Facilitating dialog in the game-based learning classroom: Teacher challenges reconstructing professional identity

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Online Publication Date: 15 December 2014


FACILITATING DIALOG IN THE GAME-BASED LEARNING CLASSROOM: TEACHER CHALLENGES RECONSTRUCTING PROFESSIONAL IDENTITY

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Abstract
Despite widespread interest in the use of digital games to engage students and enhance the quality of student learning, the teacher’s perspective has been less extensively studied. The challenges that teachers face when enacting authentic game-based learning predicated on dialogic pedagogy in the classroom offer powerful opportunities for professional learning despite potentially engendering stressful experiences. In this paper, we draw on the conceptual frame of dilemmatic spaces to theorise and document challenges teachers encounter when learning to enact dialogic facilitation in a game-based learning curriculum. Based on coded interview data drawn from nine teachers, our findings suggest that teachers wrestle with tensions engendered by habituated modes of classroom teaching and the need to redefine power relations with students. They experience a gap between their existing professional practice when they embark on the curriculum—their being—and striving to perform the role of an effective dialogic teacher—their becoming. The (re)construction of teacher identity that emerges is contingent on how teachers respond to continuing professional development as well as how they deal with challenges they face in the classroom.

Keywords: dialog, dilemma, game-based learning, performance, identity, becoming

I Must Not Prepare!


This time I went unprepared. Or so I managed to convince myself. I didn’t go through any readings this time, didn’t run through how the discussion should go in my head but merely decided on an anchor for the discussion.

These were some points raised during the discussion; “Money can buy everything”, “the teacher betrayed us”, “everyone started to attack us”, “we need to build up resources”, “we need to be prepared”. Each time a point was raised, my mind went into overdrive thinking of ways to bring the discussion “back on track”. Turned out, it was a rather weak attempt to “yank” the discussion back to where I’d wanted it to go. The discussion became disjointed and in my opinion, had failed rather miserably again. Instead of being a point of reference, the anchor became the yoke.

(Teacher’s blog entry, reflecting on a game-based learning lesson)
Introduction

The teacher’s blog entry conveys a palpable sense of heart-wrenching angst. It was authored by a schoolteacher, in the context of teacher professional development, while learning to support game-based learning in a Singapore classroom. Torn between the habituated practice of executing teacher-directed lessons and facilitating student-generated dialog on social studies issues fostered by game play, the teacher ruminated over a real dilemma: get her students to converse about issues that comprised her lesson agenda or allow her students to talk about what was meaningful to them based on their experience of game play?

This paper addresses the challenges teachers face when learning to master the pedagogy of dialogic teaching in conjunction with the use of authentic digital games. Teacher education programs in Singapore (at the time of writing) do not address dialogic pedagogy in any significant way. Dialogism is grounded in values different from conventional instructional objectives that revolve around teaching “content and skills.” Consequently, transitioning to this new practice does not come readily.

In earlier lesson reflection sessions with the teacher, research team members had suggested that the teacher prepare for the lesson rather than construct a predetermined lesson plan for subsequent classroom execution. She could do so by reviewing the most recent in-game events and considering their significance for issues related to the social studies curriculum. Titling her blog entry “I Must Not Prepare!” illuminates the slippery terrain of negotiating change in the teacher’s practice. She wrote about not preparing—“This time I went unprepared”—when we actually encouraged her not to plan the lesson (in the customary rigid manner). Furthermore, the teacher kept referring to the classroom activity as a “discussion” in spite of our efforts to contrast the concept of discussion, which connotes a convergent conversation whose trajectory tends to summative closure, with that of dialog, which connotes an expansive conversation that encourages and accommodates multiple voices and viewpoints (Bakhtin, 1981). As the teacher reviewed the topical ideas that arose during the class session, she reflected on feeling challenged knowing how to respond to students’ ideas as they spontaneously emerged, causing her mind to go into “overdrive.” The tension between fulfilling her classroom discussion agenda and that of genuinely facilitating dialog surfaced issues of lesson control, manifested in the reference to yanking the discussion to where she wanted it to go. Unfortunately, the teacher’s metaphorical “anchor”, an intended stabilising device, morphed into a burdensome “yoke” accompanied by a sense of failure.

The cited example makes evident the serious dislocation that teachers may experience when attempting to harness the power of authentic digital games for learning in the classroom. Unlike “serious games” (Abt, 1970) that tend to focus on the mastery of content and simple skills, “games-to-learn” (Chee, in press) challenge teachers’ conventional instructional practices and invite reconstruction of their professional identity. In this paper, we identify and explicate challenges that teachers experience when learning to enact authentic game-based learning in the classroom.

