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Classroom code-switching: three decades of research

Abstract: In this paper I provide a review of the historical development of different research paradigms and approaches adopted in studies on classroom code-switching. I also discuss the difficulties and problems faced by this field of studies and share some of my own critical reflections on how this field might move forward in the future, speaking from the position of a researcher who has been engaged in this area of studies for close to three decades.

Keywords: classroom code-switching, classroom research paradigms, interactional sociolinguistics, disciplinary bilinguals, translanguaging, L1 use in L2 classrooms, bilingual classrooms

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Introduction: Classroom Code-switching – Delimiting the Field

We all seem to know what classroom code-switching is about. For example, one can easily define classroom code-switching as language alternation – the alternating use of more than one linguistic code in the classroom by any of the classroom participants (e.g., teacher, students, teacher aide), and this can include both code-mixing (intra-clausal/sentential alternation) and code-switching (alternation at the inter-clausal/sentential level) (Lin, 1990, 2008). However, whether we refer to it as code-mixing, switching or alternation, this “*code-X*” terminology begs the question of whether language should, in the first place, be conceptualized as discrete “codes” with stable boundaries.

The term, “code”, in linguistics has been borrowed from information theory, and Alvarez-Caccamo (2001) delineates the original and derived usage of the term as follows:

In information theory, a code is a mechanism to pair two sets of signals in non-ambiguous, reversible, and context-free ways. For instance, in morse code the letter “s” is always rendered as three dots, regardless of particular circumstances (context independence); “s” can only be rendered as three dots (non-ambiguity); and three dots are always to be understood

as “s” (reversibility). . . . This “code” notion was systematically applied to speech first by information theorists (Fano) and, then, fundamentally, by Roman Jakobson. Jakobson re-framed Saussure’s *langue/parole* dichotomy in terms of code/message. In this model, the speech signals would match “meanings” in the linguistic “code,” equivalent here to “grammar.” However, Jakobson’s model is not exempt from ambiguities, loose ends, and perhaps contradictions.

. . . Inferential views of communication propose that most understanding depends on the particulars of the relationship between literal contents and contexts . . . this has led to a disabling of the applicability of the “code model” to human communication. (Alvarez-Caccamo, 2001, p. 23–24)

Recent years have further witnessed increasingly poststructuralist views on language, seeing language not as static “codes” with solid boundaries but rather, as fluid resources in meaning-making practices (Pennycook, 2010). These views are captured in the recent use of the terms, “code-meshing” (Canagarajah, 2011a, 2011b) and “translanguaging” (García, 2009; Creese and Blackledge, 2010), which seek to take away the “markedness” of the linguistic phenomenon that is traditionally called “code-switching” and reconceptualize it as a social practice that is part and parcel of everyday social life. This plethora of terms is aptly summarized by Lewis, Jones and Baker (2012) in their analysis of the historical development of the term, translanguaging:

A plethora of similar terms (e.g., metrolingualism, polylinguaging, polylingual languaging, heteroglossia, codemeshing, translanguing practice, flexible bilingualism, multilinguaging, and hybrid language practices) makes this extension of translanguaging appear in need of focused explication and more precise definition. Such varied terms are competitive with translanguaging for academic usage and acceptance (Lewis et al., 2012, p. 649)

Further complicating the picture is the overlapping field of studies variously known as: first language (L1) use in second and foreign language (L2) classrooms (Turnbull and Dailey-O’Cain, 2009), use of local languages in English classes (Mahboob, 2011), incorporation of L1 in foreign language teaching and learning (Brooks-Lewis, 2009), the role of the mother tongue in foreign language classrooms (Butzkamm, 2003), student use of the mother tongue in the task-based classroom (Carless, 2007), L1 use in the L2 classroom (Edstrom, 2006), bilingual pedagogy in EFL (Forman, 2010), first language and target language in the foreign language classroom (Littlewood and Yu, 2009). And the kinds of classrooms studied can be content classrooms or language classrooms (or various hybrid instances lying on a continuum between these two prototypical types; see Figure 1 in Lin and Man, 2009, p. 137).

Such a vast range of studies presents difficulties in any attempt to achieve a comprehensive review in the limited space of an article. I shall, therefore, aim at providing a review of the historical development of the different research paradigms and approaches adopted in various studies. Then I shall analyse the difficulties and problems faced by this field of studies and share some of my own critical reflections on how this field might move forward in the future, speaking from the position of a researcher who has been engaged in this area of studies for close to three decades.

Early developments

While classroom code-switching studies have been diverse, the often-quoted early studies have been conducted in North American settings in two main kinds of contexts: (1) second language contexts (e.g., ESL classrooms) and (2) bilingual education classrooms. Quantitative and functional coding analysis was often used. The research questions usually focused on two aspects: the relative quantities of first language (L1) and second language (L2) use in different activity settings, and the functional distribution of L1 and L2. Below is a review of the major types of research methods used in some early studies.

