AN EMERGENT CULTURE OF SCHOOL-BASED CURRICULUM DEVELOPMENT

The Evolving Role of Primary 1 Teachers in Singapore

Abstract

Singapore’s public school education has undergone a great many changes and reforms over the 40 years it has been in existence. The recent Ministry of Education initiative, Strategies for Effective Engagement and Development (SEED) represents a radical change in reform initiatives, however. Traditionally, both reform agendas and curriculum in Singapore have been centrally designed and disseminated, such that pedagogical practice has been assumed to emanate, naturally, from the given policy statements and text. Through SEED, the MOE has created a path for primary schools to develop their own unique curriculum in Primary 1 classrooms. In general, this curriculum has been loosely described to teachers as integrated and learner-centered and the general goals of Primary 1 teaching have remained intact, but other than that, very little has been defined. In our work with Primary 1 teachers we have been watching them respond to this new reform initiative in their schools—to develop new voices and new roles in curriculum construction and pedagogical enactment. We construct this paper as a story of an emergent culture of curriculum development and professional leadership.

INTRODUCTION

We are in the back yard waiting for the class to arrive. There is one picnic table where Mrs Loh, the teacher of this class, has put cut up fruit—logan, mango, guava, dragonfruit, grapes, papaya, star fruit—on paper plates with the remainder of the uncut fruit. A girl, Priam, of about seven is guarding the fruit and waiting with me. I ask her "which one do you like best to eat?" Totally ignoring the local tropical fruits, she replies, "I likes apples and grapes and orange too". She runs off to watch for the kids.

They arrive in a line behind Mrs Loh. All have their folders and pencil cases with them. They carefully spread out vinyl table cloths and then sit quietly in their groups, waiting for instructions. Mrs Loh: “Ok, Children, you have to listen to my instructions first. Put your files down and listen. Alright, I have some fruits here, on the table and I’ve labeled them. There is logan, mango, guava, dragonfruit, papaya, star fruit aaaand ….!” Student: “Grapes!” “Ok, now listen…..” Mrs Loh goes on to describe the activity the children will be doing next. First they will look at the fruit and write down the colors they see, Then they will feel the fruit and write down the texture
and, finally, they will taste the fruit and write down words to describe the
taste. They will also count the number of seeds they see and write that
down. All of this will be done group by group with no more than one group
at a time working with the fruit until the final tasting occurs—then everyone
will go together. All of this is a classic, activity based early childhood lesson
on the five senses overlaid by the Singaporean curricular goal of learning to
understand, apply and write good English sentences using adjectives. It is
carried out in an extremely orderly and business like manner with children
clearly enjoying themselves but all engaged in the task at hand, filling out
their worksheets, talking in undertones and only getting up to look at the
fruit when summoned.

Mrs Loh is the level head in her school for Primary Grade 1 (P1). In her role she
takes the leadership with her team of 11 other teachers working with the same age
group at Jelutong Primary School, a neighborhood school covering the grades
Primary 1-6 (ages 7-12) in Singapore. This role involves mentoring, developing
and evaluating the other teachers and guiding them in curricular and pedagogical
implementation and construction. Mrs Loh is relatively new to her role, both as a
teacher and as a level head. Teaching is a second career for her but she is smart,
ambitious and a person who is “in control” of both herself and others. In many
ways how she runs this class, which would typically be quite chaotic and probably
noisy and messy too, is illustrative of how she runs her teacher community.
Everyone pays attention and gives answers when asked. People behave properly,
work together well and have a pretty good time. Things get done.

The curriculum, in which the fruit tasting activity occurs, is a new initiative
in the P1 classroom in Singapore. Singapore’s public school education has
undergone a great many changes and reforms over the 40 years it has been in
existence. The recent Ministry of Education initiative, Strategies for Effective
Engagement and Development (SEED) represents a radical change in reform
initiatives, however. Traditionally, both reform agendas and curriculum in
Singapore have been centrally designed and disseminated and pedagogical practice
has been assumed to fall out, naturally, from the given policy statements and text.
Through SEED, the MOE has created a path for primary schools to develop their
own unique curriculum in P1 classrooms. In general, this curriculum has been
loosely described to teachers as integrated and learner-centered but other than that
very little has been defined. To respond to this new reform initiative in their
schools teachers need to develop new voices and new roles in curriculum
construction and pedagogical enactment. This will involve an evolution in
established relationships and leadership structures in the schools and it is that we
wish to describe in this paper.

CURRICULUM DEVELOPMENT AND LEADERSHIP

When a curricular and pedagogic innovation like SEED is rolled out, teachers
respond by:

- Waiting to see what happens;
- Becoming leaders themselves in shaping their own response;
- Leading others by applying and readjusting pre-existing leadership roles and relationships.

Reform can lead to emergent leadership and to shifting, evolving leadership roles. This can occur in a fluid and evolving manner, depending on the capacities and qualities of the people involved. We would define instructional leaders in such a setting as people who decide to do something and whose decision impacts others. Similarly Spillane (2003) defines leadership as the "ability to empower others" with the purpose of bringing about a "major change in form, nature, and function of some phenomenon" (Leithwood, Begley, & Cousins, 1994; Bennis & Nanus, 1985). This definition helps us to focus on instructional leadership that is centered on change and transforming teaching practice. To this end, leadership involves at least mobilizing the school community to face and tackle the problems of developing and implementing a new curriculum and pedagogical practices and harnessing and using the necessary resources to support this process. Unlike definitions of leadership which concentrate on the occupants of formal leadership positions and provide limited insights into leaders' day-to-day practice (Heifetz, 1994; Rost, 1991), this allows us to think about leadership in practice; that is, in the "acts of leadership" or "leadership activity" (Lambert, 1995; Heifetz, 1994).

