Outside In / Inside Out:

Bridging the gap in literacy education in Singapore classrooms

Abstract

Effective teaching, among other things, can be seen as a series of orchestrated moves between different kinds and levels of knowledge, be they between personal, everyday and technical knowledge, between school knowledge and the world beyond school and between knowledge in different disciplines. This paper is about bridging the gap between what students learn in school and their outside-of-school experiences. It focuses on the dimension of *Connected Learnings*, which is one part of a three-dimensional analytic framework developed for a study in Singapore. By examining transcripts of English Language and Social Studies lessons in Singapore secondary schools, this paper shows how teachers can make what is taught in the classroom relevant to the outside world as well as incorporate and infuse students' prior knowledge and outside-of-school experiences into classroom teaching. It argues that such *connected learnings* not only increases motivation and engagement levels for the students but also makes learning more meaningful and purposeful. In this sense, students are no longer just learning basic literacy competencies within an academic context but endeavouring to develop life skills that take them beyond classroom walls and examination halls. Put simply, they are going beyond learning how to read and write to reading and writing in order to learn.

Key words: Connected Learnings, Literacy Education, Singapore

INTRODUCTION

From the standpoint of the child, the great waste of the school comes from his inability to utilize the experiences he gets outside the school in any complete and free way within the school itself; while, on the other hand, he is unable to apply in daily life what he is learning in school. That is the isolation of the school - its isolation from life (Dewey, 1899/1998, p. 76-77).

Although this observation was first made more than a century ago, what is amazing is that in many ways it still rings true today. The apathy towards learning that teachers sometimes detect in their students can sometimes be attributed to the sense of disconnectedness that students experience between their school learning and their real-world experience. Insularity breeds apathy which, in turn, leads to disengagement from learning. For the below-average, unmotivated or simply defiant student, whose interests and motivations may lie outside of getting top marks for standardised tests and examinations, disengagement can set in quite early. And if teachers do little more than rely on success in examinations to motivate students to learn, then these 'weak' students will likely continue to slide in their academic performance as they feel a deepening sense of disengagement, frustration and isolation. Yet, this need not be so, if teachers are able to harness the rich, outside-of-school experiences that students often possess and connect them to the learning that takes place within the classroom and, more importantly, help students *apply* what they learn in class to the 'real' world outside.

The aim of this paper is to provide a glimpse into the Singapore classroom through lesson transcripts that focus on how teachers endeavour to make connections between their students' background knowledge and experiences and what they are learning in school, and, more significantly, how their school learning can have implications beyond school exams. The paper will begin by outlining the research literature which has inspired the observation-cum-intervention study from which this paper is drawn[1]. This will be followed by a close examination of a few lesson excerpts which illustrate how various types of 'connections' were being made by teachers in a bid to make their students see the relevance and value of what they learn in school as well as to advance their cognitive development and understanding of key concepts. The paper will end with a discussion of the various benefits and implications of 'connected learnings' both within and beyond the classroom.

THEORETICAL FRAMEWORK

This present study is situated within the extensive research in the US, UK and Australia examining the kinds of pedagogies that can improve learning outcomes in the literacy classroom. Recent work including Lingard et al (2000) and Gore, Griffiths and Ladwig (2004) involved large-scale studies aimed at improving literacy standards in Australia. Others such as Allington and Johnson (2002), Taylor, Pearson, Clark and Walpole (1999) and Wharton-MacDonald, Pressley and Allington (1998) have developed 'subject-specific' observational scales which focused on literacy

instruction at the primary level, while Langer (2001) has identified features of effective literacy instruction at the secondary level of schooling. Some of these large-scale empirical studies have resulted in the development of observational matrices for describing general patterns of classroom pedagogy which can then be translated into normative statements of what teachers can do to improve literacy instruction in their classrooms.

In particular, this present study draws and builds on the 'productive pedagogy' matrix developed by the Queensland School Reform Longitudinal Study (QSRLS) research team (Lingard et al, 2000), which itself was an extension of the 'authentic pedagogy' construct developed by Newmann and Associates (1996) in America. The latter used the term 'authentic' to refer to intellectual work that involves original application of knowledge and skills rather than just routine facts and procedures. The term was used not to devalue basic skills and competencies but to distinguish intellectual work that is more complex and socially or personally meaningful than others (Newmann et al, 1998). They believe that beyond academic achievement, work that is intellectually challenging also benefits students when they eventually leave school and enter the workplace and participate in civic life. They argue that productive work, responsible citizenship and successful management of personal affairs in contemporary and future society will involve more than giving the correct answers and following proper procedures. To function effectively in such capacities, adults will need intellectual skills that help them to construct knowledge and produce discourses that have meaning or value beyond success in school.

Another key dimension featured in both the 'productive' and 'authentic' pedagogies relates to the degree of explicitness with which instruction and assessment are carried out. Bernstein (1990) had early on observed the distinction between 'visible' and 'invisible' pedagogies, which highlighted the importance of employing clear, or explicit, standardised criteria as opposed to multiple, diffuse criteria, so as not to disadvantage non middle class students who have a more limited or 'restricted' access to language-rich resources than their middle class counterparts. More recently, there has been further critique of implicit pedagogy in the field of literacy pedagogy (Freebody, Luke and Gilbert, 1991; Cope and Kalantzis, 1993; Freiberg and Freebody, 1995, 2001). The upshot of this critique is that unless a teacher has very bright, willing students from middle class homes where they receive a lot of reinforcement of school and literacy practices, achieving high intellectual quality requires a more specific pedagogical focus. This is particularly pertinent to students having to operate between two or more languages, as is the case in Singapore and many ESL contexts around the world. The work of Bourdieu and Passeron (1977), through to Delpit (1988, 1995), and more recently (Freebody, Ludwig and Gunn, 1995) have all attested to the crucial need to give students explicit access to how texts works, the strategies that would enable them to process and produce texts on their own and the criteria by which these texts are to be judged.