In the next section of the paper, we identify relevant literature and key concepts to situate our research problem. We then establish our research context and specific research goals. The next section articulates the research methodology. It is followed by our data analysis and findings. We discuss the implications of our work before concluding the paper.
Situating the research problem

Research on game-based learning adheres to different ideologies. We can identify two distinct orientations. In the first orientation, members of the research community accept dominant schooling practices “as is” while looking to games to strengthen student motivation in learning (Miller, Chang, Wang, Beier, & Klisch, 2011; Papastergiou, 2009). Members of this community appear not to see or feel the need to interrogate why students are increasingly disengaged and unmotivated in the classroom. Instead, they remain preoccupied with the discourse of technology integration. In the second orientation, members of the alternate community express increasing alarm over how schools are failing to prepare our children and youth for the realities of the 21st century and suggest ways to frame and address the challenge (Craft, 2013; Facer, 2011). Friedman (2013), in particular, argues that K–12 and college tracks are not consistently adding the value and teaching the skills that matter most in the marketplace and preparing students to be innovation ready.

For members of the alternate research community, authentic digital games of the kind studied by Gee (2007) offer the potential to transform educational practices in ways that respond to the demands for 21st century learning and educational reform. Gee (2012) argues that good games are a model of 21st century learning because they are about doing, making decisions, solving problems, and interacting, rather than being about content. Content in a game facilitates and serves acting, deciding, problem solving, and interaction. Game worlds, Halverson (2012) notes, are the referential totalities of tools, practices, traditions, and routines in which actors make meaning of actions and interactions. Consequently, games are excellent tools for driving inquiry and meaning making processes. Good games develop situational know-how: the capacity to act in contextually appropriate and informed ways. The value of such learning far exceeds the “possession” of knowledge or its mere profession (Chee, 2011b). What can be learned with good games is “performance excellence” (Friedman, 2013).

The construct of performance is central to the work of the authors (Chee, 2011a, 2013). It is predicated on three key characteristics: (1) patterned behavior, the doing and redoing of meaningful repertoires of behavior (including acting and speaking), (2) reflexivity, an evoked self-consciousness of the doing and redoing on the part of the performer, and (3) double consciousness, a critical self-assessment of actual performance against an ideal or standard that provides the basis for further improving one’s performance (Carlson, 2004). Based on the first author’s theoretical construction, performance constitutes the lived manifestation of personal identity. Identity, in turn, is constituted by a person’s knowing–doing–being–valuing manifested through engagement in situated action and participation in discursive practices (see Figure 1). It is helpful to think of knowing–doing–being as a three-colored, tightly interwoven braid wrapped around a central axial cable that represents valuing. The theoretical framing asserts the inseparability of knowing, doing, and being because they are co-constitutive. Furthermore, knowing, doing, and being are necessarily embedded within a larger sociocultural context of axiology because they are inherently value-laden activities (Ferré, 1996, 1998). Consequently, valuational dispositions ground personal biases, preferences, and choices (Dewey, 1938/2008). A performance-centric theorisation of human learning frames learning as a process of becoming (Semetsky, 2006) that progresses from a current state of being. It applies not only to students in schools and universities but also to schoolteachers, in relation to their ongoing development of professional practice to become better teachers. This theoretical framing helps us to better understand the challenges teachers face when enacting authentic game-based learning in the classroom.
There is limited published work on the professional challenges teachers face when attempting to enact pedagogical innovation with authentic digital games. There are two main reasons. First, published work in the tradition of classroom use of “serious games” largely conforms to the model of games to teach content and limited skills. This approach aligns with Prensky’s (2001) definition of digital game-based learning as the combination of computer and video games with educational content to achieve as good or better results compared with traditional learning methods. It reduces educational games to an ICT resource directed toward conventional schooling and its associated goals. Innovative research on games and virtual worlds, such as *Quest Atlantis* (Barab et al., 2009) and *River City* (Ketelhut, 2006), focus on science education of a constrained, school-based kind. Such environments over-structure and over-simplify science education at the expense of the kind of inquiry advanced by Dewey (1938/1991).

Second, institutional and parental resistance has largely kept innovative use of games for learning out of the classroom. Consequently, most innovative work has taken place in situational contexts where teachers have less direct involvement, often participating in only a peripheral way. In the United States, for example, it is often the researchers who play a central role in non-formal, out-of-classroom learning settings (for example, Kafai, Peppler, & Chapman, 2009).

A notable exception is the research of Hanghoj that seeks to directly examine how teachers perceive, approach, and use COTS-like games in Danish and Belgian classrooms. This line of work is based almost exclusively on the *Global Conflicts* series of games. Hanghoj, however, consistently uses the terms “teaching with games” (Hanghoj & Brund, 2010) and “game-based teaching” (Bourgonjon & Hanghoj, 2011), lending a teacher-centric, instructional connotation to his writing. He also prefers to passively observe what teachers do with games in the classroom as part of naturalistic observation. Consequently, no professional development or active form of support is offered to the observed teachers.
While games have the potential to offer an inquiry-based, constructivist approach that allows learners to engage with material in an authentic yet safe environment (Becker, 2007), the pertinent question that arises is who will scaffold the teachers to teach differently so as to achieve this potential? Given the limited research on this topic, it appears that there is a real need to support teachers, via professional development, so that they may realise the power of authentic game-based learning.