Current discussions of school change (for example Elmore, 2002) often revolve around the relationship between leadership and the teachers—the people who are meant to change. Investigating the daily practice of school leaders is crucial to understanding how school level conditions support teacher change. Unless reformers can help school leaders practice in ways that support teacher change, reforms are likely to meet with a mixed fate, that is, adapted by relatively few schools and teachers in special circumstances, while having marginal effect on instructional practice as a whole. Further, leadership practice is key if reforms are to become classroom practices of teachers in ways that reflect the spirit of the reforms; that is, involving substantial change in the content and pedagogy of the Primary 1 curriculum. Viewed in this light, the curricular change involves a shift in leadership practices; it involves teachers developing agency and the ability to acquire new knowledge and skills about teaching, learning, and the subjects they teach.

Theorizing leadership has evolved from looking at the roles and activities of formal leaders (i.e. principals) to a model of leadership that is more fluid and resides in the evolving roles of the ‘on-the-ground’ participants in school life—what is called distributed leadership. The distributed leadership model (Gronn, 2000; Spillane et al. 2004) is an articulation of this and poses a way of understanding leadership that focuses upon interaction and social processes. According to Spillane et al., there is a social distribution of leadership where leadership encompasses the work of a number of individuals and involves the interaction of multiple leaders. Distributed leadership (as defined by Spillane, 2003) is a natural structural component of the elementary school.
We become especially aware of this facet of elementary schools and how they work and want to name and theorize it when the school is in a state of flux such as when a reform initiative is being enacted. At that point, the emergent roles necessitated by the creation of new curriculum and pedagogy challenges the established leadership roles and hierarchies. This is something of an uncomfortable stance in an educational landscape such as Singapore, where test scores are analysed in great detail in staff meetings, and teachers are expected to conduct remediation for poor performing peers. We wish to explore both the process of consciousness-raising we have seen teachers undergoing, its’ ramifications in the classroom and school cultures, and larger issues of the tensions such shifts cause at a political and policy level. This paper is fundamentally about a theory of power relations between teachers and institutionalized and disembodied power structures, and the reconstruction of teacher identities as teachers engage in curriculum and pedagogical construction in the classroom with their learners.

In this paper we will look at the curriculum and pedagogical development process and how aspects of leadership manifest themselves. In the example presented above, Mrs Loh, the “designated leader” of the P1 teachers demonstrates a classic example of activity based P1 teaching in which children learn how to use adjectives, compose good English sentences, do a little mathematics, all embedded in a science lesson about the five senses. She conducts the class in a picture perfect manner in which children know what they are supposed to do and accomplish it. There is open talk as well as cooperative group work, all carried out with a minimum of noise and mess and all focused upon achieving the curricular goals. This is the de facto standard because Mrs Loh is the primary evaluator of the other P1 teachers and the institutionally recognized “leader” and expert in pedagogy and curriculum.

Through a close analysis of a primary school involved in developing new P1 programs and producing elementary curricula, we argue that teachers, as agents of school change, reconstruct such relationships by positioning themselves in relation to other educators (e.g., peer teachers, traditional leaders, and administrators), in relation to subject matter and curriculum, and in relation to pedagogical practices and in this manner leadership roles emerge. We argue these teachers who take on such leadership roles do not merely assume a new position or “location” for their work; rather, their relationships and roles shift in highly complex ways relative to others. Our interest in positioning is twofold. First, we contribute to a larger discussion on teacher identity connecting concepts of identity with those of agency and leadership and are able to talk relationally about these as they arise in the fluid conditions of an educational reform. We consider how teachers assume agency in constituting their pedagogy and curriculum, and at the same time how this agency is dialogically responsive to and shaped by social and political others. What voices and practices do teachers, as agents of curricular and pedagogic change, take up or position themselves against? Secondly, our interest in positioning and how teachers interpret reform initiatives is related to a broad discussion of school change. What positions relevant to reform are teachers offered and what positions do they construct? How are teachers relationally positioned in the process of enacting change?
Over a two year period we have documented a number public primary schools as they developed and rolled out very different versions of SEED. In each case, a great deal of the responsibility for curriculum and pedagogical development has been passed to individual teachers and this has, in turn greatly changed their relationships with each other, parents, and traditional figures of school leadership. This process has in essence redefined many school leadership roles so that teachers themselves have increased ownership for their work and a greater need to both share with and learn from each other. Such shifts in professional and leadership roles in the practice of school reform reflect the unique character of each location—physically, intellectually and personally. In this paper we will present four studies of one school’s curriculum and pedagogical development and use these as lenses to explore how the teacher’s roles and identities have changed through this unfolding/complex process.

VIGNETTES

The following narratives are composed from a variety of data sources gathered from our interactions with the P1 staff and school administration at Jelutong Primary, including classroom observations, interviews with teachers, informal conversations, and observations of large group project meetings. However, the primary data sources interpreted here are classroom observations and conversations with the four teachers described in the opening and following vignettes.

Miss Chang, Senior Teacher

“Those who can see read with me, those who can’t see just listen.” Miss Chang is reading from a small book, “The Waves Come In,” which she is holding up at the front of the class. The kids are seated on the floor in front of her in their group rows. The story is about the various things that waves wash up on the beach, including a starfish, stones, seaweed and sticks.

In a lesson like this, pupils may be reading aloud a book such as “The Waves Come In”, receiving English language instruction with embedded discussion of how verbs reflect whether or not the subject is plural and how adjectives are used in English. The children in this particular class are typical of the Singapore population as a whole—approximately 70% ethnic Chinese, 23% Malay and 7% Indian. These children may or may not speak English at home, however, English is the language of instruction and the majority of the early primary instructional hours are spent teaching English literacy. A major change in this new curriculum as realized at Jelutong Primary School is that instruction is embedded in themes designed to invite the intellectual and emotional participation of the children.