Finally, a third significant aspect of the 'authentic' and 'productive' pedagogies relates to the observation made by Dewey (1899/1998, p. 76-77) about the sense of disconnect and disengagement that students experience between what they learn in school and their outside of school experiences. According to him, there are three kinds of instruction. The least desirable treats each lesson as an independent whole, without putting upon the student the onus of finding points of contact between it and other lessons in the same subject, or other subjects of study. The second kind is where teachers see to it that the student is systematically led to utilise his/her earlier lessons to help understand the present one. In this type of instruction, results are better but the school subject matter remains largely isolated; save by accident, out-of-school experience is left in its crude and comparatively unreflective state. In Dewey's words, 'It is not … motivated and impregnated with a sense of reality by being intermingled with the realities of everyday life' (Dewey, 1916: 191-192, cited in Kwek, 2005). The best type of teaching, in contrast, bears in mind the desirability of affecting this interconnection. It puts the student in the habitual attitude of finding points of contact not only within the same subject but across other subjects and disciplines so that students are able to see the inter-disciplinary, and indeed trans-disciplinary, nature of knowledge.

In the QSRLS, tasks and lessons were seen to provide students with 'opportunities to make connections between their linguistic, cultural and world knowledge and experience' (Lingard et al, 2000: 26). The importance of teachers doing this sort of linguistic and cultural bridge-building, rather than treating the content of instruction as if it were entirely new, has been documented widely in the education literature (e.g. Bransford, Brown and Cocking, 1999) and more specifically for literacy and language learning in a number of studies as well (e.g. Au, 2000, and Lee, 2001). In more concrete terms, these connections could be manifest in teachers drawing on examples from everyday home life, from the subject area itself or prior knowledge from other subject areas which are raised in class in order to connect with the new information that is being presented. In pedagogical terms, the questions posed or activities devised could provide students with opportunities to express what they already know about the topic and to connect with the new knowledge or more abstract notions being presented to them during the lesson.

More recently, Gibbons (2006) has also articulated her vision of 'bridging discourses' within an ESL context, which embraces a wide range of discourses including the talk that teachers and students co-construct to bridge the everyday and the more formal academic registers, the interdisciplinary discourse that researchers from different disciplinary backgrounds can develop so as to view and articulate classroom teaching and learning in a more holistic, fruitful manner, and finally the discourse that converges at the theory-praxis nexus from which new theories of teaching and learning can be developed. The first aspect, which involves moving students from context-embedded colloquial talk to more formal written registers characterised by explicitness, coherence and justification which wider audiences can make sense of, is of special interest here.

In the Singapore study (Kramer-Dahl et al, 2005) from which this paper is drawn, my colleagues and I have adapted and elevated these three dimensions – Intellectual Quality, Explicit Instruction and Connected Learnings – to form a complementary and mutually supportive matrix (see Figure 1 below) that forms the basis of our three-year, observation-cum-intervention study known as *Expanding Textual Repertoires* (ETR). The word 'textual' here embraces both written and spoken texts, in all its modes of representation, including the visual and electronic, and 'affordances' (Bearne and Kress, 2001), used and generated by teacher and students in and outside of the classroom. We use the notion of 'repertoires' in the sense of Rogoff (2003) and more specifically, in the domain of literacy, Tuyay, Jennings and Dixon (1995) and Freebody and Luke (2003), to refer to ways of engaging in activities learned from participating in cultural practices. Just what constitutes a person's repertoire of literate and textual practices will depend on the kinds of opportunities they are given access to and take up. An important aspect of focusing on textual repertoires is that it allows us to view schools and classrooms as enabling spaces and teachers as enablers providing opportunities to build students' textual practices and dispositions by helping them to move flexibly between ways of being literate and engaging with texts for distinctive purposes in a range of social circumstances. Thus seen, literacy and literate action involve far more than reading and writing processes and embrace the whole gamut of 'communicative processes through which it is constructed' (Santa Barbara Classroom Discourse Group, 1992: 121). The decision to focus on the classroom and the processes through which literate talk and action is generated is premised on the belief that the key to understanding everyday classroom practices and processes lies in capturing snapshots of the discourse generated in the classroom to build a more accurate picture of what actually goes on in the classroom. As Luke et al put it, 'it is in "everyday mediations" (Cole and Griffin, 1990), the face-to-face modulations, changes, contours at work in classrooms', not curriculum, syllabus writing and standardised examinations, 'that the "differences that make a difference" in performance, achievement, outcomes and consequences … are shaped (Luke et al, in press: 2). While the impact of curriculum and syllabi on students' learning must be acknowledged, their impact is realised through the ways learning opportunities are provided for students in the classroom, that is through pedagogy.