Early studies on relative amounts of L1/L2 use across activity types and settings

This type of research has largely been conducted in North American settings with children in bilingual education programmes (e.g., Wong-Fillmore, 1980). The main emphasis of such work is to investigate whether linguistic minority children's L1 (e.g., Spanish, Chinese) and the wider, societal language (English) are given equal emphasis by calculating the relative quantities of use in the classroom (in terms of the number of utterances in each code or the time spent on it). Data for such studies is typically collected through class visits and observations with subsequent analysis of field notes and audio/videotapes. For instance, Wong-Fillmore (1980) found a range of L1 use depending on the degree of individualization in teacher-student interaction. In a Cantonese-English bilingual programme, the teacher spoke the least L1 (8% of all her utterances) and the most L2 (92%) during whole-class instruction. She spoke more L1 (28%) during interactions with individual students in seatwork. The child chosen for observation, on the other hand, spoke much more L1 (79%) in seatwork than during teacher-directed whole class instruction (4% L1). This study suggests the preference for the use of L1 in less formal, more intimate participant structures.

In another study (Frohlich et al., 1985) on the communicative orientation of L2 classrooms in four different programmes in Canada (e.g., core French, French immersion, extended French with subject matter courses, ESL classrooms), teacher talk in all four programmes was found to reflect very high L2 use (96%). However, the researchers noted that students generally used the target language only while the teacher exercised control over classroom activities. During seatwork most interaction occurred in the students' L1. Again, it seems that students show strong preference for using L1.

While the interactive sociolinguistic notion of 'participant structure' (Goffman, 1974; Heller, 2001) was not used in these early studies, the early researchers relied instead on the related notion of activity type or setting (e.g., individual seatwork, group work, whole-class instruction) as an important factor affecting the relative amounts of L1/L2 use in both studies mentioned above. In contrast, other work used functional coding systems in their analysis to develop categories of functions of L1 use.

Early studies on functional distribution of L1/L2 use

Many of the functional studies were conducted in bilingual content classrooms in the U.S. and only a few in second and foreign language classrooms. In these studies classroom utterances were usually coded by the observer with a functional coding system (e.g., Flanders, 1970) yielding frequency counts of distribution of L1 and L2 across different functional categories. For instance, in a study of five kindergartens in Spanish bilingual programmes using an adaptation of Flanders' Multiple Coding System, Legarreta (1977) reported on the functional distribution of Spanish (L1) and English (L2) in two different programme models: the Concurrent Translation (CT) and Alternative Days (AD). She found that the AD model generated an equal distribution of Spanish and English by teachers and children overall, with more Spanish used for "warming" and "directing" functions and English as the primary choice for disciplining children. However, in the CT model, instead of using the L1 (Spanish) of the majority of the pupils to express solidarity (warming, accepting, amplifying), the teachers and aides predominantly used English for these functions.

In another study, Milk (1981) coded teacher talk in a twelfth grade civic education lesson according to eight basic pedagogical functions (e.g., informative, directive, humor-expressive) based on Sinclair and Coulthard (1975). English (L2) was found to dominate the teacher's directives (92%) and meta-statements (63%) while there was a greater balance between L1 and L2 in other functions (e.g., elicitation, expressive, reply, informative). In addition, Milk described the skillful

manner in which the bilingual teacher employed extensive switching between Spanish and English to create humour, both as a means of social control (via the creation of a sense of solidarity) and as a way to arouse students' interest.

Guthrie (1984) used similar research methods in a study of an ESL lesson attended by 11 first-grade Cantonese-American students (ranging from limited-English proficiency to fluent). Two types of lessons were analysed: reading in English with a Cantonese-English bilingual teacher, and oral language with an English monolingual teacher. Field notes and audio-recording of six hours of lessons were obtained and coded by two bilingual observers. Guthrie found that interactions of the English monolingual teacher with the limited-English-proficiency students in the oral lessons were characterized by a higher proportion of conversational acts such as 'attention-getters', 'requests for action' and 'protests', indicating a certain lack of teacher control and a frequent loss of student attention. On the other hand, while the bilingual teacher used Cantonese (L1 of the students) very rarely (less than 7% on average) in the English reading lessons, when she did it was for a distinct reason. She told the researchers that she tried to avoid using Cantonese during these lessons and was surprised to find she has used L1 as much as she had. The functions of L1 use reported by Guthrie can be summarized as: (a) to act as a "we-code" for solidarity, (b) to clarify or check for understanding, (c) to contrast variable meanings in L1 and L2 and to anticipate likely sources of confusion for students.

While the functional coding approach dominated early work, in some studies (e.g., Milk, 1981; Guthrie, 1984) preliminary use of ethnographic interviews and interactional sociolinguistic methods were incorporated, a trend which continued in later work.

Major Contributions

Many early studies seemed to have worked with the assumption that functional categories were stable, valid categories of classroom speech and that analysts could reliably assign utterances to each category. Yet the functional coding approach in early studies in fact involved a lot of sociolinguistic interpretive work on the part of the coder. This interpretive work was, however, not made explicit but taken for granted in the form of final frequency counts of L1 and L2 distributed across different functional categories.

