, A., & Hall, J. (1990). Language and culture in secondary level Spanish textbooks. *Modern Language Journal*, 74, 48–65.
- Reddy, M. J. (1979). The conduit metaphor—A case of frame conflict in our language about language. In A. Ortony (Ed.), *Metaphor and thought* (pp. 284–297). Cambridge: Cambridge University Press.
- Richards, J. C., & Mahoney, D. (1996). Teachers and textbooks: A survey of beliefs and practice. *Perspectives*, 8, 40–63.
- Rifkin, B. (1998). Gender representation in foreign language textbooks: A case study of textbooks of Russian. *Modern Language Journal*, 82, 217–236.
- Schegloff, E. (2007). *Sequence organization in interaction: A primer in conversation analysis*. Cambridge: Cambridge University Press.
- Shardakova, M., & Pavlenko, A. (2004). Identity options in Russian textbooks. *Journal of Language, Identity and Education*, 3, 25–46.
- Shaw, P. (1996). Voices for improved learning: The ethnographer as co-agent of pedagogic Change. In K. Bailey & D. Nunan (Eds.), *Voices from the language classroom* (pp. 318–337). Cambridge: Cambridge University Press.
- Singapore Wala, D. (2003). Publishing a coursebook: Completing the materials development cycle. In B. Tomlinson (Ed.), *Developing materials for language teaching* (pp. 141–161). London: Continuum.
- Slimani, A. (2001). Evaluation of classroom interaction. In C. Candlin & N. Mercer (Eds.), *English language teaching in its contexts: A reader* (pp. 287–303). New York/London: Routledge.
- Sullivan, P. (2000). Playfulness as mediation in communicative language teaching in a Vietnamese classroom. In J. Lantolf (Ed.), *Sociocultural theory and language learning* (pp. 115–132). Oxford: Oxford University Press.
- Sunderland, J., Cowley, M., Rahim, F. A., Leontzakou, C., & Shattuck, J. (2001). From bias "in the text" to "teacher talk around the text": An exploration of teacher discourse and gendered foreign language textbook texts. *Linguistics and Education*, 11, 251–286.
- Tomlinson, B. (Ed.). (2008). *English language teaching materials: A critical review*. London: Continuum.
- Tomlinson, B. (Ed.). (2011). *Materials development in language teaching* (2nd ed.). Cambridge: Cambridge University Press.
- Tomlinson, B. (2012). State-of-the-art article: Materials development for language learning and teaching. *Language Teaching*, 45, 143–179.
- Tomlinson, B., & Masuhara, H. (Eds.). (2010). *Research for materials development in language learning: Evidence for best practice*. London: Continuum.
- Tschirner, E. (1996). Scope and sequence: Rethinking beginning foreign language instruction. *Modern Language Journal*, 80, 1–14.
- Tsui, A. (2003). *Understanding expertise in teaching: Case studies of second language teachers*. Cambridge: Cambridge University Press.
- Tudor, I. (2001). *The dynamics of the language classroom*. Cambridge: Cambridge University Press.
- van Lier, L. (1988). *The classroom and the language learner: ethnography and second language classroom research*. London: Longman.
- van Lier, L. (1996). *Interaction in the language curriculum: Awareness, autonomy and authenticity*. London: Longman.
- van Lier, L. (1997). Observation from an ecological perspective. *TESOL Quarterly*, 31, 783–787.
- van Lier, L. (2004). *The ecology and semiotics of language learning: A sociocultural perspective*. Norwell, MA: Kluwer Academic Publishers.
- White, R. (1988). *The ELT curriculum: Design, innovation and management*. Malden, MA: Blackwell Publishing.
- Wieczorek, J. (1992). Classroom implications of pronoun (mis)use in Spanish. *Modern Language Journal*, 76, 34–40.
- Wong, J. (2002). "Applying" conversational analysis in applied linguistics: Evaluating dialogue in English as a second language textbooks. *International Review of Applied Linguistics*, 40, 37–60.
- Yakhontova, T. (2001). Textbooks, contexts, and learners. *English for Specific Purposes*, 20, 397–415.
- Zacharias, N. (2005). Teachers' beliefs about internationally-published materials: A survey of tertiary English teachers in Indonesia. *RELC Journal*, 66, 23–37.

 APPENDIX A: TRANSCRIPTION CONVENTIONS

- bold** Discourse that originates from text of the materials
- underlined Marked stress

?	Phrase final rise in intonation
↑	Marked rising shift in intonation
.	Falling intonation
:	Lengthening of the preceding sound
*	Whispered utterance
—	Short pause
(number)	Longer pause with the length of pause indicated in seconds
(text)	Commentary within the transcript by the transcriber
((??))	Unintelligible
. . .	Text or talk omitted

(Adapted from Jefferson, 2004)

APPENDIX B: TURNS-AT-TALK UNPROMPTED BY MATERIALS

John: yes. I want to talk about the syllabus
 Female I cannot
 student:
 John: what?
 Female I couldn't - copy the - syllabus -
 student: because the copy machine doesn't
 work
 ((Karim)): the printer - does work

(Class, June 27, 2008)