Figure 1: Three Dimensions of Coding Classroom Talk

Given our study's focus on textual practices and the multifarious forms they may assume, it is helpful to realise that teachers typically organise the textual interactions in their classrooms around three distinct but not mutually exclusive categories of activity:

1. **Interactions with texts**: these refer to the nature and type of textual materials used in class (such as textbook, website, worksheet, templates, PowerPoint slides, etc.), the purposes for which they are read or talked around and the opportunities that are provided for interactions with them. The critical question here is the extent students are assigned banal roles to do with recalling texts or more challenging epistemic roles requiring them to interpret, synthesise, even critique and generate new understandings.

2. **Interactions about texts**: these involve classroom talk which may refer to future or past written texts in this class. For example, a news report on the government's population policy that students read a month before may be alluded to in order to start a discussion on the role of government in social engineering.

3. **Interactions through texts**: these involve members of the classroom in written interactions that occur in or outside class in the form of assignments, student workbooks or journals, or even editing and feedback tasks, which require students to interact with the teacher or with one another through the written texts they produce.

Thus, by examining the interactions with, about and through texts that teachers organise in their classrooms, it is possible to obtain a better understanding of how teachers, through their efforts to make their instructions and expectations of outcomes explicit and to help students make connections, can enhance the quality of their students' intellectual engagement with the topics, concepts and skills being developed.

In order to gather our baseline data on current literacy and discourse-based practices, we observed and audio-recorded over the course of four months, the teaching of a unit of English, Science and Social Studies[2] by 17 teachers (10 teaching English, 4 Social Studies and 3 Science), in three neighbourhood[3] secondary schools in different regional clusters of Singapore. In addition to the classroom observations, secondary data in the form of teaching materials and student artefacts, school syllabus and educational policy documents, as well as focus interviews with both teachers and students were also collected. The interviews with teachers were aimed at surfacing the underlying motivations and ideologies that shaped their design of classroom activities and desired learning outcomes, while those with students sought to probe at the kind and level of learning and understanding that actually took place. This collection of primary and secondary data facilitated the kind of triangulation necessary for the analysis of the interaction among official educational discourse, classroom practice and student uptake, affording a glimpse into the nexus between the prescribed and enacted curricula in the Singapore classroom. A series of professional development sessions

were then conducted with teachers using excerpts of lesson transcripts culled from the observation data collected to illustrate 'typical' and 'good' teaching moments vis-à-vis the three dimensions of our coding framework shown earlier. This served as a springboard for the intervention phase of ETR in which we worked collaboratively with teachers in their own subject areas to help them review and revise their units of work, providing the space and autonomy for them to reflect on the overall architecture of the unit in terms of the interplay of interactional structures, knowledge build-up and shifts, and textual choices made, and revise their lessons along the way on the basis of their individual and collective reflections.

Since the focus of this paper is on *connected learnings* and how they can contribute to an enhanced level of engagement and more crucially quality of learning, it is useful to probe a little deeper into the ways this notion can be conceptualised. In this regard, Cazden (2006) has made an interesting distinction between 'shuttling' and 'weaving'. While the notion of 'shuttling' (Gibbons, 2003) suggests a simple back-and-forth movement between the students' past experiences and academic or theoretical knowledge, for instance, the metaphor of 'weaving' implies a more purposeful, directed process of making connections *in order to* produce in a seamless fashion something larger and more beautiful. This tapestry that weaving produces is the students' ability to engage with the topics/concepts at a higher cognitive or intellectual level, and it is this focused, purposeful weaving that keeps teachers from slipping into trivial asides and interesting but pointless and ultimately distracting anecdotes, often witnessed in many classrooms.

With this broad conceptual framework in mind, I shall now articulate in more specific terms the two main types of connections focused on in this paper:

1. Connections made to students' background knowledge and experiences as they are being introduced to new knowledge, where my interest will be on the degree to which activities, talk and texts in a lesson *build on* (and not merely make a passing reference to) students' previous knowledge in the subject, previous knowledge in other subject areas and everyday knowledge and experiences. Without actively building on prior knowledge and experience in terms of showing how the new is related to the old as well as how the old takes on an added significance in light of the new, this sort of interjections can become trivial and even potentially distracting for the students.

2. Connections/value of lesson activity or task to competencies or concerns beyond the classroom, where the focus will be on the extent to which activities, talk and tasks show links to get students to recognise their value and meaning beyond the instructional context, i.e. to see their present and future significance and utility.

These two types of connections can be construed to exist in a bi-directional but complementary relationship. The first – connections to the students' prior knowledge and experiences – can be seen as bringing the

students' *outside* knowledge and experiences *into* the classroom, hence 'outside-in'. The second – connections between what is taught in class and the value or applicability it has beyond classroom walls and examinations halls – can be construed as bringing what is *inside* the school textbooks/classroom *out* to the real world, hence 'inside-out'[4]. Both can be construed as a conduit that facilitates the exchange and interaction of ideas and experiences that lead to the construction of meaningful knowledge and practical learning for students.

Against this theoretical and conceptual background, selected samples of English Language and Social Studies lesson transcripts extracted from the ETR data will now be examined, with the aim of illustrating the dimension of 'Connected Learnings' and discussing the ways and types of connections being attempted. The transcripts that follow will first focus on the 'outside-in' dimension of 'Connected Learnings', followed by the less commonly observed but arguably more important 'inside-out' dimension.