Later studies (e.g., Lin, 1990, 1996, 1999, 2006; Merritt et al., 1992; Adendorff, 1993; Ndayipfukamiye, 1994; Polio and Duff, 1994; Eldridge, 1996; Martin-Jones, 1995, 2001; Heller, 1999, 2001; Jacobson, 2001; Simon, 2001; Martin, 1996, 1999, 2003; Creese, 2005; Üstünel and Seedhouse, 2005) have, to varying degrees,

dispensed with a priori lists of functional categories and drawn on research approaches from interactional sociolinguistics and ethnography of communication (e.g., Goffman, 1974; Gumperz, 1982; 1986); conversation analysis (Sacks, 1965/1992); interpretive research paradigms; critical social theory (Bourdieu and Passeron, 1977); and critical research paradigms to study classroom code-switching (Heller and Martin-Jones, 2001; Li and Wu, 2008; Li, 2011).

Just as interactional sociolinguistics (IS) and ethnography of communication (EC) provide the most useful analytic tools for researching and understanding code-switching in different settings in society, their concepts and methods have been drawn upon in classroom studies on code-switching. For instance, the most frequently and fruitfully used ones are: code-switching as contextualization cues (Gumperz, 1984) to signal a shift in the frame or footing (Goffman, 1974) of the current interaction (e.g., see Adendorff, 1993). Frame or footing is the definition of what is happening and it is constantly being negotiated, proposed (signaled) and re-defined by the speakers engaged in interaction. Different frames or footings that are being evoked (or signaled and proposed by a speaker) involve the simultaneous negotiation of different role-relationships and the associated sets of rights/obligations. Lin's studies (1990, 1996), for instance, drew on these interactional sociolinguistic analytic concepts to analyse code-switching in Hong Kong classrooms. Below is an example from Lin's (1996) reanalysis of Johnson's (1985) data in Hong Kong secondary schools, using IS analytic concepts. The data presentation format is as in Johnson's: Tape-recorder counter numbers precede utterances; bold italics indicate originally Cantonese utterances, and only teacher's utterances have been transcribed.

Example (1)

A junior secondary math teacher in Hong Kong begins his lesson in English and then breaks off and switches to Cantonese to deal with late-comers; once they are settled, he switches back to English to continue with the lesson work ("Example 1" in Johnson, 1985, p. 47):

- 008 Close all your text book and class work book.
 012 ***There are some classmates not back yet. Be quick!***
 017 Now, any problem about the class work?

Johnson (1985) analyses the Cantonese utterance as an example of an informal aside done in Cantonese. While agreeing partially with this analysis, we note, however, that if it is to mark out a mere topical digression, the teacher can well

have done this by means other than code-switches, e.g., intonation changes, hand-claps or pauses to bracket the aside (see example in Lin, 1990, pp. 32–36). The use of these contextualization cues (Gumperz, 1984) does not involve a violation of the institutional “use-English-only” constraint which teachers in Anglo-Chinese secondary schools in Hong Kong were well aware of. It can, therefore, be argued that what is being signalled here is not only a topical aside, but also a radical break in the English pedagogic frame and an urgent change in the teacher’s concerns. The switch from English to Cantonese seems to relay to his students this implicit message, “Now I’m so annoyed by these late-comers that I have to put aside *all* kinds of teaching, including that of English teaching, and concentrate on one single task: that of getting you to settle down quickly! And you’d better take my command seriously as I’m focused on enforcing it!” This break in the English pedagogic frame to highlight a different, urgent set of concerns cannot have been achieved without the teacher’s switch from English (L2) to Cantonese (L1).

The key, therefore, to understanding the implicit meanings signalled by code-switches lies in a recognition of the sociolinguistic fact that whenever Hong Kong Cantonese have something urgent and earnest to relay to one another, they tend to do so in their shared native language; whenever Hong Kong Cantonese speak to one another in English despite their having a common native language, it is usually because of some institutionally given reasons, for instance, to teach and learn the English language in an English immersion classroom. When teachers want to establish a less distanced and non-institutionally defined relationship with their students, they will also find it necessary to switch to their shared native language, Cantonese.

Similar kinds of analysis drawing on IS and EC research methods are offered in Simon’s (2001) study of code-switching in French-as-a-foreign-language classrooms in Thailand. Teachers are seen as code-switching for a number of purposes, among which are those of negotiating different frames (e.g., formal, institutional learning frame vs. informal friendly frame), role-relationships and identities (e.g., teacher vs. friend). Code-switching is seen as having a ‘momentary boundary-levelling effect’ in the classroom (Simon, 2001, 326). Whether similar effects might be achieved by code-switching in different contexts would, however, seem to depend on different sociolinguistic statuses and values associated with different codes in different societies.

In studies along this line, IS and EC analytical concepts and methods are drawn upon to analyse instances of classroom code-switching. The findings look remarkably similar across different sociocultural contexts. Code-switching is seen to be an additional resource in the bilingual/multilingual teacher’s communicative repertoire enabling her/him to signal and negotiate different frames

and footings, role-relationships, cultural values, identities and so on in the classroom (e.g., see Merritt et al., 1992; Ndayipfukamiye, 1994). These studies have the effect of uncovering the good sense or the local rationality (or functions) of code-switching in the classroom. To summarize by drawing on the functional view of language from Halliday (1994), code-switching can be seen as a communicative resource readily drawn upon by classroom participants (usually the teacher but sometimes also students) to achieve the following three kinds of purposes:

1. Ideational functions: Providing basic-L2-proficiency students with access to the L2-mediated curriculum by switching to the students' L1 to translate or annotate (e.g., key L2 terms), explain, elaborate or exemplify L2 academic content (e.g., drawing on students' familiar lifeworld experiences as examples to explain a science concept in the L2 textbook/curriculum). This is very important in mediating the meaning of academic texts which are written in an unfamiliar language – the L2 of the students.
2. Textual functions: Highlighting (signalling) topic shifts, marking out transitions between different activity types or different focuses (e.g., focusing on technical definitions of terms vs. exemplifications of the terms in students' everyday life).
3. Interpersonal functions: Signalling and negotiating shifts in frames and footings, role-relationships and identities, change in social distance/closeness (e.g., negotiating for in-group solidarity), and appealing to shared cultural values or institutional norms.