The teachers at Jelutong Primary School have developed a curriculum which maintains English Language curricular goals while integrating standard subject matter content in the sciences and social studies. In particular, the new
curriculum integrates English, Math, Science, Art and Craft, Social Studies and Health Education in a thematic format. The P1 teachers, as a group, created the activities and lessons to achieve learning outcomes in the various subjects based on classic P1 themes. During the unit "Farming," for example, pupils learn about animals and plants, what farmers do and why, how important farming is to them, as well as embedded language arts and mathematical skills through pupil-centred activities. There are songs, making of art work, maps and models using recycled materials, collages etc which relate directly to activities. Believing that experiences in context and real life situations may help reinforce learning, there is no demarcation that the children are learning English, Math or Science in these discussions. Children do activities, write paragraphs and poems and create artwork, summarizing their ideas and the things they have learned and have more questions about.

The class, in their discussion of “The Waves Come In”, talked about trips to the ocean, going fishing with grandparents, whether or not they could swim, aquariums they have at home. This, in turn, became a discussion of Singapore as an island and where it is situated relative to other countries. Miss Chang, the teacher, might, at this point have launched into more geography or developed a science theme, or maybe a math lesson with bar graphing of (for example) how many of the children can swim and how well. Instead, she reminded them of their sensual experiences going to the ocean and then they began to discuss the adjectives they were learning that week.

Miss Chang: “Ok, the other day we learned about colors and shapes and today we will learn a little bit about sizes. Now tell me what colors you can see here.” She points to the cover illustration of the books. Kids call out blue and red. Miss Chang organizes their calling out by pointing and repeating children’s statements.

Student: The beach—yellow!

Miss Chang: Ok let me see, who can tell me the colors…oh who can tell me what this is, one voice, one voice?.. it’s a star fish. Isaac can you tell me the color of the starfish?…

Isaac: Its orange.

Miss Chang: Any more colors? Brown. Red? Yellow. Ok one voice only one voice. The shape? It’s a star a star shape. Alright, lets look at this again. Tell me the shape of this stone. (Children call out answers.) Its round, its in the shape of a circle… (another child calls out “oval!”)… its oval, some of you say its oval. Tell me the size of the stone. What is the size of the stone? Alef?”

Alef: Small…

Miss Chang: Its small, very good. And tell me the color (kids call out brown and red black). Its brown, brown, some red and black. Its brown. Alright now… (Miss Chang puts lists of colors, shapes and sizes on the board. In the meantime a conversation is going on behind her about the shape of the moon and sun.

Tien Sien: You forgot one of the shapes from yesterday…the crescent.”

Miss Chang: What do you see that’s a crescent.
Student: The moon.
Miss Chang: A moon shape, but what kind of moon is it?
Student: Part moon.
Miss Chang: Who can draw a crescent for me? (Kids are calling out “a banana, like a boat.”)
Claris comes to board and draws.
Miss Chang: Like a banana, like a boat? A bone! How can it look as a boat?
Oh a bone, a bone but how can it be a shape of a boat?
Claris: You turn it the other way!
Miss Chang repeats and has her draw it that way. Kids clap her. Miss Chang: “Who can tell me where you can see the crescent?”
Kids call out: In the sky! Singapore flag!

The curriculum and pedagogical development at Jelutong Primary School was initiated by the school principal, Mrs Goh, who had advance notice of the roll out of the new P1 Ministry of Education policy. At Jelutong, teachers worked in teams under the leadership of Mrs Loh and Miss Chang, who is a Senior Teacher, to discuss curriculum goals and topics, compile materials and test them, write drafts of curriculum, pilot and revise these. One of us (Nora Teo) supported this effort by hosting and mediating debate, serving as a sounding board for ideas and providing materials and information. The principal was also extremely supportive of these efforts with the teachers, carving out space and time for their work to proceed. A final and on-going step in the program has been the conversations and debate amongst the classroom teachers, the senior teacher and also the level head about pedagogical issues, individual curricular development and assessment.

This lesson by Miss Chang occurred during the same week and covering the same topic as the three other lessons we describe in this paper. The English Language Curriculum from the English Language Syllabus 2001, in primary education emphasizes balanced and integrated teaching of relevant text types for literacy acquisition (reading and writing), development of oral communication (listening and speaking), grammar, and vocabulary. Within this framework, lie the goals of Primary 1 English learning outcomes: 1) students will be able to read and respond to a variety of texts and demonstrate a positive attitude towards reading and listening for information from a variety of sources; 2) they will be able to speak fluently and expressively on a range of topics, present and develop ideas effectively in speech/writing, and write legibly, coherently, and cohesively, for different purposes and audiences; 3) children will be able to demonstrate knowledge about language and text types from print/ non-print and electronic sources and use reading strategies to construct meaning. They will be able to listen, read and view a variety of texts and finally, demonstrate understanding of content in oral or written form and the ability to acquire and use knowledge for a variety of purposes.

Miss Chang, “I’m going to tell you a secret and then it won’t be a secret anymore! But…the other day I told you that we would do something special today, No to do this something special you really need to be very sensible now and sit down and listen with learning special ears…” She goes
on to the lists on the board now and starts with the colors. She has the children choral read the colors as she points to each with a meter stick. Then the shapes. When they read out the shape names, children note that oval has been left out so Miss Chang adds it back in. Then they do size words such as are small, large, big. Miss Chang introduces the idea of using size descriptors to compare relationally.

Miss Chang: Ok what is the difference between tall and long? When do I use long and when do I use tall?

Student: Tall for people!
Miss Chang: Tall for people.
Student: Long for things that lie down.
Miss Chang: Long is for things that lie down! What about buildings?
Students: Tall!
Miss Chang: Tall! What about mountains?”
Students: Tall!
Miss Chang: Very good!

Miss Chang moves to change activity but Tien Sien stands and pronounces: “You can’t say long for human beings, it just doesn’t sound right because you just say tall….“ The children go on to debate when they should use comparative size adjectives, in what context and in reference to what things.