ANALYSIS

The first two transcripts are both taken from a lower secondary or junior middle school class focusing on the subject of English Language. The first shows how the teacher contextualises the writing task, which requires the students to collaboratively write an advertisement (leaflet) for a food stall to be set up during their school carnival, with the special condition that the food to be promoted must be healthy.

Outside In

Transcript A

1. T   So, let's start from the beginning, step one, we're looking at just planning your essay, before you even start writing at all.
So let's just look at each point properly, [reads from handout] <u>your school has decided to organise a carnival and your class</u>… what are you going to do?
2. S   [Food stalls…]
3. T   So, can everybody underline 'food stall'?
What must you decide on?
4. S   [inaudible]
5. T   What type of food?
So a very bad answer would be, if you wrote an ad "oh, come to our food stall and have lots of food to eat," and you didn't specify what food is it. What suspense! I think when it comes to food, we don't want suspense. (Students giggle)
You, everyone here is a class chairman, you must write a leaflet that promotes the class stall with the following in mind.
[Reading from handout] <u>If your school actively promotes healthy life, a healthy lifestyle, and discourages the consumption of fattening food</u> … how does it affect what you write?
Because there're two things you need to decide, right? You need to decide on what?
6. S   Type of food.
7. T   So what type of food would you consider?
8. S   [inaudible]
9. T   Yes, yes, but you need to decide what type!
So give me give me ideas.
12. S   [students brainstorm among each other.]

13.	T	But let's look at, I mean let's think about it, it's a carnival right?
		Who wants to go to a carnival and eat salad?
		What do you want to eat at a carnival really?
14.	S	Roti Prata.
		Hot dogs!
15.	T	Hot dogs, what else?
		What else?
16.	S	Pizza!
17.	T	Pizza!
18.	S	Pasta.
19.	T	Satay.
20.	S	Rojak!
21.	T	Rojak and all the rest of it, ok?
		So if you want to sell the food, you don't want to have to throw er buckets and buckets of eh lettuce because nobody wants to eat your healthy salad, isn't it?
		So if you are going to say…. choose something that's delicious but might be fattening how can you make it healthier then?
22.	S	Add more vegetables …
23.	T	Add vegetables, change the method of cooking. Vegetarian versions.
24.	S	Fresh, fresh.
		Balance.
25.	T	Balance with something else [Starts writing suggestions on keyboard.]
		Let's put it that way that way huh. Can you write it in your notes? I'm just basically your note-taker. Now write down, because these are your notes, write down your own ideas, what you were thinking about just now when I asked the questions. When you said healthier versions, what were you thinking of?

Transcript conventions used:

[xxx]	Recording is inaudible
[…]	Turns which have been left out
(…)	Short pause
// //	Overlapping speech

What we see here is the teacher (T) first of all drawing her students' attention to the rubric of the writing task so that they are mindful of the type of food they are promoting for their school carnival (turns 1-5). She then activates their schema of 'carnival' (turn 13) to help them focus on the type of food generally available in a carnival (turns 14 to 20). From their responses, the teacher then makes them realise that carnival food is typically unhealthy, which then presents the problem of how the students can attract potential customers with carnival food that is both delicious *and* healthy, so that they do not end up having to 'throw away buckets and buckets of lettuce because nobody wants to eat your healthy salad' (turn 21). This in turn stimulates students' idea of promoting 'balanced' meals (turn 24). At this point, it is significant that the teacher switches from a teacher-directed questioning mode to a more passive role of 'note-taker' (turn 25) when she begins recording her students' ideas on the computer, which is projected onto the screen in the classroom so that there is collective recognition and, more importantly, ownership of the ideas offered by the students themselves. Thus, by first activating the students' 'carnival' schema, the teacher effectively makes

the connection to their general background knowledge of and experience with school carnivals and the type of food typically sold there, which then sets the stage for them to come up with their own ideas of how to make the food they want to sell more healthy, as required in the writing task they are undertaking. If the teacher had merely begun by stating the task requirements and getting the students to brainstorm for ideas, both the level of engagement and quality (in terms of focus) of brainstorming would most likely be lower, as the students might not have appreciated the need to make their food healthy *and* palatable to carnival visitors.

In the following lesson transcript (B), the teacher is also preparing her students for a writing task, but this time it is a (suspense) narrative that the students are required to compose.

Transcript B

1.	T	What are the four different features? Let's do a quick recap. First one?
2.	S	Orientation.
3.	T	Orientation, very good. K, let me draw it in a different fashion where you know it. First layer, known as orientation. (writes on the board) What is this method known as to you?
4.	T	Yes, I hear something.
5.	S	Layering.
6.	T	Layering, very good. This is called 'layering'. (…) Why layering?
7.	S	[silence]
8.	T	An onion? When you peel the layers, do you actually see what's inside before you peel it? No, right? It's only after you have peeled the first layer, then second layer is exposed. Suspense story does this. Ok? It's always layer by layer, it doesn't give you the information all at the same time. K? Layering. After orientation, what do you get?
9.	S	(inaudible)
10.	T	Complication. (writes on the board) Peng Xiong, what is a complication?
11.	S	Problem.
12.	T	Problem in the story. Who faces the problem?
13.	S	The character.
14.	T	The character, very good. K. The character is the one. Keith, what comes after the complication?
15.	S	Climax
16.	T	Climax. (writes on the board) Keith, why is there a need for a climax in a suspense story?
17.	S	(inaudible)
18.	T	Because?
19.	S	(inaudible)

20. T   It's the most exciting part of the story. K, last one, k, we all know is what you call that?

21. S   Resolution.

22. T   Resolution. Good. (writes on the board) K, so this is your structure for writing your suspense story. It goes up this way. Next, I want to draw you a diagram which I want you to include in your, the paper you have been taking notes on. Now, listen ah, the diagram goes like this. I'll use red pen. (…) Ok, we all know your heart beats according to the music. You all know that right? If you listen to the music which is very slow in bits, you will also feel very relaxed. But when you go into, when you put on a CD that's got rock music, pop or rock music, beating is very fast, likewise your heart rate goes up, right or not? K, what does suspense story do to your heart?