As a construct, the term “dilemmas” was introduced into the educational literature by Cuban (1992) when he drew attention to messy situations in professional life that grant no simple “right” answer because they embed deep value conflicts. Denicolo (1996) argues that dilemmas are unavoidable given “the relativism of knowledge, different notions of what constitutes the ‘truth’ for the teachers themselves, for their pupils, and for those who set and examine the curriculum” (p. 60). Consequently, the commitments of mutual parties are not always in harmony. Because there are no inherently “right” answers to dilemmas, they tend to leave “a residue of guilt” or a “remainder of regret” whatever the course of action taken.

Similarly, Honig (1996) holds that dilemmas pose the question of difference and the ineradicability of conflict in specific and ordinarily familiar settings. Difference, she asserts, “is what identity perpetually seeks (and fails) to expunge, fix, or hold in place” (p. 258). Honig proposes the theoretical construct of dilemmatic spaces: the conceptual space within which moral subjects are positioned on multiple, conflictual axes of identity such that the subject’s agency is constituted and enabled by dilemmatic choices and negotiations. Thus conceived, socialised human beings, as moral beings, inhabit dilemmatic spaces as a matter of course. From this there is no escape.

Fransson and Grannäs (2013) extend Honig’s construct of dilemmatic space by inflecting space as a relational category associated with the concept of dilemma. Consequently, dilemmas are not conceptual entities but social constructions resulting from structural conditions and relational aspects in everyday practices, enacted through the execution of positioning and negotiation maneuvers based on personal values. Thus, a dilemmatic space also establishes a relation between human subjects and the negotiation, construction, and deconstruction of professional and personal identities. This theoretical framing of dilemmatic spaces furnishes us with a powerful conceptual tool with which to understand the challenges that teachers face when enacting game-based learning as a pedagogical innovation in the classroom. Much is at stake for teachers who engage in bona fide game-based learning in the classroom because a teacher’s professional practice is firmly and inextricably located within an intricate web of epistemological, ideological, professional, social, and power relations in the workplace.

Research context and goals

Our research takes place in the context of fostering teacher capacity to enact authentic game-based learning in the classroom using the Statecraft X curriculum. This curriculum, designed for social studies taken by 15-year-olds, is based on the Statecraft X mobile game. It is played on Apple iPhones (see Figure 2). The Statecraft X curriculum addresses the topic “principles of governance,” representing one of four key topics in the social studies curriculum for students in Secondary 3. In our school-based research, each student is loaned an iPhone with a supporting data plan for the duration of the curriculum. Details of this curriculum can be found in Chee, Gwee, and Tan (2011) and Chee, Mehrotra, and Liu (2013). Both papers reported on the efficacy of the curriculum for student learning in relation to citizenship and governance.
Our earlier work revealed that teachers found the process of learning to facilitate student dialog (Roth, 2009) in the game-based learning classroom difficult. In the present project, teachers had the benefit of professional and moral support from their school leaders in addition to an initial two-day professional development workshop that oriented them conceptually to ideas associated with game-based learning supported by dialogic learning. Like learning to swim, enacting an unfamiliar pedagogical role in the classroom constitutes a performance of teaching. The challenge is not about knowing what to do but being actually able to do it (as suggested by the blog piece that opened this paper). Thus, learning some subject domain, Y, is not equivalent to learning about Y (just as learning swimming is not equivalent to learning about swimming). Consequently, no amount of lecturing, questioning, discussion, or self-study can adequately prepare a teacher for enacting game-based dialogic facilitation in front of, and with, students. A teacher’s capacity develops with practice over time. Representational modes of learning, based predominantly on language, lead to passive and inert outcomes. They cannot deliver what teachers need: the capacity for enactive performance.