Apart from the above studies which draw on interpretive research paradigms, there is also a major trend of studies led by Monica Heller and Marilyn Martin-Jones (e.g., in their edited 2001 book, *Voices of Authority: Education and Linguistic Difference*), which draws on both interpretive and critical research paradigms and they relate micro interactional functions of code-switching in the classroom to larger societal issues, such as the reproduction or sometimes contestation of linguistic ideologies in the larger society (e.g., which/whose language counts as standard and valued language; which/whose language counts as inferior or not-valued language).

Heller and Martin-Jones (2001) provided some examples on how micro ethnographic studies of classroom code-switching are not actually 'micro' in their implications if we see the classroom as a discursive site for reproduction or contestation of linguistic ideologies and hierarchies. The discursive construction/negotiation of what counts as front stage and back stage (Goffman, 1974) and the legitimation of what goes on in the front stage (largely controlled and set up by the teacher) as legitimate, standard, valued language vs. what gets marginalized,

reproduced as inferior, non/sub-standard language in the back stage. Usually the societal dominant L2 occupies the first position and students' L1 occupies the latter position. For instance, in Ndayipfukamiye's (2001) study of Kirundi-French code-switching in Burundi classrooms, the bilingual teacher is seen to be using Kirundi (students' familiar language) to annotate, explain and exemplify French (L2) terms and academic content. While the linguistic brokering functions of code-switching is affirmed (i.e., the value of providing students with access to the educationally dominant language, French), the linguistic hierarchy as institutionalized in the French immersion education policy in Burundi is largely reproduced in these code-switching practices.

However, not all studies are about reproduction of linguistic ideologies and practices. For instance, Canagarajah (2001) shows how ESL teachers and students in Jaffna (the northern peninsula of Sri Lanka that has been the political centre of the Tamils) negotiated hybrid identities through code-switching between Tamil and English, defying both the Tamil-only ideology in the public domains and institutions, and the English-only ideology from the ESL/TESOL pedagogical prescriptions from the West. Canagarajah argued that both teachers and students, by code-switching comfortably between these two languages are also constructing their bilingual cosmopolitan identities, refusing to be pigeonholed by essentializing political ideologies (of Tamil nationalism) or English-only pedagogical ideologies.

Lin (1999) also showed that by skilfully intertwining the use of L1 (Cantonese) for a story focus with the use of L2 (English) for a language focus, a bilingual teacher in a Hong Kong English language classroom successfully got her students interested in learning English and gaining confidence in reading English story-books, and thus transforming the habitus of these working class students for whom English had been an alien language irrelevant to their daily life. Drawing on Heap's (1985) notion of discourse format, which was in turn built on Sinclair and Coulthard's (1975) seminal analysis of the Initiation-Response-Feedback (IRF) exchange structure, Lin (1999) offered a fine-grained analysis of how L1-L2 code-switching was built into two kinds of IRF discourse formats to enable the teacher (Teacher D) to engage students in both enjoying the story and in learning English through this process:

Teacher D uses two different IRF formats in the following cycle in the reading lesson:

- (1) Story-Focus-IRF:
 - Teacher-Initiation [L1]
 - Student-Response [L1]
 - Teacher-Feedback [L1]

- (2) Language-Focus-IRF:
 Teacher-Initiation [L1/L2]¹
 Student-Response [L1/L2]
 Teacher-Feedback [L2], or use (2) again until Student-Response is in L2

(3) Start (2) again to focus on another linguistic aspect of the L2 response elicited in (2); or return to (1) to focus on the story again.

This kind of discourse practice allows the teacher to interlock a story focus with a language focus in the reading lesson. There can be enjoyment of the story, via the use of the story-focus IRF, intertwined with a language-learning focus, via the use of the language-focus IRF. We have noted above that the teacher never starts an initiation in L2. She always starts in L1. This stands in sharp contrast with the discourse practices of Teacher C (another teacher in the study) who always starts with L2 texts or questions in her initiations. It appears that by always starting in L1, Teacher D always starts from where the student is – from what the student can fully understand and is familiar with. On the other hand, by using the language-focus IRF format immediately after the story-focus IRF format, she can also push the students to move from what they are familiar with (e.g., L1 expressions) to what they need to become more familiar with (e.g., L2 counterparts of the L1 expressions) (see Lin, 1999). The fine-grained sequential analysis of classroom code-switching drawing on both Sinclair and Coulthard's (1975) IRF analytical tradition and conversation analysis (CA) continued in later work as exemplified in Üstünel and Seedhouse (2005)'s study on how learners displayed their alignment or misalignment with the teacher's pedagogical focus in an EFL classroom in a Turkish university. The fine-grained discourse analytic methods were also productively used in conjunction with a stimulated recall procedure in Scott and De La Fuente (2008)'s study of the role of L1 when pairs of intermediate-level college learners of French and Spanish are engaged in consciousness raising, form-focused grammar tasks. As we shall see in the next section increasingly studies are drawing on a wider range of research methods including both qualitative and quantitative ones.