23. S   For example, if it's very exciting right, then you need to know what is next,.

24. T   Correct, yes. Yesterday, we watched "The Last Samurai", ok, did you realise that your heart was actually beating and pounding towards the climax?

25. S   Yes.

Here, we see the teacher getting her students to recapitulate the structural features of a narrative – orientation, complication, climax and resolution. But rather than merely having them mechanically recite these stages as proof of their knowledge, she makes an effort to make sure they understand how these stages contribute to the telling of a suspense story. First of all, she does this by using an analogy to illustrate how reading a suspense story is like peeling an onion, layer by layer, to gradually reveal what is inside the core (turn 8). In using this simple analogy, she is effectively making the connection between an everyday, concrete object and the abstract concept of suspense and how it is constituted. Later on (in turn 22), she again makes a connection between the abstract notion of 'climax' in a story to how our heart beats according to the tempo of a piece of music – 'If you listen to the music which is very slow in bits, you will also feel very relaxed. But when you go into, when you put on a CD that's got rock music, pop or rock music, beating is very fast, likewise your heart rate goes up'. By drawing the frequency fluctuations on the board, she further reinforces this connection between the abstract and the concrete by graphically illustrating through a visual stimulus what it is like to build the events of a story in an increasingly escalating crescendo that leads to a climax. Finally, she helps her students recall a key scene in a movie clip they watched earlier and how they experienced a building up of excitement towards the climax of the scene (turn 24). This is the sort of 'interactions about texts' which allows the teacher to bridge students' prior experiences with current teaching through textual materials encountered earlier (in this case a clip from the movie, 'The Last Samurai').

What is significant is that the sorts of connections that we observe in Transcript B are qualitatively different from those we saw in Transcript A. While the teacher in Transcript A merely connects with the students' schema or background knowledge of a carnival in order to better contextualise the writing task, the teacher in Transcript B goes further by her helping students to connect between the abstract and concrete in a

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bid to help them understand the staging of a suspense narrative, so that they may have a better idea of how they can craft their own suspense stories. Conscious perhaps of the need to help her students move beyond knowing the metalanguage of narratives as mere labels to understanding what they actually mean and, more significantly, how they can be actualised, we see the teacher in Transcript B bringing in various types of 'outside' knowledge and textual resources (onion, music and movie) into her lesson to enhance the learning of abstract concepts crucial to the successful performance of the writing task.

It should, however, be pointed out that the decision of what 'outside' knowledge to bring into the classroom hinges on the teacher's knowledge of what is likely to constitute familiar knowledge for the students. This is best illustrated in a separate lesson by another English Language teacher who at first tried to use *lasagna* as an analogy of how a news report is constructed in layers, with each layer gradually revealing more details about the news event being reported. Realising that *lasagna* fails to activate the students' schema, she immediately switches to a more familiar local delicacy, *kueh lapis*, which is Malay for 'layered cake', to much better effect. If she did not have the presence of mind to switch analogies and persisted with the lasagna analogy, instead of illuminating the construction of a news report she would have completely befuddled the students. This also raises a more serious issue of how teachers need to be sensitive to possibly disadvantaged children in their classes whose schema of the world may be so impoverished that even what is deemed by the majority of the students in the class as common and familiar may in fact be totally unfamiliar and alien to them. For these children, the imagined worlds and vicarious experiences enacted through the books and resources that teachers bring into the class then become the surrogate 'outside' world, to which they have been denied access due to their disadvantaged socio-economic background and from which they will remain locked out except through schooling.

Having looked at two English Language lessons, let us now turn our attention to another subject area — Social Studies — at the upper secondary or senior middle school level to see how connection-making at the 'outside-in' level can be operationalised. Specifically, what we will see is how the teacher taps on the prior experience and specialised knowledge of the foreign students in her class as a way to help the class appreciate the meaning and impact of a key concept being taught. In the following excerpt (Transcript C), we see how she calls upon a student from India, whom she refers to as the 'guest speaker', to share with the class whether he thinks his country is 'over-populated' and how he can tell.