In the research reported here, we worked with teachers to foster their capacity for dialogic facilitation in conjunction with the use of Statecraft X. The game-based learning curriculum is predicated on the pedagogy of performance, play, and dialog (Chee, 2011a). With respect to student learning, we seek to foster their dispositions and capacities to become active and responsible citizens—a performance capacity—because it makes little sense for students to merely learn about citizenship and excel in written tests. Consequently, with Statecraft X, students play the game in their own time, outside of classroom hours. Game play can take place anywhere—in school, in the shopping mall, at home, etc.—given the provision of wireless network connectivity. Scheduled social studies lessons are used by teachers to engage students in dialog directed toward making meaning of events and processes experienced during game play. Teachers interrogate the actions taken by students in the game and surface the values underlying students’ actions. They also encourage students to reflect on the consequences of their in-game actions as governors of virtual towns in the game and to evaluate their own actions to foster the disposition of reflexivity. We refer to these classroom conversations as dialogic sessions. Given a typical class size of 40 students, we divide each class into two independent game instances of 20 students each. Consequently, two
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Teachers participate in each research intervention, with each teacher engaging in dialogic facilitation with approximately 20 students. Given that the pedagogy is oriented toward dialogic inquiry and sense making rather than to teaching content, it is imperative for teachers to be able to elicit and build on student contributions in a manner productive for deep interrogation and reflection.

The next section of the paper articulates our research methodology.

**Research methodology**

Our research is based on a collective case study (Patton, 2002). Our data is drawn from nine individual case studies, representing the nine teachers with whom we collaborated. Our empirical work in schools took place between January 2012 and February 2013. Each cycle of the Statecraft X curriculum intervention lasted three weeks.

**Participants**

Our research participants were nine government secondary school teachers, of whom six were female and three were male. They taught social studies to 15-year-old students in Secondary 3. The teachers were recruited via a talk for school leaders and teachers organised by the local Academy of Singapore Teachers. Five teachers were “beginning teachers” who had less than three years of teaching experience. Two were experienced teachers with more than three years of teaching experience. The remaining two teachers were “mid-career switch” teachers. They entered the teaching profession as a second career. One teacher had taught for less than three years while the other had taught for over three years. The nine teachers came from five separate schools. Five teachers enacted the Statecraft X curriculum twice with different classes. The remaining four teachers enacted the curriculum once. As part of the requirement for ethics clearance, the teachers were given a detailed briefing on the objectives of the project and what was expected of them as participants. We secured written agreement for their participation. The teachers consented to having their classes observed and being interviewed after each class except the first.

**Materials**

The teachers were familiar with the Statecraft X mobile game. They were introduced to the game as part of the professional development workshop held before they commenced participation in the research project. This introduction required them to play the game, as a student would, for a period of about five consecutive days. The five-day duration represents a compressed version of game play, as the typical duration of game play by students lasts approximately 16 days. As part of in-class teaching activity, the teachers periodically used the game’s web-based “Teacher Administration Tool” to share two graphs with their students: the Economic Wealth graph and the Citizen Happiness graph. These graphs furnish feedback to students on how the in-game faction (analogous to a political party) they belonged to was performing vis-à-vis other factions. Teachers were familiar with these graphs and how to interpret them in relation to emerging patterns of game play. The tool also provided teachers with detailed information about each faction (e.g. amount of gold, wood, ore; population size of various towns; inter-racial harmony; etc.).

**Procedure**

Each curriculum intervention cycle ran over three consecutive weeks. There were six social studies lessons in each cycle, given that schools typically scheduled two social studies lessons per week. The duration of each lesson varied between schools. The
range was between 45 and 60 minutes. Teachers were interviewed prior to commencement of the in-class research. They were further interviewed after each of sessions 2 to 6. Session 1 was exceptional in that class time was used to introduce the curriculum and game to the students. The researchers presented this session. The iPhones, funded by the research project, were also loaned to the students at the end of this session.

Post-lesson interviews with teachers were positioned as lesson debriefs and professional development conversations. They were conducted informally and directed toward engaging teachers in reflection on their just-concluded lesson and to address any difficulties encountered. The interview sessions usually lasted between 30 and 60 minutes. These sessions were audio recorded.

Data analysis

We collected approximately 40 hours of teacher interview data. Two coders carefully transcribed these interviews. One coder was a research assistant with a degree in sociology. The other coder was a schoolteacher seconded to the research project from the Ministry of Education. The transcripts were crosschecked in instances of ambiguity. The text transcripts were systematically organized and labeled to facilitate ready identification of teacher and interview session.

We employed a form of coding akin to grounded theory (Birks & Mills, 2011) in order to distill, categorize, and establish themes that appropriately and fairly reflect the teachers’ articulations of challenges they faced while enacting their classroom lessons. We stress that it was not our intention to perform a grounded theory study in the full sense that may be implied by this term. As Corbin and Strauss (2008) point out, “[i]f the researcher is building upon a program of research or wants to develop middle-range theory, a previously identified theoretical framework can provide insight, direction, and a useful list of initial concepts” (p. 40). Our work is not oriented toward developing a complete bottom-up grounded theory from the data collected. Rather, it is located in the context of fostering teacher capacity to enact game-based dialogic facilitation with a view to encouraging the take-up of such teaching practice. Consequently, our analysis of data is oriented toward addressing this goal. Our findings may be colored because we embarked on the research process with an “appropriation model of innovation uptake” derived from a review of the relevant literature and used as a basis for securing research funding.