Recent Developments

In this section we shall look at research that hints at a slightly different research angle and research that starts to draw on research approaches from diverse fields

¹ "L1/L2" denotes "L1 or L2".

such as genre theories, theories of academic literacies (Setati, Adler, Reed and Bapao, 2002) and cognitive processing perspectives and experimental methodologies (Macaro, 2009).

Setati et al. (2002) provided a mid-term report on findings from their larger ongoing study of code-switching and other language practices in Mathematics, Science and English language classrooms in South Africa. These schools had adopted a small-group inquiry teaching approach and built on notions of additive bilingualism and strategic code-switching as encouraged by the authorities. While good in their intentions, this approach might have overlooked some pitfalls in two areas:

1. The indirect, student-centred, exploratory, group-work, learning-from-talk teaching approach: This is found to be done mostly in students' L1. However, without teacher's input on scientific content (e.g., in whole-class instruction), students may suffer from a lack of input in the English academic discourses required to talk about science topics or writing extended texts in English.
2. So, some traditional teacher-fronted whole class teaching may be needed to provide the necessary L2 academic discourses to students, especially those in rural areas.

Setati et al. (2002) found that the progressive pedagogies (e.g., student-centred group work) alone did not provide the much-needed direct teaching of subject domain-specific academic discourses and English academic literacies and thus aggravated social inequalities. Setati's et al.'s (2002) report, however, did not show much analysis of how this academic discourse can be provided or inserted into the progressive teaching approaches along with the integration of some conventional pedagogies. While this report seems to be work-in-progress, it does point out the importance of drawing on research tools of genre analysis of different subject-specific academic discourses in future studies of code-switching in the classroom. We shall continue the discussion of the potential contribution of genre-based pedagogies to classroom code-switching research in the final section. Let us now turn to the recent work of Macaro (2009), who has drawn on cognitive processing perspectives and experimental approaches.

Macaro (2009) presented the findings of two studies on the effect of code-switching on students' vocabulary learning. In the first study a sample of 159 Chinese learners of English, aged 16, were randomly assigned to two different conditions. The context was a reading class in which the teacher orally interacted with the whole class around two challenging English texts. There were two sessions, each with a different text, and the conditions were rotated with each text. In the first condition, the teacher provided a first-language equivalent of words in the text that she knew her students were unfamiliar with as determined by a

pre-test of vocabulary knowledge. In the second condition, the same teacher provided learners with English definitions of the same unfamiliar words. Students in each condition were thus given different *types* of information about unknown words (code-switch vs. paraphrase). A third group was an intact class that acted as a control group, which was given *both* types of information (code-switch and paraphrase). A pre-test of receptive vocabulary showed that the target vocabulary items were all unfamiliar to the students, that there were no statistically significant differences in their vocabulary knowledge between the 3 classes, and additionally the 3 classes were chosen because they did not differ in general English proficiency according to their school proficiency tests. Students were given an immediate post-test, and a delayed post-test after 2 weeks. The findings are summarized as follows:

Text 1 (about sport): the L2 paraphrase group scored significantly higher in the immediate post-test than the other 2 groups; however, this advantage disappeared in the delayed post-test and there were no significant differences among the 3 groups.

Text 2 (about the life of Walt Disney): there were no significant differences among the 3 groups in both the immediate and delayed post-tests.

Macaro concluded that there is at least “no harm” in giving L1 equivalents of words during the teaching activity around the reading texts in terms of long-term vocabulary acquisition and he further hypothesized that giving L1 vocabulary equivalents “lightens the cognitive load freeing up processing capacity to focus on the meaning of the text as a whole” (2009, p. 43).

In the second study students’ responses to teachers’ code-switching (e.g., giving L1 equivalents of unfamiliar words) were tapped through a stimulated recall procedure. The study was set in China, in two universities (one teacher in each university), and involved first year students learning English as a foreign language (EFL). The researcher videotaped sixteen 45-minute lessons of a number of these EFL classes and then, immediately following the lesson, asked individual learners (n = 32) to take part in a stimulated recall session carried out in the students’ first language.

Based on the students’ responses Marcaro inferred that when provided with the L1 equivalents of unfamiliar L2 words, “the amount of processing that a learner has to do is in fact increased rather than decreased”, suggesting more cognitive processing taking place, and students may have been afforded “deeper processing opportunities” than when they are provided with L2 definitions (Macaro, 2009, p. 47).