Oral language development is also a goal of English language instruction in P1 and includes pronouncing words while reading stories and discussing the themes of the integrated curriculum. In particular, students observe, interpret, and respond to visuals (pictures) to tell a story or describe actions. Discussing and conversing with the teacher and peers about a variety of topics and experiences pertaining to a thematic unit paves the way to interacting and expressing their opinions.

Miss Chang, the teacher in this vignette, is a 40 year veteran primary teacher. Her role in this school and especially this grade is “Senior Teacher” and in that role she is the curricular “expert” and pedagogical resource for other teachers at her school. She is the person to go to for day-to-day help with practical teaching problems. The Senior Teacher role is a new creation by the Ministry of Education and it is considered a high honor to be named one. The specific duties of the role are to provide mentorship and coaching of junior teachers and particularly novice teachers and to act as curricular expert. In this vignette and in all the other teaching instances we observed Miss Chang, she displayed a expert command of the English language curricular goals and pedagogy. Lynn Paine (1990) described the Chinese expert teacher as a virtuoso:

The focus in teaching was on performance, the goal to produce a virtuoso performance. With little input into the selection, content, or use of curriculum materials, […] what is important is how the teacher presents the material, how she or he adds a particular interpretation to the rendering of accepted knowledge.
1. The central aim of teaching is to provide knowledge for students. It is an act of transmission, its movement unilateral. The teacher plays the leading role.

2. Knowledge, at the core of all teaching, is the most important requirement for a teacher. A good teacher, an excellent one, is distinguished by possessing an exceptional amount of knowledge.

3. Students are expected to receive the teacher’s knowledge as it is presented. Construction or transformation of that knowledge is not an essential part of learning or teaching. (p. 50-51)

We would not argue that the children perceive Miss Chang in this role, but it is the role she contends with in the perceptions of other teachers and it is in many ways an inhibiting role. The fascinating thing to us was how she both embodied this generalization and transcended it—experimenting with infusing her English language teaching with content and particularly science content and opening her teaching up to a great deal of uncertainty by enabling topical discussion in her class.

Next Miss Chang described today’s activity—the kids will go down to the eco-garden and find “something”. They will then draw and color it and finally label it. When they are done with this they will write a paragraph describing what they have seen. “We are going to write about what we have seen and use good punctuation!” The class discusses the construction of a paragraph:

Miss Chang: Now a new idea. What do we do?
Student: “Indent!”

Back in the class. Miss Chang tells kids they are going to share and then after recess they are going to make friezes. “You are going to do friezes of things that you have seen in the garden, and I’ll show you how to do this after recess.” She shows them what a frieze is using an example of paper dolls they have made in the past that Miss Chang has put up under the board. She explains to them how they are a frieze because they form a repeating pattern characterized in different ways—color, shapes and sizes.

Miss Chang used her strengths in pedagogical methods and the English Language curriculum to experiment with infusing her English language teaching with content and particularly science content and experimented with a great deal of uncertainty by enabling open-ended discussion in her class. Such experimentation is part of the design process through which new curriculum and pedagogical processes evolve. When Miss Chang takes her experiences back to discussions with the other P1 teachers it enables their creative processes. In the next vignette we watch another teacher take this experimentation even further.
Mrs Govan, Experienced Classroom Teacher

This class on adjectives starts with the children filling up a list on the whiteboard called “New Discoveries”. Mrs Govan asks what they learned in art today and children start calling out the names of shapes. Mrs Govan writes up what they say right next to another list of colors and sizes: “Crescent, cube, square, diamond, circle, over…”

Mrs Govan: “What’s an over?”
Students: “OVAL!!”
Mrs Govan: “But you said “over”?!…Ok one person say it."
Student: “Ovel.”

Mrs Govan writes this on the board and the kids all laugh and one calls out the correct spelling. “Oval,” Mrs Govan writes and then “moon shape” which Mrs Govan queries as she adds it, “Isn’t that crescent…?” The kids protest that moon shape is “different”. “Ok, moon shape,” but she writes crescent up as well as “moon shape” and adds a little drawing of a semi-circle.

Then Mrs Govan sets up today’s activity—the class will go to the eco-garden and do a treasure hunt looking for sweets Mrs Govan has hidden. This takes about 20 minutes because it includes a bathroom break and time to fill the water bottle each child carries. This class, which runs from 4:30 after the children have had their daily mother tongue lesson to the end of school at 6:30, and includes a lot of fast shifts between activities and a lot of pauses for stretches, water drinking and quick visits to the toilets. In addition, Mrs Govan does many high energy activities with the children and she is very aware of a need to move and keep moving to help children this age remain engaged. Elementary schools in Singapore are not air conditioned.

Mrs Govan is an interesting teacher. She has stepped down from a position as Head of Department in Physical Education, the next career step before Vice-Principal in the Singapore school system. She did this for personal reasons—to spend more time with her young family—and to be able to devote more time to teaching. It is quite rare for a teacher to do this but when it happens usually they are assigned to upper level primary grades, especially P6 where the first phase of the high stakes testing in Singapore occurs. In this case, her assignment to P1 is another indication of how much the school principal acknowledges the need for pedagogical and curricular expertise and leadership in the response to the roll out of SEED.

This activity is Mrs Govan’s equivalent to Mrs Loh’s fruit tasting lesson and Miss Chang’s trip to the eco-garden but it extends it. While the children are learning to use adjectives in practice, they are going one step further in thinking about color, shape and size. In the next part of this vignette, we will see how a teacher is integrating the curricular goals into the current SEED theme—animals.

Back from the eco-garden—Mrs Govan sketches a forest on the board and then attaches appliqués of a green frog and an orange flower. The children immediately agree the drawing is of the pond and then Mrs Govan asks
them about the frog, “What is he doing? The kids say he isn’t happy so Mrs Govan asks them,

“Why? He hops around, he is so sad…” She takes the frog picture and moves it about the garden drawing. “He looks at the flowers, ‘It’s so beautiful, it’s so bright, its so pretty! Look at me, I’m so green … Look at me I’m green in color! I want to be like the flower.’” The kids all laugh. Mrs Govan: “You know the flower is so pretty and look at him, no body wants to play with him.” Students start calling out things for him to play with.