We used NVivo as the computer-based tool to assist in data management and manipulation, the coding process, and the subsequent distillation of code descriptors. This process was highly iterative, and it involved all research team members in dialog directed toward making emergent sense of the data and stabilising a collective interpretation that felt grounded and defensible. The coding work was the primary responsibility of the third author.

Findings

In this section, we present our findings of classroom challenges that teachers faced when enacting the Statecraft X curriculum. In the excerpts cited below, our collaborating teachers are not equally represented for two reasons. First, some teachers conveyed keener insights into their circumstance than others. Second, some teachers were more reflexive than their peers. We seek to share the voices of teachers as faithfully as possible. The cited instances convey how teachers wrestle with the process
of change in professional practice. It is hoped that readers will not only read the excerpts but also feel the emotions that underlie them.

Classroom challenges that arise from reconstructing teaching practice
Facilitating game-based dialogic learning in the classroom constitutes a performance enacted by a teacher (and by her students as well). It entails more than simply having a requisite set of “knowledge and skills.” Akin to learning how to swim, the first attempt is always the most difficult. In this subsection, we exemplify the quandaries of teachers as they attempt a new pedagogical practice. The challenges articulated here are not merely professional “problems” (see Section 2) that would find natural resolution with extended opportunities to practice dialogic facilitation. Dilemmas arise when teachers feel they are “letting their students down” because they are unable to rise quickly to the standard of professional performance needed, as exemplified in the opening teacher’s blog entry. The moral dilemma is always: “what do I do now, in the present situation?”

Learning to think and act “on one’s feet.” Adele (all teachers names are pseudonyms) expressed her professional learning challenge in the following terms:

I totally forgot about the refugee arrival! . . . And that was actually what I had planned, as in like in my head, thinking of the refugee arrival and to link it to migration. . . . That was what I had in mind before I step into the lesson. . . . But during the lesson, as it was going on, yeah, then I sort of got lost in the things that they were saying.

Adele had made due lesson preparation prior to her class. Based on her understanding of the game and how game play was evolving, she was aware that the in-game event of refugees arriving in the towns governed by her students provided the perfect springboard for conversing about issues related to migration and immigration policies. However, Adele felt overwhelmed by what students had to say in class, leading her to “get lost” in the things that they were saying. Brenda expressed this idea succinctly when she said, “to me as a Statecraft X teacher, you really need to think on your feet at all times.” As a teacher with less than three years of teaching experience and accustomed to teaching within the safe confines of a predetermined lesson plan, Adele had not needed to “think on her feet” very much before. Consequently, she found doing so challenging and felt disappointed being unable to keep track of multiple conversational threads effectively despite the availability of a whiteboard.

Pauline expressed the difficulty she experienced in terms of the need to be adept at multitasking. She said:

. . . most of the time when we go to the classroom it is just the screen and the board. But now I have the screen, the board, and then I got . . . I’m like thinking I’ve got to show the results but then I want to refer to my notes. The unfortunate thing is that our printers are not working well, so most of the time we would have printed out all these things as reference . . .

The “results” that Pauline referred to were the Web-based graphs of the game’s economic wealth and citizen happiness scores. These representations allow teachers to convey to their students how various player factions are performing relative to one another. While teachers are used to working with just the projector screen and the whiteboard in a linear fashion, they can feel overwhelmed when they also need to pull up Web-based graphs and refer to their personal notes in a more contingent way. In this regard, Pauline added that knowing the members of the class very well would be a big
help “[b]ecause having . . . you know your brain like . . . having to do so many things – you’ve got to think and then you got to know who’s that and then . . . It . . . it does tax you a little bit.”

Overcoming old teaching habits. When asked about the challenges she faced enacting the Statecraft X curriculum, Adele spoke of the difficulty “of really being a facilitator rather than the traditional ‘imparting of knowledge’” that she was accustomed to. She added, “I think I am still used to the habit of talking and talking and talking and talking. Yeah.” In a more reflective moment, Pauline also shared:

And in fact sometimes because you are so used to doing things a certain way, and then you are very comfortable yet you are confident in that . . . it is what you are good at but because of that, it binders you and then you have certain blind spots.

Later, Pauline added:

Yeah we are always prepared with PowerPoint slides and we are . . . And even if there is a discussion we know where to always go back to. And I think being used to that. That is a hindrance that I need to get rid of.

Pauline appeared conscious that her ingrained habits that made her feel “comfortable” and “confident” in her traditional mode of teaching and which she had become “good at” could lead to blind spots and hinder the take up of a new pedagogical practice. She also began to view the practice of instructing with PowerPoint slides, which facilitates returning to a point of departure following an unplanned digression, as a “hindrance” to the development of dialogic practice.