Continuing with the experimental approach to find evidence on the impact of code-switching on vocabulary learning, Tian and Macaro's (2012) investigated the effect of teacher code-switching on EFL vocabulary acquisition during listening comprehension activities in a lexical Focus-on-Form context. Eighty first-year students of English as an L2, in a Chinese university, were stratified by proficiency and randomly allocated to a code-switching condition or to an English-only condition, and their performance in vocabulary tests compared to a control group of 37 students that did not receive any lexical Focus-on-Form treatment. Results confirmed previous studies that lexical Focus-on-Form leads to better vocabulary learning than mere incidental exposure. More importantly the results also provided initial evidence that teacher code-switching (to L1) may be superior to the teacher providing L2-only information on vocabulary learning. Contrary to some theories of the mental lexicon, proficiency level did not clearly favour one condition against the other, implying that both high and low proficiency students can benefit from the code-switching condition. However, the researchers also noted that the advantage in vocabulary gain did not sustain in the long run.

Problems and Difficulties

In this section I shall outline what I see to be major problems or difficulties that seem to be inhibiting advancement of our work in this area of studies, and I hypothesize that these difficulties have arisen in part from the ideological environment that has implicitly pushed researchers towards a “normalizing mission” (Rampton, 2002, p. 375) for their studies.

Studies tend to be descriptive rather than design-interventionist

Researching code-switching in the classroom, unlike researching other kinds of related classroom phenomena (e.g., classroom discourse, classroom interactions), has often been engaged in consciously or unconsciously with a legitimating motive or “normalizing mission” (Rampton, Roberts, Leung, and Harris, 2002, p. 375). Given the official pedagogical prescription of the use of only one language in the classroom in many contexts (e.g., in China, see Tang 2002; in Hong Kong, Singapore, Malaysia, see Lin and Martin, 2005; Haroon, 2005; in Thailand, see Forman, 2007; in Europe, see Macaro, 2009; in Korea, see Liu, Ahn, Baek, and Han, 2004), many researchers have studied classroom code-switching practices

to seek out their ‘good sense’ or local rationality, or their positive impact on teacher-student relationships, students’ interest level and various aspects of learning. These (implicit) aims have often shaped the research questions and research approaches used in classroom code-switching studies.

Because of these (implicit) legitimating concerns of researchers the studies in the literature tend to stop short of pointing ways forward for analyzing how code-switching practices can be further improved to achieve better pedagogical and social critical purposes (as researchers tend not to be too critical of existing practices, given the legitimating mission). They tend to be descriptive rather than interventionist; i.e., they describe existing practices rather than experiment with innovative ways of code-switching practices as ways both to provide access to (content in) L2 and to critique linguistic hierarchies and pedagogical dogmas (e.g., the monolingual principle; see a critique of these pedagogical dogmas by Levine, 2011) in the larger society and institutions. Because of the lack of design interventionist research questions, the majority of studies in the classroom code-switching literature tend to offer little new insight into how existing classroom code-switching can be further improved to achieve more: e.g., more of the transformation of student identities (as hinted at by Lin, 1999 and Canagarajah, 2001) and more understanding of how L1 can be used with a greater positive impact on specific aspects of learning (e.g., as recently pursued by Macaro, 2009; Tian and Macaro, 2012). The findings of the bulk of the existing research literature thus seem to be variations on similar themes without providing new research questions and research approaches to achieve new findings beyond what has already been known (and repeated frequently) in the literature on classroom code-switching.

Lack of “disciplinary plurilinguists”

Coupled with the above difficulty is the tendency of fragmentation or compartmentalization of researchers from different research paradigms without much cross-fertilization or inter-illumination. For instance, there is a dearth of research studies that attempt to utilize trans-disciplinary perspectives or a combination of research paradigms and approaches and there is a lack of researchers who are “disciplinary bilinguals” (Rampton et al., 2002, p. 388) (and I would add “disciplinary plurilinguists”); e.g., researchers who are well-versed in multiple research paradigms and methods, both interpretive and experimental. However, to tackle the enormous task of charting out when, how, in what stage of the lesson, with whom, by whom, and in what kinds of tasks, code-switching can be used produc-

tively with what kinds of effect would require nothing short of concerted research efforts breaking disciplinary boundaries and drawing on a whole range of theoretical perspectives and research methods.

Scarcity of theory-driven research questions

Research questions in the field tend to arise from practical classroom concerns (e.g., to uncover the good sense or rationality of the existing practices). While this is a normal source of research questions in education research, if the research literature cannot build up an expanded, diversified repertoire of theoretical frameworks that will motivate the formulation of increasingly sophisticated research questions, the studies would tend to be overly descriptive and repetitive (e.g., the classroom code-switching literature tends to be replete with studies describing the useful classroom functions of existing code-switching practices). Recent studies that draw on cognitive theories of vocabulary learning (e.g., Macaro, 2009) and theories of discipline-specific genres and academic literacies (Setati et al, 2002) would seem to be a welcoming development although we also need to complement these approaches with approaches from the interpretive and critical paradigms as classroom code-switching involves not only cognitive processing but also identity/ideology reproduction (or transformation).