Student: Fish!

Mrs Govan: Ah, fish. You think fish want to play with him?

Another child elaborates: Guppies!

Mrs Govan: Ah so guppies want to play with him?

Other kids are calling out No! Frogs!

Mrs Govan: Ok so what do you think he did? He went home and he got some paint and…look at him now?!! Hi-Yah! He painted himself orange! ‘I’m so happy! I’m so happy!’ (Mrs Govan chants and does a little dance. The kids laugh appreciatively.) ‘Now the bees will come and visit me!’ And then…a grasshopper… (she puts up a grasshopper by the frog). He says, ‘Hum… (the kids call out YUM! YUM!) I want to eat.’ (B moves frog over towards the grasshopper.) And as he moves the grasshopper goes … (Mrs Govan picks it up and leaps it off the board). He says, ‘What happened to my grasshopper?!! I have no problem catching grasshoppers! This is very annoying!’

Students start calling out, “Its because he’s orange, because he’s orange!” Mrs Govan responds, still in the voice of the frog: “‘But I like the color orange.’ And then you know what he did he went all over looking for that grasshopper.” Mrs Govan picks up the cut out and hops it around the class. “You think his stomach is growling? Can you all make the sound of a stomach growling? So he went everywhere looking and he looked and he looked and guess what he found? He found … (everyone starts screaming as Mrs Govan has brought out her snake model). So what happens? He was so bright and beautiful that the snake saw him.” The kids scream more as Mrs Govan mimes the snake and frog chasing each other back to the front of the room. “So he went Yow! Yow! Yow! Yow! (and is back on the board).”

Mrs Govan pauses to calm kids after Noah, one of the more active little boys, has leapt to his feet to chase away the snake. Then she gives an impromptu lecture on how snakes are very sensitive to vibration and are more likely to be scared when they “feel” you coming than if they hear you screaming. The children have a lot to say about this, discussing various snakes they’ve seen, where and when, and how they’ve felt about them. Singapore has a number of varieties of snakes and they are quite common despite its urban qualities and aggressive removal programs. Then Mrs Govan concludes the story—the frog jumps back into the pond, turns green
again, avoids the predator, catches the grasshopper and forgets about being lonely. She asks, “Why is it he decided not to be orange color?”

In comparison to Miss Chang’s book reading, Mrs Govan has constructed an oral narrative. She utilizes class pedagogical tools such as Initiation, Response and Evaluation (IRE) to help construct the narrative (although in a storytelling sequence we are tempted to name it “call and response”) and to develop the children’s understandings of color, size and shape. She does this in a new context—both descriptive and embedded in scientific theorizing. Now the children are thinking about why something is the color it is. She is also developing their sense of how to analyze elements of a story and how stories play a part in scientific explanations and explorations. The content that Mrs Govan teaches is complex and facilitated by her repertoire of pedagogical tools and her willingness to spontaneously shift between them in response to the children’s actions and reactions. Such teaching offers us an opportunity to think about the construction of teacher practices and how leadership roles are created through this process. Theorizing this involves looking at the roles and activities of teachers and constructing a model of emergent leadership that is fluid and resides in the evolving roles of the ‘on-the-ground’ participants in school life.

For Mrs Govan to be able to do such teaching she must draw on resources both personal and professional. The professional, structural resources include knowledge and confidence in pedagogical practices she developed as a Head of Department. These are different from Miss Chang’s and Mrs Loh’s in substance but similar in the degree of respect afforded them by other teachers and by Mrs Govan herself. Mrs Govan’s leadership role in the construction of curriculum and pedagogical practices in P1 comes from different locations than the others—rather than curricular expertise or authority of position, it comes from funds of pedagogical knowledge. Mrs Govan is an expert at engaging children in activities and she has a highly developed interest in nature study. A fundamental theorem of cultural sociology according to William Sewell (1992) is the dialectical relationship between agency and structure. Agency, the ability to do things, requires access to the resources of a field, in this case pedagogy, and the cultural capital needed to appropriate them. A teacher such as Mrs Govan uses the resources she has to meet her goals. This in turn changes the way other teachers think about curriculum and pedagogical practices which become part of the structure of the field and resources for the process of production and reproduction of curriculum and the pedagogical practices of others. Mrs Govan also does this “trying on” of pedagogical practices in a very open and self-reflective manner. This personal design process, when shared with younger, less experienced teachers, is particularly empowering.

The children respond with various ideas until Mrs Govan reminds them of the toad they just saw in the eco-garden. That toad was the color of the surrounding dirt. Mrs Govan: “It was hard to see right? So what happened is, he was this color (puts the orange figure up again) they could see him and jump off and he would be going hungry and because he’s green the snake cannot see him either, but when he is this color…” (indicates the orange
one)...” A student calls out, “He is camouflaged.” Mrs Govan repeats this and asks what camouflaged means. Noah: “He is hiding himself.” Mrs Govan writes the word on board as well as Noah’s definition. Mrs Govan: “So what did Noah say, camouflage means to hide yourself.” Then she repeats her question, “What does camouflage mean?”

Gwen: He’s nobody.
Mrs Govan: Nobody?
Yongbing: Blend in…. (He gestures with his hands.)
Mrs Govan: Ok so Yongbing says it’s to blend in. Now blending means he is green, is he green like the leaf?
Students: Yes.
Mrs Govan: Yes he looks like the leaf right? So what happens…sorry?
Student: You can see!
Mrs Govan: But not so easily…you can see, but not so easily, you can you can…
Gwen: He was orange when the flower was orange. He’s blending with the surrounding.
Mrs Govan: Gwen said a very good thing ‘Blend with the surroundings...’ (she writes this on board). What is the meaning of surroundings?
Student: Everything.
Noah: Everywhere. Everywhere around you.