Maintaining flow and coherence in dialog. Teachers often struggled with the challenge of maintaining a natural conversation flow becoming of a dialogic classroom. Fiona spoke of this as “about being seamless – about just going into the virtual world and then back to S~ uh . . . you know, to Singapore, and then the real world.” (The tilde character is used to denote interrupted speech.) As part of dialogic pedagogy, teachers were encouraged to draw connections between events and processes in the game world (referred to here by the teacher as the “virtual world”), in Singapore, and in the real world beyond Singapore. This art of expansive and relational conversation was initially challenging for most teachers until they got the “hang” of it. In a later interview, Fiona added:

. . . it’s also pressurising because things may not go well. . . . Things may not flow well, you know and then there are moments where some . . . I guess in the beginning with 3R1, sometimes when I felt like “okay, oh no we are stuck. What should we do now?”

The excerpt above was uttered during the teacher’s second intervention cycle. 3R1 refers to the class taught during her first intervention cycle. The sense of feeling pressured and of “being stuck” is palpable: what should we do now?

Teachers also wrestled with maintaining the coherence of conversational flow in the classroom. During her first intervention cycle, Pauline said:

But the low point was that I couldn’t pick up y’know enough on these things and I felt like the session didn’t . . . I felt like there wasn’t a flow. I just felt like it was here and there.
In the subsequent interview, Pauline also referred to the ideas as being “disconnected.” Fiona expressed her difficulty as: “I felt that there was a bit of a jump.” These utterances illustrate the challenge teachers experience in orchestrating and managing the smooth flow of dialog so that the classroom conversation does not feel patchy and like being “here and there.”

**Dropping points and missing opportunities to interrogate ideas.** When asked to identify a low point after one of her classes, Pauline said:

> Lowest point, the first one would be the dropping of points. Because, yeah, I think as a teacher you always look out for teachable moments. It could be the teaching of values, I mean, um, so I thought you know when the students said "I don’t really care about the people" you know, I thought . . . yep that was one — why do you not care, that is so obvious that people would be one of the most crucial, because without people then you will not have the town, you know.

Pauline regretted failing to seize the opportunity to foreground a pertinent point about a government’s attitude—not caring—toward its people. Consequently, a “teachable moment” was lost, and a “point was dropped,” much to her distress. Fiona shared a similar sentiment:

> . . . one of the difficulties would be as you said, really thinking on the spot and trying to link IMMEDIATELY whatever the students say to a concept or to a learning point. And . . . yeah. That I still find difficult. And I think that it takes quite a lot of time to get the hang of it. [Word in uppercase denotes speech emphasis.]

The excerpts above illustrate teacher frustration with letting slip some powerful opportunities for learning that their students’ utterances offered as they wrestled with the challenges of a new teaching practice.

Teachers also experienced uncertainty over what they should or should not say. For example, Pauline shared:

> . . . when I was in intervention 1, we were carrying that out, I was afraid to share my thoughts because I didn’t know whether I would give the game away or give anything away. So I wasn’t quite sure of the balance.

In this instance, we had sensitised teachers to avoid “teaching content as content.” In the process of making meaning of this statement, teachers sometimes interpreted the statement to mean that they should not share their own thinking with the students. Fortunately, as part of the interview sessions, we were able to clarify that facilitating student dialog did not imply that they were precluded from sharing their own thinking with their students.

**Classroom culture and the need to redefine relations with students**

It is difficult to develop a dialogic classroom culture if teachers are accustomed to an authority position with respect to subject matter. Several teachers expressed the importance of developing rapport with students for dialogic facilitation to be effective. Noreen, for example, said that “rapport must be built very strongly such that uh the students are feel comfortable enough to really talk and verbalise their opinion.” Stephen further illuminated this issue:
. . . yeah I’ll just be very painfully honest. Okay, I mean after communicating with my students today, I think I really got to understand them on a deeper level. . . . Okay. These sessions like that do help. But then I realized that many of them actually really have a fear of speaking up. A deep-seated fear of speaking up and a fear of being judged.

Stephen was referring to the 22 students (half the intervention class) whose dialogic sessions he was facilitating and for whom he was their regular social studies teacher. Things had not been going well during his first intervention cycle. His students were unresponsive to his attempts to open up conversations. The students were top academic scorers and belonged to the best class in their cohort. They were known amongst schoolteachers as “high performers.” It was an epiphanic moment for Stephen when he shared “in painful honesty” that these students, based on conventional classroom culture, had a “deep-seated fear of speaking up and a fear of being judged.”

Brenda, who was from a different school, had a different experience:

I did fairly well in the sense that um, I guess that I have an added advantage because I taught quite a number of them last year. So I already had a rapport with a few of them, so I get their respect and the kind of cordial relationship. So the students are very open mmm with me, I don’t think anybody was reserved in asking questions.