Transcript C

1.	T	Arbishek, let's hear from you.
		You come from India. Come, share with us about your country.
		Do you find that your country is over populated? How do you know it's over populated?
		Okay, let's hear from Arbishek. (He) is our guest speaker.
1.	Arbishek	(XXXX) because many people are (very) (XXXX)

2.	T	Excuse me?
3.	Arbishek	In the streets-
		On the streets (XXXX)
4.	T	Yah, on the streets.
		So the fact that there are many people on the streets.
		[Class laughed]
5.	Arbishek	(XXXX) actually you don't see it [Teacher prompting class
		to be quiet] unless you visit some foreign country.
6.	T	What- What do you mean?
		You want to explain?
7.	Arbishek	When I came here, then I realise that it is very populated.
		(Otherwise), we just-
		It's a normal life. So-
8.	T	Oh, so to you when you were there is very normal? People
		on the street, is.. normal?
		But when you came here-
9.	Arbishek	When I came here, (XXXX) it is [not] so populated here,
		you seldom see any people walking around.
10.	T	Here, or?
11.	Arbishek	In some streets.
12.	T	Here or your own country?
13.	Arbishek	Here

Even though Arbishek experiences some difficulty in explaining his observation, he manages, with the teacher's prompting, to get the point across that India's overpopulation is evident in its crowded streets, which he had thought was 'normal' until he arrived in Singapore and noticed its relatively sparse streets. By inviting students to share their specialised knowledge or experiences, it not only acknowledges and valorises such students' knowledge and experiences and allows them to connect the topic at hand with their own experiences, it also allows the rest of the class to benefit from such 'guest' observations that broaden their perspective beyond Singapore and the textbook/examination requirements. This in itself would have been laudable enough; the teacher, however, goes further:

14.	T	Ok, so if you were to tell us, what then is the government
		doing about it?
		In your country, do you know?
		You don't know?
15.	Arbishek	(I mean,) they are trying to reduce birth rate.
16.	T	Trying to reduce birth rate. Ok..
17.	Arbishek	So.. it's so populated that they are out- is out of control.
18.	T	Out of control ok? [Class laughed]
		Know his word is "Out of control" huh.
		Ok, Arbishek. If You have a chance..
		Shhh!
		To be the government and you said "I'm going to do
		something about the population", what will you do? [Some
		commotion in class]
19.	S	(XXXX) chance
20.	T	(You didn't) have the chance?
21.	Arbishek	(XXX)
22.	T	Sorry?
23.	Arbishek	Use this measure.
24.	T	You will use this measure.
		What is this measure?

25.	Arbishek	Erm, give.. give.. set up (XXXX). Set up family planning and population (growth)
26.	T	Ok, so this minister says that he will set up the family planning board huh.

Having elicited the student's observation about his country's state of over-population, she first makes him say what his country's government has done about the situation and then what he himself would do if he were part of the government. This series of questions clearly goes beyond connecting with students' experiences, by getting them to evaluate the situation and formulate recommendations to improve the status quo. This hones the students' skills not only in describing practices but also evaluating them and making recommendations to improve the status quo. In this way, learning is not only broadened by connecting with experiences outside of textbook knowledge, but also deepened by getting the students to evaluate the problem and existing situation in order to create more effective solutions. Moreover, from the perspective of connected learnings, what this Social Studies teacher does here has the dual effect of broadening the Singaporean students' knowledge and perspective beyond Singapore and actively including non-Singaporean students in the discussion about Singapore's population policies, which can otherwise appear irrelevant and hence become disengaging for these international students[5]. Hence, the connections she makes are between local knowledge and foreign perspective for the Singaporean students, as well as between foreign expertise and local (textbook) relevance. This way, both the Singaporean and international students' needs are met and the lesson becomes more interesting, relevant and hence engaging for both groups. Furthermore, in the line of questioning that the teacher engaged in with the student in question, she was also modelling the way in which she would like the other students in the class to engage their own classmates in meaningful exchange and discussion, as the following indicates:

27.	T	Ok, I've asked Arbishek whether two or one is more effective, he came up with you don't think any one will be effective. Why, Arbishek?
28.	Arbishek	Because there would be people like- Who will try to like (XXXX) the government, they can be- they can be very serious (XXXX). (First,) will be to make the government very serious.
29.	T	Make the government serious? [Class laughed] Ok.. He's trying.. Ok.. Unless the government is very serious about it. Why.. What do you think is holding the government back from really, erm, putting a policy that is successful? Now, notice I'm asking all the questions uh. Afterwards, you will ask (Macy) questions, all right, about Indonesia.
30.	SS	Woohh.. [tone of anticipation]
31.	T	Ok, so don't look at me afterwards. It's your turn to ask questions.

Engaging students in such a way, connecting with their particular experiences and specialised knowledge, getting them not only to articulate but also evaluate, and modelling and encouraging students to engage one another in meaningful discussion is what makes the teacher's lessons such a rich and engaging experience for her students, where learning comes alive through the meshing and interweaving of textbook knowledge with real life experiences in a dialogic construction of knowledge and learning to produce a tapestry of rich and meaningful learning experience. This sort of 'interaction with texts' illustrates the concept of 'weaving', referred to earlier, in which students are provided with challenging epistemic roles requiring them to interpret, synthesise and even critique in order to generate new and wider understandings of the concepts being taught.

Having examined three lessons in terms of how they connect the 'outside' with what is being taught 'inside' the class, let us now shift our attention to how teachers attempt to bring classroom/textbook knowledge to the outside world, as a means to underline the significance, relevance and hence value of academic knowledge to the real world.