Then Mrs Govan takes this concept of camouflage as blending with the surroundings and relates it to a previous book the class had read together on animal habitats. “Remember we did the habitat, it’s the place where you live? (yeses) It’s the environment surrounding, right? So blend with the surrounding means he looks like the place that he lives in so he lives in a pond and everything is green and he’s fine. Then Mrs Govan goes on to talk about the activity with the sweets and the class discusses which were easier to find and why.

In their recent study of the teaching practices in Singapore, the Centre for Research in Pedagogy and Practice (2005) found that in general in Singapore classrooms:

– There is a strong, across-the-board emphasis on basic skills, introductory concepts and factual knowledge.
– [...]atively low levels of lesson focus on advanced concepts, knowledge criticism, knowledge application or generation of new knowledge.
– In general, teacher practices were highly routinised and scripted, with little evidence that teachers were able to move flexibly from one instructional strategy to another. Nor was there much evidence that teachers shifted between levels or kinds of knowledge in their teaching (“weaving”).
Finally, there was little evidence that teachers sought to connect knowledge taught in the classroom to the real world or to other disciplines.

This is in marked contrast to what we see in this teaching vignette. Weaving, which refers to the systematic shifts in teaching done by the teacher between levels or kinds of knowledge, is highly apparent here. We see weaving between levels of knowledge in science as well as English Language, between everyday and more scientific ways of looking at animals and plants, between a practical application of observation to a theoretical development of an understanding of why things look the way they do and between individual experience with animals to more generalizable theories.

Anne Dyson, in talking about literacy teaching and learning in the early years, claims that, “children create comfortable learning places for more skillful literacy efforts through weaving together experiences in and out of school” (Dyson 1990: 211). For Dyson weaving adds a new dimension to ideas such as scaffolding by suggesting that a child’s progress in any one activity can be supported by his experiences in varied activities. Such activities can be distinguished by the learning spaces they generate through varying the intentions, materials and phases (participation structures). A weaving is comprised of varied activities that allow for different kinds of intentions, interactions and materials.

Mrs Govan starts the visualizer. “I’m going to teach you a skill today (kids cheer). Now Yongbing told us about camouflage, right? Now there are a lot of books here which I borrowed from the library and I know that some of you borrowed books from the library yesterday and today, everyday I’ve been seeing you borrowing books, I just saw somebody looking at a book about mammals (child identifies himself), now I am going to teach you how to look for things using the index. It’s usually in the back now. She shows them on the visualizer using one of the books. “I want you to look for the word camouflage, can we see the word camouflage? Can somebody come and show me where the word camouflage is?” Ah Min tries and then they discuss what the numbers next to the words mean. Everyone agrees they indicate book pages.

They go to the pages and discuss the pictures there, how rabbits in the Arctic change color depending on the season to hide from predators and then Mrs Govan checks again to make sure they know what the word predator means.

Mrs Govan: Now I’m not going to talk so much while you are going to get to do something. Listen very carefully. Now what I want you to do is to turn to the last page, and what is the word that you look for? Camouflage, (as she talks Mrs Govan demonstrates again how to do this) you look for camouflage and you turn to the page that has the picture. You talk about the picture and why you think the animal looks the way it does. Ok? Tell me all about camouflage (flips some pages). There is a lot to talk about. See? Even in your house, even in your house (she shows them a
picture of a house fly). See you can hardly see the insect because it is so small and it is what?

Student: Hiding!

Student: Brown.

Mrs Govan: What I would like you to do is to work together. I am going to give you a piece of paper. Now I would like you to draw an animal. Now say Isaac wants to draw a tiger…

Isaac: I want to draw a snow rabbit.

Mrs Govan: …Do you remember the story, “Walking through the Jungle?”

Students: Yes!!!

Mrs Govan: Now walking through the jungle, the tiger has, what, stripes.

Student: Its camouflage.

Mrs Govan: Yes right, he lives in the jungle and he lives in the place where there are a lot of trees and a lot of shrubs and things so what happens is the strips, he blends into the environment, correct? And nobody can see him coming so he will come very quietly up to you and then (she roars at a kid) and then he bites you and eats you up. Ok so what I want you to do is, there are lots of books here, what I want you to do is flip through it, find an animal and draw me a picture and write a description of the animal and its habitat.

Mrs Govan, along with all the other teachers we observed at Jelutong Primary School, was in accordance with the primary one syllabus. The P1 teachers use the integrated curriculum to teach students to use nouns, verbs, adjectives, prepositions. Develop understandings of English language usage of common, and proper nouns for names of people, objects, places and animals; use singular and plural nouns; classify and recognize gender terms; use demonstrative pronouns, this and that; use pronouns such as I, they, he, she, me, him, her, and them; use interrogative pronouns who, what, where, when, which, why and how; use simple past and present tense. In addition, they emphasized the use of punctuation in writing such as capital letters, question marks, and full stops in sentences.

Through the integrated curriculum, the students learn vocabulary related to thematic units by using words in context. Using open-ended discussion as well as more directed topical conversation, the children talk about things, people, animals, and their experiences related to the unit theme. They develop analytic skills as they compare, question and classifying things. In the context of these conversations, the children write in cooperative learning groups as well as during individual seatwork developing individual expressive and creative skills through free essay writing, inquiry driven writing, as well as more traditional worksheets.

To address these goals, in the integrated curriculum at Jelutong Primary School, students arrange words to make meaningful sentences on various topics and experiences in English as well as write legibly and neatly, reconstruct these into narratives to develop their ideas, and engage in creative writing. Listening,
enjoying, responding and acting out the actions are embedded in their lesson approach. Listening for information and details in a story, drawing conclusions about stories and answering questions of a given text type, talking in context through connecting their personal experiences and feelings are situated in the teaching and learning process.