As researchers, we sensed a deeper factor at work. While Stephen and Brenda appeared satisfied and comfortable framing the issue as one of student rapport, Brenda, we believe, got closer to the crux of the matter when she said:

I am more to the side where uh I prefer to be closer to students. A bit more pally, rather than the other end of the continuum, because I believe that um if I have a good relationship with the students and things like that, the respect that they give me could be easily earned and uh . . . support from them is very um easily garnered. I don’t have to be authoritative or authoritarian to earn their respect. But I earn respect by . . . by showing an example myself that when one person speaks I listen.

In an interview toward the end of her second intervention cycle, she added:

. . . initially as I you know, started as a fresh beginning teacher, it’s really like okay, a teacher um doing the teaching. And um . . . it’s more of top down because I’m the one having all the subject knowledge content. I have all the information and I know that . . . I clearly know that my students do not have access to all these. So I feel that I have an advantage over my students. . . . So I feel I have the upper band. But you know as I do this um Statecraft X project, I find that it is . . . Okay, I [laughingly with emphasis:] descend to be of the same level as the student whereby I find myself learning a lot from the students and they are definitely in the capacity to teach me. And in fact, some of them they might even know more than me. And from a teacher, I become a facilitator. And at the same time, I am also a learner. So I’m of the same level as the students . . .

Brenda manifested an ability to reduce the culturally enforced power relation between teachers and students in Singapore schools and a genuine willingness to bring herself down to the level of her students. She expressly shied away from being “authoritative or authoritarian,” preferring to be “pally” with her students. She acknowledged feeling that she had “the upper hand” over her students because she had content knowledge that they did not possess. But, most importantly, she declared that her involvement in the
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Statecraft X project led her to “descend to be of the same level” as her students “so I’m of the same level” as them. She also found herself “learning a lot from the students and they are definitely in the capacity to teach me.” This attitude represents a significant shift in the relation typical between teachers and students in Singapore. It is also a significant marker of Teacher B’s personal growth and of the development of her professional identity.

As Brenda professed, she is a mid-career switch teacher with limited teaching experience. Perhaps the years spent working outside the school sector contributed to the seeming ease with which she changed her attitude toward her students. Being relatively new to the teaching profession, she appears not to have been much influenced by deeply rooted classroom norms that sway teachers toward imposing and maintaining a power distance between themselves and their students.

From the foregoing, it becomes evident that established cultural norms can strongly influence how readily dialogic learning is assimilated into classroom practice. While conventional cognitivistic analyses of student learning processes and outcomes exclude consideration of power relations in the classroom, a sociocultural analysis necessitates it. Opening up analysis to the consideration of power relations suggests that it is important for teachers to be able to redefine their relationship with students. Reducing the power gap encourages students to articulate their ideas and make their voices heard so that productive learning can take place. Teachers who feel that their professional identity demands the maintenance of high power distance, especially in Asian cultures, wrestle with the dilemma of striking a practical balance between school norms and pedagogical requirements.

Discussion

Our findings suggest that the challenges associated with shifting teaching practice gives rise to dilemmas in the professional life of teachers. From the perspective of theory, Fransson and Grannäs’s construction of dilemmatic spaces, extended from Honig’s original idea, possesses considerable theoretical merit. Unlike Honig and Denicolo who suggest that dilemmas are characterised by having no “right” answer, we propose that there may be situations where a “right” or inherently “preferred” answer may exist. However, the situation may still constitute a dilemma because the “right” answer remains out of reach to a teacher who has neither the means nor the power to attain that “right” answer. Consequently, a “remainder of regret” may be left as a situational residue. Teachers continually find themselves inhabiting a dilemmatic space when lessons do not go the way intended due to their still-developing dialogic facilitation skills. They may then either abort attempting to enhance their pedagogical practice (and feel a twinge of guilt about that) or try to master the practice and feel poorly about not succeeding. Either way, the outcome leaves some “residue of guilt.”