Lack of variety in the research questions and research designs

There is a lack of longitudinal studies. Studies in the literature tend to be one-shot or cross-sectional. There is scarcity of studies on students' code-switching, and also written code-switching (but see Canagarajah, 2011a, 2011b). There is a lack of studies conducted by teachers (as teacher-researchers) or students (as student-researchers) themselves on their own classroom code-switching practices (but see Song and Andrews (2009) for an interesting study of four teachers' own perspectives on their code-switching instances in their classrooms through a stimulated recall procedure; their students' perspectives were also tapped using a similar procedure). There is also a lack of studies on the direct comparison of code-switching in the language and the content classrooms.

If I might have sounded a bit too critical of the state of affairs in our field, it is because I am deeply aware of the invisible ideological grip that seems to have exercised its spell on researchers in this field. It is to a critical uncovering of this ideological grip that I shall turn to in the next section.

Production and Legitimation of Knowledge on Classroom Code-switching: Invisible Ideological Shaping Forces

Researchers on classroom code-switching seem to have been working “against the grain” of dominant ideologies in pedagogical theories and policies in many parts of the world for many years. When the knowledge produced by a piece of research is aligned with the dominant theories of the field, it is easier for it to be accepted and legitimated in the symbolic market of academia (e.g., widely cited and circulated in the education field). When, however, the piece of knowledge produced is not aligned with the dominant pedagogical theories of the day it cannot easily attain the status of received knowledge in the field and constantly feels the need to justify and prove itself, thus the “normalizing mission” implicit in most of the studies of classroom code-switching, as discussed above. Some promising research programmes might get interrupted or derailed. For instance, three decades ago, R. K. Johnson was already experimenting with different bilingual ways of presenting teaching content, both in oral and written modes and documenting the effects of different modes of presentation (bilingual vs. monolingual; oral vs. written) on students’ comprehension of content in Hong Kong secondary schools (Johnson, 1983; Johnson, 1985; Johnson, Chan, Lee, and Ho, 1985). Johnson and his colleagues investigated the effects of various modes of presentation and questioning (e.g., English / Chinese / bilingual texts and questions, or different combinations of them). He also looked at the code-switching strategies used by experienced teachers in English medium schools. Research studies in the early and mid-1980s in Hong Kong were characterized by optimism in the possibility of developing bilingual oral and/or written strategies in English medium schools to solve the dilemma created by the overwhelming parental demand for an English medium education for their children and the often limited English proficiency of the majority of children to benefit from a purely English medium education.

In the first study (Johnson 1983), it was found that teachers systematically code-switched between Cantonese and English for different purposes. In general, English was found to be associated with text-dependent, formal and didactic functions; whereas Cantonese was found to be associated with text-independent, informal and explanatory functions. In his conclusion, Johnson wrote:

Separation of the languages is one simple, but possibly also simplistic, approach to the problems of bilingual education, and I am not convinced that there is anything intrinsically wrong with code-switching in bilingual classrooms. At the very least, the teaching strate-

gies identified here are capable of greater sensitivity to differences amongst learners and groups of learners than the separation approach. (Johnson, 1983, p. 282)

In the second study, Johnson et al. (1985) tested for the effects of different linguistic modes of presentation and questioning on the subsequent comprehension test scores among 1,296 Form 3 (Grade 9) students. It was found that irrespective of the linguistic mode of presentation of the texts (on the topic of how bean curd is made), students scored higher on average when answering Chinese questions, and irrespective of the linguistic mode of questioning, students scored higher on average when the texts had been presented in the Cantonese mode or the bilingual mode. When asked about their preferences on the medium of instruction, less than 3% of the 1,296 students preferred English-only instruction. In the oral mode, the students were about equally split in their preference for Cantonese-only instruction or Cantonese-English bilingual code. In the written mode, over 70% of the students preferred to study with Chinese texts, although 11% would also like to have English glosses added to the Chinese text, and 32% would also like to have a corresponding English text side by side with the Chinese text. Apparently, the majority of students preferred a bilingual to an English-only mode of instruction.

The production of knowledge along this line, however, was not aligned with the dominant theories in TESOL and applied linguistics in that era. The bilingual approach to the medium of instruction was problematized in a paper by Swain in 1986. After having visited Hong Kong and reviewed the school language situation in Hong Kong, Swain (1986) argued against the bilingual medium practices, which she described as an instance of “the mixing approach” (1986, p. 3). Johnson’s programme of research came to an end in the late 1980s and his innovative and eclectic approaches to researching bilingual classroom practices (both written and spoken) were not widely circulated or known after the 1980s.

Three decades have gone by and we see that the fields of applied linguistics and second language learning have broadened and embraced alternative theoretical perspectives including sociocultural theories, critical theories, postcolonial theories and many scholars have changed significantly their stance towards classroom code-switching. For instance, Swain and her colleagues have published in Hong Kong a handbook entitled “*How to live a guilt-less life using Cantonese in the English Class*” (Swain, Kirpatrick and Cummins, 2011). At this juncture although researchers investigating classroom code-switching still feel the need to constantly prove and justify – to legitimate classroom code-switching, we are perhaps a bit freed from the tight grip of the former times and could afford to be much more critical of our own work so as to advance our field further. Below I outline some directions for future work that might carry our goals further along.