Inside Out

Transcript D

1	Michael	Smaller proportion of younger working people plus the workforce is smaller so productivity rate also decrease.
2	T	Very good, excellent! Smaller workforce, number one. When the workforce is smaller, also, it also may mean your productivity will be lower. So when your productivity is lower if you compare with a country that has a large population and a bigger workforce what happens is, their productivity could be higher and as a result, Singapore may eventually lose the competitiveness. Now, all these ah, that we are studying ah, class has an impact on you. In ten years time you are going to make up the labour force. At least ten years' time, for the girls, ten years, you should be working; for the guys you should be finishing either your university, poly or national service and you will be working The mean age to work is about 24, 25.
3	S	Hah!
4	T	Ok
5	S	So old ah.
6	T	So old; you think you are really that old ok. I want to tell you to enjoy studying first. When you come out to work it's a different ball game altogether.
7.	S	Stay in the army.
8.	T	Ok, you can stay in the army alright, sure. So, if Singapore, if Singapore does not enjoy a competitive position, and other countries start to overtake us, that means to say your position may be questionable okay, and if you look at what we discussed yesterday, we said that Singaporeans are very choosy they don't want particular jobs and so on and so forth, what does it imply for you and what is left for you? That's why Bio Science is one of those components that Singapore is emphasizing alright and high tech industry I like you to look at another consequence of an ageing population. Do you have another one?

In Transcript D above, we see the teacher discussing with her upper secondary class the implications of an ageing population when a student raises the point about a smaller workforce as one of the consequences. Instead of merely evaluating the response, 'Very good, excellent!', and elaborating on it by relating it to the issue of a country's economic competitiveness, 'So when your productivity is lower …, Singapore may eventually lose the competitiveness', the teacher also makes the students aware that this is not just an academic issue but one that would impact the students in about ten years' time when they enter the workforce and find themselves competing for jobs, 'Now, all these ah, that we are studying ah, class, has an impact on you'. Turn 8 also highlights the teacher's attempt to provide a concrete example of how Singapore as a small country with limited natural resources tries to stay competitive by trying to carve a niche in the field of biological sciences. More importantly, in helping students understand the significance of Singapore's emphasis on biological sciences, she is able to connect the topic under discussion with broader events/issues in Singapore. This not only deepens the students' understanding of the implications of an ageing population, but also broadens their awareness and understanding of current affairs and the reasons/motivations underlying them, which offers crucially a *reason* for what are studying. Thus, what we see in this short excerpt is the teacher's ability not only to connect the topic to the students' own (future) lives but also classroom learning to broader current events/changes happening around the students.

The attempts to broaden classroom discussion beyond the confines of textbook examples and examination requirements are typical in this teacher's lessons as we look at another instance within the same lesson:

Transcript E

9. T   Just now I showed you the video.
       I wanted you to see that actually the old are still an asset to our country but it's something that Singapore is still working at.
       How to make it easier for retirees to be employed.
       Let me tell you when you are retired and you don't have a job; I tell you life can be very meaningless ok.
       Ah, your parents, I don't think your parents are retired yet.
       Most of you seem to have very young parents.
       But if you look at your grandfather; if your grandfather had been working and if he doesn't live, you know, and if he doesn't maintain an active life style and he sits there and moan and groan, let me tell you the rate of him dying faster is actually very high.
       Okay, because you enter into this depressed mode, alright.
       I have a friend; she works as a doctor in a geriatric, in a, in a hospital that deals with all the elderly people; and as doctors themselves they have to talk to these eh, elderly, you know, patients, to engage their minds so that they will not even think of things like suicide.
       Because it's so easy for them to say, 'aiyah, there's nothing for me to do; I can't contribute to the economy so let me just get rid of my own life', okay.
       So, what did you say, Shawn? (Laughter)
       Shawn, I want to know what you said.
       I am going to talk to your father, you know because I can imagine what you are

going to do to your father (laughter).
I am worried what you do to your father okay. (laughter)
Alright, so, so who makes it easier for retirees to employ?
Example, just now, what did you see?
Which company in Singapore is making it easier for retirees?
McDonalds is one very good example.
They were one, the first few companies to spearhead this hiring the retirees.
And do you know McDonalds, because they practised that; it helped McDonalds tremendously because all these youngsters who work are part-timers, correct, come and go, come and go but the retirees are the one who is holding on the fort for McDonalds.
They are the stable ones; ok they work; they may be slow; they don't know how to read English; they may have a lot of weakness but look at what McDonalds did to turn their weakness into strength.

Here, the teacher makes the topic on the potential problems of the aged real by relating them to the students' own families as well as through her doctor friend's experience of working with the elderly in the geriatric ward, thereby situating an academic topic in the context of the real world. She is able to make her lesson come alive by connecting an academic and potentially disengaging topic with her students' own experiences with their grandfathers as well as anecdotal accounts of people who work with the elderly. In this way, she is not only able to make her lesson interesting and 'real', she is also able to underscore the importance of the aged to be gainfully employed, which is a key national education point being promulgated through the subject. Furthermore, by referring to the example of McDonalds and its practice of employing retirees, the teacher is able to use a concrete and familiar real-world example to drive home the point that instead of viewing the aged as a problem or liability to society they can be perceived as and indeed *become* an asset. This type of connection-building between academic/textbook knowledge and real-world stories and examples is what makes an otherwise abstract, distant and potentially alienating and disengaging subject of ageing population come alive for a group of teenagers.

DISCUSSION

What we have just seen is a series of lesson transcripts from two subject areas, English Language and Social Studies, culled from the ETR project, which focus on the dimension of 'Connected Learnings'. We have seen how the teachers employ various textual resources in different ways to connect their students' background knowledge and experience with topics/concepts being discussed in class, as well as between academic or textbook knowledge with real-world issues and trends which will impact the students directly or indirectly. This extends the value of the lessons beyond the immediate and parochial goal of passing examinations, and frees the students from the stifling and isolating experience of school learning observed by Dewey, in which the student is unable to 'utilize the experiences he gets outside the school in any complete and free way within the school itself' and 'unable to apply in daily life what he is learning in school' (Dewey, 1899/1998, p. 76-77).