As suggested by Denicolo, however, dilemmas can trigger deep reflection and lead to emancipatory outcomes through transformative professional growth. Brenda, for example, felt more confident that she could facilitate her students’ development of 21st century competencies after she enacted two cycles of the Statecraft X curriculum. As she reflected on her learning journey, Pauline said, “you know I’ve really see how um, it has changed me.” During her second intervention cycle, she shared that she was already adopting a dialogic approach in her teaching of another subject with a different class. She spoke of how the professional support offered “help[ed] me change the way I see my kids” (referring to her students) and of a newly found “openness to really hear and accept what the kids are saying.” She also spoke of “my identity as a teacher, as well as a Statecraft X teacher, is that um the way I teach is different.” She further emphasised, “I
definitely take greater ownership toward the curriculum.” These utterances are reflective of deep professional change. They illuminate the impact that enacting the game-based curriculum had on the teacher. When Pauline’s colleagues suggested that taking up Statecraft X “seems like a lot of work,” she responded, “I said ‘sounds like it, but actually . . . I don’t prepare!’” (cf. opening blog excerpt). Pauline’s identity shifted significantly, and her professional growth was evident for all to see. With reference to Figure 1, Pauline’s engagement in situated action, both in and out of the classroom, and her manner of participation in discursive practice helped her reconstruct her identity, as encapsulated by the knowing–doing–being–valuing of her reconstructed practice. Through learning as becoming, Pauline’s identity evolved. She likened her journey of transformation to how a pearl is formed. Beginning with a small piece of dirt that gets into an oyster and irritates its very being, the process of dealing with that triggering event, albeit painful and difficult, ultimately yields an outcome of great value.

From the perspective of teacher professional development, our findings point to a crucial need to approach teacher professional development as intensive person-oriented work. One-off teaching practice seminars and two-day professional workshops cannot yield the kind of deep change needed to transform teachers’ knowing–doing–being–valuing (Chee & Mehrotra, 2012; Flint, Zisook, & Fisher, 2011). The provision of continuing professional development is vital for teachers to build the capacities required for 21st century education and for them to be active agents of school improvement. For teacher identity to be impacted and for there to be sustainable professional growth, teachers must also begin to value learning outcomes vastly different from those that adequately met the needs of the 20th century and respond to the needs of a changing world. Change intervention and change management processes need to be instituted by policy makers to provide for greater teacher agency, participation, and voice in teachers’ professional lives so that teachers feel empowered to create their professional future and contribute their expertise and talent.

Institutional systems, such as that of school, entrench structures and processes for self-perpetuation. If teachers feel compelled to comply with the system’s bidding because their own work appraisal is tied to that of their students scoring high marks on tests and examinations, they are caught in a double bind. Such an environment leads to teachers resisting innovation, teaching to the test, and being unwilling to deviate from “proven success formulas.” The ensuing institutional culture is one of risk aversion. To counter this culture, education leaders need to develop an environment that teachers perceive to be safe and an institutional culture that welcomes and rewards pedagogical innovation. Teachers need considerable support, in terms of resources and moral support, to step outside of their comfort zone and take carefully considered professional risks. Deep change to practice moves in tandem with development of teacher identity. Apart from time and space needed to experiment with new pedagogies, teachers also require ample opportunity to practice new ways of teaching because it is practice that makes practice (Britzman, 2003).

Working with nine teachers on this research project, we observed a spread of teacher responses to the challenges they encountered when enacting the Statecraft X curriculum. While some teachers learned quickly, others were more challenged due to a host of complex interdependent factors. Apart from institutional and situational factors, teacher identity also influenced the outcome of teachers’ professional learning. We witnessed momentous transformational growth and emancipation on the part of teachers who adapted well to the demands of a new classroom practice. But we also witnessed teachers who experienced difficulty because they had limited control over system constraints that were, for them, fixed and non-negotiable. Consequently,
entrenched systems, with their mandated rules, cultural norms, and assessment procedures, can stubbornly resist teachers’ best attempts to enhance practice.

Conclusion

In this paper, we addressed the issue of challenges teachers face when learning to facilitate dialog to support authentic game-based learning. Grounded in our work on helping teachers enact the Statecraft X curriculum in social studies, our findings suggest that the key challenges teachers face are not technology centric but practice centric. At its core, the overriding issue rests on competing visions of why students should go to school today. Entrenched schooling practices carried over from the industrial era of mass production work against pedagogical innovation needed to move 21st century learning forward. Caught in the vortex of currents that pull backward to maintain the status quo and currents that pull forward to reform practice, teachers inhabit a dilemmatic space that requires them to respond to situations where the “right” course of action either does not exist or is unattainable to them when situated in the dilemma. Our data suggest that such dilemmas engender stress in the professional lives of teachers. Depending on how teachers respond, these situations may contain the seeds of transformational professional growth or they may hinder teachers from strengthening their professional practice. Challenges engendered by the need to change classroom practice and to redefine relationships with students create obstacles to building capacity for dialogic facilitation. For authentic game-based learning to find traction in classroom teaching and learning, questions concerning the assumptions and purposes of schooling need to be revisited by policy makers and education stakeholders. Will the crust of institutional and social convention continue to engender resistance to change or will insight concerning challenges to teachers’ professional growth surfaced in this paper contribute to foresight for social good? Only time will tell.

Acknowledgements

This work was funded by the Office of Education Research, National Institute of Education, Singapore, under grant OER 02/11 CYS. Views expressed are strictly those of the authors only.

References

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