Future Directions for Research

To my knowledge, there have been no published studies of the longitudinal, design-interventionist type. Also, most studies were conducted by a sociolinguist or a discourse analyst, usually an outsider coming into the classroom studying the interactional practices of classroom participants. These limitations in existing studies make it difficult for us to know what will happen if classroom participants (e.g., teachers, students) themselves become researchers of their own classroom practices, and what will happen if they embark on systematic study of their own practices, getting a deeper understanding of their own practices through their own research and then modify their own practices with systematic action plans and study the consequences, much like the kind of action-research carried out by the teacher-researcher. Below I outline what a future study might look like in order to achieve new insights into classroom code-switching:

1. Longitudinal research: Instead of one-shot classroom video/audiotaping studies, we need to have studies that follow the same classroom for a longer period of time; e.g., a whole course, a whole semester.
2. Design-interventionist studies: We need to integrate the sociolinguistic interpretive and conversation analytic with the action-research approaches so that the teacher becomes conscious of trying out specific bilingual classroom strategies with respect to achieving specific sets of goals. We also need to build into the research design ways of ascertaining the degree to which these goals are achieved. This is similar to the mode of teacher action research. Close collaboration between teacher and researcher is also needed; e.g., the teacher is the researcher or there is close collaboration between the teacher and the researcher. Likewise, depending on the readiness of the students, students can also be solicited to become researchers in the study of their own bilingual classroom practices.
3. Viewing the whole lesson as a curriculum genre and investigating the role of L1 in different stages of the curriculum genre in different pedagogies: Much of the existing classroom code-switching research tends to look at code-switching instances as individual instances but not as an organic part of specific stages of a particular kind of curriculum genre as a whole. Rose and Martin (2012), for instance, differentiate between different kinds of curriculum genres in different kinds of pedagogies. In some stages of some curriculum genres L1 might have a greater role than in other stages of the curriculum genres, and the kind of curriculum genres that are readily acceptable often depends on the kind of pedagogy dominant in the field in different eras (e.g., see Mahboob (2011)'s analysis of the different roles assigned to L1 in different kinds of L2 pedagogies in different eras).

4. Drawing up specific goals and designing specific bilingual classroom strategies to achieve those goals: This will require the teacher and researcher to understand the specific situated needs and goals of the educational context in which they find themselves. These educational goals need to be set up with reference to the needs and choices of participants in specific contexts, and not taken to mean any universal set of goals.
5. Drawing on research methods of genre analysis of discipline-specific academic discourses and literacies: For instance, we need to know what are the specific genre features and discourse structures of a biology course in order to design bilingual strategies to provide students with access to biology discourses through familiar everyday discourses. There will be frequent interweaving between academic discourses (mostly mediated in a less familiar language to the students such as the L2 or the 'standard' dialect) and students' familiar discourses (e.g., everyday life examples and experiences mediated in students' familiar language such as their L1 or a home dialect). How can the teacher provide access to the formal, academic (often L2) discourses through the informal, everyday, familiar (often L1) discourses of the students' will become a key research question (e.g., Lin, 2012).
6. Integrating the research of classroom code-switching with that of multimodality: e.g., to view code-switching as continuous with mode-switching (e.g., Li, 2011), and to investigate how classroom participants engage in classroom code-switching, mode-switching (or analysis of multimodality) and style-switching, all of which constituting an integrated repertoire of the communicative resources of classroom participants.
7. To systematically study the effectiveness of different bilingual classroom strategies, it will require a carefully planned integration of different research paradigms (including interventionist action-research, interpretive, critical) and research approaches (including those from sociolinguistics, academic genre analysis, pedagogical analysis, analysis of students' spoken and written samples of academic work, plus assessment of students' mastery of academic genre features and skills in performing academic tasks using the appropriate registers).
8. Taking a holistic, contextualized approach: We need to situate the classroom in its larger socioeconomic and political contexts and to re-examine the pedagogic goals of the classroom to see if they are really serving the interests of the students. Then we need to find out/explore possible ways to achieve these goals including (but not limited to) bilingual classroom strategies. Both traditional (e.g., teacher whole-class instruction) and progressive pedagogies (student-inquiry groups) need to be used in conjunction with a consideration of which code-switching patterns can be intertwined with which pedagogical

patterns and participant structures. All these require an approach that allows for try-and-see and then document and re-try another pattern and see what happens and re-design future action plans that will progressively better achieve the goals through both bilingual and other pedagogical practices.

The above suggestions might sound like an ‘unholy’ eclectic approach to the linguistic or research methodological purist. However, to have breakthroughs in our current state of affairs in researching classroom codeswitching, we need to be both pragmatic and flexible in our research paradigms and approaches. We also need concrete designs of bilingual classroom strategies and research studies that can systematically develop these designs and show their effectiveness (with respect to the situated goals of the classroom). When we can break away from the implicit grip of the “normalizing mission” perhaps we can afford to be more critical of the research methods we have traditionally used to study classroom code-switching. For instance, without designing more of the kind of systematic longitudinal, interventionist studies that can work on further refining bilingual classroom strategies and pedagogies to achieve the goals deemed worthwhile in specific contexts, our research literature on classroom code-switching might be seen as repetitive of apologetic statements about the good sense or diverse functions of classroom participants’ practices and we cannot advance our knowledge of how classroom participants can do better what they are already doing with different degrees of success or failure.

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