Mrs Govan is doing all of these things but in a manner which is unique and highly personal. Coming to assume such agency in her teaching comes from her history, personal and professional. We wish to argue that assuming such agency is a dialogically responsive move shaped by context and the people around her. Mrs Govan in enacting this teaching, does it in an environment constructed by Mrs Goh, Mrs Loh and Miss Chang, one which enables a teacher to act creatively, drawing upon their own strengths. The leadership practices of Mrs. Goh, Mrs Loh and Miss Chang, both active and passive, create the environment in which Mrs Govan works.

Kids look at books. Trade with each other. Share what they are looking at. Mrs Govan tells me she doesn’t do work sheets. Her kids design their own way of presentation. Mrs Govan calls them up to the front of the room for a final sharing session.

Gwen has described a margay (forest cat): Its camouflaged with spots.
Mrs Govan: Where does it live?
Gwen: In the jungle.

Isaac (on his rabbit) When it is summer, the rabbit is brown. When it is autumn, it is white and brown. In winter it is white.
Student: Why does he change the colors?
Mrs Govan: Why? What do you see in those pictures?
Noah: In the summer he is hiding in a soil place.” It is white in winter and the animals will think it’s the floor. In autumn it is brown and white because that’s its normal color.

Toh Hok (on his whale book): The whale is a grey color and the rocks are a grey color and the whale will come down and stick in the rocks and no one will see.

Terance: A frog... when people come and chase the frog it tries to keep away but they catch it. He looks like the leaves, they don’t catch.

Drawing again on the ideas of William Sewell (1992), the practices of curriculum and pedagogy are often enacted in schools (a “field”) without awareness and in accordance with an agency/structure dialectic. When they are enacted, practices become part of the structure of the field and can be appropriated by all participants (i.e. they become resources for the agency of all participants). For example, if a teacher, such as Mrs Govan, decides to teach in the manner we have just seen, the practices become a resource for the other teachers as well as Mrs Govan herself. The leadership practices of Mrs Goh, Mrs Loh and Miss Chang create a field in which Mrs Govan in turn becomes a leader. This in turn plays out in the relationships constructed between other teachers and in the pedagogical practices and curriculum that they realize.
Ms Nurhizah, Early Career Teacher

Ms Nurhizah is having fun. She has just started presenting the task for the day—the children are going to invent their own genetically engineered fruit, draw these and then write a paragraph describing the fruit using adjectives for color, texture, size and taste. She has just put up a large poster for the children to read aloud. It is of her fruit, a huge durian with scarlet flesh and no prickles. Durian is a local fruit with yellow or white flesh, an extremely strong taste and smell and shaped rather like the business end of a medieval flail or mace. It is not for the timid and most westerners are nauseated by the smell. Loving it is a source of local pride and eating durian is an obsession for many native Singaporeans.

Ms Nurhizah: This flesh is very soft and smooth…
Student: Deep red…
Ms Nurhizah: So not only my durian will have a very smooth skin, its fleshy.
Its very smooth and fleshy. So when I eat it, it is just like eating ice cream, and it melts in my mouth. Boh seng har!
Student: Sore eyes!
Student: Go for little bit.
Ms Nurhizah: Yes go for little bit, alright so easier for me to eat my durian.
Student: The flesh is not yellow.
Ms Nurhizah: The flesh is not yellow, but deep red.
Student: Hi! Hi! Yeh, yeh yeh it is blood.
Ms Nurhizah: No it is not blood. My durian will be beautiful as well. Not only it is nice and easy to handle and also very colourful. I mean colourful!
Manoj: Colourful, colourful, colour…
Ms Nurhizah: Like a rainbow…
Cheng: Very little will be like poison!
Ms Nurhizah: Poison!! Children see Manoj say, say something very good. He suggested, something, he was saying why not the flesh be colourfull, rainbow, like rainbow colours.
Student: [lots of comments]
Ms Nurhizah: But Cheng said something very good. You know the, the very "poison" fruits or animals, they are very colourful. The more colourful, generally, the more colourful it is, the brighter it is, the more poisonous it is.
Student: Like a Malay cake.
Ms Nurhizah: Hm, Hm
Students: [lots of comments]

In this vignette we see the introduction of another writing activity for children involving the use of adjectives combined with science in a thematic context. Ms Nurhizah has been working on the idea of inheritance and genes as carriers of inherited characteristics for most of the school year. She weaves it in and out of every topic and many activities feature it. Here she is also doing something we rarely see in Singapore classrooms—relating curriculum to children’s personal,
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culturally embedded experience. There is a subtle subtext of something similar in Miss Chang’s reading of “The Waves Come In” but here it is overt, explicit and a source of both engagement and amusement for the children. The students are making fun of the durian, Malay cakes and Ms Nurhizah as well as celebrating them.

Ms Nurhizah has been teaching for two years and she has teamed with Mrs Govan as she developed both her curriculum activities and worked out how to teach them. She has been the most adventurous with the themes and the curricular content and has pushed the inclusion of science well beyond the other teachers. Science is not actually part of the P1 curriculum at all and its inclusion, particularly at such high levels, is especially daring. When discussions of curriculum and pedagogical development activities are separated from discussions of situated school change, we miss how teachers develop and share curricula and how this, in turn, defines how a school takes up a reform effort. At this school, teachers have worked the curriculum in their individual classrooms, developing it in unique and substantive directions in both content and processes. This school is unique in the development of science as an underlying theme running through SEED teaching. It is also unique in the intensity of its commitment to open-ended discussion, writing and activities. Each teacher both leads and follows the others depending upon strengths and needs. The teachers as their personal focus develops, concentrate the amount of developmental reform activity occurring in a location, such that curriculum production and the development of pedagogical practices, teacher relationships, and leadership activities, are brought together.