Making connections both 'Outside-In' and 'Inside-Out' does not merely represent a pedagogical shift in the way text and talk and the

interactions around them are structured, but entails an epistemological shift in the way knowledge about texts is construed and constructed. What this means is that there needs to be paradigm shift in terms of the way teachers see and make use of texts. They are not merely the objects of language study (where suspense stories are deconstructed to lay bare the structural or linguistic features for students to learn and later reproduce, for instance) or repositories of factual or authoritative knowledge (like accounts in Social Studies textbooks of Singapore's population policies) to be mined, memorised and regurgitated at the opportune time. Rather, they should be viewed as the tools or media through which ideas can be generated and made to come alive. This can be done by using texts as a means to *contemplate* and *reflect* on the world by bridging the abstract, technical and remote with the concrete, familiar and current (by making the link between the problems faced by one's grandparents and the larger, socio-economic issues of an ageing population faced by a nation, for instance), and to *act* on the world (by persuading carnival visitors to patronise healthy food, for instance). Using textual resources as a vehicle for students to *contemplate*, *reflect* and *act* on the world not only helps them to see texts as relevant to their lives and their environment but also empowers them to gain control of them. This dovetails with the idea of learning to write versus writing to learn (Doecke and Parr, 2006), where reading materials and writing exercises are seen as an 'indispensable medium for communication, for negotiating human relationships, for forming a social identity, for constructing knowledge and for imagining worlds other than the one we currently inhabit' (Doecke and Parr, 2005: 8). Thus, 'writing [or reading] to learn' construes students as no longer just learning basic literacy competencies within an academic context but endeavouring to develop life skills that take them beyond classroom walls and examination halls to the 'real world' outside.

Finally, the value of 'Connected Learnings' is not only about making lessons more interesting and engaging, or even more relevant and meaningful outside of high-stakes examinations. It is also, more importantly, about aiming for higher and deeper levels of cognitive understanding and learning on the students' part. As mentioned in my outline of the ETR coding framework, 'Connected Learnings' represents only one of three inter-locking and mutually reinforcing dimensions that contribute to effective teaching/learning. As I have already suggested, 'Connected Learnings' can and perhaps should feed into and reinforce the 'Intellectual Quality' of lessons, especially if connections made relate directly to concepts being taught, as we saw in both transcripts B and C. Cazden's (2006) notion of 'weaving' referring not only to the nature but also the purpose of connections being made in a class is pertinent here. What 'weaving' produces is the students' ability to engage with the topics/concepts at a higher cognitive or intellectual level, which arguably is the most important or even ultimate goal of teaching. If by making the connection between the layers of an onion and the nature of suspense in a story, students can better understand how suspense is conceived and constructed, then the teacher can be said to have gone beyond 'shuttling' to 'weaving'. Likewise, 'weaving' can be effected if by connecting a foreign student's perception and construal of overpopulation in his own country with the way overpopulation, as an abstract concept, is defined

and presented in textbooks, the teacher can in fact deepen her students' understanding about the concept of overpopulation as a whole and how it is defined and measured. This can then lead to their realisation that the concept of overpopulation is sometimes not merely a matter of numbers alone but something which involves people's perceptions as well, thereby helping them to see the critical significance of her questions – 'revealing the questionability of what is questioned' (Gadamer, 1998: 363) – and raising their critical understanding of the epistemological basis of academic knowledge. This is the substance and significance of 'weaving' in contrast to mere 'shuttling'.

CONCLUSION

In conclusion, what this paper has shown is the way 'Connected Learnings' – both 'Outside-In' and 'Inside-Out' connections – are manifested in different lessons dealing with different content and skill areas by examining transcripts of English Language and Social Studies lessons in Singapore secondary schools. What I hope to have demonstrated through this paper is the potential (and not always the actualization) of how teachers can make what is taught in the classroom relevant to the outside world as well as incorporate and infuse students' prior knowledge and outside-of-school experiences into classroom teaching. Such 'Connected Learnings', as I have argued, will not only increase motivation and engagement levels for the students but will also make schooling a more meaningful, intellectually challenging and empowering experience than what it is for many students today. But for this to happen, teachers need to realise and be convicted that teaching entails more than training students to give the correct answers and follow proper procedures, but equipping them with the intellectual skills that will help them to construct knowledge and produce discourses that have meaning or value beyond success in school.

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Notes:

[1] This paper is drawn from data collected as part of a two-stage **description and intervention research project entitled, 'Literacy Practices in Secondary Schools: Expanding Textual Repertoires', which was funded by the Centre for Research in Pedagogy and Practice, National Institute of Education, Singapore.**

[2] This is a subject that looks at various aspects of Singapore's historical, political, economic and social issues in relation to other countries, and is commonly perceived as a form of national education to cultivate students' awareness of and pride in their own nation's developments and achievements.

[3] This refers to schools located in public housing estates with the majority of students from working and lower middle class families.

[4] It should be acknowledged this idea was first used by Cooke and Wallace (2004) in a study of reading in ESOL contexts in the U.K.

[5] It should be pointed out that the Social Studies syllabus only requires students to compare Singapore's population policies with Japan's and not any other country's.