DISCUSSION

This brings us back to the concept of a “distributed” perspective on school leadership. The distributed perspective as developed in this paper involves more than acknowledging a division of labor for leadership functions in schools. A distributed perspective on leadership acknowledges that a leader’s thinking and practice is enabled by other leaders and by the task at hand in the context of the school environment. The social and situational distribution of leadership enables thinking and practice that would not be possible in solo. We have used the vignettes of teaching to develop a distributed model of school leadership as a practice of instructional improvement.

In our observation of classes, meetings and discussions with the teachers at Jelutong Primary we have watched them evolve so that the teachers have begun to enable each other in developing curricula to reflect both their personal interests and strengths and the questions and passions the children bring to class. To do this, they have discovered an interest in sharing their practice with each other, and constructing spaces for dialogue in which they “push” the parameters of their work. For example, as well as Mrs Govan and Ms Nurhizah meeting together and discussing pedagogy, Ms Nurhizah and two other teachers have formed a group they call “Wings” which explores nature and science themes that they can bring to their teaching. The teachers, untrained in curriculum development and unused to sharing their practice, have changed as they engage in teaching and dialogue about
teaching as an embodied activity that they have personal ownership over. To do this has involved a fundamental shift in which the teachers have had to allow themselves permission to personalize knowledge and personalize curriculum and teaching. It has involved recreating and then acknowledging teaching as something internal, self-constructed—not imposed or alien. This realization goes hand in hand with a shift in the identities that the teachers evolve or accept within curriculum and their school communities, how these identities are dynamic and locally situated, their reasons for particular forms of engagement, and the relationship they perceive these roles have.

Teachers actively engaged in the interpretation and development of reform activities in school contexts offer us an opportunity to interpret the complex relationships of school change, an occasion to "redraw boundaries" (Ball & Cohen, 1996, p. 8) between teachers, new materials, and teaching practices, and think about how teaching practices and leadership roles are constructed within these locations (Spillane, Diamond & Jita, 2003). Theorizing leadership has evolved from looking at the nature of formal roles and activities, to a model of leadership that is more fluid and resides in the evolving roles of the ‘on-the-ground’ participants in school life. At Jelutong Primary School, with the advent of SEED which required teachers to develop curriculum and pedagogy, there was a shift in leadership from those designated as leaders to the individual teacher. The shape this leadership took was determined by the particular qualities and strengths each person brought to the role. Miss Chang brings her great knowledge of the English Language curriculum, Mrs Govan her knowledge of pedagogy and Ms Nurhizah an enthusiasm for science. Each pushes the others in their areas of strength. The distributed leadership model we have been using to analyze the curricular development process at Jelutong Primary has a number of inherent difficulties, however. Alma Harris (2005) in her analysis of recent scholarship on distributed leadership in schools listed three barriers to distributed leadership: formal leaders reluctance to relinquish power to “others”; educational institutions which are inherently top down in leadership structure; and practical questions of leadership distribution and management.

The distribution of leadership roles amongst the teachers did not occur without tensions. As noted by Harris, many of the barriers to a distributed form of leadership are inherent and present in this school. There is certainly tension between a teacher such as Miss Chang and a relative beginner who is also an innovator such as Ms Nurhizah. There are also inherent tensions between the two institutionally recognized “expert teachers” and between them and another who has stepped down from that role. There are also personal tensions of performance—Mrs Loh, for example, has got to live up to her role and that has to impede her ability to experiment with both curriculum and pedagogy. Sarason's mapping of school cultures (1982, 1990), including his important analyses of the sociopolitical positions of teachers (1982), critically foregrounds the tensions teachers face within schools including the ones we are describing. Sarason and others (Spillane, 1999; Ball and Cohen, 1996; Wilson and Berne, 1999, Wineburg and Grossman, 1998) have also noted how it is just these tensions which impede the adoption of reforms. The tensions fall out from the structures of the school as a systemic
whole—again the agency/structure dialectic enables or disables change. Other work on pedagogical reform suggest that we need to explore the interplay between institutions, leadership and teacher propensities toward practice and change, and take a situative perspective on teacher change (Putnam and Borko 2000, Borko, 2004) and leadership roles (Spillane et al, 2003). We would argue that the role of teachers as they respond to the tensions of change and of their own locations within change is important and inherently problematic.

We argue that teachers engaged in reform reconstruct their practice and take on leadership roles by positioning themselves and their work in highly complex ways. We feel that teachers assume agency in constructing their interpretations of a reform, and that this agency is dialogically responsive to and shaped by their interactions with others. The leadership positions that the teachers at Jelutong Primary School have constructed are reflective of their strengths and also needs. They are creations of the community of teachers as a whole. We believe that in the process reform is "decentered," with teachers not as sole reform actors, but relationally positioned in the process of enacting reform. Shotter's (1993) concept of "joint action" suggests a relational, responsive, situated perspective on reform:

Action of this kind occurs in response to what others have already done, and we act just as much 'into' the opportunities and invitations, or 'against' the barriers and restrictions they offer or afford us, as 'out of' any plans or desires on our own. Thus, the stony looks, the nods of agreement, the failure of interest, the asking of questions, these all go towards what it is one feels one can, or cannot do, in any situation . . . as an outcome of the joint action between them, people find themselves 'in' a seemingly 'given' situation, an 'organized' situation that has a 'horizon' to it and is 'open' to their actions. (Shotter, 1993, p. 47)

Unfortunately, it is worrying that policy makers tend to ignore both the evolving roles of teachers and the social process they go through and continue to think and talk about teachers work as labor, in a technical-rational way. For many teachers, this sort of role and identity construction is filled with tensions because it involves personal exposure and taking personal ownership for classroom practices. Studying emergent teacher practices and roles during the enactment of a reform initiative such as SEED is important because the 'new' policies expect and require new identities of teachers, so that what it means to be a teacher is decisively being changed in the reform process. This is not yet sufficiently understood in the research on teacher development, leadership and school reform.

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SCHOOL-BASED CURRICULUM DEVELOPMENT


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